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BATHURST
RESOURCES LIMITED

26 October 2017

Market Announcements
Australian Securities Exchange
Level 4, 20 Bridge Street
Sydney
NSW 2000

Bathurst Resources Limited - Update on Resources and Reserves

The Board of Bathurst Resources Limited (ASX: BRL "Bathurst") is pleased to announce an update on Resources and Reserves.

During the past year work has been ongoing to update the company's Resources and Reserves to comply with the Joint Ore Reserves Committee (JORC) 2012 code and to integrate the recently acquired assets into the company reporting standard.

The key indicator of total Resources shows a significant uplift from 108 million tonnes to **194** million tonnes.

The main improvement is maiden resources for Stockton (69mt), Rotowaro (10mt) and Maramarua (5.5mt). In addition Canterbury resources grew from 5mt to 7mt.

The documents appended have been generated as JORC Table 1 disclosures as required under clause 5 of the JORC (2012) code. The Table 1 documents support both first release and materially changed Mineral Resources or Ore Reserves for significant Bathurst projects.

Where there has been no material change the company has continued to report under the JORC 2004 standard.

On behalf of Bathurst Resources Limited

Richard Tacon
CEO

Coal Resources and Reserves

RESOURCES

Table 1 – Resource Tonnes

Area	2017 Measured Resource (Mt)	2016 Measured Resource (Mt)	Change (Mt)	2017 Indicated Resource (Mt)	2016 Indicated Resource (Mt)	Change (Mt)	2017 Inferred Resource (Mt)	2016 Inferred Resource (Mt)	Change (Mt)	2017 Total Resource (Mt)	2016 Total Resource (Mt)	Change (Mt)
Escarpment [(1)]	3.1	3.1	0	2.1	2.1	0	1	1	0	6.2	6.2	**0**
Cascade [(1)]	0.5	0.5	0	0.6	0.6	0	0.3	0.3	0	1.5	1.5	**0**
Deep Creek [(1 & 3)]	6.2	6.2	0	3.1	3.1	0	1.6	1.6	0	10.9	10.9	**0**
Coalbrookdale [(1)]	0	0	0	3.8	3.8	0	5.4	5.4	0	9.2	9.2	**0**
Whareatea West [(1)]	7.6	7.6	0	10.8	10.8	0	4.9	4.9	0	23.3	23.3	0
South Buller Totals [(7)]	**17.4**	**17.4**	**0**	**20.4**	**20.4**	**0**	**13.2**	**13.2**	**0**	**51.1**	**51.1**	**0**
Stockton [(2 & 6)]	1.0		1.0	11.0		11.0	7.5		7.5	19.4		19.4
Upper Waimangaroa (Met) [(2 & 6)]	0.6		0.6	13.8		13.8	33.9		33.9	48.3		48.3
Upper Waimangaroa (Thermal) [(2 & 6)]	0		0	0.6		0.6	0.9		0.9	1.5		1.5
Stockton Totals	**1.6**		**1.6**	**25.4**		**25.4**	**42.3**		**42.3**	**69.2**		**69.2**
Millerton North [(1 & 3)]	0	0	0	1.9	1.9	0	3.6	3.6	0	5.5	5.5	**0**
North Buller Totals	2.4	2.4	0	7.3	7.3	0	10.9	10.9	0	20.6	20.6	**0**
Blackburn [(1 & 3)]	0	0	0	5.8	5.8	0	14.1	14.1	0	19.9	19.9	**0**
North Buller Totals [(7)]	**2.4**	**2.4**	**0**	**15.0**	**15.0**	**0**	**28.6**	**28.6**	**0**	**46.0**	**46.0**	**0**
Buller Coal Project Totals	**21.4**	**19.8**	**2**	**60.8**	**35.4**	**25**	**84.1**	**41.8**	**42.3**	**166.3**	**97.1**	**69**
Takitimu [(1 & 4)]	0.9	1	-0.1	2	1.9	0.1	0.5	0.8	-0.3	3.4	3.7	**-0.3**
New Brighton [(1)]	0.2	0.2	0	0.4	0.4	0	1.3	1.3	0	1.9	1.9	**0**
Canterbury Coal [(1 & 5)]	1.2	0.5	0.7	2.5	1.4	1.1	3.4	3.4	0	7.1	5.3	**1.8**
Southland/ Canterbury Totals [(7)]	**2.3**	**1.7**	**0.6**	**4.9**	**3.7**	**1.2**	**5.2**	**5.5**	**-0.3**	**12.4**	**10.9**	**1.5**
Rotowaro [(2 & 6)]	2.8		2.8	5.1		5.1	1.8		**1.8**	9.7		**9.7**
Maramarua [(2 & 6)]	4.7		4.7	0.8		0.8	0		**0**	5.5		**5.5**
North Island Totals	**7.5**		**7.5**	**5.9**		**5.9**	**1.8**		**1.8**	**15.2**		**15.2**
Total	**31.2**	**21.5**	**9.7**	**71.6**	**39.1**	**32.5**	**91.1**	**47.3**	**43.8**	**193.9**	**108.0**	**85.9**

All resources and reserves quoted in this release are reported in terms as defined in the 2004 and 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia ("JORC").

The Measured and Indicated Mineral Resources are inclusive of those Mineral Reserves modified to produce the Ore Reserves.

Rounding of tonnes as required by reporting guidelines may result in summation differences between tonnes and coal quality.

All resources quoted are reported as of 1 September 2017.

Mineral Resource Notes

1 *Resource tonnages have been calculated using a density value calculated using approximated in-ground moisture values (Preston and Sanders method) and as such tonnages quoted in this report are wet tonnes (unless stipulated otherwise). All coal qualities quoted are on an Air Dried Basis.*

2 *Stockton, Upper Waimangaroa, Rotowaro and Maramarua density values are based on air-dried ash density regressions. Stockton, Upper Waimangaroa, Rotowaro and Maramarua are reported on an air dried basis.*

3 *No additional work has been was undertaken on the coal resources for Deep Creek, Millerton North, Blackburn and New Brighton since originally reported.*

This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

4 *Resources were depleted by mining. Additional drilling and a revision of the geological model resulted in an overall decrease in the resource tonnage. Takitimu resources include Black Diamond and Coaldale.*

5 *Additional drilling, improved mining economics and a revision of the geological model have resulted in improved resource confidence and an overall increase in the resource tonnage.*

6 *Stockton, Upper Waimangaroa, Rotowaro and Maramarua are owned by BT Mining Limited (65% Bathurst Resources Limited / 35% Talleys Energy Limited). On 1st of September 2017 BT Mining Limited took control of Solid Energy assets including two operating mines Rotowaro and Maramarua in the Waikato region of the North Island and the Stockton mine on the West Coast of the South Island.*

7 *South Buller, North Buller, Southland and Canterbury Resources are 100 % Bathurst Resources Limited ownership.*

Table 2 – Average Coal Quality - Measured Resource

Area	Measured Resource (Mt)	Ash% (AD)	Sulphur % (AD)	Volatile Matter % (AD)	Fixed Carbon % (AD)	CSN	Inherent Moisture	In Situ Moisture	Calorific Value (AD)
Escarpment	3.1	20.0	0.6	32.7	46.3	7.0	0.9	5.5	28.5
Cascade	0.5	15.5	1.7	39.3	42.6	4.5	2.6	7.6	30.8
Deep Creek	6.2	11.0	2.5	32.9	53.9	-	2.2	5.2	29.7
Coalbrookdale	0	-	-	-	-	-	-	-	-
Whareatea West	7.6	23.0	0.8	24.2	52.2	7.0	0.6	6.3	26.8
Stockton	1.0	8.0	2.5	31.6	59.5	8.0	0.9	-	32.6
Upper Waimangaroa (Met)	0.6	4.0	1.1	38.6	52.9	4.0	4.6	-	28.3
Upper Waimangaroa (Thermal)	0	-	-	-	-	-	-	-	-
Millerton North	0	-	-	-	-	-	-	-	-
North Buller	2.4	8.6	4.7	43.1	45.4	4.5	2.9	11.4	29.7
Blackburn	0	-	-	-	-	-	-	-	-
Takitimu	0.9	11.1	0.4	37.4	36.1	N/A	15.5	24.5	21.5
New Brighton	0.2	10.7	0.4	35.9	39.1	N/A	14.3	21	22.7
Canterbury Coal	1.2	9.0	0.8	35.3	38.9	N/A	16.8	26.1	21.7
Rotowaro	2.8	5.6	0.3	44.0	36.5	N/A	13.9		25.5
Maramarua	4.7	5.9	0.2	37.5	37.4	N/A	19.2	8.8	22.2

Table 3 – Average Coal Quality - Indicated Resource

Area	Indicated Resource (Mt)	Ash% (AD)	Sulphur % (AD)	Volatile Matter % (AD)	Fixed Carbon % (AD)	CSN	Inherent Moisture	In Situ Moisture	Calorific Value (AD)
Escarpment	2.1	19.2	1.1	35.0	44.6	7.0	1.2	5.3	30.3
Cascade	0.6	14.8	1.8	38.3	44.5	4.0	2.4	8.0	29.3
Deep Creek	3.1	9.7	2.7	34.7	53.6	-	2.0	4.8	30.3
Coalbrookdale	3.8	18.4	1.4	36.3	43.5	5.0	1.8	6.1	30.0
Whareatea West	10.8	22.1	0.9	22.7	54.5	6.5	0.6	6.3	25.6
Stockton	11.0	5.1	2.7	35.4	58.2	8.0	1.2	-	33.5
Upper Waimangaroa (Met)	13.8	4.4	1.9	38.9	53.3	5.0	3.6	-	28.8
Upper Waimangaroa (Thermal)	0.6	6.5	3.9	35.8	52.0	0.0	4.1	-	27.7
Millerton North	1.9	9.7	4.9	36.9	52.4	10.0	1.0	6.1	31.1
North Buller	7.3	8.8	5.1	42.6	46.3	5.0	2.3	9.4	30.0
Blackburn	5.8	3.9	4.3	42.1	51.8	6.0	2.2	10.1	30.4
Takitimu	2.0	9.4	0.3	35.9	38.4	N/A	16.2	25.6	21.5
New Brighton	0.4	9.0	0.3	35.9	42.1	N/A	12.9	20.5	23.7
Canterbury Coal	2.5	8.8	0.9	35.4	39.1	N/A	16.7	26.3	21.8
Rotowaro	5.1	5.7	0.3	44.0	36.2	N/A	14.0	-	24.5
Maramarua	0.8	9.8	0.2	36.0	35	N/A	19.2	7.7	21.3

Table 4 – Average Coal Quality - Inferred Resource

Area	Inferred Resource (Mt)	Ash% (AD)	Sulphur % (AD)	Volatile Matter % (AD)	Fixed Carbon % (AD)	CSN	Inherent Moisture	In Situ Moisture	Calorific Value (AD)
Escarpment	1.0	18.4	1.7	35.5	44.7	7.0	1.4	5.7	30.2
Cascade	0.3	16.5	2.2	36.7	44.7	4.0	2.1	6.7	27.6
Deep Creek	1.6	10.1	2.4	29.7	57.8	-	2.4	7.1	29.7
Coalbrookdale	5.4	16.4	1.5	35.2	46.7	5.0	1.7	5.5	29.1
Whareatea West	4.9	21.7	0.9	21.3	56.3	6.0	0.7	6.3	24.6
Stockton	7.5	6.3	3.4	35.3	57.0	7.5	1.3	-	33.1
Upper Waimangaroa (Met)	33.9	5.8	2.0	38.7	52.4	4.5	3.6	-	29.8
Upper Waimangaroa (Thermal)	0.9	4.1	1.6	34.7	51.7	2.0	6.6	-	27.8
Millerton North	3.6	12.0	5.5	35.3	51.6	9.0	1.1	7.2	30.2
North Buller	10.9	9.9	5.1	45.6	42.3	5.0	2.2	9.6	29.5
Blackburn	14.1	6.4	4.8	41.8	49.5	6.0	2.3	11.2	30.1
Takitimu	0.5	11.1	0.3	35.6	37.3	N/A	16.0	25.6	21.0
New Brighton	1.3	9.0	0.3	35.7	43.6	N/A	11.6	19.6	24.1
Canterbury Coal	3.4	9.3	1.1	35.3	38.8	N/A	16.6	26.4	21.7
Rotowaro	1.8	5.5	0.3	43.2	37.3	N/A	14.0	-	24.3
Maramarua	0	-	-	-	-	-	-	-	-

RESERVES

Table 5 – Coal Reserves (ROM [10]) Tonnes

ROM Coal Area	Proved (Mt)			Probable (Mt)			Total (Mt)		
	2017	2016	Change	2017	2016	Change	2017	2016	Change
Escarpment Domestic [8, 13 & 15]	0.2	0.2	0	0.1	0.1	0	0.3	0.3	0
Escarpment Export [8, 13 & 15]	2.3	2.3	0	0.5	0.5	0	2.8	2.8	0
Whareatea West [8, 13 & 15]	0	0	0	15.8	15.8	0	15.8	15.8	0
Stockton [9, 13 & 14]	0.8		0.8	8.0		8.0	8.9		8.9
Upper Waimangaroa (Met) [9, 13 & 14]	0.6		0.6	3.0		3.0	3.5		3.5
Takitimu [8,11,13 & 15]	0.5	0.5	0	1.3	1.1	0.2	1.8	1.6	0.2
Canterbury Coal [8, 12, 13 & 15]	0.5	0.1	0.4	1.1	0.1	1.0	1.6	0.1	1.5
Rotowaro [9 & 14]	0.5		0.5	1.5		1.5	2.0		2.0
Maramarua [9 & 14]	3.1		3.1	0.1		0.1	3.2		3.2
Total	8.5	3.1	5.4	31.4	17.6	13.8	39.9	20.6	19.3

Table 6 – Marketable Coal Reserves Tonnes

Product Coal Area	Proved (Mt)			Probable (Mt)			Total (Mt)		
	2017	2016	Change	2017	2016	Change	2017	2016	Change
Escarpment Domestic [8, 13 &15]	0.2	0.2	0	0.1	0.1	0	0.3	0.3	0
Escarpment Export [8, 13 &15]	1.9	1.9	0	0.4	0.4	0	2.3	2.3	0
Whareatea West [8, 13 &15]	0	0	0	9.9	9.9	0	9.9	9.9	0
Stockton [9, 13 & 14]	0.6		0.6	6.2		6.2	6.9		6.9
Upper Waimangaroa (Met) [9, 13 & 14]	0.5		0.5	2.7		2.7	3.2		3.2
Takitimu [8, 11, 13 & 15]	0.5	0.5	0	1.2	1.0	0.2	1.7	1.5	0.2
Canterbury Coal [8, 12, 13 & 15]	0.5	0.1	0.4	0.9	0.1	0.9	1.4	0.2	1.3
Rotowaro [9 & 14]	0.4		0.4	1.3		1.3	1.7		1.7
Maramarua [9 & 14]	3.1		3.1	0.1		0.1	3.2		3.2
Total	7.7	2.7	5.0	22.9	11.5	11.4	30.5	14.2	16.3

Table 7 – Marketable Coal Reserves - Proved and Probable Average Quality

Deposit	Proved Marketable						Probable Marketable					
	(Mt)	Ash (%)	Sulphur (%)	VM (%)	CSN	CV (MJ/Kg)	(Mt)	Ash (%)	Sulphur (%)	VM (%)	CSN	CV (MJ/Kg)
Escarpment Domestic [8, 13 & 15]	0.2	8.9	0.5	35.1	8.5	31.3	0.1	7.1	0.6	36.4	8.5	32.0
Escarpment Export [8, 13 & 15]	1.9	-	-	-	-	-	0.4	12.1	0.9	26.0	9.5	31.9
Whareatea West [8, 13 & 15]	0	12.9	1.9	35.0	7.0	28.9	9.9	14.5	1.5	34.0	6.0	28.4
Stockton [9, 13 & 14]	0.6	4.7	2.3	31.6	8.0	33.9	6.2	3.8	3.0	35.7	8.0	34.2
Upper Waimangaroa (Met) [9, 13 & 14]	0.5	3.3	1.1	38.5	4.0	28.6	2.7	3.1	1.1	38.1	4.0	29.7
Takitimu [8,11,13 & 15]	0.5	8.9	0.3	33.1	N/A	19.8	1.2	5.9	0.2	32.6	N/A	20
Canterbury Coal [8, 12, 13 & 15]	0.5	8.4	0.8	35.2	N/A	21.9	0.9	8.4	0.9	35.4	N/A	21.9
Rotowaro [9 & 14]	0.4	6.8	0.3	37.1	N/A	24.0	1.3	5.9	0.3	37.5	N/A	24.5
Maramarua [9 & 14]	3.1	5.2	0.2	37.4	N/A	22.2	0.1	8.5	0.2	36.8	N/A	21.6

Table 8 – Marketable Coal Reserve - Total Average Quality

Deposit	Coal Type	Mining Method	Total Marketable					
			(Mt)	Ash (%)	Sulphur (%)	VM (%)	CSN	CV
Escarpment Domestic [8, 13 & 15]	Met	Open Pit	0.3	8.6	0.5	35.3	8.5	31.4
Escarpment Export [8, 13 & 15]	Met	Open Pit	2.3	12.1	0.9	26	9.5	31.9
Whareatea West [8, 13 & 15]	Thermal	Open Pit	9.9	13.4	1.8	34.7	6.5	28.7
Stockton [9, 13 & 14]	Met	Open Pit	6.9	3.9	3.0	35.3	8.0	34.2
Upper Waimangaroa (Met) [9, 13 & 14]	Met	Open Pit	3.2	3.1	1.1	38.2	4.0	29.6
Takitimu [8,11,13 & 15]	Thermal	Open Pit	1.7	6.8	0.2	32.7	N/A	19.9
Canterbury Coal [8, 12, 13 & 15]	Thermal	Open Pit	1.4	8.4	0.9	35.3	N/A	21.9
Rotowaro [9 & 14]	Thermal	Open Pit	1.7	6.1	0.3	37.4	N/A	24.4
Maramarua [9 & 14]	Thermal	Open Pit	3.2	5.4	0.2	37.4	N/A	22.2

All reserves quoted in this release are reported in terms as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia ("JORC").

The Measured and Indicated Mineral Resources are inclusive of those Mineral Reserves modified to produce the Ore Reserves.

Rounding of tonnes as required by reporting guidelines may result in summation differences between tonnes and coal quality.

All Reserves quoted are reported as of 1 September 2017.

Mineral Reserve Notes

8 *Reserve tonnages have been calculated using a density value calculated using approximated in-ground moisture values (Preston and Sanders method) and as such reserve tonnages quoted in this report are wet tonnes. All coal qualities quoted are on an Air Dried Basis.*

9 *Stockton, Upper Wiamangaroa, Rotowaro and Maramarua density values are based on air-dried ash density regressions. Stockton, Upper Wiamangaroa, Rotowaro and Maramarua are reported on an air dried basis.*

10 *Coal Reserve (Run of Mine (ROM) tonnes), include consideration of standard mining factors (JORC Code 2012).*

11 *Increase in coal reserves due to revised mining plans and economics. Takitimu reserves include Black Diamond and Coaldale.*

12 *Increase in coal reserves due to increase of available resources, revised mining plans and economics.*

13 *Marketable Reserves are based on geologic modelling of the anticipated yield from ROM Reserves.*

Total Marketable Coal Reserves are reported at a product specific moisture content (10–12% for Escarpment Export and Whareatea West, 5-8% at Escarpment Domestic, 14-16% and 22-23% at Takitimu and Canterbury) and at an air-dried quality basis, for sale after the beneficiation of the Total Coal Reserves, converted using ASTM D3180 ISO 1170. Reserve tonnages have been calculated using a density value calculated using approximated in-ground moisture values (Preston and Sanders method) and as such all tonnages quoted in this report are wet tonnes. All coal qualities quoted are on an Air Dried Basis.

14 *Stockton, Upper Waimangaroa, Rotowaro and Maramarua are owned by BT Mining Limited (65% Bathurst Resources Limited / 35% Talleys Energy Limited). On 1st of September 2017 BT Mining Limited took control of Solid Energy assets including two operating mines Rotowaro and Maramarua in the Waikato region of the North Island and the Stockton mine on the West Coast of the South Island.*

15 *Escarpment Domestic Reserves, Escarpment Export Reserves, Whareatea West Reserves, Takitimu Reserves and Canterbury Reserves 100 % Bathurst Resources Limited ownership.*

Resource Quality

The company is not aware of any information to indicate that the quality of the identified resources will fall outside the range of specifications for reserves as indicated in the above table.

Further resource and reserve information can be found on the company's website at www.bathurst.co.nz

Mineral Resource and Ore Reserves Governance and Estimation Process

Resources and Reserves are estimated by internal and external personnel, suitably qualified as Competent Persons under the Australasian Institute of Mining and Metallurgy, reporting in accordance with the requirements of the JORC code, industry standards and internal guidelines.

All Resource estimates and supporting documentation are reviewed by a Competent Person either employed directly by Bathurst or employed as an external consultant. If there is a material change in an estimate of a Resource, or if the estimate is an inaugural Resource, the estimate and all relevant supporting documentation is further reviewed by an external suitably qualified Competent Person.

All Reserve estimates are prepared in conjunction with pre-feasibility, feasibility and life of mine studies which consider all material factors.

All Resource and Reserve estimates are then further reviewed by suitably qualified internal management.

The Resources and Reserves statements included in Bathurst's 2017 Annual Report have been reviewed by qualified internal and external Competent Persons, and internal management, prior to their inclusion.

Competent Person Statements

The information on this report that relates to mineral resources for Deep Creek and the mineral reserves for Escarpment Export, Stockton and Whareatea West is based on information compiled by Sue Bonham-Carter who is a full time employee of Golder Associates (NZ) Ltd and is a Chartered Professional and member of the Australasian Institute of Mining and Metallurgy and member of Professional Engineers and Geoscientists of British Columbia, Canada. Ms. Bonham-Carter has a B.Sc. Engineering (Mining) (Hons) from the Queens University, Canada. Ms. Bonham-Carter has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2004 Edition and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms. Bonham-Carter consents to the inclusion in this report of the matters based on her information in the form and context in which it appears above.

The information in this report that relates to exploration results and mineral resources for Escarpment Domestic, Escarpment Export, Cascade, Coalbrookdale, Whareatea West, Millerton North, North Buller, Blackburn, Takitimu, Canterbury Coal, New Brighton, Rotowaro and Maramarua is based on information compiled by Hamish McLauchlan as a Competent Person who is a full time employee of Bathurst Resources Limited and is a member of the Australasian Institute of Mining and Metallurgy. Mr. McLauchlan has a B.Sc and M.Sc (Hons) majoring in geology from the University of Canterbury. Mr. McLauchlan has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. McLauchlan consents to the inclusion in this report of the matters based on his information in the form and context in which it appears above.

The information in this report that relates to exploration results and mineral resources for Stockton and Upper Waimangaroa is based on information compiled by Mark Lionnet as a Competent Person who is a full time employee of BT Mining Limited and is a member of the Australasian Institute of Mining and Metallurgy. Mr. Lionnet has a B.Sc (Hons) majoring in geology from the University of Witwatersrand. Mr. Lionnet has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Lionnet consents to the inclusion in this report of the matters based on his information in the form and context in which it appears above.

The information on this report that relates to mineral reserves for Escarpment Domestic, Takitimu, Canterbury and Maramarua is based on information compiled by Terry Moynihan who is a full time employee of Bathurst Resources Limited and is a member of the Australasian Institute of Mining and Metallurgy. Mr. Moynihan has a Bachelor of Technology (Mining) from the Otago School of Mines. Mr. Moynihan has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Moynihan consents to the inclusion in this report of the matters based on his information in the form and context in which it appears above.

The information on this report that relates to mineral reserves Rotowaro is based on information compiled by Martin Bourke who is a full time employee of BT Mining Limited and is a member of the Australasian Institute of Mining and Metallurgy. Mr. Bourke has a Bachelor of Engineering (Mining) and B.Sc (Chemistry) from Massey University. Mr. Bourke has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Bourke consents to the inclusion in this report of the matters based on his information in the form and context in which it appears above.

JORC Code, 2012 Edition – Table 1 Report for the Denniston Plateau 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary

Sampling techniques	• Multiple campaigns of data acquisition have been carried out on the Denniston Plateau over the past century.
	• Modern exploration campaigns include data from 2010:
	  ○ 280 PQ-HQ triple tube core (TTC) holes
	  ○ 96 production blast holes
	  ○ 13 outcrop trenches
	  ○ Down-hole geophysics are available for 185 of these modern drill holes.
	• Historic data includes
	  ○ 5 reverse circulation holes 2009-2010
	  ○ 67 PQ-HQ TTC holes from 1984-2010
	  ○ 23 NQ TTC holes from 1975-1978
	  ○ 74 rotary wash drill holes from 1948-1961
	  ○ 3 outcrop trenches
	  ○ 49 historic drill holes of various drilling methods
	  ○ 40 holes of this dataset have down-hole geophysics data available
	• Recent drilling has aimed to infill areas lacking data and to test reliability of historic data. Drilling has been concentrated on areas deemed closer to production therefore tighter drill spacing exists in Cascade and Escarpment than Whareatea West and Coalbrookdale.
	• Coal sampling was based the standardised Bathurst Resources Ltd (BRL) coal sampling procedures.
	• Coal quality ply samples have been selected on all coal logged by a geologist with 95% confidence that the ash will fall below 50%. Material with an estimated ash over 50% was not sampled unless the material was a sandstone parting of < 0.1m in thickness within a coal seam whereby it would be included within a larger ply sample.
	• Ply samples were generally taken over intervals no greater than 0.5m.
	• All analytical data has been assessed and verified before inclusion into the resource model.

Drilling techniques	• All BRL managed drilling campaigns have utilised the following drilling methods
	  ○ Full PQ Triple Tube Core (TTC)
	  ○ HQ Triple Tube Core only where necessary
	  ○ Open-holed overburden where applicable
	  ○ Logged production blast holes using top head hammer blast rig.
	• Historic drilling techniques include
	  ○ PQ Triple Tube Core
	  ○ HQ Triple Tube Core
	  ○ NQ Triple Tube Core
	  ○ Open-holed
	  ○ Rotary wash
	  ○ Reverse circulation
	• All exploration drill holes were collared vertically
	• PQ sized drilling was utilised to maximise the core recovery

Drill sample recovery	• Core recovery was measured by the logging geologist for each drillers' run (usually 1.5m) in each drill hole. If recovery of coal intersections dropped below 85% the drill hole was redrilled. Drillers were paid an incentive if coal recovery was above 90%. • In some instances the recovery of thin rider seams (< 0.5m) was poor due to the soft friable nature of the coal. Therefore the sample dataset for the two rider seams was not as evenly spatially distributed as the main seam. • Average total core recovery over the modern drilling campaigns was 95.6% with core recovery of coal at 93.6%. • Where small intervals of coal were lost, and was confirmed by geophysics, ash values were estimated using the results of overlying and underlying ply samples and the relative response of the open-hole density trace. • Geochemical sampling for overburden characterisation was also completed by taking representative samples of core on a lithological basis with a maximum sample length of 5m.

Criteria	Commentary
Logging	• BRL has developed a standardised core logging procedure and all core logging completed by BRL and its contractors has followed this standard. • All modern drill core has been geologically and geotechnically logged by geologists under the supervision and guidance of a team of experienced exploration geologists. • As much data as possible has been logged and recorded including geotechnical and rock strength data. • All core was photographed prior to sampling. Depth metre marks and ply intervals are noted on core in each photograph. • The geophysical logging company maintained and calibrated all tools as per their internal calibration procedures. Additionally, geophysics equipment was calibrated and tested using a calibration hole on the plateau with known depth to coal, thickness and quality. • BRL aimed to geophysically log every drill hole that intersected coal providing hole conditions and operational constraints allowed. The standard suite of tools run included density, dip meter, sonic, and natural gamma. • Where drill hole conditions were poor or mine workings were intersected only in-rods density was acquired. In-rods density produced a reliable trace for use in seam correlation and depth adjustment but was not used for ash correlations. • Down hole geophysical logs were used to aid core logging. Down hole geophysics were used to correlate coal seams, to confirm depths and thickness of coal seams and to validate drillers' logs. Geophysics were also used to accurately calculate recovery rates of coal.
Sub-sampling techniques and sample preparation	• For all exploration data acquired by BRL, an in-house detailed sampling procedure was used. Sampling and sample preparation were consistent with international coal sampling methodology. • Ply samples include all coal recovered for the interval of the sample. Core was not cut or halved. Ply sample intervals were generally 0.5m unless dictated by thin split or parting thickness. • All drilling in the recent campaigns has been completed using triple tube cored holes. No chip or RC samples were taken in these campaigns. Some historic RC and wash drilled holes have poor sampling methods and are excluded from the coal quality model. • Assay samples were completed at the core repository after transport from drill site in core boxes. Samples were taken as soon as practicable and stored in a chiller until transport to the coal quality laboratory. • A series of random duplicate samples representing 1.3% of the total number of samples from North Buller has been completed by CRL Energy ltd. The results of this duplicate testing were comparable to that reported by SGS New Zealand Limited (SGS).

Criteria	Commentary

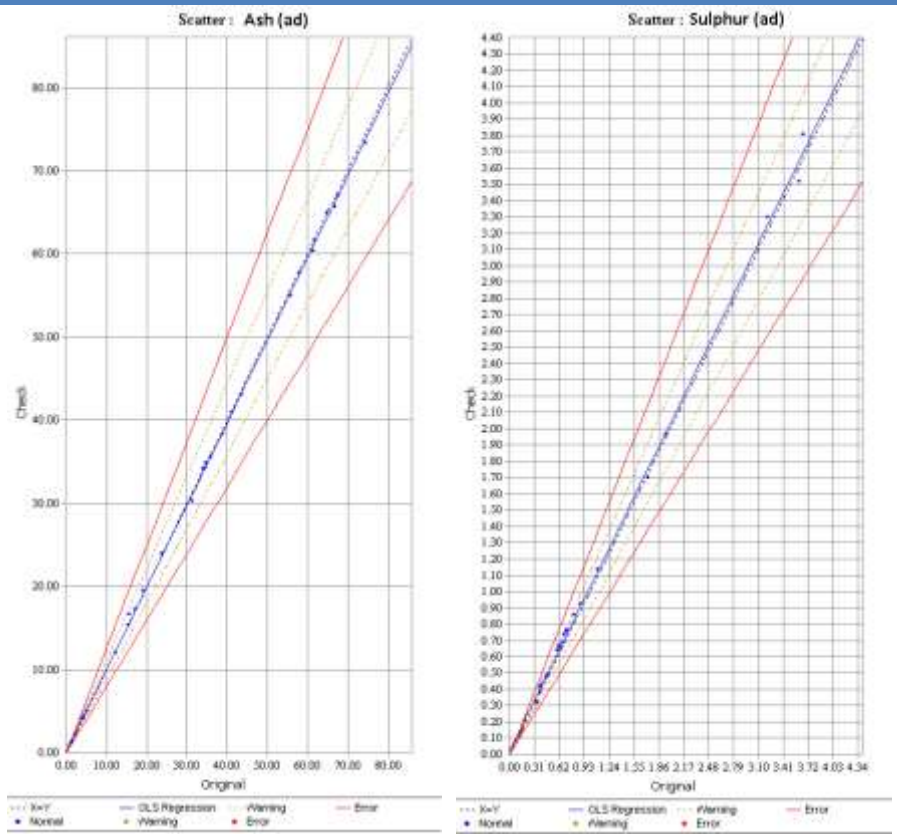


Figure 1 Scatter graphs showing the consistent results obtained for duplicate samples analysed at SGS (original) and CRL (check).

Quality of assay data and laboratory tests

- All coal quality testing completed for BRL has been carried out by accredited laboratory SGS.
- SGS have used the following standards for their assay test work:
  - Proximate Analysis is carried out to the ASTM 7582 standard
  - Ash has also used the standard ISO 1171
  - Volatile matter has also used the standard ISO 562
  - Inherent moisture has also used the ISO 5068
  - Total sulphur analysis is carried out to the ASTM 4239 standard
  - Crucible swell tests are completed using the ISO 501 standard
  - Calorific value results are obtained using the ISO 1928 standard.
  - Loss on drying data is completed using the ISO 13909-4 standard.
  - Relative Density is calculated using the standard AS 1038.21.1.1
- CRL completed much of the assay test work for samples collected prior to BRL taking over the projects.
- CRL used the following standards for their test work:
  - Inherent Moisture tests utilised the ISO 117221 standard
  - Ash tests utilised the ISO 1171 standard
  - Volatile matter tests utilised the ISO 562 standard
  - Calorific value tests utilised the ISO 1928 standard
  - Crucible swelling index testing was carried out using the ISO 501 standard
- Both SGS and CRL are accredited laboratories.
- BRL has completed a total of 56 composite samples. Composite samples have been tested using the following standards:

Test Work	Standard Followed
Loss on air drying	(ISO 13909-4)
Inherent Moisture	(ASTM D 7582 mod)
Ash	(ASTM D 7582 mod)
Volatile Matter	(ASTM D 7582 mod)
Fixed Carbon	by difference
Sulphur	(ASTM D 4239)
Swelling Index	(ISO 501)

Criteria	Commentary

Calorific Value	(ISO 1928)
Mean Maximum Reflectance All Vitrinite (RoMax)	Laboratory Standard
Chlorine in Coal	(ASTM D4208)
Hardgrove Grindability Index	(ISO 5074)
GIESELER PLASTOMETER	(ASTM D 2639)
AUDIBERT ARNU DILATOMETER	(ISO 349)
FORMS OF SULPHUR	(AS 1038 Part 11)
ASH FUSION TEMPERATURES	(ISO 540)
ASH CONSTITUENTS (XRF)	(ASTM D 4326)
Ultimate Analysis	Laboratory Standard

- All analysis was undertaken and reported on an air dried basis unless stated otherwise.

Verification of sampling and assaying

- Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the Buller Coalfield.
- Anomalous assay results were investigated and, where necessary, the laboratory was contacted and a retest undertaken from sample residue.
- 12 twinned holes have been drilled at the project with consistent results obtained between drill holes.
- Laboratory data is imported directly into an Acquire database with no manual data entry at either the SGS laboratory or at BRL.
- Assay results files are securely stored on a backup server.
- Once validated, drill hole information is "locked within the Acquire database to ensure the data is not inadvertently compromised.
- Localised weathering of coal near fault zones or near outcrops can affect coal assay results. There are a number of instances where this has occurred and only ash data from these samples has been retained for modeling purposes.

Location of data points

- Modern drill hole positions have been surveyed using Trimble RTK survey equipment.
- Some historic drill collars have been resurveyed. Some historic collars are not able to be located.
- Historic mine plans georeferenced by locating and surveying historic survey marks, survey pegs and mine portals drawn on mine plans.
- New Zealand Trans Mercator 2000 Projection (NZTM) is used by BRL for most of its project areas. NZTM is considered a standard coordinate system for general mapping within New Zealand. Historic data has been converted from various local circuits and map grids using NZ standard cadastral conversions.
- A LiDAR survey was carried out over the Denniston plateau in December 2011, with a repeat LiDAR survey flown over Cascade in January 2013. This LiDAR data provided very accurate topographic data used in the model. Contractors' specifications state that, for the choice of sensor and operating settings used for this project, the LiDAR sensor manufacturer's specification states 0.15m (1-sigma) horizontal accuracy and 0.1m (1-sigma) as the open ground elevation accuracy.
- Surveyed elevations of drill hole collars are validated against the LiDAR topography and ortho-corrected aerial photography.

Data spacing and distribution

- Data spacing for the Denniston Plateau project areas has been estimated by calculating the diameter required to fill the total area of the project divided by number of drill holes within that area.
- Escarpment has an average drill hole spacing of 114m
- Whareatea West has an average drill hole spacing of 257m
- Coalbrookdale has an average drill hole spacing of 198m
- Cascade has an average drill hole spacing of 76m
- Drill hole spacing is not the only measurement used by BRL to establish the degree of resource uncertainty and therefore the resource classification. BRL uses a multivariate approach to resource classification.
- The current drill hole spacing is deemed sufficient for coal seam correlation purposes.
- Geostatistics have been applied to the Denniston dataset with positive results being obtained. Variography results have been applied to grade estimation search

Criteria	Commentary
	parameters. • The samples database is composited to 0.5m sample length prior to grade estimation. Any samples with composited length of less than 0.1m are not included in the estimation. Compositing starts at the top of seam and small samples are not distributed or merged.
Orientation of data in relation to geological structure	• All exploration drilling has been completed at a vertical orientation. Deviation data was acquired by BRL during modern campaigns and showed little to no deviation in those holes. Holes without deviation plots are assumed to be vertical. • Any deviation from vertical is not expected to have a material effect on geological understanding as the average drill hole depth in the dataset is 65m with the deepest coal intersection of 131m (at 60m depth a 1° deviation would produce a horizontal deviation at the end of hole of 1m with negligible vertical exaggeration). • The majority of the deposit presents a shallow seam dip between 5° – 15°. • Vertical drilling is considered to be the most suitable drilling method of assessing the coal resource on the Denniston Plateau.
Sample security	• Stringent sample preparation and handling procedures have been followed by BRL. Ply samples are collected and recorded from drill core, bagged and placed within a locked chiller prior to being dispatched for analysis. • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core.
Audits or reviews	• BCL has reviewed the geological data available and considers the data used to produce the resource model is reliable and suitable for the purposes of generating a reliable resource estimate. • Results of a duplicate sample testing program comparing SGS and CRL results for ply assays have shown a strong correlation with no laboratory bias. • Senior geologists undertake monthly audits of the sample collection and analysis.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• BCL owns and operates a number of coal exploration and mining permits on the Denniston Plateau, northwest of Westport, New Zealand. • BRL has 100% ownership in the following coal permits on the Denniston Plateau:

Permit	Operation	Expiry
Mining Permit 51279	Escarpment	23/06/2022
Mining Permit 41456	Coalbrookdale	14/05/2017
Mining Permit 41332	Coalbrookdale	14/05/2015
Mining Permit 41274	Coalbrookdale	29/05/2035
Mining Permit 41455	Cascade	14/05/2017
Exploration Permit 40591	Whareatea West	19/12/2015
Exploration Permit 40628	Buller	10/01/2015

- BRL have submitted an application for a subsequent Mining Permit to replace EP40591 and it is reasonably expected that this permit application will be granted
- An appraisal extension application (AE) for EP40628 and an extension of duration for MP41332 have been submitted to NZP&M and the application is currently being processed. It is reasonably expected that these permit applications will be granted
- The Denniston Plateau Resource Model covers the Sullivan Coal Mining Licence 37161 (underground) and Ancillary Mining Licences 37161-2, and 37161-3. These three permits are owned by Solid Energy NZ Ltd (SENZ). No resources have been reported within these areas.
- A royalty payment to the Crown is payable on all coal mined from the Plateau at a rate of $2 per tonne.
- The acquisition of the Coalbrookdale permits includes a life of mine royalty based on a fixed percentage of FOB revenue.
- The majority of the land on the Denniston Plateau is Crown land administered by the Department of Conservation as Stewardship Areas (Part V Section 25 Conservation Act 1987). These areas are managed to protect the natural and historic values of the region. Stewardship areas can be disposed of, but disposal is subject to a public process and it must be clear that their retention and continued management would not materially enhance the conservation or recreational values of adjacent land.
- An access arrangement for the Escarpment project was granted by the Minister of Conservation in May 2013.
- Bathurst was granted resource consents for the Escarpment project by an independent panel of commissioners representing the local councils in August 2011. These resource consents were then the subject of a number of appeals. The final consents were granted in October 2013.
- Production from Escarpment began in 2014 and the mine was placed in care and maintenance in May 2016.
- The intent of the company is to continue to compete for other markets for this high quality coal and the company is continuing to develop plans for the export operation.

Exploration done by other parties	• Historic geological investigations and reports for Denniston exist, covering much of the past 125 years. • The Historic drilling database includes the following drill holes compiled from the historical data records.

Table 1 Table listing historic drilling dataset.

Criteria	Commentary

Years	Agency	Range of Collar ID	# Holes	Drilling Method	# Holes in structure model	# holes in quality model	# holes wi Geophysic Available
Multiple	Various	200 - 254	49	Various	36	1	0
1948 – 1950	State Coal Mines	525 – 569A	47	Rotary wash drill	44	32	1
1950 – 1951	State Coal Mines	750 - 895	7	Rotary wash drill	5	3	0
1957 – 1961	State Coal Mines	916 - 984	20	Rotary wash drill	16	2	0
1975 – 1978	State Coal Mines	1070 - 1142	23	NQ triple tube core/open hole	20	12	0
1984 – 1986	Applied Geological Associates (AGA)	1270 - 1495	21	Open hole CSR and triple tube core	16	8	14
1997	Solid Energy NZ Ltd	1509 - 1512	4	PQ wash drill and triple tube core	2	2	4
2005	Eastern Corp	CC01 – CC07	7	PQ wash drill and triple tube core	2	1	1
2005 – 2006	Eastern Corp/ Restpine	WW01 – WW11	11	PQ wash drill and triple tube core	11	9	8
2007	L&M Coal	DEN01 – DEN05	5	HQ wash drill and triple tube core	5	4	4
2008	L&M Coal	DEN01A – DEN09	8	PQ wash drill and triple tube core	5	4	4
2009 – 2010	Eastern Corp	CC08 - CC12	5	RC	3	2	0
2009 – 2010	L&M Coal	DEN10 – DEN18	11	PQ wash drill and triple tube core	11	5	6
2010	L&M Coal	Various	3	Trenches	3	3	0

- All historic data has been checked and validated against original source documents by L&M, Golder Associates (NZ) Ltd and again by BRL staff post acquisition of the project. Where data was deemed unreliable it was removed from the relevant resource model dataset.

Geology

- The project is located in the Buller coal field, New Zealand.
- The Denniston Plateau is a north west dipping plateau bounded to the west by the Papahaua Overfold / Kongahu Fault zone, and to the east by the Mt William Fault.
- The defined resource is contained within the Eocene aged Brunner Coal Measures. The coal measures consist of a fluviatile sequence of fine to very coarse sandstones, siltstone, mudstone and coal seams. The deposit generally has a single extensive seam with some localised splitting of the seam. The coal thickness can be up to 12m but generally averages 4-5m vertical thickness.
- The dip of the plateau reflects the dip of the coal bearing sediments with localised exposures of basement units at structural highs and within incised gullies.
- Little to no Quaternary deposits or soils overlay the Brunner Coal Measures with overburden generally around 40-50m.
- A strong trend in coal rank exists across the deposit with coal rank increasing from east to west.

Drill hole Information

Table 2 Table listing modern drilling dataset.

Years	Agency	Range of Collar ID	# Holes	Drilling Method	# Holes in structure model	# Holes in quality model	# holes with Geophysics Available
2010 - 2012	Rochfort Coal	WW12 - WW25	14	PQ OH and Triple tube Core	14	13	12
2011 - 2016	Buller Coal	DEN19 - DEN263	244	PQ OH and Triple tube Core	215	206	156
2011 - 2013	Cascade Coal	CC13 - CC46	32	HQ/PQ OH and Triple tube Core	21	19	25
2012	Cascade Coal	CCT01 - CCT02	2	Trenches	2	2	0
2012 - 2016	Buller Coal	DENT01 – DENT29	29	Trenches	28	28	0
2012-2016	Cascade Coal	CCB16 – CCB60	59	Logged Production Blast holes	50	0	2
2013-2016	Buller Coal	DENB001 – DENB184	184	Logged Production Blast holes	81	3	0

- Exploration drilling results have not been reported in detail.
- The exclusion of this information from this report is considered not to be material to the understanding of the report.

Data aggregation methods

- Exploration drilling results have not been reported in detail.
- The maximum ash cut off for the building the Denniston structure model was set at 50%, however some thin assay samples where ash is greater than 50% are included in the coal quality dataset due to the structure model including that interval within a coal seam.
- Resources have been reported with an ash cutoff of 45%.

Relationship between

- All exploration drill holes have been drilled vertically and the coal seam is generally gently dipping. Therefore seam intercept thicknesses are representative of the true

Criteria	Commentary
mineralisation widths and intercept lengths	seam thickness. • Dip metre and deviation plots are available for some holes. For those without this data it is assumed that a vertical orientation is achieved and, as most coal intersections are less than 100m in depth, any deviation from vertical would produce only a very minor effect to the reported depth to coal and coal thickness.
Diagrams	• The Appendix includes a number of plans that display the deposit geographically.
Balanced reporting	• Exploration drilling results have not been reported. This has avoided any issues with unbalanced or biased reporting. • The Competent Person does not believe that the exclusion of this comprehensive exploration data within this report detracts from the understanding of this report or the level of information provided.

Other substantive exploration data	• Representative bulk samples have been collected and tested for
	  ○ Coking behavior
	  ○ Material handling properties
	  ○ Washability analysis
	• BRL has completed and compiled a total of 56 coal quality composite samples over the Denniston Plateau.
	• A number of bulk marketing samples have been completed.
	• BRL has tested 784 overburden samples for overburden classification for acid forming and neutralising potential.

Further work	• Further infill drilling is planned for the near future for the eastern side of the Escarpment permit in the 'Brazil Block' to improve the definition of the coal resources within that area. • A thorough coal washability testing programme for the western margin of Whareatea West is planned.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly checked and validated against original logs and results tables. • BRL utilises an Acquire database to store and maintain its geological exploration dataset. • The Acquire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values, standardised look-up tables for logging codes etc. • Manual data entry of assay results is not required as results are imported directly. • Drill hole and mapping data is exported directly into Vulcan from Acquire.
Site visits	• Hamish McLauchlan (the Competent Person) has worked for the past 12 years in the Buller coal field and on the Denniston project for the past 5 years..
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification. • BRL uses a multivariate approach to resource classification which takes into account a number of variables. • BRL considers the amount of geological data sufficient to estimate the resource. • Uncertainty surrounds the historic mine workings, both in the quality and quantity of coal extracted and surveying and positioning of underground workings. This is reflected in the resource classification • BRL has used a total of 16 synthetic holes in the structure model primarily to constrain seam thicknesses around the edges of coal pods that have been worked by historical underground mines. • A quaternary gravel deposit truncates the coal measures as an unconformity within the Cascade valley. This unconformity surface has been incorporated into the resource model. Some uncertainty surrounds the surface and therefore the coal resource within the area of influence. The quaternary gravel deposit only covers an area of ~2.5Ha or < 0.1% of the total resource area, much of which has already been extracted at the Cascade opencast mine. • Effect of alternate interpretations is minimal when taken as a portion of total resources. • A small number of digital interpretation strings are used to constrain the coal structure

Criteria	Commentary
	grids within the model. These strings are primarily located near fault boundaries.
Dimensions	• The main coal seam varies in thickness from less than 1m thick up to 14m thickness locally. • Depth of cover varies from 0m at outcrop to over 150m at the eastern margin of the Mt William Fault. Inferred and Indicated resources include coal up to 130m below surface, while the measured resource includes coal up to 75m below surface. • The deposit roughly covers a 6.5km by 4.5km area. The model is bounded by the Escarpment Fault to the south, the Waimangaroa Gorge to the north, and the Mt William Fault to the east.
Estimation and modeling techniques	• All available and reliable exploration data has been used to create a geological block model which has been used for resource estimation and classification. • All exploration drilling data is stored in Acquire and exported into a Vulcan drill hole database. • Mapping data is stored in Acquire and exported into Vulcan. • A horizon definition has been developed and is used in the stratigraphic modeling process. • The model is subdivided into four distinct domains, each separated by large faults that dissect the project area. Each area is modeled for structure and grade separately. • Vulcan 9.0.2 is currently used to build the structure model. Grid spacing is 10m x 10m. This spacing was selected to be 1/5 of the minimum average point of observation spacing within a domain area. • Vulcan's stacking method was used to produce the structure model. This method triangulates a reference surface (coal roof) and then stacks the remaining horizons by adding structure thickness using inverse distance. • The maximum triangle length for the reference surface was set to 1400m. • Based on geostatistics for full seam thickness the maximum search radius for inverse distance is 1500m. The inverse distance power is set to 2, with maximum samples set to 8. • Structure grids are checked and validated before being used to construct the resource block model. • Vulcan 9.0.2 is used to build the block model and to grade estimate. The process is automated using a Lava script. • The coal structure surfaces for each domain, along with LiDAR topography surface, quaternary unconformity surface, and other mining related surfaces for Cascade and Escarpment are used to build the block model. The block dimensions are constructed at 10m x 10m. Vertical thickness for coal blocks is 0.5m, whilst overburden blocks are set to 5m maximum thickness. • Overburden characterisation for AMD purposes is modeled in a separate estimation step utilising the same stratigraphic structure grids. • Grade estimation is performed utilising Vulcan's Tetra Projection Model. The main seam, and two discontinuous rider seams in each domain is estimated for ash, sulphur, air dried moisture and in-situ moisture. Volatile matter, crucible swell index, and calorific value are estimated on the ash pass. • Geostatistics hav been performed on the coal quality dataset to examine and define the estimation search parameters for each variable. The maximum search radius is set to the maximum range of influence found in the semi-variogram for each variable. • Grade estimation is computed using an inverse distance squared function. • Various methods have been used to check the validity of the block estimation. This includes manual inspection of the model, QQ plots of the model qualities vs coal quality database and other comparison tools. • Some mining reconciliation has been completed on the resource model to examine model accuracy within the Cascade mining area. To date, the results are within the bounds of expected variability based on resource classification used and mining rates. No other bulk reconciliation has been completed. • Resource tonnages within the model have been discounted where the resource falls within an area of historic underground workings. The primary mining method utilised historically on the Denniston Plateau is bord and pillar mining. Some extraction using a water based coal extraction (hydro mining) when pillaring has also taken place. Three different classifications have been attributed to the historic workings, with each classification having a different extraction rate. Historic extraction rates are estimated using mining extraction reports, and tonnage reports. The extraction rates used to discount coal tonnages in the resource model are as follows:

Criteria	Commentary
	<table><tr><th>Mining Method</th><th>Extraction Rate</th></tr><tr><td>First worked</td><td>35%</td></tr><tr><td>Pillars extracted</td><td>53%</td></tr><tr><td>Hydro worked</td><td>73%</td></tr></table> • Behre Dolbear Australia Pty Limited (BDA) notes that Bathurst has adopted a procedure over old workings of discounting the estimated resources to account for the depletion of coal from underground mining and due to possible structures not identified by drilling. Based on reconciliations from mining to date at Takitimu and Cascade, this approach has been established as a reasonably reliable, if somewhat conservative, method of estimating resources where there are clearly areas of depletion. BDA accepts that this appears to be a reasonable approach, but cautions there will be areas where the resources may differ from the estimates.
Moisture	• Resource tonnages are reported using natural moisture, calculated from air dried relative density, air dried moisture and in situ moisture using the Preston Sanders equation. • Block air dried density is calculated from the block air dried ash value using the ash-density relationship derived from the project dataset. • A fraction (< 0.1%) of blocks were not estimated for moisture and have been assigned average values based on the permit in which the block is located.
Cut-off parameters	• Structure grids have been developed based on a 50% ash cutoff. Some higher ash samples are retained within the coal quality dataset to allow simplification of the seam model especially in Whareatea West where higher ash partings become more abundant. • No lower cutoff has been applied. There is an inherent minimum limit to ash samples in modern results due to a laboratory detection limit of 0.17%. Ten modern ply samples fall below this detection limit, while a further 62 historic ply samples have ash values at or below this limit. • Coal resources are reported down to a seam thickness of 0.5m (one block) with an ash cutoff of 45%.
Mining factors or assumptions	• Minimum seam thickness is set at 0.5m or one block in height. Ash cutoff of 45% is used. • No other mining factors such as strip ratios, mining losses and dilutions have been applied when developing the resource model. • Recent Whittle optimizations undertaken by Golder Associates (NZ) Ltd indicate that the majority of the resource is economically recoverable at present using standard opencast mining methods. The remainder (<5%) of the resource would become economically viable if coal prices return to the high prices of the last 5 years.
Metallurgical factors or assumptions	• BRL's current understanding of coal washability and yields on the Denniston Plateau has driven the determination to use a 45% ash cutoff for reporting resources within the project area. • No other metallurgical assumptions have been applied in estimating the resource.
Environmental factors or assumptions	• Open pit mining and coal transport will be conducted amid environmentally and culturally sensitive areas. The proposed mining sites are a likely habitat for endangered snail and kiwi species. High rainfall rates, acid-generating overburden and historical acid mine drainage are all concerns that have been addressed. • Mining within the Escarpment permit has all necessary approvals in place. Similar environmental values occur within the remainder of the Denniston Plateau. It is assumed that any constraints imposed on BRL in terms of environmental protection will not be prohibitive to economic resource extraction. • No other environmental assumptions have been applied in developing the resource model.
Bulk density	• A total of 580 relative density (air dried) sample results are available for the Denniston project area. • The samples are distributed throughout the project area and the sample set covers a complete range of ash values from <0.17% to 93.5%. • From this dataset an ash-density curve was generated with a co-efficient of determination of R^2=0.9869. • After grade estimation, density was then calculated using the block ash value and the derived density equation. • An in-situ density value was then computed using the Preston Saunders method.

Criteria	Commentary
	• Insitu - moisture determinations have been collected from drill core and from bulk samples.

Classification	• BRL classifies resources using a multivariate approach.
	• Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction and proximity to faults.
	• Closely spaced drilling with valid samples increases the confidence in resource assessments.
	• The confidence is reduced by:
	  ○ A block being within an underground worked area due to extraction rate uncertainty.
	  ○ A block being within 20m of an underground worked area due to uncertainty with historic survey of the workings and georeferencing of mine plans.
	  ○ A block is in an area of steep structure dip, usually in areas of large faults.
	  ○ A block lies within an area of thin or splitting seam resulting in uncertainty of geological continuity.
	• If an area is within an area worked by historic underground mines the resource is considered as Inferred as a minimum.

Audits or reviews	• A comprehensive internal review of the resource model has been carried out by BRL. The 2015 Resource Model represents a major update to the 2012 Resource Model and incorporates all the drilling and exploration data acquired since 2012.
Discussion of relative accuracy/ confidence	• BDA has reviewed the resource and reserve estimates and has visited the sites of all currently planned operations and the existing mines. BDA has examined the methodology used to estimate the resources and reserves and is satisfied that the processes have been properly conducted. The estimation methodology is generally in accordance with industry practice and BDA considers the estimates can be regarded as consistent with the principals of JORC. • Statistical comparisons between the resource block model and the coal quality data set have been carried out and are within expected ranges. Techniques utilised include QQ plots and probability plots. • Cascade mine utilises the Denniston resource model for mine planning and scheduling. Production reconciliation for the last 12 months showed that ROM coal production was more than 10% in excess of that modeled.

Section 4 Estimation and Reporting of Ore Reserves

Escarpment Domestic

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• A 3D Resource Block model of topography, structure and quality are used for in-situ resource definition. • Areas where previous underground extraction has taken place were depleted from the model based on historic recovery factors described by BRL in JORC Section 3 of this table. • Mine design blocks are applied to the in-situ resource model to generate the raw reserves used to create a separate mine reserve model. • The mine model also reflects working sections or seam aggregations, mining methods and associated loss and dilution impacts. The mine reserve model is used as the basis for Ore Reserves reporting. • Mineral Resources are exclusive of Ore Reserves. • Escarpment mine was split into Domestic and Export coal for reporting in 2015.
Site visits	• The Reserves Competent Person, Terry Moynihan of Core Mining Consultants (CMC) visits the site regularly.
Study status	• Escarpment is a mine project that is currently in care and maintenance. The reportable • Ore Reserve is based on the life of mine plan. It has been determined the mine plan is technically achievable and economically viable, and that material modifying factors have been considered. • Escarpment was previously operating; supplying coal into the domestic (New Zealand) based industrial market.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

For JORC Reserves reporting purposes, detailed mine design and schedules are constructed to generate detailed cash flow schedules. This work includes identifying the mining sequence, equipment requirements, and incremental and sustaining capital requirements

</td></tr>
<tr><td>Cut-off parameters</td><td>

Pit optimisation runs were completed to determine economic pit limits using BRL supplied cost and revenue data (see Figure 14)

</td></tr>
<tr><td>Mining factors or assumptions</td><td>

Coal loss and dilution factors are also applied and vary by the equipment type uncovering the various coal seams (i.e. excavator size). Roof and floor coal loss thickness is set at 10cm and roof and floor waste dilution thickness ranges from 0cm–5cm.
Underground (UG) factors are applied in the mining model using triangulations based on digitised historic plans of the underground and surface workings. UG factors applied are as follows:

<table>
<tr><th>Mining Method</th><th>UG Extraction Rate</th><th>Mining Loss</th><th>Mining Contaminated</th><th>Mining Dilution (%)</th></tr>
<tr><td>First worked</td><td>35%</td><td>10%</td><td>15%</td><td>7%</td></tr>
<tr><td>Pillars extracted</td><td>53%</td><td>10%</td><td>24%</td><td>8%</td></tr>
<tr><td>Hydro worked</td><td>73%</td><td>5%</td><td>22%</td><td>11%</td></tr>
</table>

Seam aggregation logic pre-determines what is defined as mineable coal by applying working section tests based on minimum coal thickness of 50cm, and a maximum raw ash of 30% on an air-dried basis.
The Escarpment mine utilised truck and shovel for waste and coal movement. The operations are supported by additional equipment including dozers, graders and water carts.
Moisture Adjustments: Moisture is modified during both the mining and processing operations. In-situ moisture is determined by the process described in Section 3 and is the base point for all moisture adjustments. Recoverable Coal Reserves are stated on a ROM moisture basis, as received by the processing plant. Marketable Coal Reserves are stated on a product moisture basis, as sold.

</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>

The ROM coal produced at Escarpment is not washed resulting in 100% yield for the operation.
Product coal specifications include ash, sulphur, moisture and calorific value.

</td></tr>
<tr><td>Environmental</td><td>

All environmental approvals are currently in place to operate the mine for the majority of the planned reserve blocks.
A small area in the south east is outside current approval boundaries. It is reasonably expected that any modifications to existing agreements or additional agreements that will be required to operate in this area can be obtained in a timely manner.
Waste rock characterisation results indicate that a significant proportion of waste rock is potentially acid forming.
Waste rock that has been classified as having potentially acid forming potential is actively managed on site with special placement requirements and procedures in the dumps. Costs associated with these practices are included in the site cost model.

</td></tr>
<tr><td>Infrastructure</td><td>

All necessary infrastructure is in place and operational for the current proposed operation.

</td></tr>
<tr><td>Costs</td><td>

All major infrastructure is in place at Escarpment for the industrial domestic market.
All operating costs were based on the 2015 Escarpment actual costs provided by BRL and include allowances for royalties, commissions, mining costs, train loading and administration.
Transport charges are based on actual contracted prices.
Product specifications were provided by BRL and the logic for penalties for failure to meet specification confirmed.
CMC reviewed all costs and they are considered reasonable.

</td></tr>
</table>

Criteria	Commentary
Revenue factors	• Pricing for the majority of the coal to be sold is at the mine gate. • The remaining product coal would be trucked to the east coast of the South Island where it would be blended before sale • Product specifications and penalties for failure to meet specifications were provided by BRL.
Market assessment	• A major customer for this coal ceased operations in June 2016. • The search for a replacement market is ongoing however this has not been secured to date. Current markets for this high quality coal are around 35,000 tonnes per annum and feasibility studies have shown that the mine is suboptimal at that market scale • The intent of the company is to continue to compete for other markets for this high quality coal and the company is continuing to develop plans for export operations.
Economic	• The inputs to the economic analysis of the Escarpment mine are derived capital and operating cost estimates outlined in the "Costs" section of this table. The source of the inputs is real and the confidence satisfactory.
Social	• BRL have key stakeholder agreements in place
Other	• All mining projects operate in an environment of geological uncertainty. • Updating of approvals is an ongoing annual process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Classification	• Classification of Ore Reserves has been derived by considering the Measured and Indicated Resources and the extent of historic underground workings within the pit shells. • For the Escarpment operation, Indicated Resources and Measured Coal Resources are classified as Proven Coal Reserves, as the Escarpment Domestic reserves will be in sections of historic underground workings where the level of confidence in mineral resources is already adequately reduced by the underground workings. • The Inferred Coal Resources have been excluded from the Reserve estimates. • The result reflects the Competent Person's view of the deposit.
Audits or reviews	• Internal review and reconciliation by BRL of the Reserves estimate has been completed.
Discussion of relative accuracy/ confidence	• The pit shell is supported by approximately 65% of Measured Coal Resources. The basis of the estimate is the FY16 Escarpment operating costs and two year budget forecasts. Allowance for cost savings achieved on site have not been factored into cost assumptions. • Analysis of the coal quality has been undertaken by independent laboratories working under international standards of method and accuracy. Escarpment product coal is produced from blended bypass coal products. • The level of accuracy will continue to be dependent on the ongoing update of the geological model and monitoring of the Modifying Factors affecting the coal estimate. • Geotechnical studies have been completed for the wider Escarpment project. These studies will be reviewed as the operation develops. • Internal peer review and reconciliation by BRL and CMC of the Reserves estimate has been completed. • BRL have an ongoing reconciliation process aimed at testing the appropriateness of the assumed Modifying Factors for the project. • Accuracy and confidence of modifying factors are generally consistent with the current operation.

Appendix

Maps and plans discussed within Table 1 are reported below.

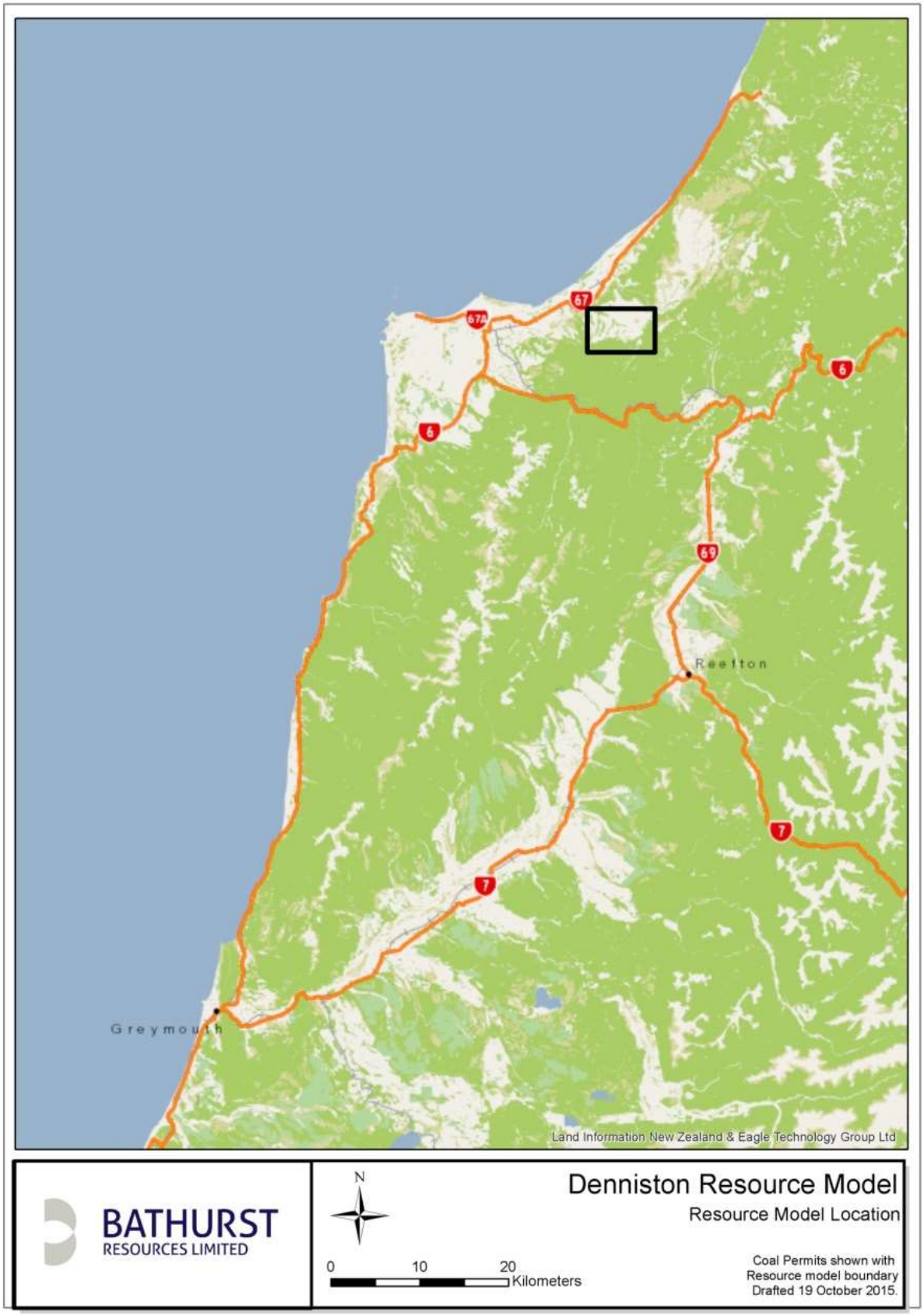


Figure 2 Location Plan

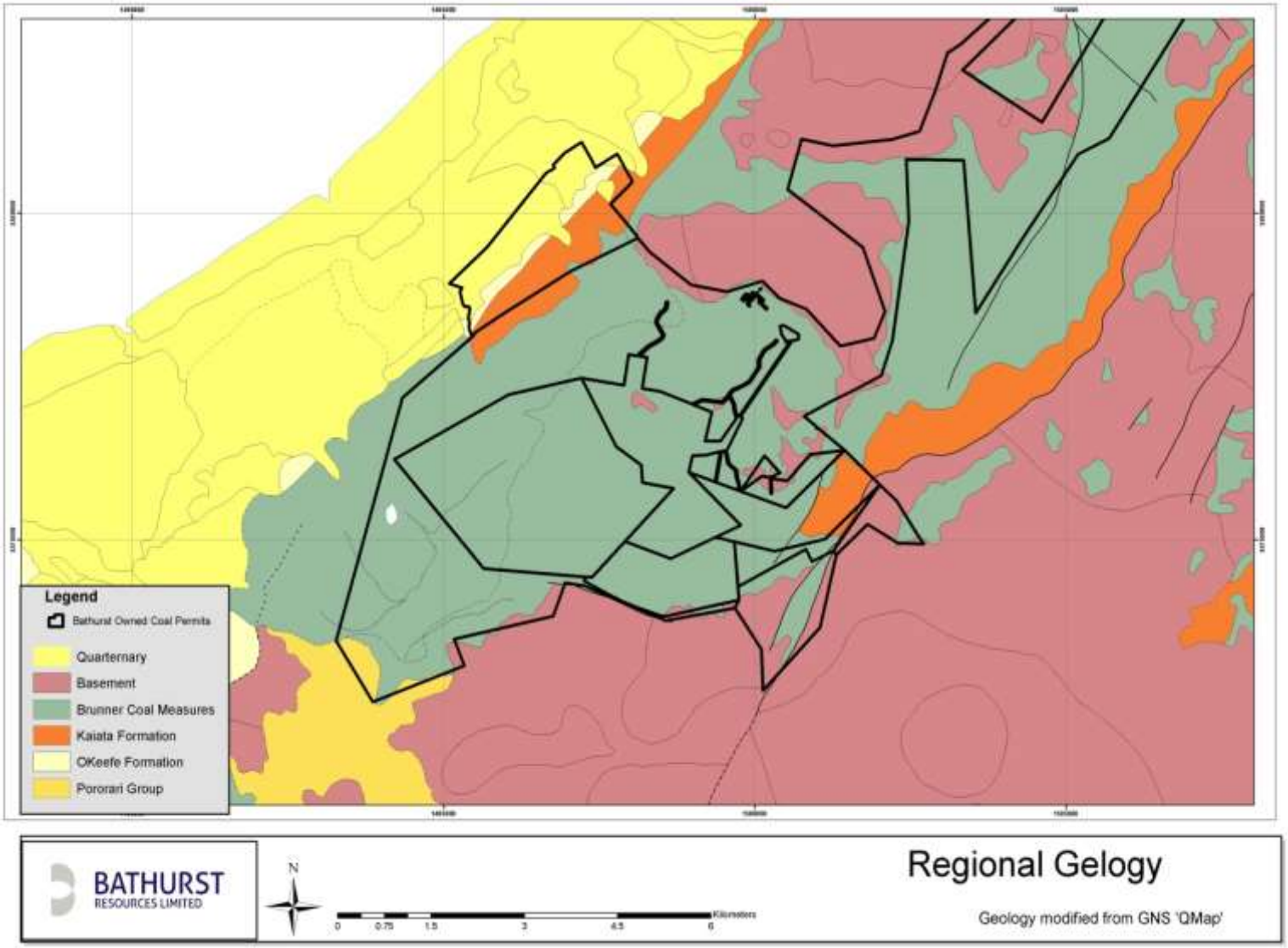


Figure 3 Regional Geology

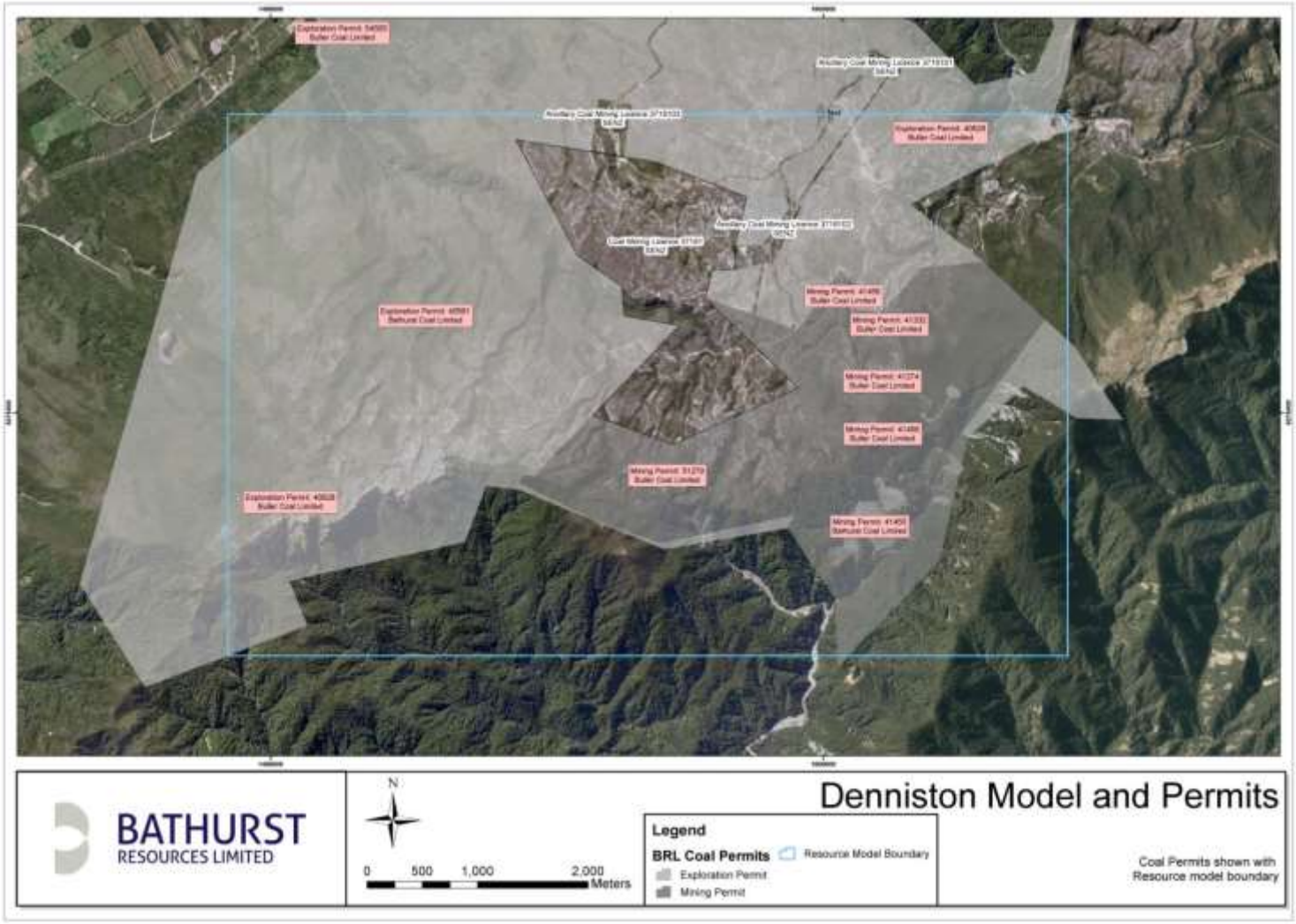


Figure 4 Denniston Plateau and the coal permits within the resource model area

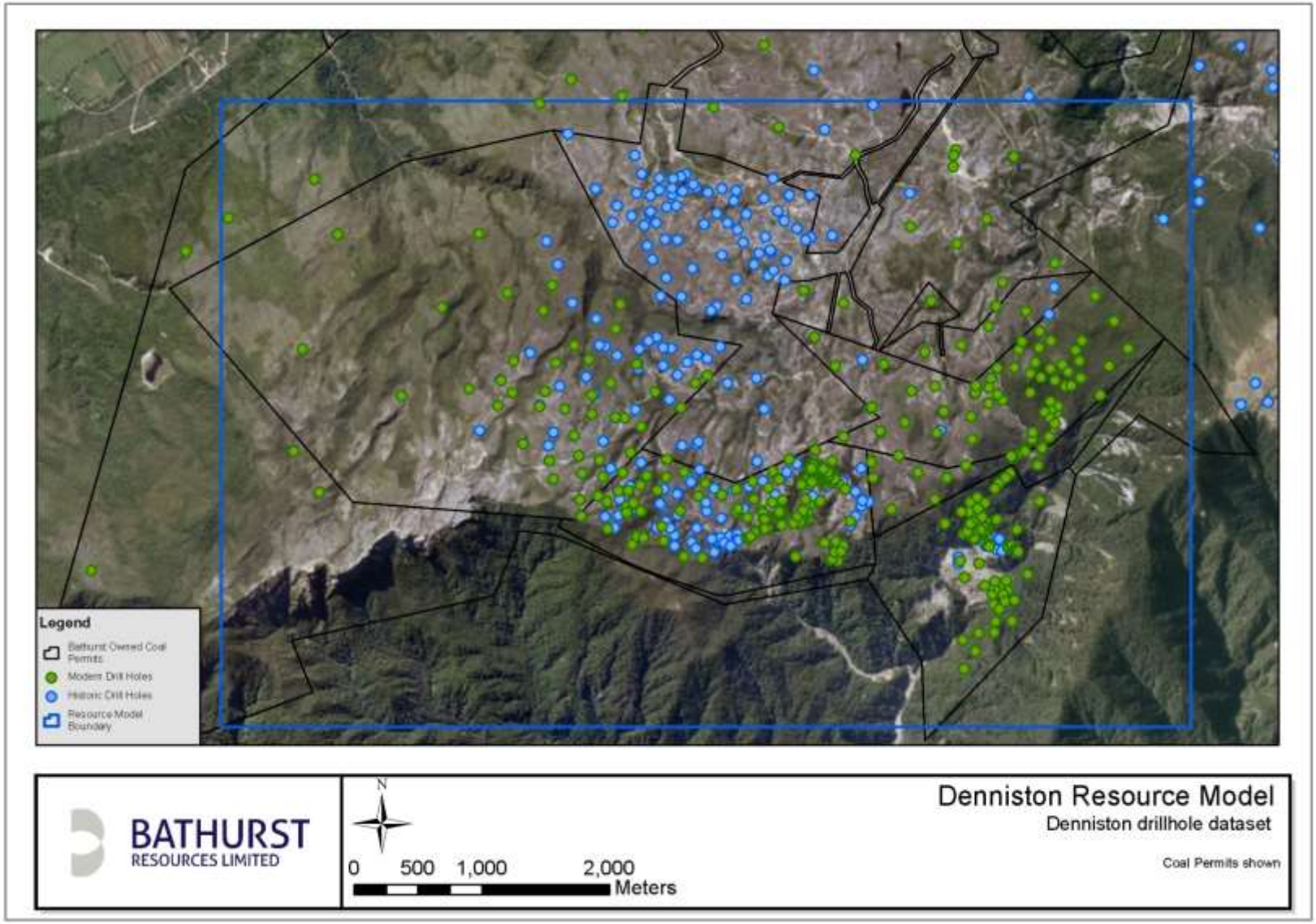


Figure 5 Plan showing the drilling dataset used to produce the resource model

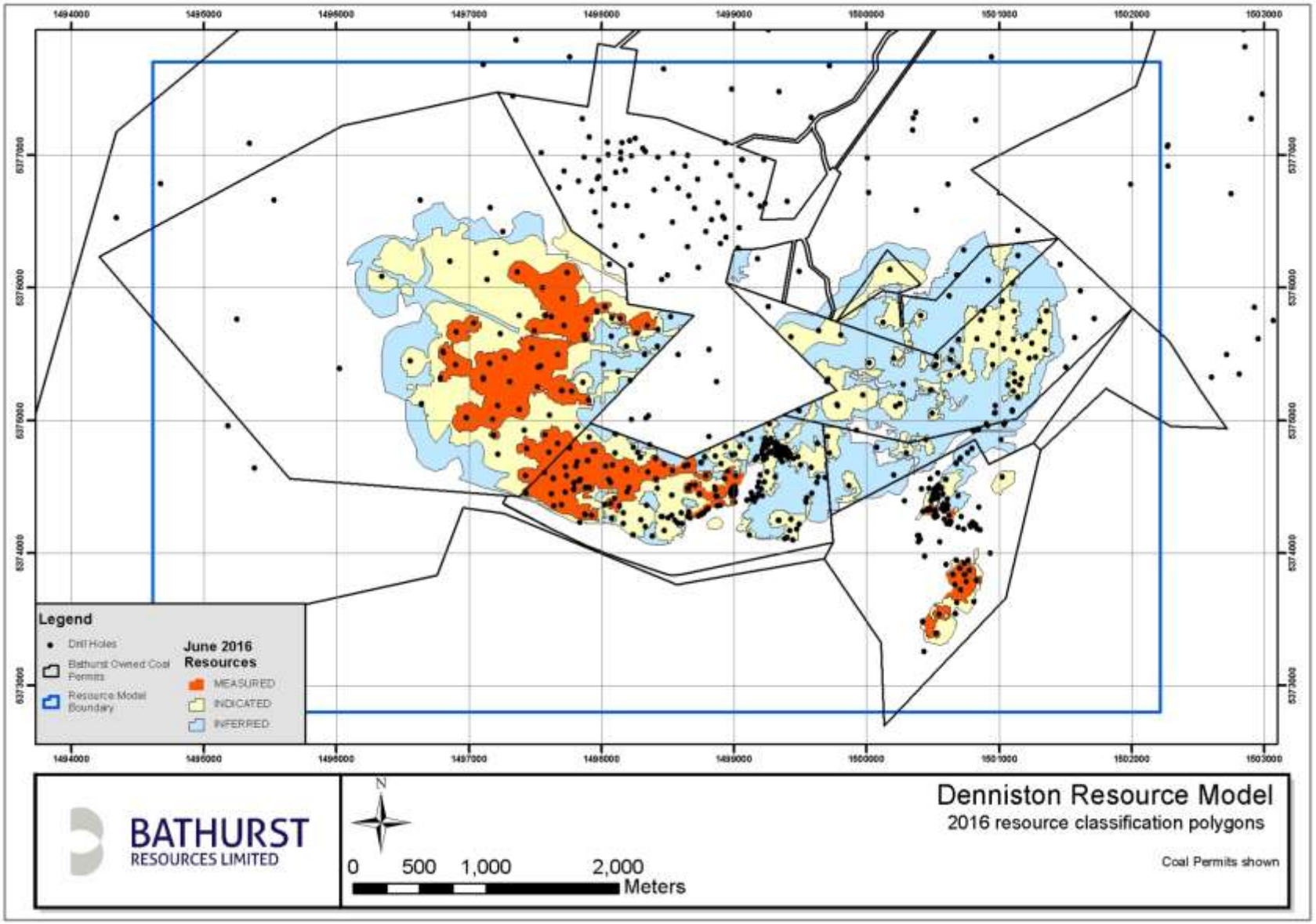


Figure 6 Plan showing the 2017 resource classification polygons

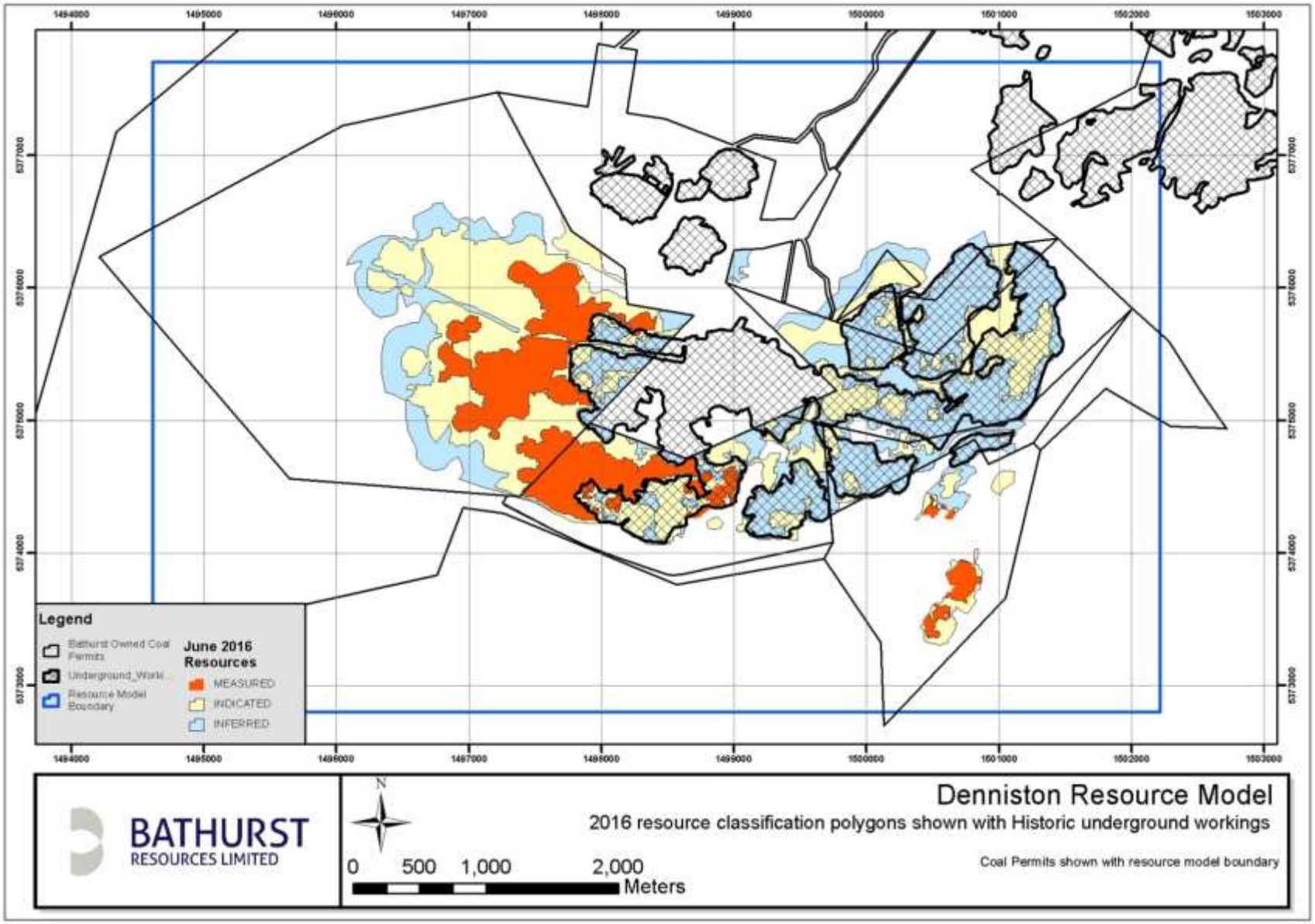


Figure 7 Extent of Underground Workings and 2017resource classification

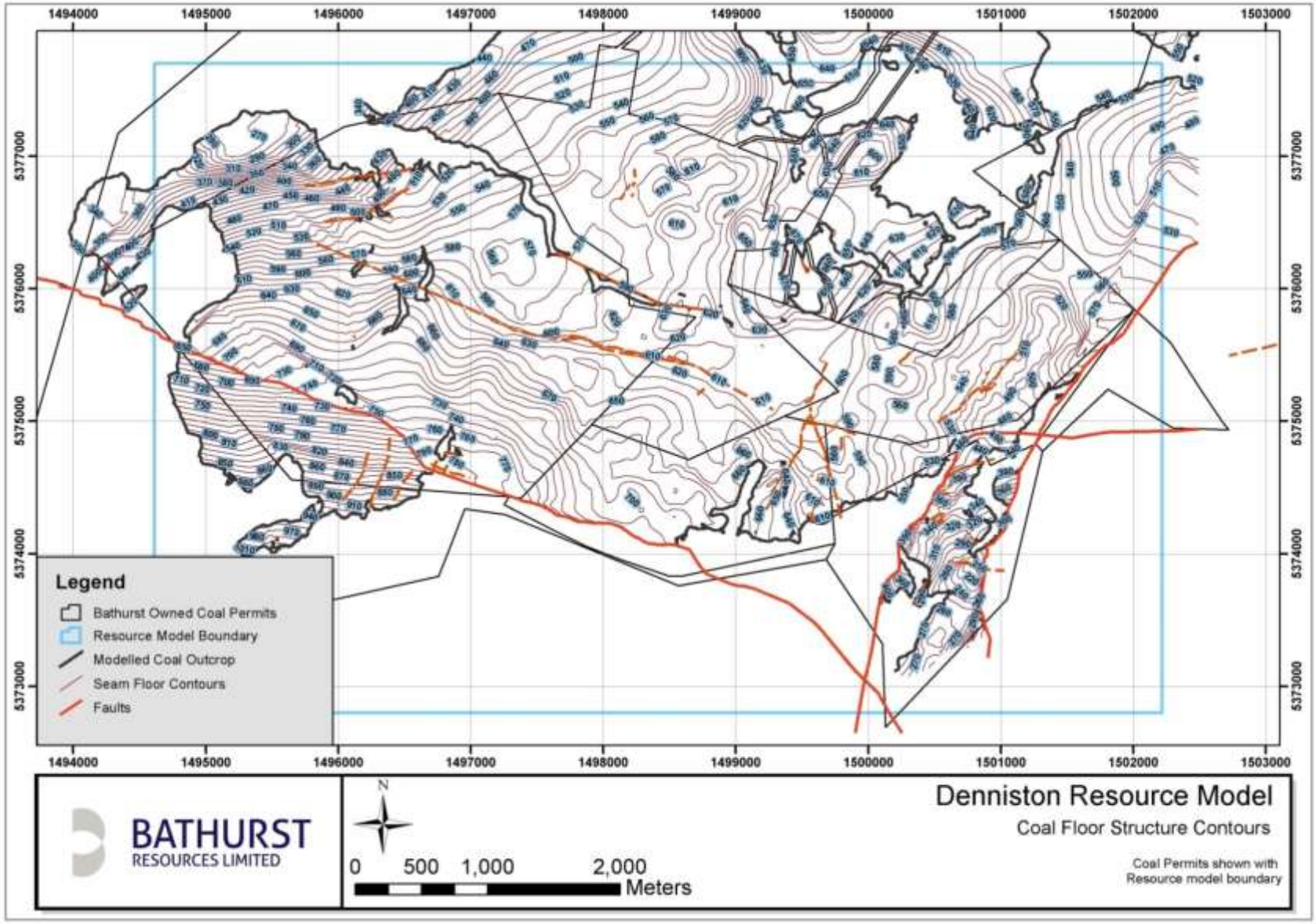


Figure 8 Plan showing the structure contours of coal seam floor

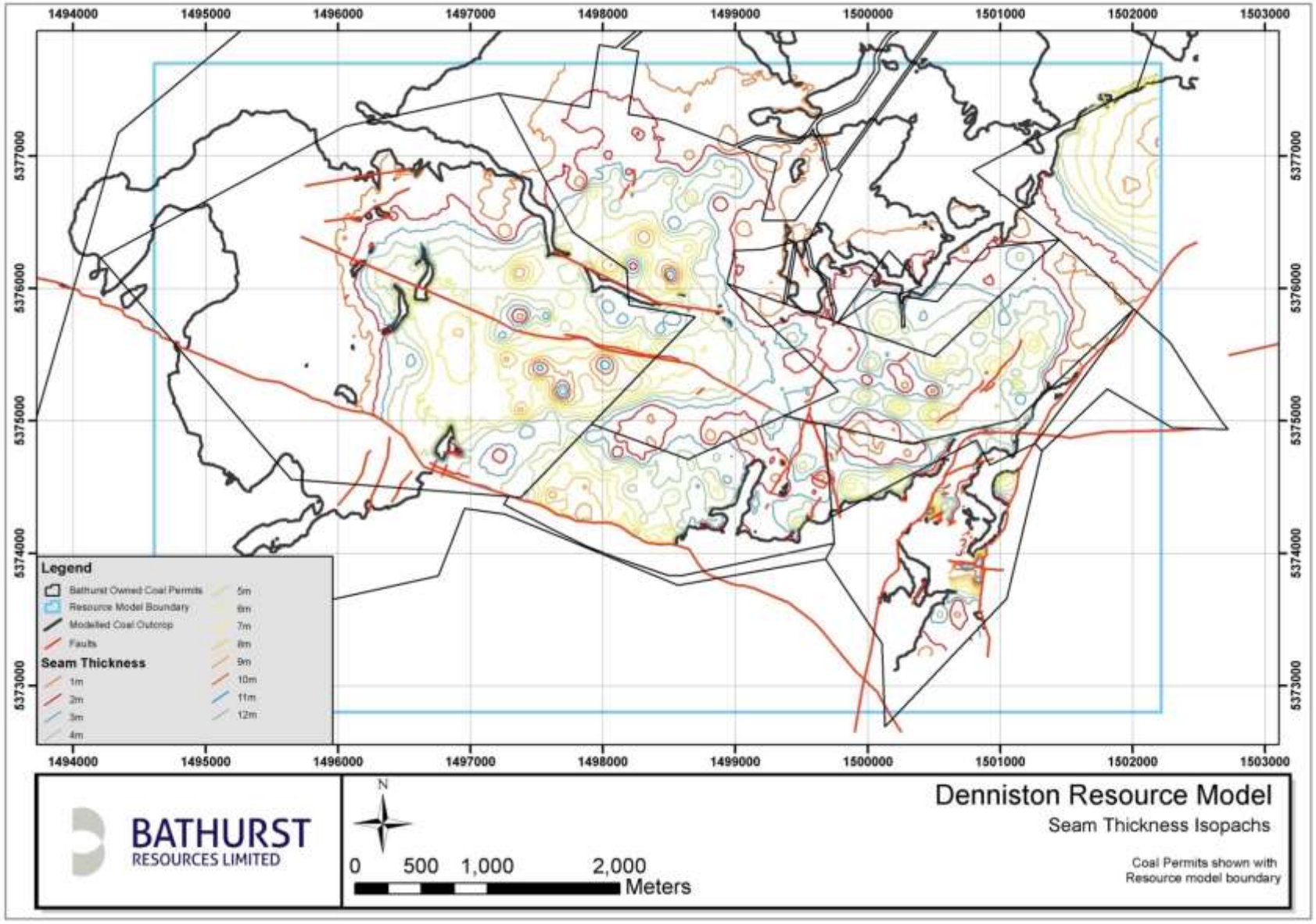


Figure 9 Plan showing full seam thickness contours over the model area

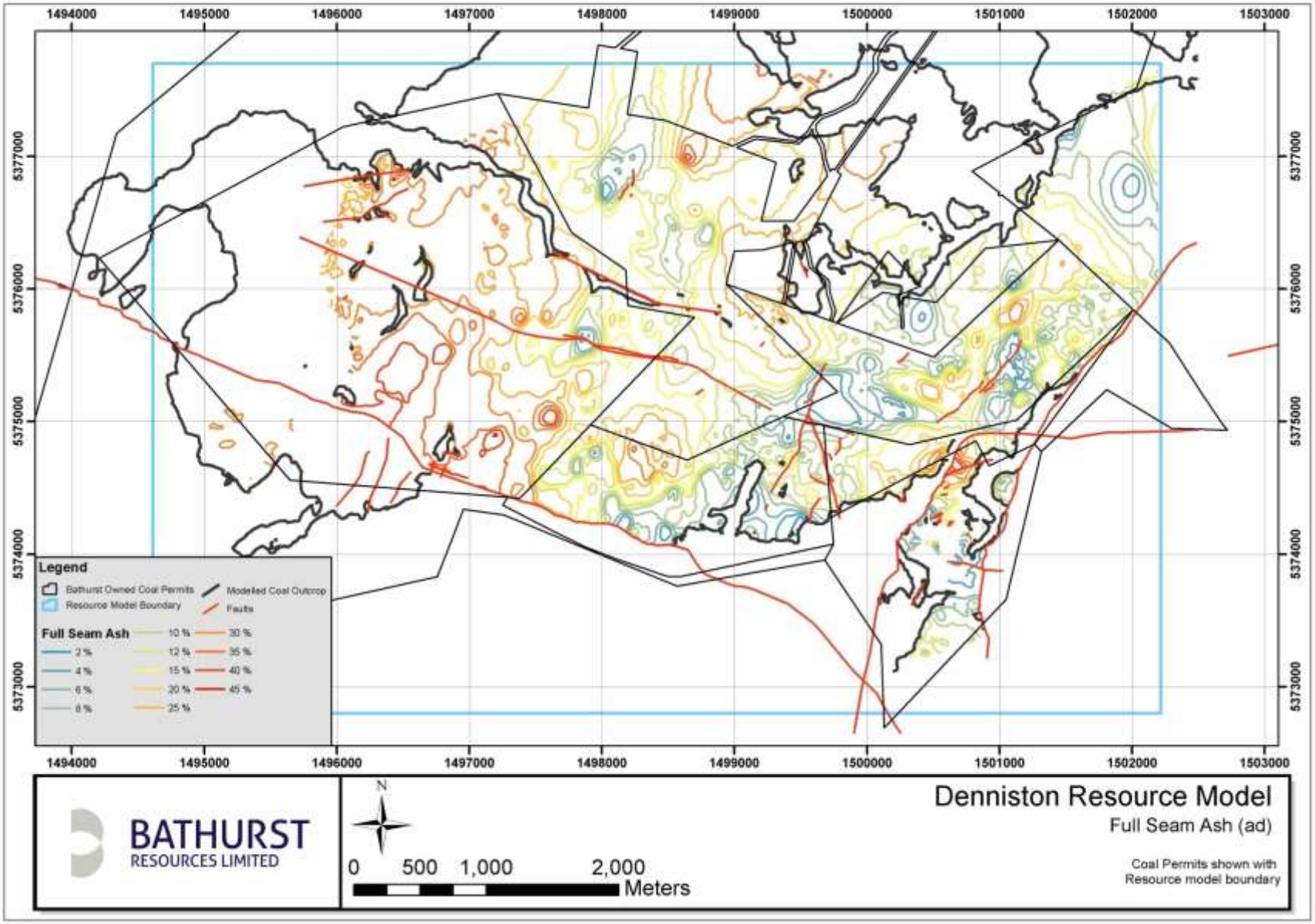


Figure 10 Plan showing in-situ full seam ash on an air dried basis as modelled over the deposit area

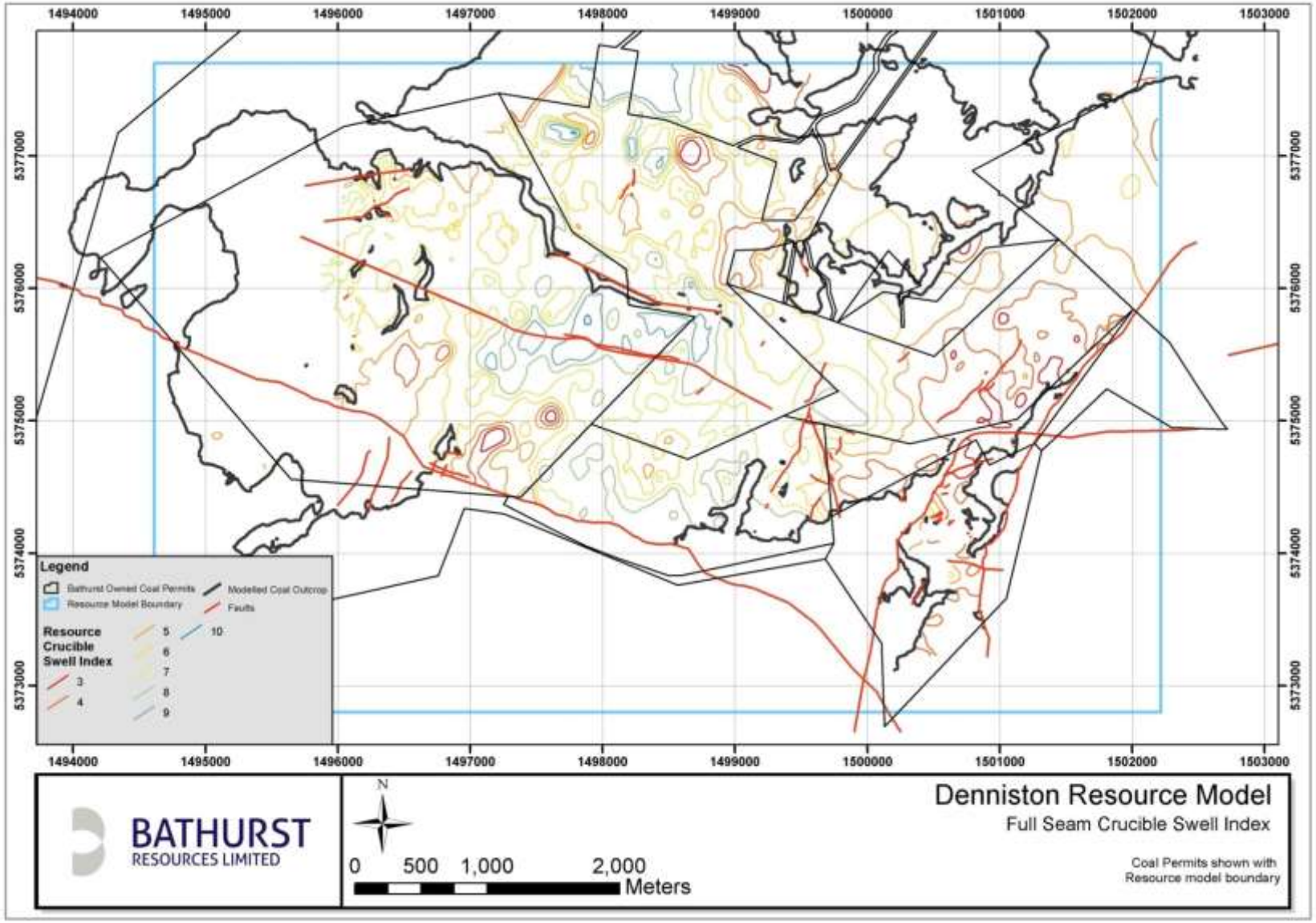


Figure 11 Plan showing the crucible swelling index (CSN) for coal across the resource
Note that these indicate in-situ values not product CSN after beneficiation due to washing

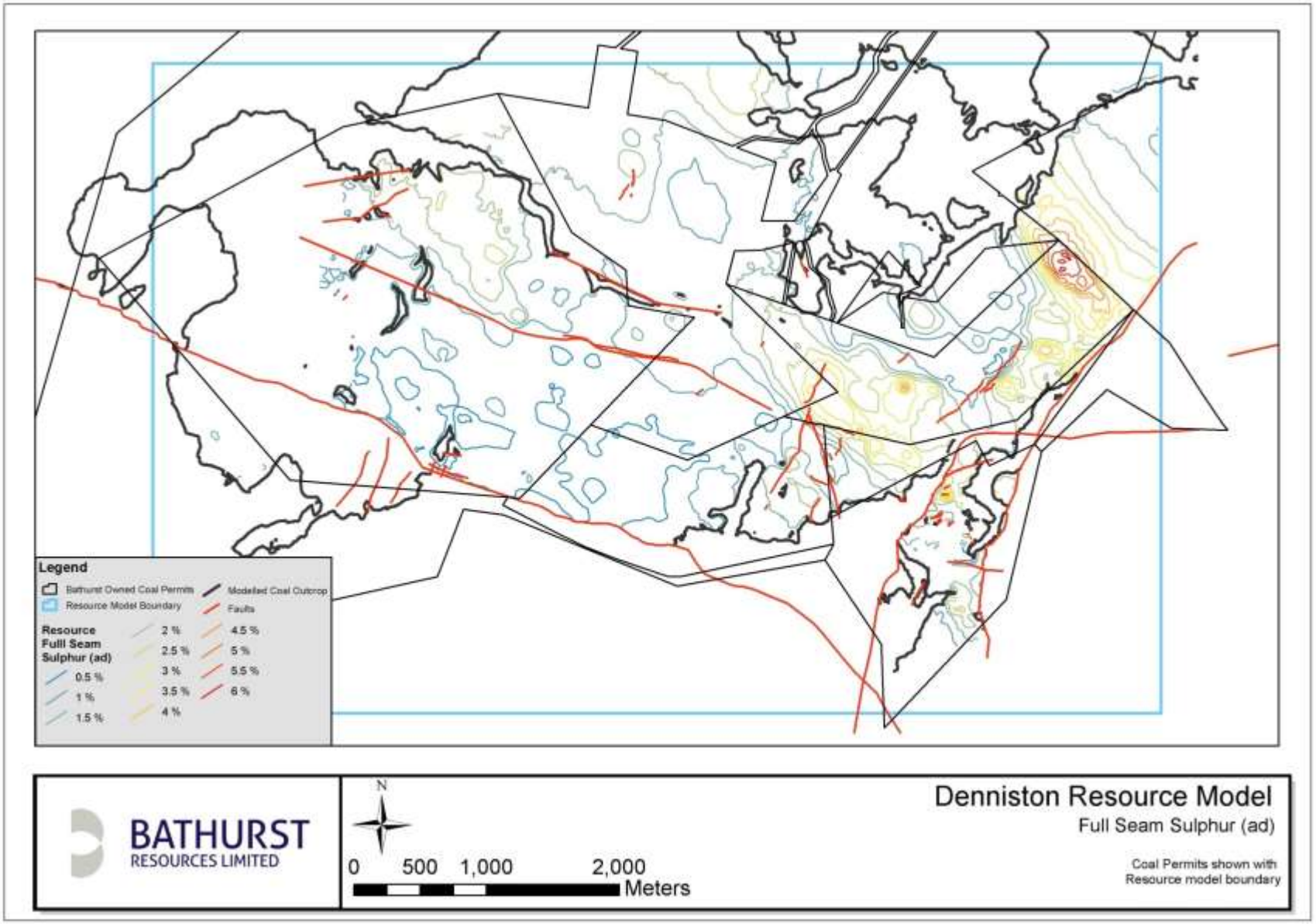


Figure 12 Plan showing full seam sulphur on an air dried basis across the resource area

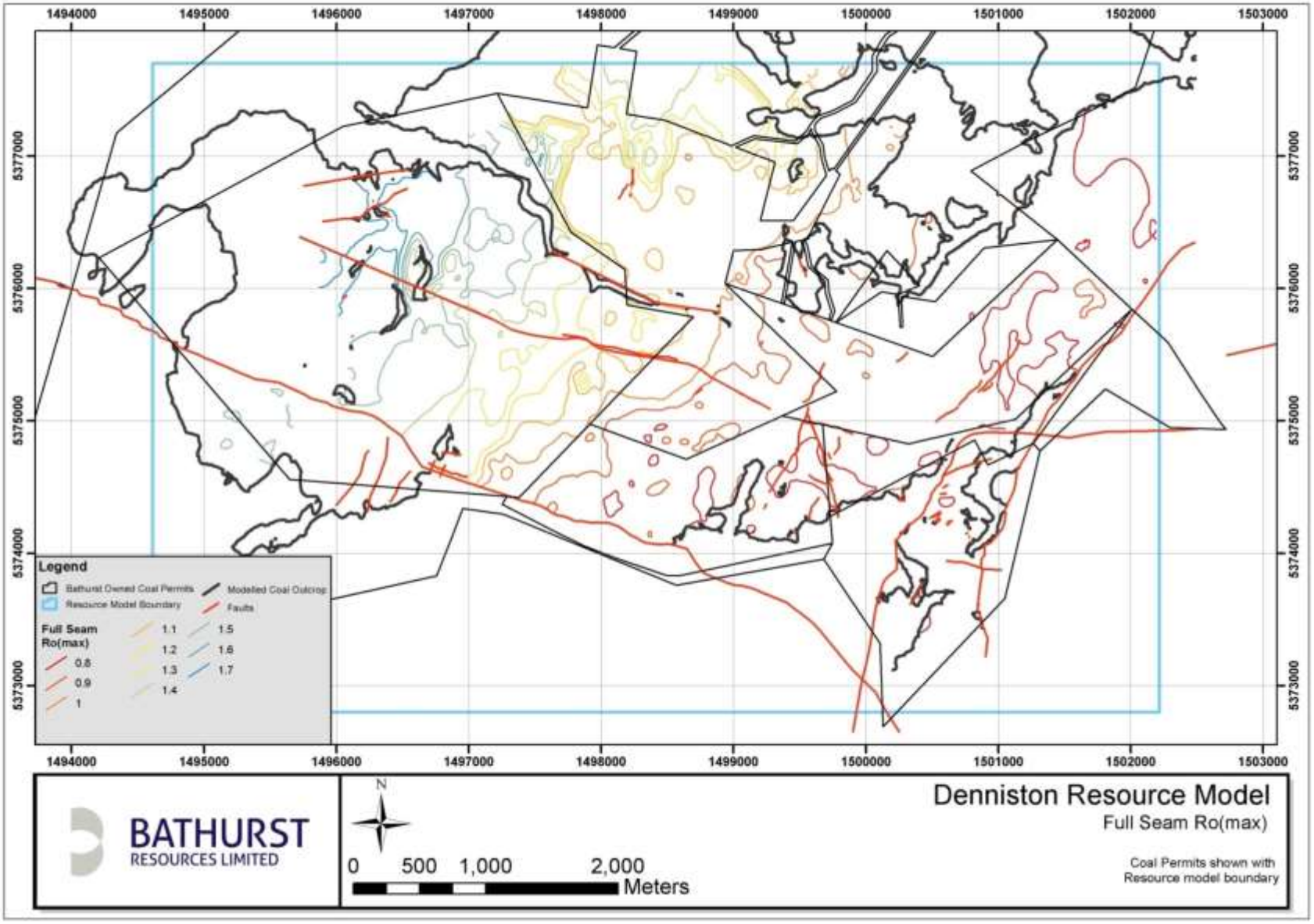


Figure 13 Plan showing the Ro (max) of coal. This shows the rank trend across the deposit

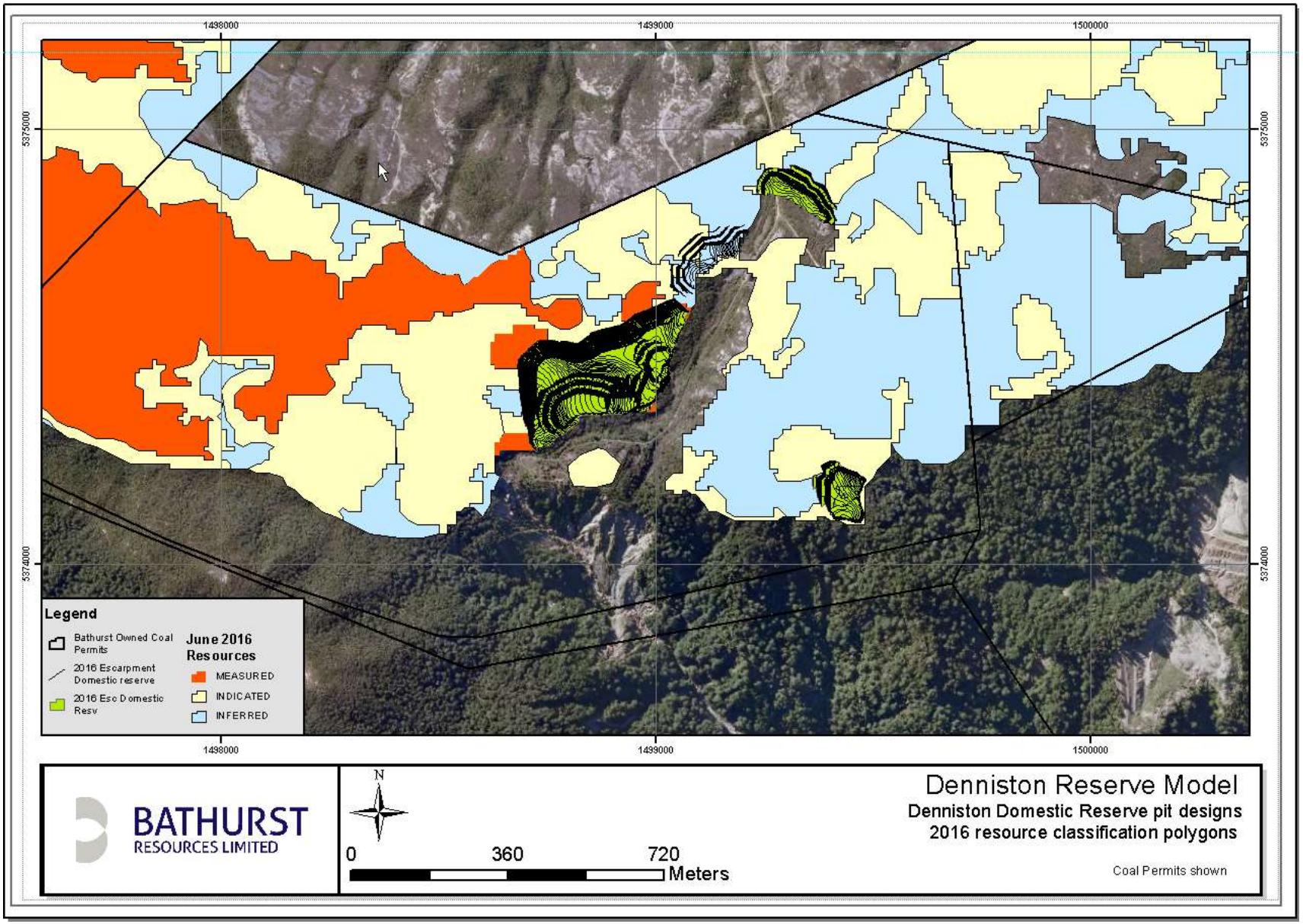


Figure 14 Escarpment domestic reserves pit shells

JORC 2012 Edition – Table 1 Report for Stockton 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Diamond Core (DC) drilling sampling for coal quality analysis took place using PQ (85mm) or HQ (64mm) coring methods for coal seams. The entire core is retained for analysis. • DC sampling is carried out under Stockton Specific protocols and QAQC procedures • Composited samples are created at the laboratory from individual plies that are thickness weighted. These composited samples are compiled for additional coal property test work. • Reverse Circulation (RC) chip samples are collected via a cyclone attached to a reverse circulation percussion drill rig. Sampling is primarily undertaken on 0.5m intervals through the coal seam (~6kg), and indicative 1m rock samples (~70g). The entire coal sample is retained for analysis. • Channel cut samples have been taken in areas of accessible outcrop, with an aim to obtaining sample intervals representing 0.5m of the true thickness. • The quality of drill core,RC chip samples, and channel samples are continuously monitored by site geologists.
Drilling techniques	• Multiple campaigns of data acquisition have been carried out on the Stockton site over the past century • Drilling has been undertaken using the following techniques - Diamond Core (triple Tube, PQ core), - Open hole (Tungsten drag bit, PQ size) - Reverse Circulation (PQ sized face sampling bit), and - Blade bit • Some drill collars had had open hole pre-collars. • The bulk of the drill holes have been drilled vertically due to the shallow dipping morphology of the deposit and due to its close proximity to the surface. • No core has been orientated
Drill sample recovery	**Diamond core** • Standard industry techniques are employed for recovering drilled core samples from drillholes. Core is obtained by PQ (83mm) diameter coring techniques, using triple tube operations, providing good core recovery, averaging >80% over the entire drill hole (inclusive of non-coal lithologies). On average recovery of coal is 90%. • PQ core diameter is considered to provide a sample of sufficient volume to be representative of the in situ material and provides adequate sample mass to undertake the variety of raw coal tests together with composited sample analysis when required. • In poor ground conditions HQ sized rods, and therefore core were used to ensure that the drill hole was completed without affecting the integrity of the drill core and or loss of drilling equipment. • Downhole geophysics has been undertaken on most of the diamond core holes. A combination of geophysical tools, including Density, Natural Gamma, Calliper, Sonic, Dipmeter, Acoustic Scanner, and Verticality have been run down holes. All tools are calibrated on a regular and systematic basis. All geophysical logging work has been conducted by a contractor (currently Weatherford). Sample interval and recovery recorded in the field by drillers is validated and adjusted if required using geophysics during core logging and sampling. • When drillholes are geophysically logged, the geophysical logs are correlated / validated against the core to determine core/chip recovery, while ensuring drill depths recorded in the field by the drillers are correct. • Core photography is undertaken on all diamond core.

Criteria	Commentary
	Reverse Circulation drilling chips • RC chip samples from the reverse circulation percussion drillholes is recovered directly from the rods using a cyclone system. The entire sample interval is retained for coal quality analysis. Sample interval of 0.5m produces a sample between 5 - 7kg • For Non-coal lithologies an indicative sample (~70g) from each meter is retained for geological logging. • RC generated samples with poor recovery (<3kg) are not submitted to the laboratory for analysis. • Should there be poor recovery for the entire coal seam the hole is re-drilled if there is no specific reason for the poor recovery (eg presence of underground workings within the coal seam) • BT Mining Limited is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred • Downhole geophysics has been undertaken on some reverse circulation drill holes. A combination of geophysical tools, including Natural Gamma, Calliper, Dipmeter, and Verticality have been run down holes. All tools are calibrated on a regular and systematic basis. All geophysical logging work has been conducted by contractor (currently Weatherford). Sample interval and recovery recorded in the field by drillers is validated and adjusted if required using geophysics after core logging and sampling. Once drilled drillholes are geophysically logged, the geophysical logs are correlated/validated against the recorded lithological logs to ensuring drill depths recorded in the field by the drillers are correct.
Logging	• All diamond core samples are checked, measured, marked up and finally photographed before logged in a high level of detail. • All diamond core samples are geologically logged in a high level of detail down to centimetre scale. Intervals are logged for lithology, colour, weathering type, stratigraphy, texture, hardness, RQD and defects. Logging is conducted using a defined set of codes. All percussion drillholes chip samples are geologically logged as per the sampling frequency, with 1m samples used to define the non-coal lithologies (overburden), and 0.5m samples for coal and other non-coal lithologies surrounding or contained within coal seam partings. The geological logs are validated against laboratory results. • Every discrepancy between the measured length of the core and the driller's length marked on the core blocks is investigated. Discrepancies are resolved by site geologists prior to sampling with the use of geophysical logs. • The entire lengths of RC drill holes are logged. Where no sample was returned due to voids/cavities it is recorded as such. • Drill holes that have been geophysically logged with a suite of tools (as described above) are analysed extensively to validate, confirm and correct coal seam depths. Validation and, if required, correction of the geological logs against geophysics is undertaken to ensure accuracy and consistency. Verticality, calliper, density and natural gamma tools are checked regularly with standard calibration assemblies. The density calibrations are performed routinely - with blocks of known densities (aluminium and/or water). **Trench samples** • Trench samples have a basic geological lithological log with the lithology being validated against the coal ply result. • All trench, diamond drill and reverse circulation data is captured in a standardized BT Mining Limited AcQuire database.
Sub-sampling techniques and sample	**Diamond Core** • No splitting of core is undertaken in the field or during sampling.

Criteria	Commentary
preparation	• Sample selection is determined in-house and is documented in Stockton core sampling procedure. Clean coal core has been sampled to a maximum of 0.5m plies, and adjusted for core loss and lithological variations. • Associated high ash coal intervals and partings were sampled separately to assess potential dilution effects where they are <0.5m thick. Intervals with non-coal material (>50% Ash) are excluded from sampling. • Samples are placed into pre-labelled plastic bags to ensure proper Chain of Custody, and then transported by BT Mining Limited personal to the laboratory for testing. The laboratory continues with the Chain of Custody requirements. Sample preparation is undertaken according to Stockton Standards. **RC chips** • No splitting of coal interval chips is undertaken. • Non-coal intervals are sub sampled directly from the cyclone. • Sample selection is determined in-house and is documented in a core sampling procedure. Associated high ash coal intervals and partings are sampled separately to assess potential dilution effects where they are adjacent to coal seams. Intervals with non-coal material (>50% Ash) are excluded from sampling. • Samples are placed into pre-labeled plastic bags to ensure proper Chain of Custody, and then transported by BT Mining Limited personal to the laboratory for testing. The laboratory continues with the Chain of Custody requirements. Sample preparation is undertaken according to Industry Standards. **Trench samples** • No sub-sampling is undertaken with trench samples. **Other** • A laboratory generated repeat sample is submitted with every 20th sample submitted to the laboratory. This sample is provided a new sample ID with no reference to the original sample ID. The results of these repeat samples are reviewed monthly and any discrepancies investigation.
Quality of assay data and laboratory tests	• SGS in Ngakawau and CRL (ACIRL Australia and Newman Energy subcontracted for specific tests) laboratories are used to undertake physical and chemical testing and use Industry Standards for all coal tests and systematic QA/QC procedures for all work. Both Laboratories hold accreditation by International Accreditation New Zealand (IANZ). The processes employed are considered to be appropriate for coal sample analysis. Results are reviewed in-house to ensure the accuracy of the data by a geologist and or a Senior Geologist. The laboratory has been inspected by the Company's personnel. Tests includes but are not limited to: **Chemical Analysis** Proximate analysis (ASTM D5142-2004 (modified)) Sulphur (ASTM D4239-04A). Total Moisture (ISO 589) **Ultimate analysis** Carbon (AL038-in house) Hydrogen (ASTM D3176-09) Nitrogen (ASTM D3176-09) Oxygen (ASTM D3176-09 (by difference)) Sulphur (ASTM D3176-09) Forms of Sulphur (AS 1038 Part 11) Chlorine (ISO 587)

Criteria	Commentary
	Ash composition (X-Ray spectrometry (Spectrachem)) Ash fusion temperature (ISO 540:1995(E)) Trace Elements Calorific Value (ISO 1928-1995) **Rheological and Physical Analysis** Gieseler Fluidity (ASTM D2639-90) Dilatational (Audibert-Arnu) (ISO 349:1975) Free Swelling Index (ISO 501:2003(E) D720-91(1999)) Hardgrove Grindability Index (ISO 5074, ASTM D409-02) Relative Density (AS 10382111-1994) **Petrographic** Maceral Analysis (c/- Newman Technologies), Vitrinite Reflectance (ASTM D2798-99) **Other tests** Washability testing as requested (AS 41561 using float-sink methods) (also used Boner gig shaker table process). • 5% of all SGS analysed samples are sent to CRL for re-analysis, and then subsequently re-tested at SGS. The result of these repeats are analysed by the database geologist and the resource geologist, on a monthly basis. Additionally 5% of all SGS analysed samples are retested by SGS, as part of their in-house QAQC process. These repeat test results are generally within a 5% of their original results. Results outside of set tolerances are investigated.
Verification of sampling and assaying	• Most holes are geophysically logged, and verification of seam contacts is made through analysis of the geophysics. Assessment of coal intersections are undertaken by a Geologist. Geophysics allows confirmation of the presence (or absence) of coal seams, accurate determination of contacts to coal seams, density measurements are used to guide sampling and identify high ash bands and or seam partings. • Geophysical logs (dual density and gamma) are analysed extensively and used to validate and, if required, correct geological and sample interval logs to ensure accuracy and consistency. • Coal ply results are provided by the laboratory and reviewed internally. No adjustments or calibrations are made to any coal quality data. In instances where results are significantly different from what was observed in geophysical logs or outside of local or regional ranges defined by previous testing, sample results are retested. • Since 2006 all coal quality data has been directly submitted and stored in electronic format using acQuire SQL database software. • Historical data has been validated and entered into the acQuire SQL database, from the original paper logs. These geological and geophysical paper logs are housed in the fire proof library in Westport. Historical data was transferred and validated against the current logging codes to ensure the data was valid. • A limited number of twin holes have been drilled, and returned acceptable duplicates of the original holes. • The competent person works on the mine site and has inspected the sampling processes and inspected the laboratory.
Location of data points	• Stockton data is surveyed in Buller 1949 grid coordinate system in New Zealand with mean sea level datum (MSL). However the Geode correction for elevation is not undertaken due to the elevation of the mine-site (+150mm). All on-site survey data used in the resource estimation does not have the Geode correction as well. • All drillholes post 1998 are surveyed using real time kinematic GPS technology and are located within +/- 20mm vertically and +/- 10mm horizontal. Older drillhole collars were surveyed using conventional methods with an unknown precision. • Historical underground workings plans are based off old hand drawn plans that have been

Criteria	Commentary
	geo-rectified (in 2D only) by converting from cadastral links to the Buller 1949 geodetic grid. • Topographic surfaces consists of “original”, “cut”, and “as-built” triangulations constructed from a combination of airborne LiDAR (accurate to within +/- 0.2m) collected for the whole of the Stockton site in June 2013, conventionally surveyed historical plans (unknown accuracy), GPS survey data (+/- 20mm) and GPS assisted laser scans using I-site laser scanner (+/-40mm). • Drillholes with down-hole geophysics are surveyed for deviation with Weatherford verticality tool (+/- 15° azimuth and +/- 0.5° inclination).
Data spacing and distribution	• Exploration drillholes are variably spaced (<75m to 150m) depending on target seam depth, geological structure, topographic constraints, down-hole conditions due to underground workings, and the location of other drill holes. • Coal quality drilling is drilled on either a 15m, 20m, 30m or 40m grid, depending on structural and or coal quality complexity of the coal seam in the area. • No sample compositing is undertaken prior to initial laboratory ply analysis. Should details coal analysis be required, compositing is undertaken at the laboratory on a length weighted basis. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support a JORC Code 2012 resource classification and is suitable for this style of deposit.
Orientation of data in relation to geological structure	• Majority of holes are drilled vertically, due to near horizontal coal seams. • A small number of exploration holes have been inclined. The purpose of these holes were to define significant geological structures and not for coal seam geometry and quality. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias.
Sample security	• RC chip samples are collected in uniquely numbered pre-labelled plastic bags. Three to five samples are then placed in a large plastic bag for delivery to the laboratory. • Core samples are placed in uniquely numbered pre-labelled plastic bags. Three to five samples are then placed in a large plastic bag for delivery to the laboratory. • Prior to submission to the laboratory, a standardised dispatch form is generated for each drill hole, within the AcQuire SQL database software, which delineates the set of analysis to be undertaken and the logged sample numbers. • Once samples and dispatch form are completed, the sample bags are validated and subsequently delivered to the secure laboratory sample receiving area by a BT Mining Limited staff member. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents. • Any additional analysis is authorised by the site Geologist. • Sample residues are stored at the laboratory pending results and any possible repeat requests. • Sample security is not considered a significant risk to the project
Audits or reviews	• Integrity of all data (drillhole, geological, survey, geophysical and CQ) is reviewed by the site Geologist before being used to model either structure or qualities. • Periodic internal reviews are conducted, to verify that both core and chips are logged in a consistent manner. These reviews are done either by a senior geologist. • The BT Mining Limited AcQuire database was last externally audited in 2008 by Advanced DataCare. Suggested actions were reviewed and actioned where necessary. • The BT Mining Limited AcQuire database is considered to be of sufficient quality to carry out resource estimation

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• Stockton CML37150 is a coal mining license, which is due to expire on the 1st of April 2027, covers the majority of the deposit. • MP 52937 and 41810 mining permits are adjacent to the main CML37150. MP 52937 expires on the 4th November 2030 and MP 41810 expires on the 8th September 2024. • BT Mining Limited has sole ownership of the operation, with ownership of the CML 37150 permit areas, and access rights to the Department of Conservation (DOC) owned MP 41810 and MP 52937. • BT Mining is a joint-venture between Bathurst Resources Limited (65%) and Talley's Energy Limited (35%). • On 1st of September 2017 BT Mining took control of Solid Energy assets including two operating mines Rotowaro and Maramarua in the Waikato region of the North Island and the Stockton mine on the West Coast of the South Island. • All operations at Stockton mine are currently undertaken within these CML boundaries. • Royalties and Levies are applied to per tonne of coal produced.
Exploration done by other parties	• Within the CML37150, Solid Energy Ltd undertook all exploration on the tenement since 1987. However, there have been earlier periods of work that have contributed to the understanding of this Resource. These programs include early drill-holes associated with mining dating back to the late 1800's through into the 1900s, with New Zealand Coal Resources Survey preforming additional drilling in the 1980s. • All historic data was checked and validated by site geologist, on inclusion into the current AcQuire database. All data is coded on usability for resource modelling.
Geology	• Coal resources on the Stockton Plateau are restricted to the Middle to Late Eocene aged Brunner Coal Measures (BCM). The unconformibly overlies the Ordovician aged Greenland Group greywacke's and argillite's, which has been extensively intruded by Cretaceous granites and porphyry (Berlins Quartz Porphyry). Due to the stratigraphic nature of coal measures, the coal seams generally lie in a horizontal or sub-horizontal plane. The resource has a dip to the NE at the northern end of the deposit and to the East along the western margin. Folding and faulting through the coal seams can create localized changes in dips up to 80 degrees. • The Mangatini coal seams are the main coal seams of the Stockton deposit . The seams have been given the abbreviation M. There are the three seams M1, M2, and the M3. The M2 seam is the predominant seam over the deposit and splits into four segregated seams in places. The M1 seam is thin and discontinuous stratigraphically below the M2 and not considered for resource estimation. The M3 is a rider seam to the M2; however the seam is discontinuous and often not recovered during mining. The M3 is not considered during resource estimation
Drill hole Information	• No Exploration results are reported, therefore there is no drill hole information. This section is not relevant to this report on resource and reserve estimations. Comments relating to drill hole information can be found in Section 1.
Data aggregation	• No exploration results have been reported for the Stockton deposit

Criteria	Commentary
methods	
Relationship between mineralisation widths and intercept lengths	• No exploration results have been reported for the Stockton deposit
Diagrams	• The Appendix includes a number of plans that display the deposit geographically.
Balanced reporting	• No Exploration results are reported, therefore there is no further exploration results to report. This section is not relevant to reporting resource and reserve estimations.
Other substantive exploration data	• 40 vibrating wire piezometers are currently installed and monitored. • A number of marketing team requested bulk samples, with varying target coal qualities, have been taken as and when requested. • The different stratigraphic units and rock defects have been assigned various strength parameters based on a mixture of recent and historic laboratory test data (UCS, shear box and ring shears), empirical classifications (RMR, GSI and Hoek Brown) and back analysis of existing cut slopes. Downhole insitu geophysical measurements have been undertaken to compare the strength variability with actual laboratory test data.
Further work	• Deposit is currently being mined. • Close spaced grade control drilling will continue as mining progress's while additional exploration and near mining resource development drilling will be undertaken to define geological structures, seam structure and coal quality.

Section 3 Estimation and Reporting of Coal Resources

Criteria	Commentary
Database integrity	• All GPS sourced and validated survey data recorded in the field is electronically transferred into the master BT Mining Limited (BTM) AcQuire SQL database • All drill core logging data is digitally entered directly into the BTM AcQuire SQL database, with in-built enforced data validation rules. Drill chip geological logging data is manually entered into BTM AcQuire SQL database, with in-built enforced data validation rules. • The AcQuire SQL database has been designed to ensure data is entered and stored in a consistent and accurate manner by using dropdown menus of standard logging codes to prompt and constrain inputs. The database highlights out of range coal quality values, duplicate records/intervals, prevents overlapping intervals or depths that extend beyond total drill hole depth. All changes to the database are tracked and archived. Data correction and validation checks are undertaken internally as defined by the BTM Data Validation Standard before the data is used for modelling purposes. • All Ply coal quality data is imported each night, using an automatic import of the laboratory generated electronic results (Comma separated text file with a standardised format, saved to a secure shared server location). • Once all validation is completed all drillhole data is signed off by the responsible geologist. On completion of the data sign-off process the data is locked in AcQuire and cannot be adjusted unless requested by the Resource Geologist. • The BTM AcQuire SQL database is administered by the site geologist. Data validation checks are run routinely by the database administrator using AcQuire software validation

Criteria	Commentary
	routines. All validation concerns are referred to the site Geologist and rectified accordingly. • The BTM AcQuire database was last externally audited in 2008 by Advanced DataCare. Suggested actions were reviewed and actioned where necessary.
Site visits	• Competent person has worked at the site and makes regular visits.
Geological interpretation	• There is sufficient confidence in interpretation of geological stratigraphy, structure and seam correlation/continuity though it is variable across the Stockton area. Mining activities supports a good confidence in the geological interpretation of the deposit • The data used in the geological interpretation included field mapping, drillhole data, core logging data, geophysical logs, sampling, coal quality laboratory testing and structural interpretations. Residual variability exists concerning geological structure along/within the major fault zones, resulting in a lower level of resource confidence this variability will influence the local estimates rather than the global structural and coal quality estimates for these zones.
Dimensions	• The Stockton resource area covers approximately 22.9km², an roughly rectangular shape up to 3.5km wide (E-W), and 8km long (N-S). • Within this area all seams are exposed in the operating mine. With insitu coal between 0 and 50m below the original ground surface. • Coal thickness varies considerably over the deposit, from 28m (areas with structural thickening) down to <0.5m (areas with coal seam poorly developed). On average the remaining coal resource has an average thickness of 8-10m. • The M3 rider seam to the main M2 seams is on average 0.5m thick but can have local thicknesses of 3m.
Estimation and modelling techniques	• Modelling has been undertaken using Maptek's Vulcan Version 7.5 and 8.2 software by the site geologist experienced in its use, using a standardised set of validated automated scripts. • 15,401 drillholes are utilized in modelling and resource estimation. • All valid drilling data, mapping data, together with a number of structural interpretations are used as the source data for creating the coal seam surfaces (grids). • Grids for the coal roof and floor (including seam splits) are developed over the entire CML. These coal surfaces are modelled using a stacking algorithm with the coal roof of the predominant coal seam (M2) used as the reference surface This process is repeated for six geological domains of the deposit to ensure that the coal seams are modelled accurately. • The grids are created by using a triangulation algorithm resulting in a 10x10m grid. This methodology of creating grids is common practice for the estimation of coal deposits • Block model extends from 321500mE to 327010mE and 710500mN to 719510mN and elevation from 300mRL to 1100mRL. • A standardised block model schema has been used, with a standardised set of variables, with associated default values. • The latest validated survey "original","cut" and "as-built" surfaces and grids are used to create an empty block model, with 10m by 10m blocks with a minimum thickness of 0.5m (for coal seams). The parent block size (10m by 10m) is half the drill spacing to ensure the mineralization is well represented by the blocks • The drilling database is used to create a set of 0.5m thick composites, which is then used to estimate the coal qualities for the blocks within the coal seams. Multiple estimation runs are completed to ensure all blocks are populated. • All coal blocks have been estimated using the inverse distance methodology, with a power of 2, for the standard set of coal qualities (ash, sulphur, swell, inherent moisture, volatile matter).

Criteria	Commentary

	• Coal Quality Estimation parameters used during coal quality estimation are:
	  • Search ranges used are 150x150x0.5m and 500x500x1m
	  • Samples used are a minimum of 2 and a maximum of 8 in the first search radius, and a minimum of 1 and a maximum of 5 in the second search radius.
	  • A maximum of 2 samples from any one drill hole is allowed.
	  • Block discretization of 4,4,1 was applied
	  • Using the Vulcan "tetra unfolding" methodology, along the modelled coal seam surfaces.
	• Lithology of non-coal overburden, underburden and interburden blocks, are estimated using a probablilistic method, using the drillhole database. Once lithologies have been estimated, the ash, sulphur, swell, inherent moisture, and volatile matter are estimated.
	  • Inverse distance estimation, with a power of 2, is used.
	  • Search ranges used are 60x60x1m and 200x200x1m
	  • Samples used are a minimum of 1 and a maximum of 10.
	  • Block discretization of 4,4,1 was applied
	  • Using the Vulcan "tetra unfolding" methodology, along the modelled structural seam surfaces.
	  • Where insufficient data drillhole data is available, then default CQ values are assigned to un-estimated blocks.
	• At each stage of the process (initial data points, new surfaces, and final block model) the new data is validated back to the previous model, to ensure consistency.
	• Standard Block model validation was completed using visual and numerical methods.
	• No selective mining units were assumed in the estimate
	• Part of the deposit has been previously underground mined. A detailed review of the underground mine plans and production records produced depletion factors for underground mining panels. These factors were used in the resource classification confidence and for depleting the resource tonnages.
	• Underground coal fires related to the underground workings have had impact on the coal quality and ground conditions. A detailed review of these fires and ground conditions have also identified areas with poor coal seam structural integrity (pillar collapse) and or have had their qualities altered due to the presence of fire. The factors have also been used to deplete and coal tonnage and or coal quality for the deposit affected by the presence of fires and or pillar collapse.

Moisture	• All moisture values are reported on an air dried basis, using air dried ply results to estimated moisture. Inherent moisture is measured for all drillholes samples. • Tonnages are estimated on a dry basis.
Cut-off parameters	• A minimum seam thickness cut off for all modelled seams is 0.5 m. As this is what is currently considered as recoverable using open cast methods. • A maximum ash cut-off of 25% has been applied to all coal seams except where seam continuity is required, which may include intervals with greater than 25% Ash. • Coal with Ash <8% is considered “bypass” coal and does not require any further processing. Coal with Ash >8% needs to be processed through the company’s Coal Handling and Processing Plant (CHPP). • Coal tonnes are only reported from the M2 seam or its splits (No M3 and M1 tonnes are reported).
Mining factors or assumptions	• This declaration reports on a long term operating site. • Selected mining method/s chosen from long term experience of local conditions. • A mined out factor is assigned to each block based on the current site topography, or if within a set of mined out/signed off areas.

Criteria	Commentary
	• Geotechnical parameters for cut slope design were developed based on historical cut slope performance, slope back analysis and laboratory testing of material strength parameters. Slopes are designed to comply with a Factor of Safety that exceeds 1.2 with its related probability of failure and potential failure dimensions. • Minimum recoverable coal thickness is 0.5m. Final coal recovery percentages have been calculated using the degree of previous mining history, adjacent waste material, expected contamination, and expected mining losses.
Metallurgical factors or assumptions	• Contaminated coals from mining and or from underground workings are processed via the company's Coal Handling and Processing Plant (CHPP) since 2010. The CHPP removes the dilutant material and a small portion of coal to provide a more saleable product. The plants performance has been routinely monitored since its inception. • Although not included in the resource estimate, studies have been conducted on the properties of the coal pertaining to combustion potential, Ash fusion temperatures and Hardgrove Grindability Index. • Small parcels of coal have been sent to customers for evaluation and testwork
Environmental factors or assumptions	• There are a number of Resource Consents regarding land use, air, and water quality that must be strictly adhered to for the Stockton site however these are unlikely to impact on the Mineral Resource Estimate... • There are a number of lithological units exposed during the mining process which generate acid metal drainage. The water run-off across site is monitored and lime dosing is used at strategic sites to correct the water acidity. • Due to high rainfall over the mine site the high content of suspended solid material is a concern to water quality. There is a series of drains and sumps that collect this 'dirty' water that allow for the settling of the suspended solids. • Mined out areas are rehabilitated using a comprehensive system, which makes use of recovered soil, recovered vegetation , bio-solids, and dried grass.
Bulk density	• The relative density value is calculated using the available ash–density data (268 samples) to define an ash–density curve. • Non-coal units are assigned default density value based upon the lithology type.

Classification	• The resource has been classified into the Inferred/Indicated/Measured status by analysing eight factors upon which the geological confidence is based.
	  ◦ Presence of Underground workings
	  ◦ Coal seam dip
	  ◦ Distance to nearest coal quality data
	  ◦ Ratio of coal seam thickness to the number of coal seams
	  ◦ Distance to reliable roof contact
	  ◦ Coal seam thickness (where less than one meter)
	  ◦ Estimation passes need to estimate
	  ◦ Number of informing drill holes used
	• The competent person will review the results of the semi-automated resource classification process and will be manually adjusted where necessary and or required.
	• The input data is comprehensive in its coverage of the coal seams and does not miss-represent the in-situ coal seams
	• The results of the validation of the block model exhibit a good correlation of the input data to the estimated grades
	• The Competent Person has taken into account all relevant factors in undertaking this estimation and considers the estimate to be a true reflection of the current understanding of the deposit.

Criteria	Commentary
Audits or reviews	• Definitive Feasibility reports (PAG L5) for the Coal Handling and Processing Plant and Millerton Coal Resource have included external peer reviews of the geological databases and resource estimate methodology. No significant issues were identified in reviews. The database and geological resource model was also extensively peer reviewed internally by Senior geologists and managers. • Pre-Feasibility and Definitive Feasibility Reports for near deposits (Cypress and Mt William North) have included external peer reviews of the geological database. No significant issues were identified in reviews. • Twin hole drilling programs have been undertaken to validate previous drillholes. • During post mining reconciliation the drillhole ply results, and the associated estimated values, are compared to the mined coal to ensure that the drilling programs have been sufficient to predict the qualities of the mined coal. • A geostatistical study undertaken by Golder and Associates into drill hole spacing was undertaken in 2006, that suggest grade control drill hole spacing should be on 15m or 20m grid spacing where coal quality parameters and coal geometry vary significantly. • A brief review of the Stockton resource modelling process was undertaken by Palaris in 2013 as part of Solid Energy New Zealand wide review. • The BTM AcQuire database was last externally audited in 2008 by Advanced DataCare. Suggested actions were reviewed and actioned where necessary.
Discussion of relative accuracy/ confidence	• Based on the data available, the degree of accuracy of this statement is considered high for the Stockton deposit . The process for calculation has used: BTM Standards and procedures, BTM Resource and Reserve Guidelines and the 2012 JORC Code along with industry best practice where available to define the Resource estimates provided to confirm search estimation ranges and drill hole spacing for each resource classification. • Regular mine area reconciliations are undertaken and show an acceptable correlation between mined coal and estimated coal.

Section 4 Estimation and Reporting of Coal Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resource estimates used are the Mineral Resource estimates undertaken by Stockton site geologist as outlined in Section 1-3. • For the purpose of reserve calculations the mine is split into regions. These are Millerton, Rockies, No2 South, A Drive, Mt Augustus, and McCabes. • 3D surfaces are used to generate the resource block model BT Mining Limited which includes topography, seam structure and coal qualities are used for in-situ resource definition. Golder has relied on this information for the study and has not performed detailed model validation or model input checks. Golder considers the model to be reasonable and constructed using a robust modelling process. • The model was depleted to account for areas where previous underground extraction has taken place, based on historic recovery factors described in Section 3 of Table 1 for Reporting of Ore Resources (JORC). • A 3D block mining model was generated which included minimum seam thickness, mining losses and dilution using Vulcan™ software. • Mineral Resources are inclusive of Ore Reserves. • Definitions- ○ **ROM Coal =** "Run Of Mine" ○ **Bypass Coal -** is defined as coal recovered that is not contaminated by rock or other materials and which when mined, is a saleable product ash (<8%) ○ **Wash Coal** - is defined as either coal contaminated with non-coal lithology's (>8% and <50% Ash) or high ash in situ coal (>8% and 35% Ash) and requires processing/washing prior to becoming a

Criteria	Commentary
	saleable product. • Pit design extents were established using standard Lerchs-Grossman pit design techniques and based on preliminary economic and geotechnical inputs. • Mine design strips by bench were applied to develop a mine schedules and used as a basis for reporting reserves. • Reserve estimates include consideration of material modifying factors including: the status of environmental approvals; other governmental factors and infrastructure requirements for selected open pit mining methods and coal transportation to market (per JORC Code 2012). • Reserve tonnages have been estimated using a density value calculated using approximated in-ground moisture values (Preston and Sanders method). As such, all tonnages quoted in this report are wet tonnes. • All coal qualities quoted are on an Air Dried Basis (adb). • Approximately 78% of total reserve coal tonnes require washing to make a marketable product. • A decrease in the previously reported export reserves is based on the following changes: ○ Updated pit designs in the No2South area based on geotechnical considerations, offset by minor increase in Millerton east pit based on model updates and economics ○ Depletion by surface mining.
Site visits	• The Competent Person for this Ore Reserve Statement is a full time employee of Golder Associates (NZ) Limited. • The Reserves Competent Person (CP) is Sue Bonham-Carter of Golder Associates (NZ) Ltd. Ms. Bonham-Carter has over ten years' experience working at the site, including mine planning role January-September 2017
Study status	• Stockton mine is an operating mine. • The reportable Coal Reserve is based on actual site performance and costs that has determined an economically viable plan. Material Modifying Factors have been considered.
Cut-off parameters	• The cut off for Bypass coal is <8% Ash. • The cut off grades for contaminated coal (Wash Coal) is coal contaminated with non-coal lithology's (>8% and <50% Ash) or high ash in situ coal (>8% and 35% Ash), • The minimum mineable seam thickness is 0.5m.
Mining factors or assumptions	• Pit limits have been updated based on pit optimization studies with restrictions for current land and mineral access determined by mining permits and consent limits. Pit Optimisations used current cost and revenue assumptions. Latest Pit Optimisation study was completed by Golder Associates (NZ) Limited in 2015. • The mining method is conventional drill and blast, load and haul open pit mining operation. This utilises truck and excavator for waste movement, while coal is loaded using a combination of loaders and excavators with haulage to the ROM hopper CHPP, or stockpiles using dump trucks. The operations are supported by additional equipment including dozers, grader and watercarts. • Geotechnical parameters are based on geotechnical studies undertaken by the Stockton engineering geologists. Different parameters are applied to each pit. Pit designs have been based on geotechnical constraints and parameters. The typical highwall configuration is a batter height of 15m with batter angles between 30°- 76° using 8.5m wide benches. Maximum of 10% gradient and a 23m wide running surface is being used for in pit ramps and roads. • Grade control drill is undertaken as defined in section 1-3. • Allowances for mining dilution and recovery has been applied to the block model. The mining loss,contamination and dilution is based rock mass lithology above coal roof and below coal floor as as follows in metres for each mineable horizon: Thickness (m) Roof Floor

Criteria	Commentary
	Mudstone Lost: 0.10 0.05 Mudstone Contaminated: 0.05 0.10 Mudstone Dilution: 0.25 0.25 Other Lost: 0.05 0.05 Other Contaminated: 0.10 0.10 Other Dilution: 0.05 0.05 • Additional adjustment factors for Millerton and Rockies mine areas include losses for historical underground extraction, fire effected coal, and where the overburden material has collapsed into the coal seam. • Minimum recoverable in-situ thickness is 0.5m. • Minimum mining widths are dependent on volumes to be excavated and the size of the fleet to be used. Typically for the bulk excavator and truck fleet this is approximately 30 meters. For the small excavators and trucks this is approximately 15 meters. • Current mining methods require the following infrastructure. Haul Roads, Drainage, Pumps, Sumps and Dam structures, Lime Dosing Plants, Coal stockpile areas, CHPP, Coal Load out and bins, Aerial ropeway, Train load out and bins, Workshop, Offices, Contractor facilities. Most of this infrastructure is in place with the main new infrastructure required being sumps, dams and water control as we move into new areas.
Metallurgical factors or assumptions	• ***Bypass Coal*** **-** Is defined as coal recovered that is not contaminated by rock or other materials and which when mined, is a saleable product (ash <8%) • **Wash Coal**- is defined as either coal contaminated with non-coal lithology's (>8% and <50% Ash) or high ash in situ coal (>8% and 35% Ash) and requires processing/washing prior to becoming a saleable product. • Approximately 78% of total reserve coal tonnes require washing to make a marketable product. • Stockton has a Coal Handling and Preparation Plant (CHPP) in operation to produce a saleable product • Online analysis utilise for identifying coal that is out of specification. • Additional samples are sent for petrographic analysis (Romax). • The processes used are standard for the coal industry and so are well tested technologies. This has also been backed up by bulk samples being taken and tested for washability, yield and recovery factors. • Historical plant performance has been used to review these factors in late 2014.
Environmental	• All Mining approvals, consents, Permit and License to operate have been granted for Stockton Mine. These are CML37150, MP41810 and MP52937. • Environmental planning and management is fully integrated with coal mining at Stockton and the mine has annual rehabilitation targets. • Developing an area for mining includes systems to divert clean surface water around the area and ensure any water from the work site which is carrying sediment is collected and channelled into the mine's water treatment infrastructure. • Soil and vegetation are carefully lifted and taken to a holding area or immediately placed in an area of the mine undergoing rehabilitation. • No environmental impacts that cannot be mitigated have been identified.
Infrastructure	• Stockton is an operating site with existing infrastructure in place to support the operation. This includes a Coal Handling and Processing Plant (CHPP), ROM Pads, Water treatment plant, Lime dosing plant, Workshop, Offices, Aerial ropeway, Train load out, water treatment structures, weighbridge area, contractors laydown yard, power station and explosives storage. • Labour is primarily sourced from the nearby town of Westport. • Accommodation for the labour source is off-site in the small nearby towns but primarily

Criteria	Commentary
	in Westport.
Costs	• Stockton is an operating mine and majority of the capital has already been spent. Capital expenditure is required to maintain these structures and also to develop additional water infrastructure for future mining (e.g. resource definition). • Operating costs are reviewed annually. These are based on historical actual's and forecasting for the following financial year. This is made up of machinery costs, fuel consumption, construction, fixed costs, administration costs, environmental costs and transport costs. • Operating costs include mining, processing, civils, administration, haulage, aerial ropeway, rail freight and port costs. • Exchange rates Bloomberg (April 2015 forward curve 10 years). • CHPP is owned by BT Mining Limited and so costs are based on the demand for wash product in the annual budget. Historical data has been used to calculate CHPP costs and quality output reviewed daily and adjusted. Mine Rescue levy, License and Inspection levy, Energy Resources levy, Crown royalty, Coal Mining Licence fees, FME carbon and land rates are applied as per appropriate NZ legislation.
Revenue factors	• Coal prices – Hard Coking Coal (HCC) prices used was based on Wood Mackenzie April 2015 (long term forecast) • All other prices derived from HCC based on agreed company ratios (SHCC 87%, SSCC 70%). • Discount rate as per Price Waterhouse Cooper assessment July 2015.
Market assessment	• The supply and demand situation for coal is affected by a wide range of factors, and coal consumption changes with economic development and circumstances. BT Mining Limited has sales agreements in place with some existing customers. Established external forecast analysts have provided guidance to assess the long term market and sales of Coal. • BT Mining Limited Marketing team is regularly in talks with new customers and investigate potential new markets.
Economic	• For the optimisation study carried out June 2015 the following inputs have been taken into consideration: - mining, processing, civils, administration, haulage, aerial ropeway, rail, port costs and licenses and levy's as per appropriate NZ legislation. • Pit optimization study developed a revenue factor (RF) with a range of 0.4 to 2.0 in 0.1 intervals. • The incremental RFs allow for the generation of different pit shells, allowing different stages to be chosen rather than just mining the ultimate pit. For RFs > 1, can give an indication of the possible size of a pit should the price increase. • Sensitivity analysis has only been completed on commodity price variations. Stockton pits are sensitive to commodity price variations.
Social	• BT Mining Limited currently holds the required DOC Permits for Mining and access to mine the Stockton Plateau. • Millerton and Plateau Protection Society (MAPPS) - This is an Agreement between BT Mining and the residences of Millerton Township. In this agreement BT Mining have stated that they will not mine within the MAPPS area but have also stated that they retain all the rights to undertake activities covered under the Coal Mining License (CML) including coal mining. • As a part of resource consenting process and general site operations, regular communication and consultation has taken place with the local communities including the local Iwi.
Other	• All material legal agreements, marketing arrangements and government approvals are in place and active for the existing operation. • There is no identified material naturally occurring risks that could impact on the project or Ore Reserves.
Classification	• Ore Reserves are based upon resources classified as either Measured or Indicated from the Resource estimation and classification process. • The Ore Reserve classification results appropriately reflect the Competent Persons

Criteria	Commentary
	view of the deposits. • 0% of Probable ore reserves are derived from measured mineral resources.
Audits or reviews	• In 2008 a study was undertaken to access coal washability for the Coal Handling and Processing Plant (CHPP). • In 2009 a Definitive Feasibility Study was undertaken for the Millerton Region. • Palaris undertook a review of the Stockton reserve model in 2013 • Internal review Pit Optimisation Study has been undertaken in 2014. • A new Pit Optimisation study was completed in June 2015 by Golder Associates
Discussion of relative accuracy/ confidence	• Coal Reserves have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Reserve estimates. • The Modifying factors applied to the reserve model are global estimates of tonnes and grade. • Accuracy and confidence of modifying factors are generally consistent with the current operation. Modifying factors applied to the Stockton reserve are Mining Losses, Dilution and Contamination to both Roof and Floor of the coal seam. The amount of losses, dilution and Contamination are dependent on the lithology of the rock in the roof and floor. The next modifying factors used are for underground (UG) mined area (e.g. Millerton). For the UG we have mining Losses, Dilution and Contamination the accuracy is reflected in the reserve classification of probable. The other modifying factor that affects Millerton is UG fires. A fire affected surface is estimated from drillhole data and applied in the model. The accuracy of this surface is reflected in assigned resource classification of Inferred. • Marketable coal tonnes are reported on the basis of in-ground moisture only, further data and assessment is recommended in order to report total product moisture. • The accuracy of the Coal Reserve estimate is primarily dependent on the ability to sell the coal at the estimated prices and the site operating costs. Site operating costs have been reviewed internally and also with assistance from Golder Associates (NZ) Limited.

Appendix A

Maps and plans discussed within Table 1 are reported below.

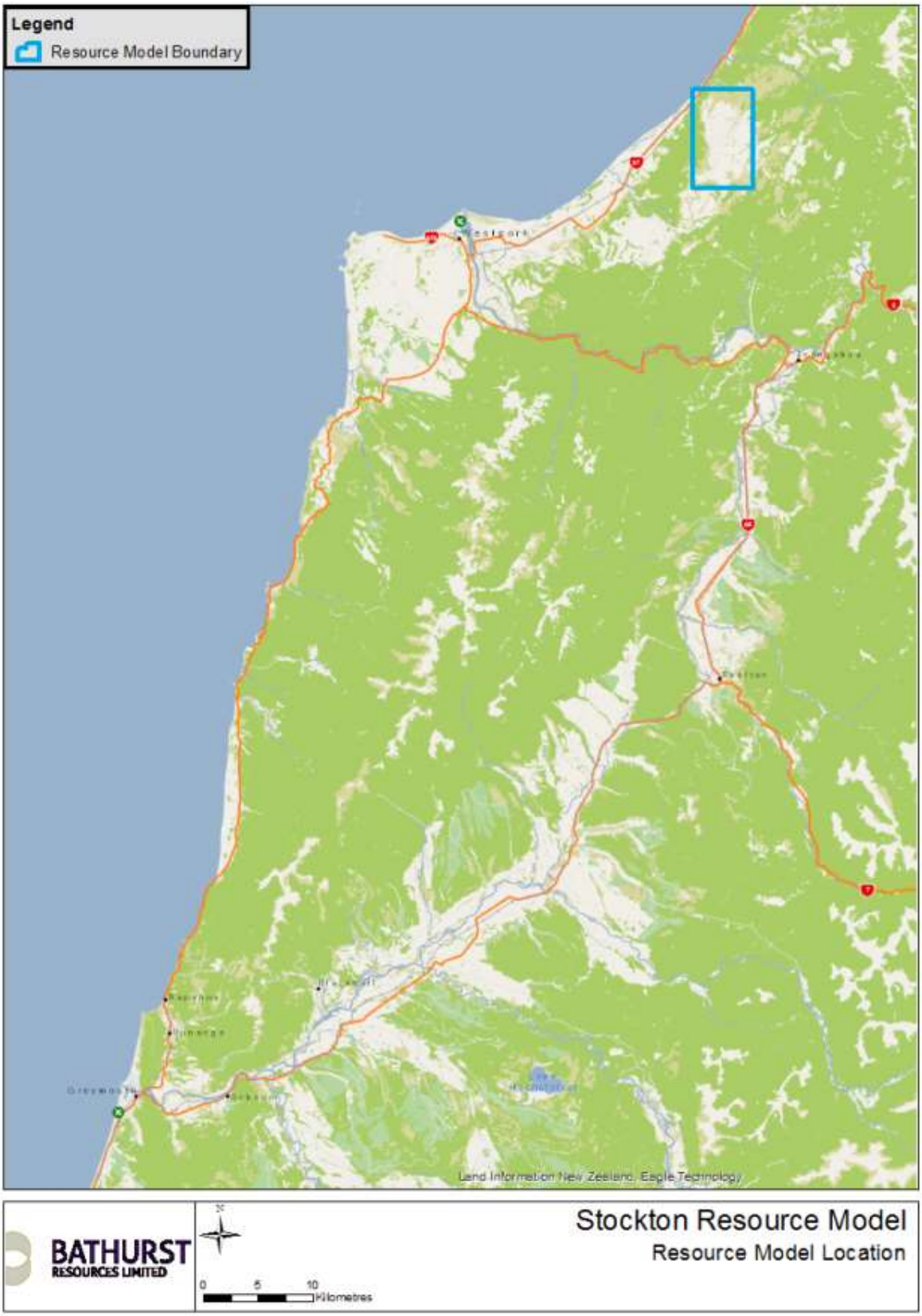


Figure 1: Location map of Stockton block model within Buller District

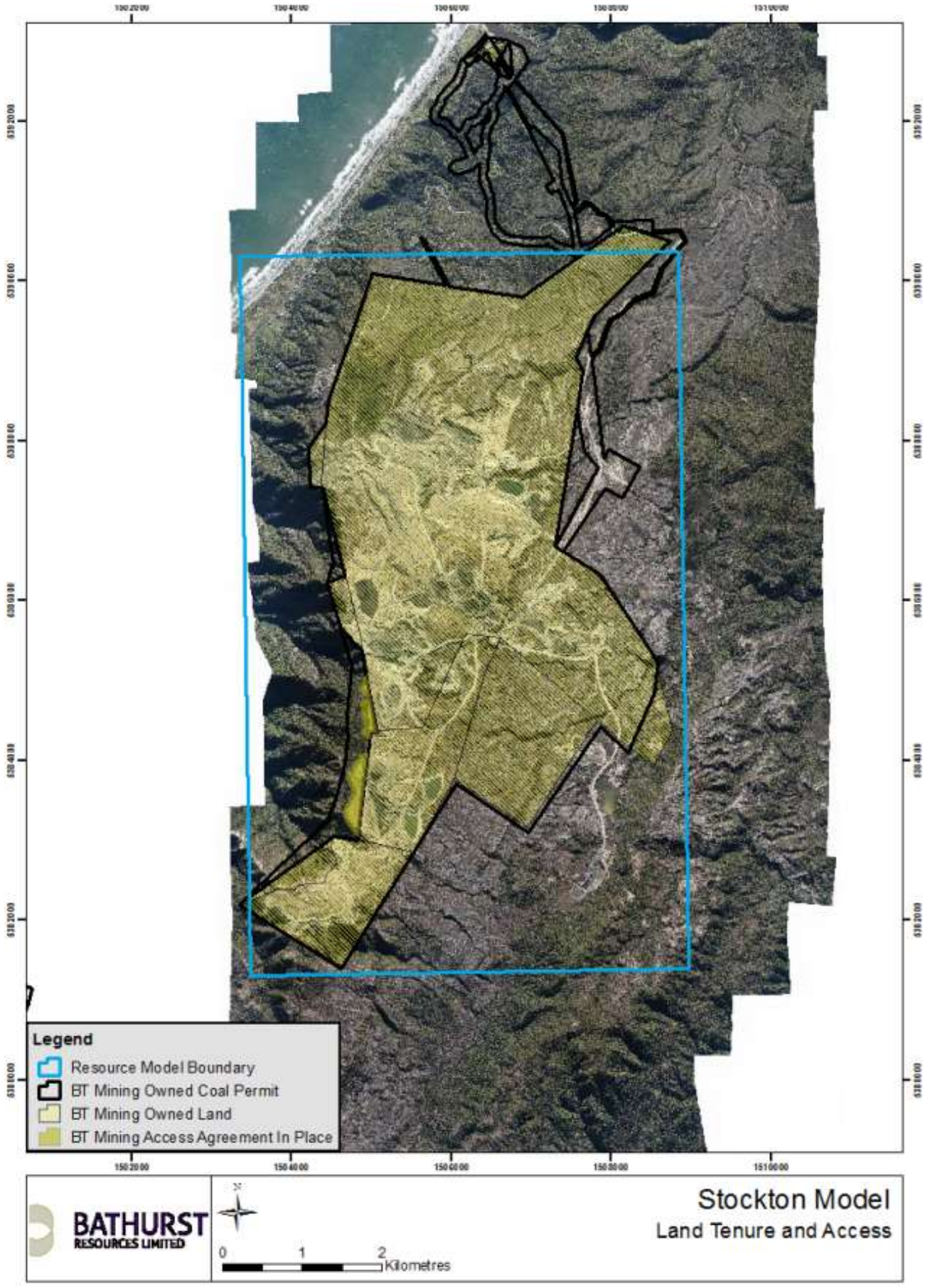


Figure 2: Map showing Land rights across the mine site

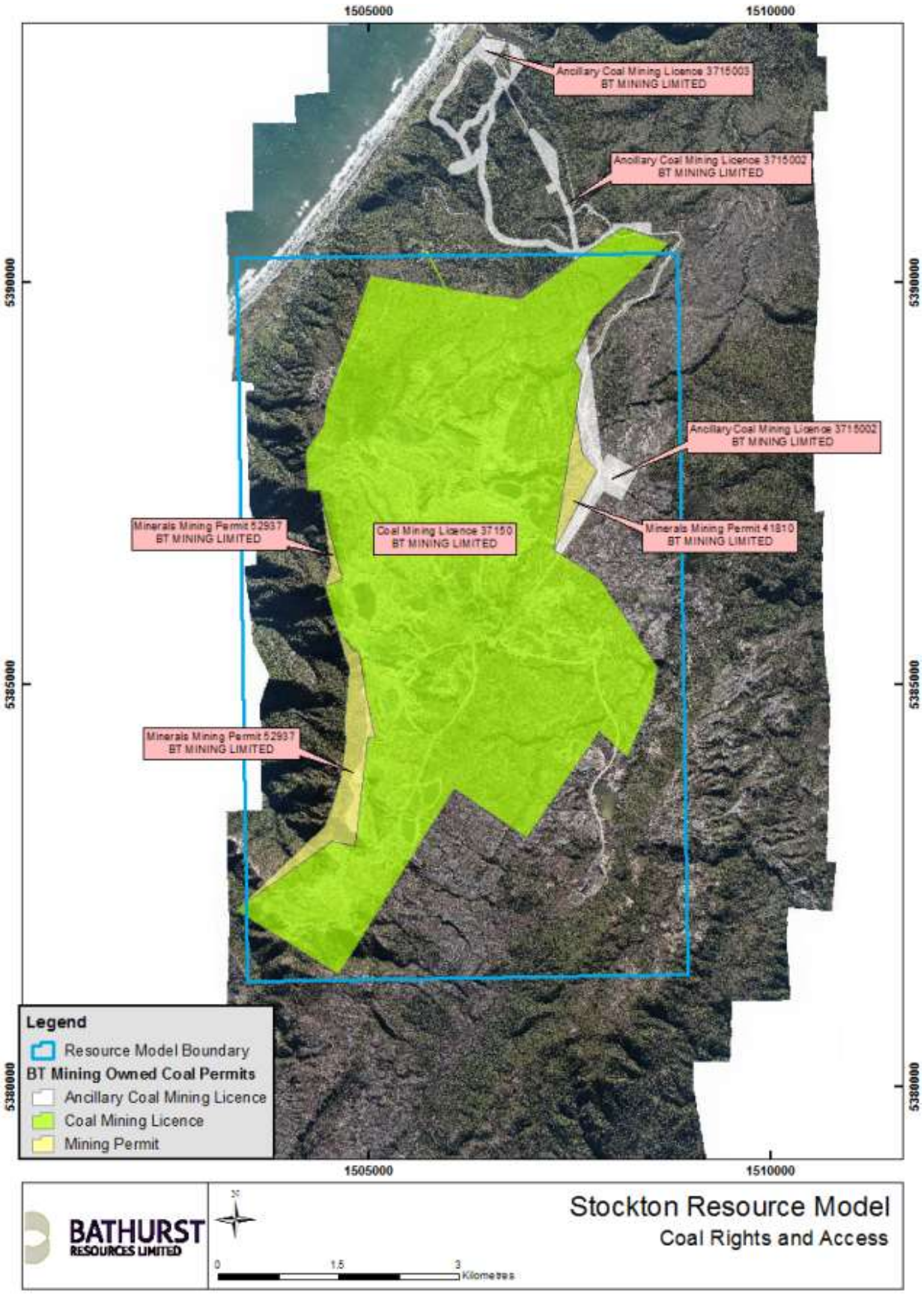


Figure 3: Map showing Mining Permit across Mine site

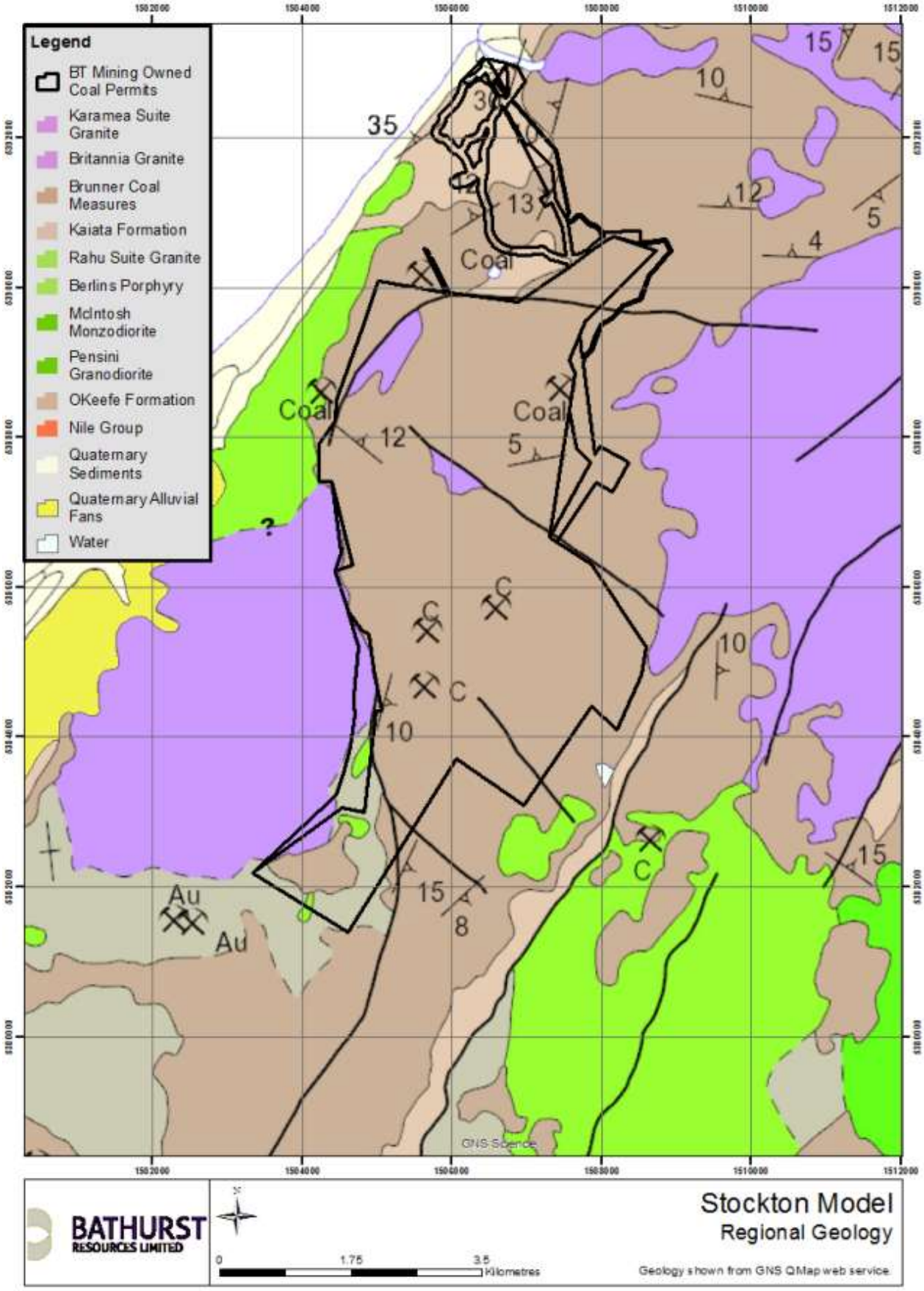


Figure 4: Regional Geological plan across mine site

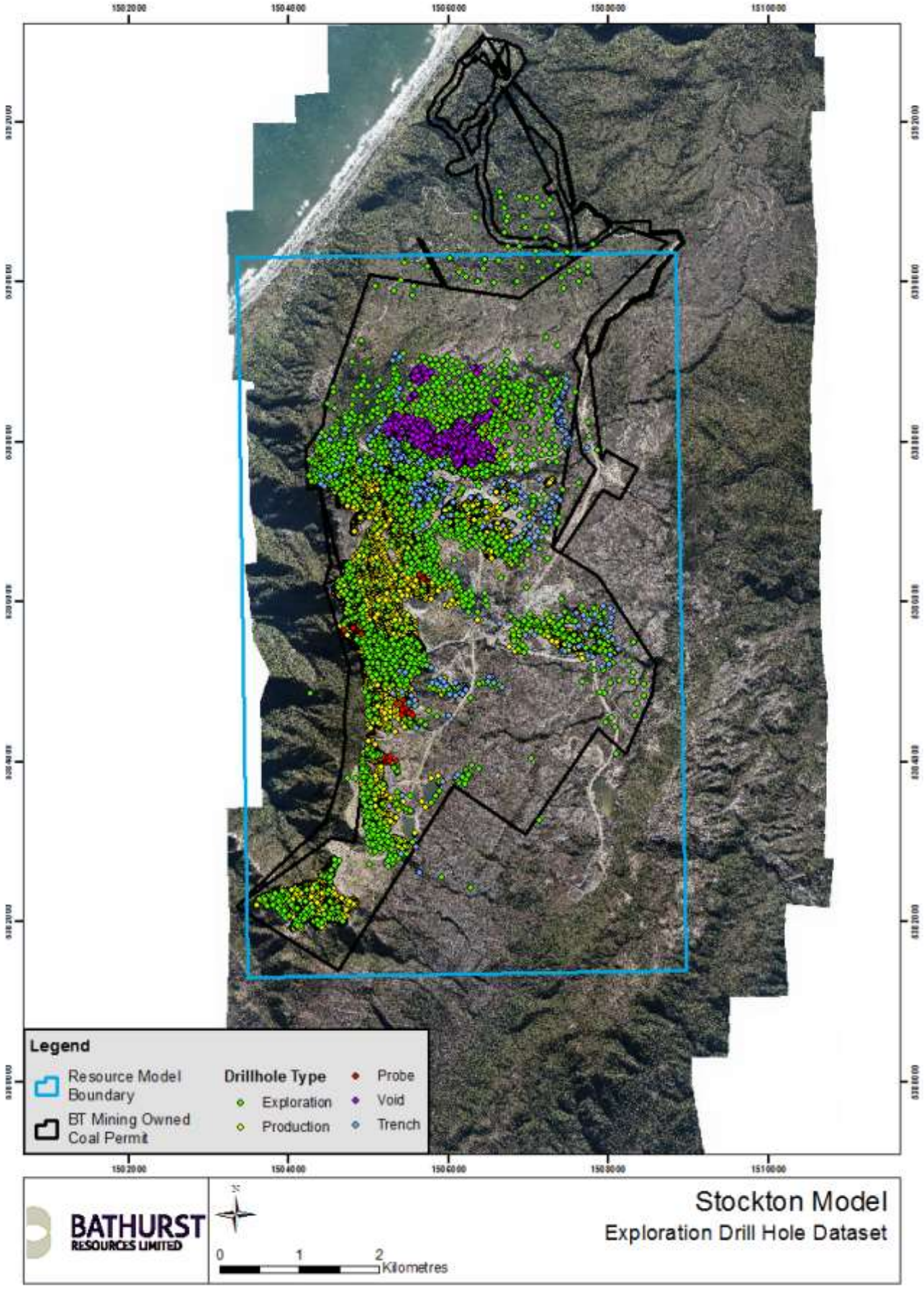


Figure 5: Map showing drillhole type/distribution

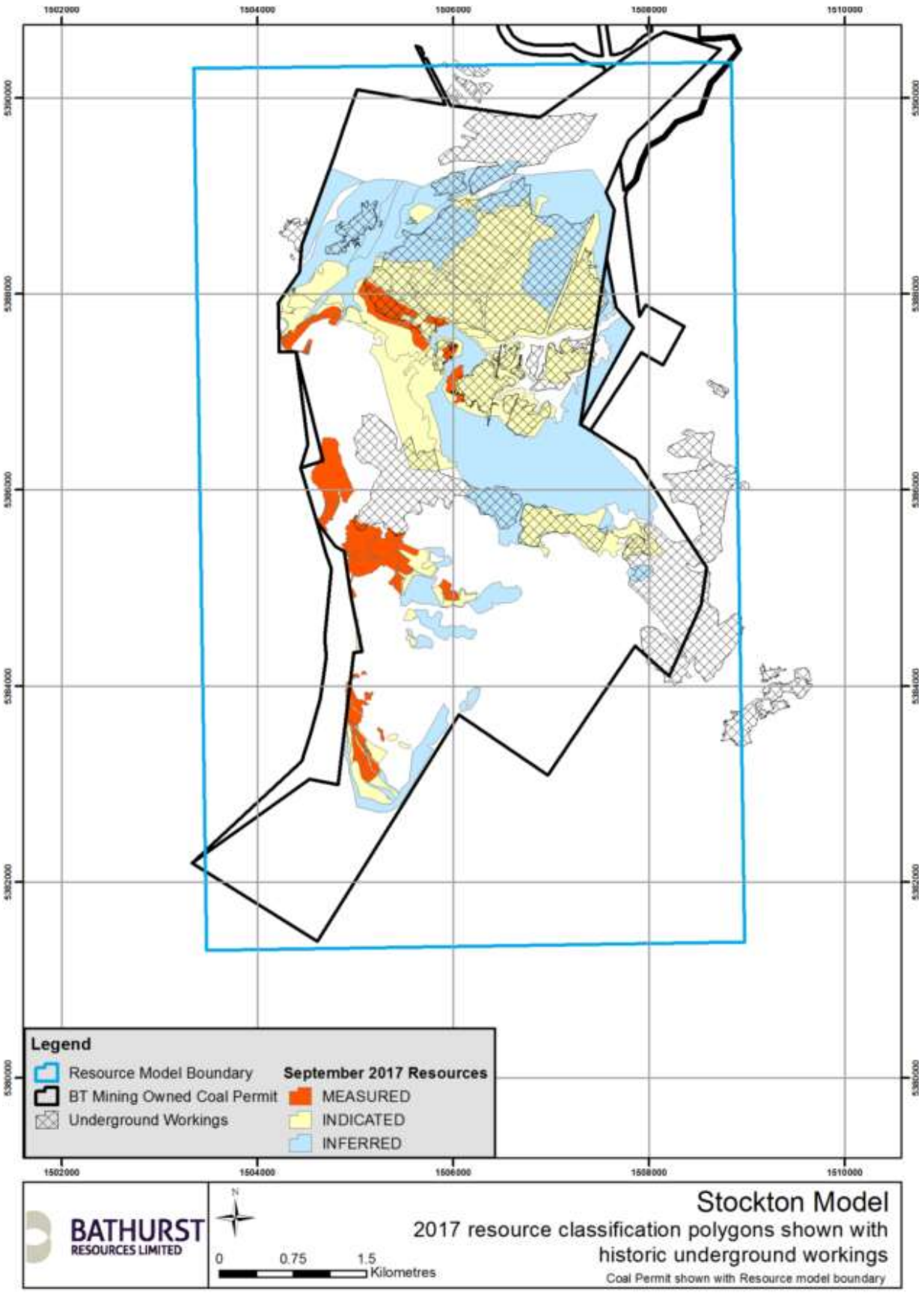


Figure 6: Map of underground workings across mine area

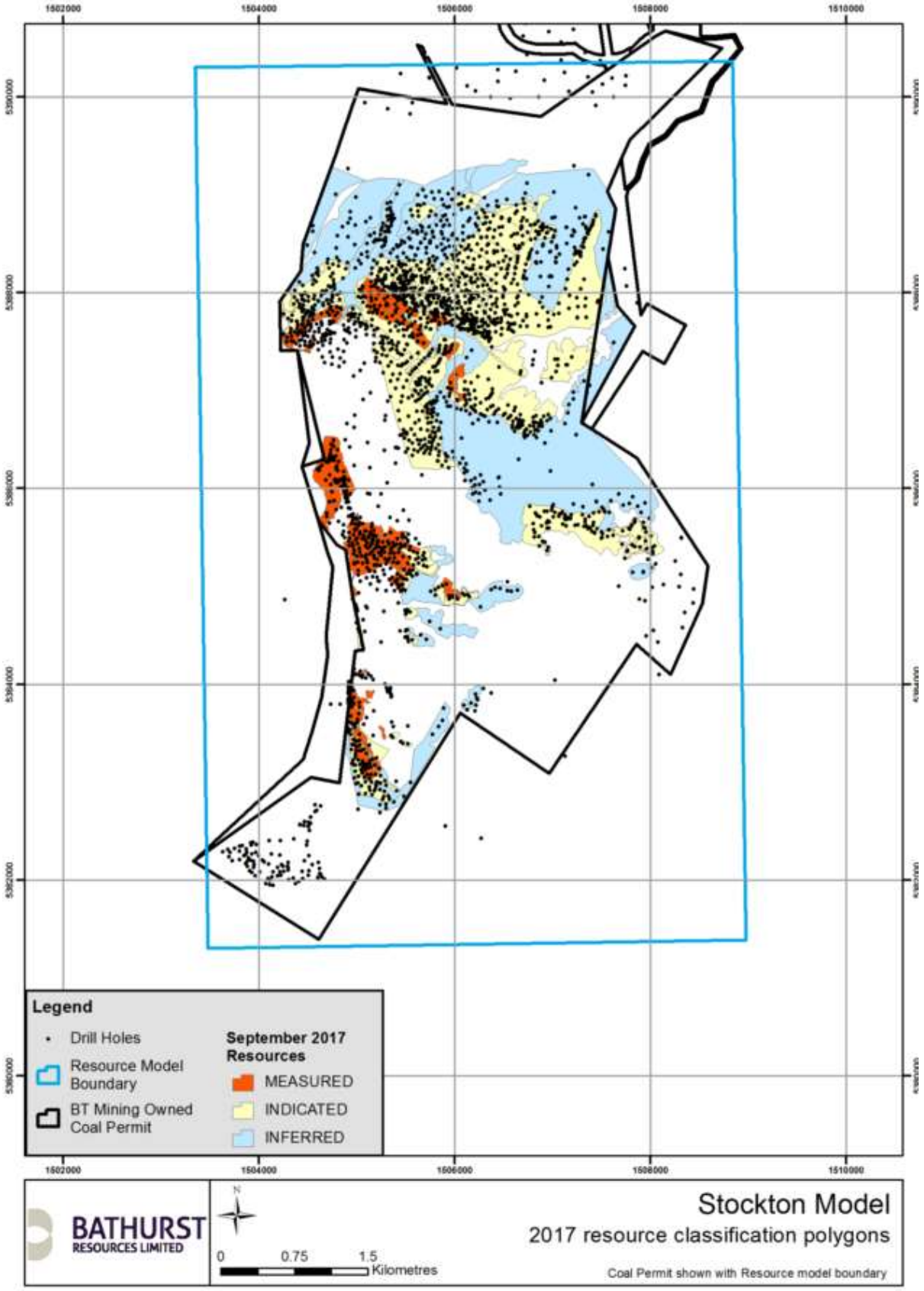


Figure 7: Map of Stockton 2017 Resource Classification

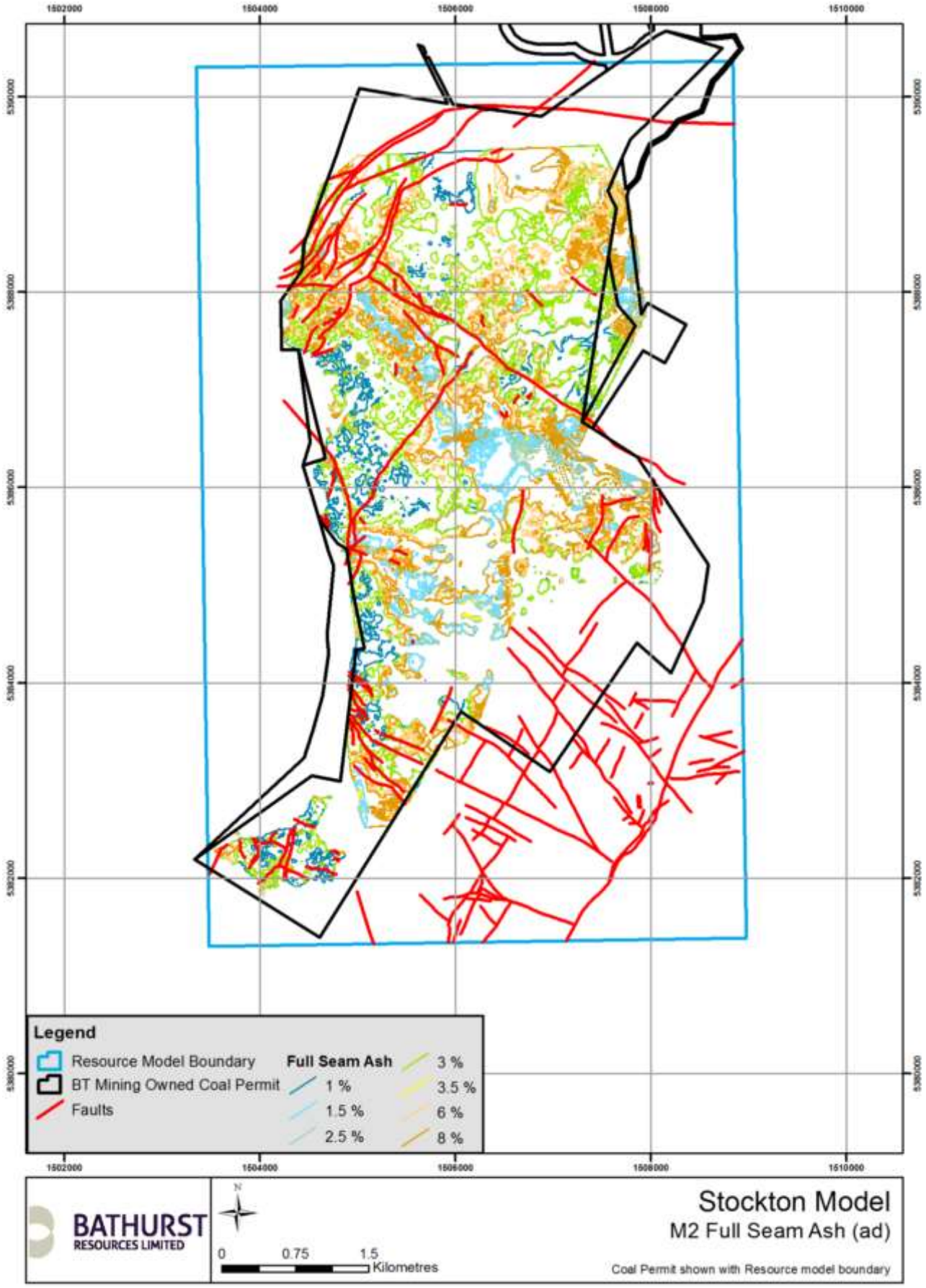


Figure 8: Map showing M2 Ash distribution

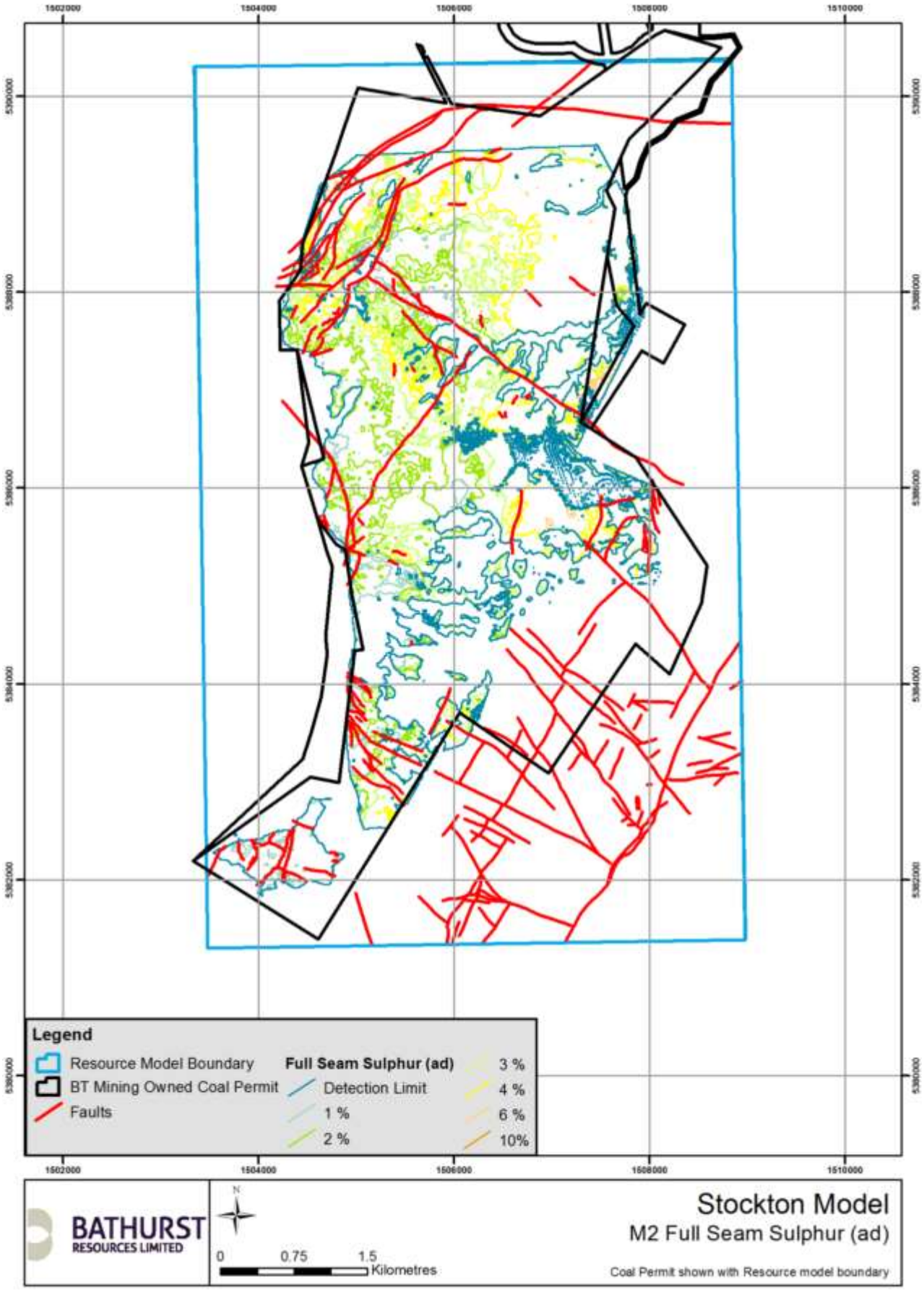


Figure 9: Map showing M2 Sulphur distribution

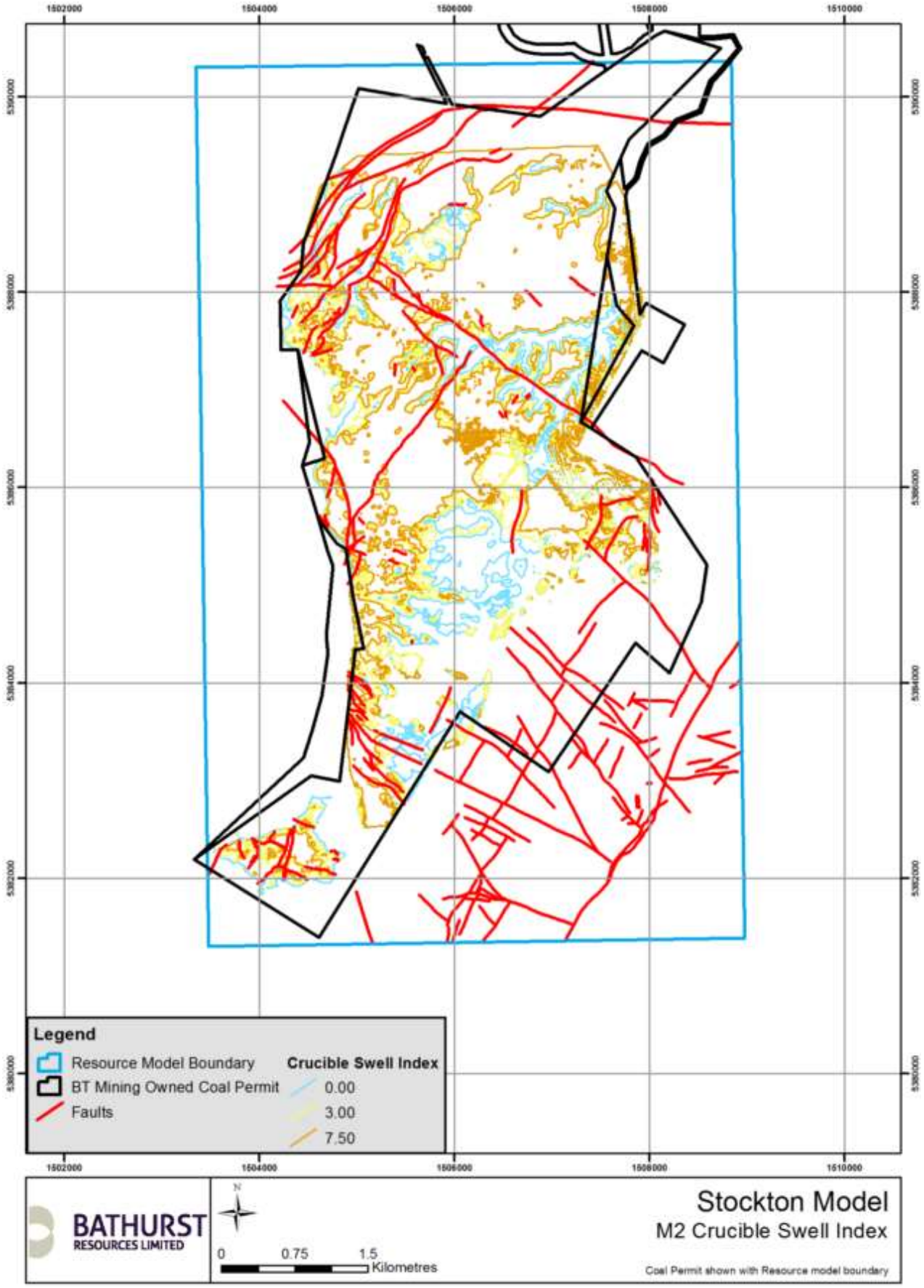


Figure 10: Map showing M2 Crucible Swell Number (CSN) distribution

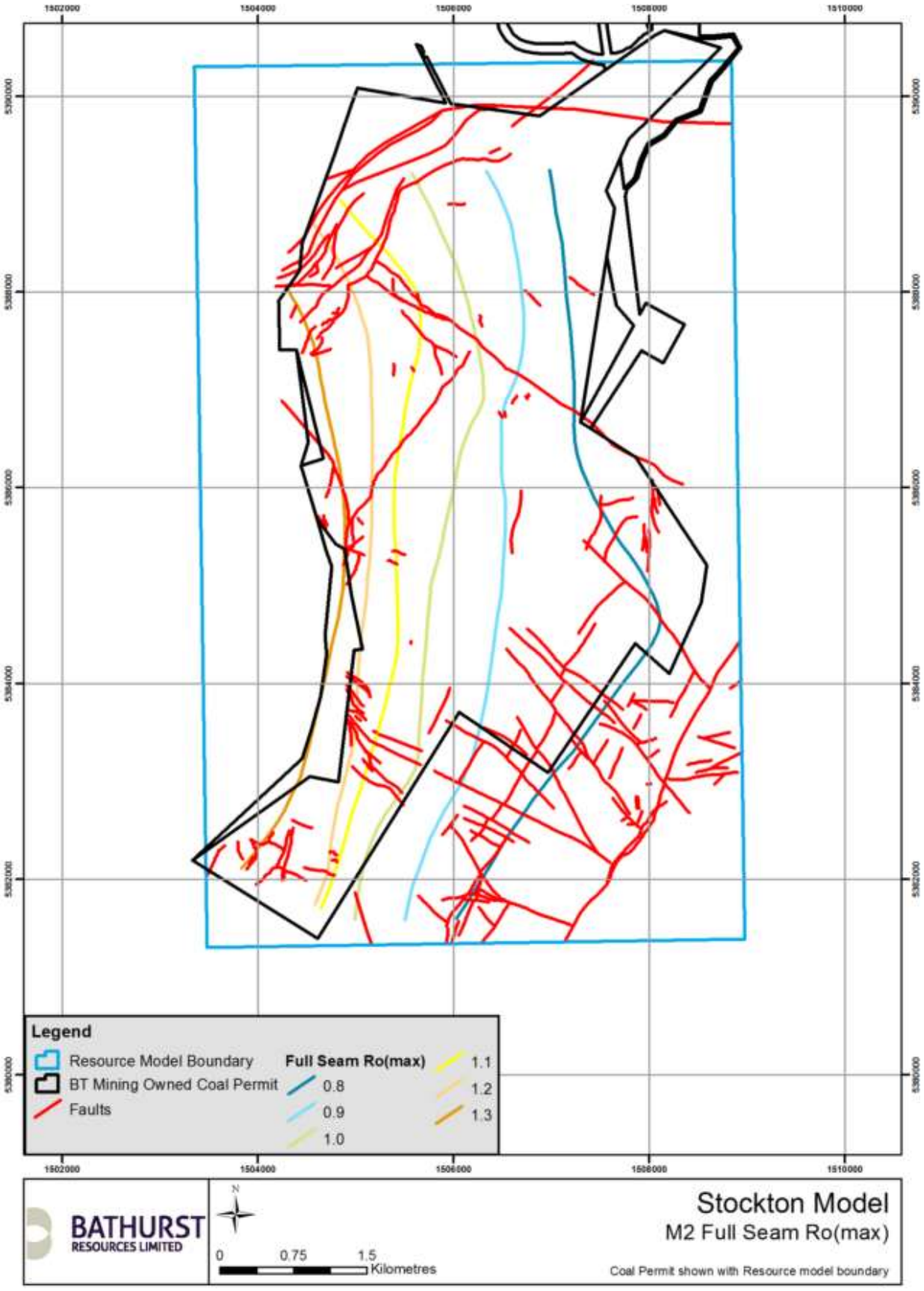


Figure 11: Map showing M2 ROMAX distribution

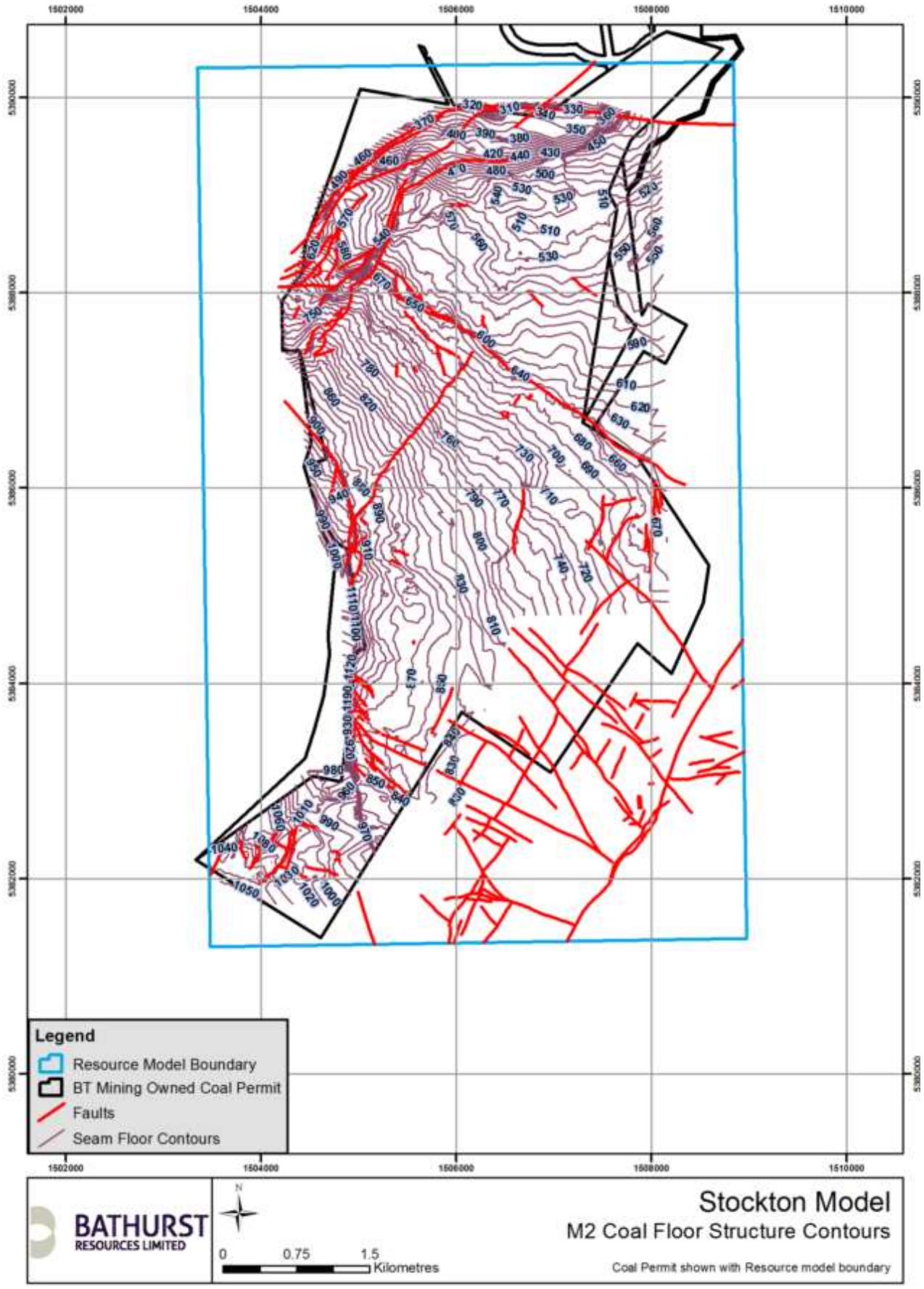


Figure 12: Map showing M2 floor contours distribution

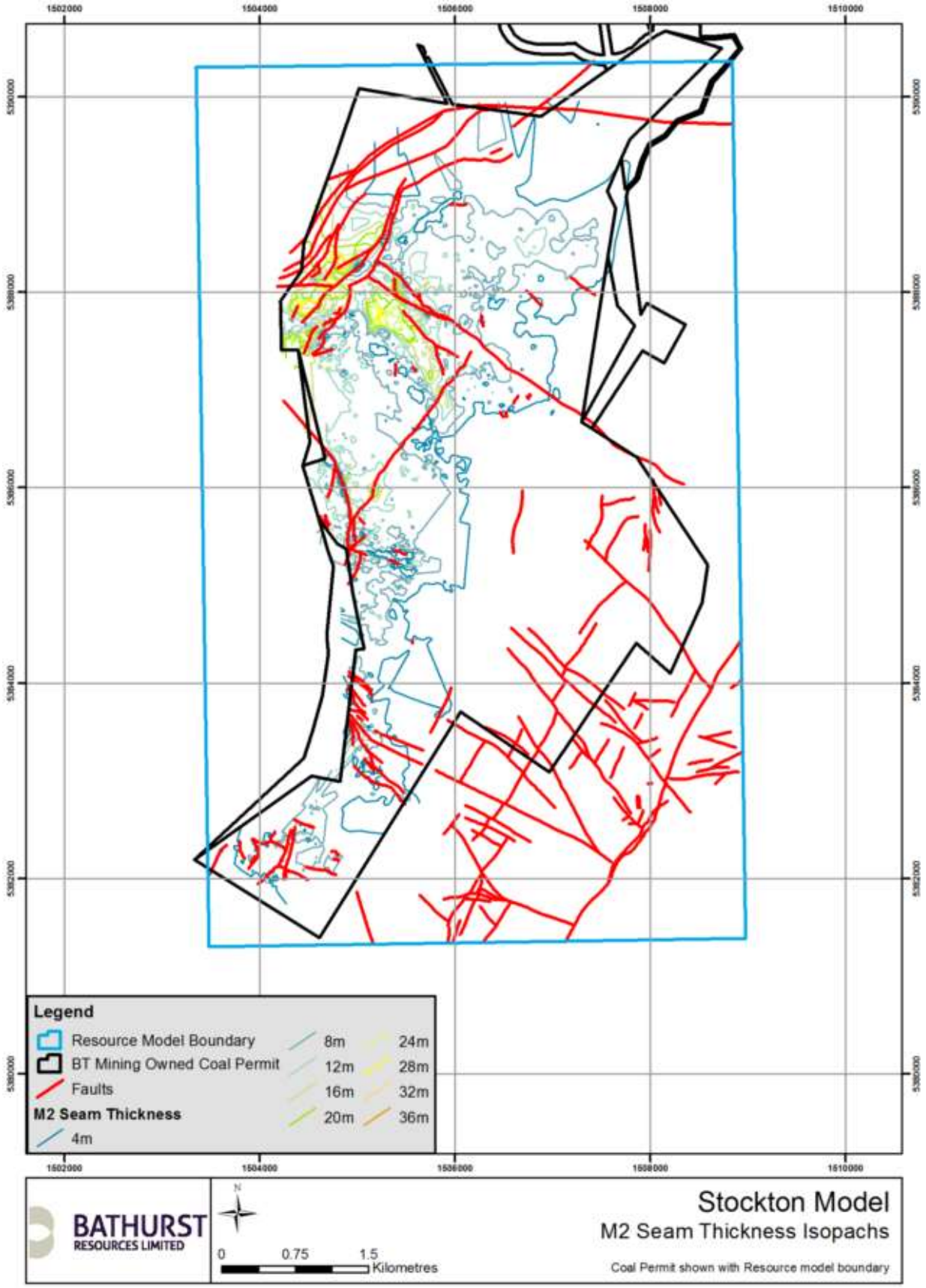


Figure 13: Map showing M2 apparent seam thickness

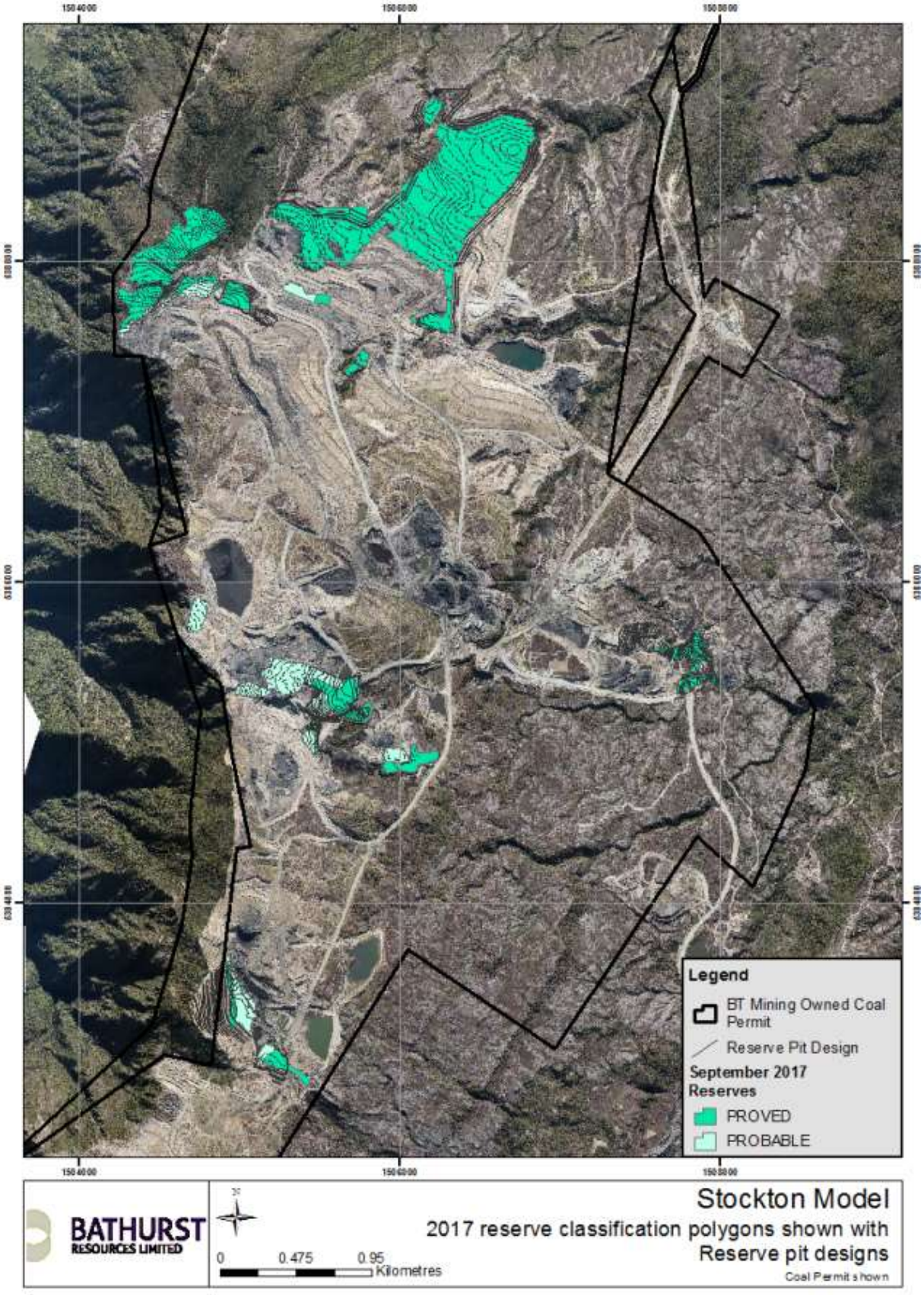


Figure 14 Stockton reserve pit shells

JORC Code, 2012 Edition – Table 1 report for the Upper Wiamangaroa 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Diamond Core (DC) drilling sampling for coal quality analysis took place using PQ (85mm) or HQ (64mm) coring methods for coal seams. The entire core is retained for analysis. A total of 479 exploration drillholes have been drilled across the permit. 72 trench intersections have been completed across the deposit with several infill reverse circulation programs completed over time. 868 reverse circulation drill holes are recorded in the AcQuire SQL database. Figure 4 represents drilling intersections used for resource modelling. Resource modelling has been undertaken over four individual areas of interest (Figure 2); o Mt. William North o Cypress o Mt. William South o Upper Wiamangaroa South Individual resource model reports have been compiled for the individual areas of interest. • DC sampling is carried out under Stockton Specific protocols and QAQC procedures. • Composited samples are created at the laboratory from individual plies that are thickness weighted. These composited samples are compiled for additional coal property testwork. • Trench lithology and sampling data collection has been collected in a similar manner to drill core (i.e. 0.5m plies) and have had the same analysis completed. • Reverse Circulation (RC) chip samples are collected via a cyclone attached to a reverse circulation percussion drill rig. Sampling is primarily undertaken on 0.5m intervals through the coal seam (~6kg), and indicative 1m rock samples (~70g). The entire coal sample is retained for analysis. • The quality of drill core, RC chip samples and trench samples are continuously monitored and collected by geologists during drilling.
Drilling techniques	• Drilling has been undertaken using the following techniques - Diamond Core (triple Tube, PQ core), - Open hole (Tungsten drag bit, PQ size) - Reverse Circulation (PQ sized face sampling bit), and - Blade bit • Some drill collars have had open hole pre-collars. • The bulk of the drill holes have been drilled vertically due to the shallow dipping morphology of the deposit and due to its close proximity to the surface. • No core has been orientated
Drill sample recovery	**Diamond core** • Standard industry techniques are employed for recovering drilled core samples from drillholes. Core is obtained by HQ (63mm) diameter coring techniques, using triple tube operations, providing good core recovery, averaging >80% over the entire drill hole (inclusive of non-coal lithologies). On average recovery of coal is 90%. • HQ core diameter is considered to provide a sample of sufficient volume to be representative of the in situ material and provides adequate sample mass to undertake the variety of raw coal tests together with composited sample analysis when required. • In poor ground conditions HQ sized rods, and therefore core were used to ensure that the drill hole was completed without affecting the integrity of the drill core and or loss of drilling equipment. • Downhole geophysics has been undertaken on most of the diamond core holes. A combination of geophysical tools, including Density, Natural Gamma, Caliper, Sonic, Dipmeter, Acoustic Scanner, and Verticality have been run down holes. All tools are calibrated on a regular and systematic basis. All geophysical logging work has been conducted by a contractor (currently Weatherford). Sample interval and recovery recorded in the field by drillers is validated and adjusted if required using geophysics during core logging and sampling. • When drillholes are geophysically logged, the geophysical logs are correlated/validated against the core to determine core/chip recovery, while ensuring drill depths recorded in the field by the drillers are correct.

Criteria	Commentary
	• Core photography is undertaken on all diamond core. **Reverse Circulation drilling chips** • RC chip samples from the reverse circulation percussion drillholes is recovered directly from the rods using a cyclone system. The entire sample interval is retained for coal quality analysis. Sample interval of 0.5m produces a sample between 5 - 7kg. • For Non-coal lithologies an indicative sample (~70g) from each meter is retained for geological logging. • RC generated samples with poor recovery (<3kg) are not submitted to the laboratory for analysis. • Should there be poor recovery for the entire coal seam the hole is re-drilled if there is no specific reason for the poor recovery (eg presence of underground workings within the coal seam) • The competent person is satisfied that the RC holes have taken a sufficiently representative sample of the mineralisation and minimal loss of fines has occurred.
Logging	• All diamond core samples are checked, measured, marked up and finally photographed before logged in a high level of detail. • All diamond core samples are geologically logged in a high level of detail down to centimeter scale. Intervals are logged for lithology, colour, weathering type, stratigraphy, texture, hardness, RQD and defects. Logging is conducted using a defined set of codes. • Every discrepancy between the measured length of the core and the driller's length marked on the core blocks is investigated. Discrepancies are resolved by geologists prior to sampling with the use of geophysical logs. • All percussion drillholes chip samples are geologically logged, with 1m samples used to define the non-coal lithologies (overburden), and 0.5m samples for coal and other non-coal lithologies surrounding or contained within coal seam partings. The geological logs are validated against laboratory results. • The entire lengths of RC drill holes are logged. Where no sample was returned due to voids/cavities it is recorded as such. • Drill holes that have been geophysically logged with a suite of tools (as described above) are analysed extensively to validate, confirm and correct coal seam depths. Validation and, if required, correction of the geological logs against geophysics is undertaken to ensure accuracy and consistency. Verticality, caliper, density and natural gamma tools are checked regularly with standard calibration assemblies. The density calibrations are performed routinely - with blocks of known densities (aluminum and/or water).
Sub-sampling techniques and sample preparation	• No splitting of core is undertaken in the field or during sampling. • Sample selection is determined in-house and is documented in a core sampling procedure. Clean coal core has been sampled to a maximum of 0.5m plies, and adjusted for core loss and lithological variations. • Associated high ash coal intervals and partings were sampled separately to assess potential dilution effects where they are <0.5m thick. Intervals with non-coal material (>50% Ash) are excluded from sampling. • Trench samples follow the same procedure as described for core samples. • Samples are placed into pre-labeled plastic bags to ensure proper Chain of Custody, and then transported by BT Mining Limited personal to the laboratory for testing. The laboratory continues with the Chain of Custody requirements. Sample preparation is undertaken according to Industry Standards. • A laboratory generated repeat sample is submitted with every 20th sample submitted to the laboratory. This sample is provided a new sample ID with no reference to the original sample ID. The results of these repeat samples are reviewed monthly and any discrepancies investigation. **RC chips** • No splitting of coal interval chips is undertaken. • Non-coal intervals are sub sampled directly from the cyclone. • Sample selection is determined in-house and is documented in a core sampling procedure. Associated high ash coal intervals and partings are sampled separately to assess potential dilution effects where they are adjacent to coal seams. Intervals with non-coal material (>50% Ash) are excluded from sampling. • Samples are placed into pre-labeled plastic bags to ensure proper Chain of Custody, and then transported by Solid Energy personal to the laboratory for analysis. The laboratory continues with the Chain of Custody requirements. Sample preparation is undertaken

Criteria	Commentary
	according to Industry Standards. • A laboratory generated repeat sample is submitted with every 20th sample submitted to the laboratory. Before submission this repeat sample is provided a new unique sample ID with no reference to the original sample ID. The results of these repeat samples are reviewed monthly and any discrepancies investigation.
Quality of assay data and laboratory tests	• SGS in Ngakawau and CRL (ACIRL Australia and Newman Energy subcontracted for specific tests) laboratories are used to undertake physical and chemical testing and use Industry Standards for all coal tests and systematic QA/QC procedures for all work. Both Laboratories hold accreditation by International Accreditation New Zealand (IANZ). The processes employed are considered to be appropriate for coal sample analysis. Results are reviewed in-house to ensure the accuracy of the data by a geologist and or a Senior Geologist. The laboratory has been inspected by the Company's personnel. Tests includes but are not limited to: **Chemical Analysis** Proximate analysis (ASTM D5142-2004 (modified)) Sulphur (ASTM D4239-04A). Total Moisture (ISO 589) **Ultimate Analysis** Carbon (AL038-in house) Hydrogen (ASTM D3176-09) Nitrogen (ASTM D3176-09) Oxygen (ASTM D3176-09 (by difference)) Sulphur (ASTM D3176-09) Forms of Sulphur (AS 1038 Part 11) Chlorine (ISO 587) Ash composition (X-Ray spectrometry (Spectrachem)) Ash fusion temperature (ISO 540:1995(E)) Trace Elements Calorific Value (ISO 1928-1995) **Rheological and Physical Analysis** Gieseler Fluidity (ASTM D2639-90) Dilatational (Audibert-Arnu) (ISO 349:1975) Free Swelling Index (ISO 501:2003(E) D720-91(1999)) Hardgrove Grindability Index (ISO 5074, ASTM D409-02) Relative Density (AS 10382111-1994) **Petrographic** Maceral Analysis (c/- Newman Technologies), Vitrinite Reflectance (ASTM D2798-99) **Other Tests** Washability testing as requested (AS 41561 using float-sink methods) (also used Boner gig shaker table process). • 5% of all SGS analysed samples from 2010 have been sent to CRL for re-analysis, and then subsequently re-tested at SGS. The result of these repeats are analysed by the database geologist and the resource geologist, on a monthly basis. Additionally 5% of all SGS analysed samples are retested by SGS, as part of their in-house QAQC process. These repeat test results are generally within a 5% of their original results. Results outside of set tolerances are investigated. • Results are reviewed on a regular basis by the project geologist.
Verification of sampling and assaying	• Most holes are geophysically logged, and verification of seam contacts are made through analysis of the geophysics. Assessment of coal intersections are undertaken by a Geologist. Geophysics allows confirmation of the presence (or absence) of coal seams, accurate determination of contacts to coal seams, density measurements are used to guide sampling and identify high ash bands and or seam partings. • Geophysical logs (dual density and gamma) are analysed extensively and used to validate and, if required, correct geological and sample interval logs to ensure accuracy and

Criteria	Commentary
	consistency. • Coal ply results are provided by the laboratory and reviewed internally. No adjustments or calibrations are made to any coal quality data. In instances where results are significantly different from what was observed in geophysical logs or outside of local or regional ranges defined by previous testing, sample results are retested. • Since 2006 all coal quality data has been directly submitted and stored in electronic format using acQuire SQL database software. • Historical data has been validated and entered into the acQuire SQL database, from the original paper logs. These geological and geophysical paper logs are housed in the fire proof library in Westport. Historical data was transferred and validated against the current logging codes to ensure the data was valid. A limited number of twin holes have been drilled, and returned acceptable duplicates of the original holes. • The competent person has inspected the sampling processes and inspected the laboratory.
Location of data points	• Upper Waimangaroa data is surveyed in Buller 1949 grid coordinate system in New Zealand with mean sea level datum (MSL).). However the Geode correction for elevation is not undertaken due to the elevation of the mine-site. All on-site survey data used in the resource estimation does not have the Geode correction as well. • All drillholes post 1998 are surveyed using real time kinematic GPS technology and are located within +/- 20mm vertically and +/- 10mm horizontal. Older drillhole collars were surveyed using conventional methods. • Historical underground workings plans are based off old hand drawn plans that have been geo-rectified (in 2D only) by converting from cadastral links to the Buller 1949 geodetic grid. • Topographic surfaces consists of triangulations constructed from a combination of airborne LiDAR (accurate to within +/- 0.2m) collected for the whole of the Upper Waimangaroa area in June 2013 • Drillholes with down-hole geophysics are surveyed for deviation with Weatherford verticality tool (+/- 15° azimuth and +/- 0.5° inclination).
Data spacing and distribution	• Exploration drillholes are variably spaced (<100m to 1500m) depending on target seam depth, geological structure, topographic constraints, down-hole conditions due to underground workings, and the location of other drill holes. • RC drill holes were spaced 40-80m apart to define a weathering profile. • No sample compositing is undertaken prior to initial laboratory ply analysis. Should detailed coal analysis be required, compositing is undertaken at the laboratory on a length weighted basis. • This drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate to support the resource classification and is suitable for this style of deposit. • Further drilling will be required to upgrade resource classification as part of long term development plans for the greater Stockton Plateau
Orientation of data in relation to geological structure	• Majority of holes are drilled vertically, due to near horizontal coal seams. • A small number of exploration holes have been inclined. The purpose of these holes were to define significant geological structures and or for geotechnical purposes and not for coal seam geometry and quality. • No drilling orientation and sampling bias has been recognized at this time and is not considered to have introduced a sampling bias.
Sample security	• RC chip samples are collected in uniquely numbered pre-labeled plastic bags. Three to five samples are then placed in a large plastic bag for delivery to the laboratory. • Core and trench samples are placed in uniquely numbered pre-labeled plastic bags. Three to five samples are then placed in a large plastic bag for delivery to the laboratory. • Prior to submission to the laboratory, a standarised dispatch form is generated for each drill hole, within the AcQuire SQL database software, which delineates the set of analysis to be undertaken and the logged sample numbers. • Once samples and dispatch form are completed, the sample bags are validated and subsequently delivered to the secure laboratory sample receiving area by a staff member. Once received at the laboratory, the consignment of samples is receipted against the sample dispatch documents. • Any additional analysis is requested as required by the Geological Services Superintendent or Resource Geologist. • Sample residues are stored at the laboratory pending results and any possible repeat

Criteria	Commentary
	requests. • Sample security is not considered a significant risk to the project
Audits or reviews	• Integrity of all data (drillhole, geological, survey, geophysical and CQ) is reviewed by the Resource Geologist before being used to model either structure or qualities. • Periodic internal reviews are conducted, to verify that both core and chips are logged in a consistent manner. These reviews are done either by a senior geologist or by the resource geologist. • The AcQuire database was last externally audited in 2008 by Advanced DataCare. Suggested actions were reviewed and actioned where necessary. • The AcQuire database is considered to be of sufficient quality to carry out resource estimation • Resource models have been externally reviewed by Palaris as part of Solid Energy's Vendor Due Diligence in April 2016.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• Upper Waimangoroa MP41515 is a coal mining permit is due to expire on the 11th November 2038. • BT Mining Ltd has sole ownership of the Cypress operation and Upper Waimangaroa area. • BT Mining is a joint-venture between Bathurst Resources Limited (65%) and Talley's Energy Limited (35%). • On 1st of September 2017 BT Mining took control of Solid Energy assets including two operating mines Rotowaro and Maramarua in the Waikato region of the North Island and the Stockton mine on the West Coast of the South Island. • All operations at Cypress mine are currently undertaken within the Mining permit boundaries. • BT Mining Ltd does not own any land within the Upper Waimangaroa South resource. The land is owned by the Crown and administered by LINZ. BT mining Limited has a land access agreements with the Crown to access land. The agreements expire at a date after the life of CMP 41515, to be determined by the Crown, to provide sufficient time for rehabilitation. The permit expires in 2038. • Royalties and Levies are applied to per ton of coal produced.
Exploration done by other parties	• Within the MP41515, the previous owner (Solid Energy) has undertaken all exploration on the tenement since 1987. However, there have been earlier periods of work that have contributed to the understanding of this Resource. These programmes include early drill-holes back to the late 1800's through into the 1900s, with New Zealand Coal Resources Survey preforming additional drilling in the 1980s. • Between 1927-47 28 drill holes were drilled by Westport Coal Company • In 1952-53 a further 9 drill holes were drilled in the Northwest area by the Mines Department • In 1976-77, 14 drill holes were drilled by the Ministry of Works. • Three phases of drilling were completed by New Zealand Coal Resources Survey were completed between 1982 – 1985. • State Coal Mines drilled 48 holes between 1985 - 1987. • Solid Energy commenced further drilling from 1997 – 2012.
Geology	• Coal resources on the Stockton Plateau are restricted to the Middle to Late Eocene aged Brunner Coal Measures (BCM). This unconformibly overlies the Ordovician aged Greenland Group greywacke's and argillites, which has been extensively intruded by Cretaceous granites and porphyry (Berlins Quartz Porphyry). Due to the stratigraphic nature of coal measures, the coal seams generally lie in a horizontal or sub-horizontal plane. The resource has a dip to the NE at the northern end of the deposit and to the East along the western margin. Folding and faulting through the coal seams can create localized changes in dips up to 80 degrees. • The Mangatini coal seams are the main coal seams of the Upper Waimangaroa Deposit. The seams have been given the abbreviation M. There are the three seams M1, M2, and the M3. The M1 and M2 seams are the predominant seams over the deposit. Seam splitting is common across the deposit and can lead to correlation complications. No distinct marker horizons are present between the seam. Correlations are based on detailed cross sections completed across the deposit. The

Criteria	Commentary
	M1 and M2 seams are the dominant seams targeted for mining and can vary in thickness.The M2 seam overlies the M1 seam.The M3 is a rider seam to the M2; however the seam is not considered during resource estimation. The M3 seam is characterised by having high Sulphur (>4%) and is generally poorly developed.
Drill hole Information	• No Exploration results are reported. Comments relating to drill hole information can be found in Section 1. • The exclusion of this information from this report is considered not to be material to the understanding of the report,
Data aggregation methods	• The maximum ash cut-off for building the Upper Wiamangaroa structure models was set at 25%. • Resources have been reported with an ash cut-off of 25%. • Seams have been sampled on a ply-by-ply basis with ply boundaries determined by reconciliation against down hole geophysics.
Relationship between mineralisation widths and intercept lengths	• All exploration drill holes have been drilled vertically and the coal seams are generally gently dipping. Therefore the reported seam intercept thickness is representative of the true seam thickness. • Dip meter and deviation plots are available for some holes. For those without this data it is assumed that a vertical orientation is achieved and, as most coal intersections are less than 100m in depth, any deviation from vertical would produce only a very minor effect on the reported depth to coal and coal thickness.
Diagrams	• The Appendix includes a number of plans that display the deposit geographically.
Balanced reporting	• No Exploration results are reported. This avoids any issues with unbalanced or biased reporting. • The Competent Person does not believe that the exclusion of this comprehensive exploration data within this report detracts from the understanding of this report or the level of information provided.
Other substantive exploration data	• Historically a number utilization and specialist marketing testing has been undertaken. • The different stratigraphic units and rock defects have been assigned various strength parameters based on historic laboratory test data (UCS, shear box and ring shears), empirical classifications (RMR, GSI and Hoek Brown). Downhole insitu geophysical measurements have been undertaken to compare the strength variability with actual laboratory test data.
Further work	• Additional exploration and resource development drilling has been proposed to better define geological structures, seam structure, thickness and coal quality of the deposit and is pending approval.

Section 3 Estimation and Reporting of Coal Resources

Criteria	Commentary
Database integrity	• All GPS sourced and validated survey data recorded in the field is electronically transferred into the master Solid Energy New Zealand (SENZ) acQuire SQL database • All drill core logging data is digitally entered directly into a AcQuire SQL database, with in-built enforced data validation rules. Drill chip geological logging data is manually entered into the AcQuire SQL database, with in-built enforced data validation rules. • The acQuire SQL database has been designed to ensure data is entered and stored in a consistent and accurate manner by using dropdown menus of standard logging codes to prompt and constrain inputs. The database highlights out of range coal quality values, duplicate records/intervals, prevents overlapping intervals or depths that extend beyond total drill hole depth. All changes to the database are tracked and archived. Data correction and validation checks are undertaken internally as defined by the a Data Validation Standard before the data is used for modeling purposes. • All Ply coal quality data is imported each night, using an automatic import of the laboratory generated electronic results (Comma separated text file with a standised format, saved to a secure shared server location). • Once all validation is completed all drillhole data is signed off by both the responsible geologist, and the resource geologist. On completion of the data sign-off process the data is locked in AcQuire and cannot be adjusted unless requested by the site geologist. • Data validation checks are run routinely by the site geologist using AcQuire software validation routines. All validation concerns are rectified by the site geologist.

Criteria	Commentary
	• The AcQuire database was last externally audited in 2008 by Advanced DataCare. Suggested actions were reviewed and actioned where necessary.
Site visits	• Competent person has a full time role with Bathurst Resource Limited as the Technical Project Team Leader with a high level of interaction with the Stockton geologist. • The Technical Project Team Leader has worked for 5 years at Stockton and has extensive knowledge of the project area. • Regular visits have been undertaken by the Technical Project Team Leader.
Geological interpretation	• There is sufficient confidence in interpretation of geological stratigraphy, structure and seam correlation/continuity though it is variable across the Upper Waimangaroa area. • The data used in the geological interpretation included field mapping, drillhole data, core logging data, geophysical logs, sampling, coal quality laboratory testing and structural interpretations. Residual variability exists concerning geological structure along/within the major fault zones, resulting in a lower level of resource confidence This variability will influence the local estimates rather than the global structural and coal quality estimates for these zones.
Dimensions	• The Upper Waimagaroa resource area covers approximately 4km², a roughly rectangular shape up to 2km wide (ESE-WNW), and 10km long (NNE-SSW). • Within this area all seams are exposed at outcrop along the western margin of the MP. With the bulk of the insitu coal between 0 and 150m below the original ground surface. • Coal thickness varies considerably over the deposit, from over 20m (areas with structural thickening) down to <3m (areas with coal seam poorly developed). On average the cumulative (M1 & M2) coal resource has an average thickness of 8m. • The M3 seam is on average 0.5m thick.

Estimation and modelling techniques	• Modeling has been undertaken using Maptek's Vulcan Version 9.1 software by resource geologists experienced in its use, using a standarised set of validated scripts and the structural modeling module integrated into the software package.
	• Resource models have been produced across four prospective areas;
	  ○ Mt. William North
	  ○ Cypress
	  ○ Mt. William South
	  ○ Upper Wiamangaroa South
	• Mt William North is based on a resource model utilizing a combination of 111 drillholes, reverse circulation and trench intersections
	• 337 Drillholes and trenches are utilized in modeling and resource estimation for the Cypress model.
	• The Upper Wiamangaroa model has utilized 226 exploration drillholes and 34 trench intersections
	• Mt. William South has been interpreted using 23 exploration drillholes.
	• All valid drilling data, mapping data, together with a number of structural interpretations are used as the source data for creating the coal seam surfaces (grids).
	• Grids for the coal roof and floor (including seam splits) are developed over the entire MP. These coal surfaces are modeled using a stacking algorithm with the coal roof of the predominant coal seam (M1 and or M2) used as the reference surface. This process is repeated for six geological domains of the deposit to ensure that the coal seams are modeled accurately. The major fault blocks each have separate interpretation data points, to guide interpretation process, with a hard data boundary with the surrounding fault blocks.
	• The structural grids are created by using a triangulation algorithm. Grid sizes vary across the four models but are dependent on data support.The methodology of creating structural grids is common practice for the estimation of coal deposits. Fault blocks have been modelled separately, and then appended together along three-dimensional fault surfaces.
	• Block model extends vary depending on modelling extents and can overlap.
	• A standarised block model schema has been used, with a standised set of variables, with associated default values.
	• The latest validated survey "original" topo surfaces and structural grids are used to create an empty block model, with 20m by 20m blocks with a minimum thickness of 0.5m (for coal seams). The parent block size is approximately one fifth the average drill spacing to ensure the mineralization is well represented by the blocks. For Mt. William North a standarised block model was created, with a standised set of variables, with associated default values that has been used for the nearby Stockton and Cypress deposits. The topography surface and grids surfaceswere used to flag blocks within the model. The seam blocks are 10m (x) by 10m (y) by 0.5m (z) blocks with a minimum thickness of 0.5m (for coal seams).

Criteria	Commentary

	• The drilling database is used to create a set of 0.5m thick composites from the assay results, which is then used to estimate the coal qualities for the blocks within the coal seams. Multiple estimation runs are completed to ensure all blocks are populated.
	• All coal blocks have been estimated using the inverse distance methodology, with a power of 2, for the standard set of coal qualities (ash, sulphur, swell, inherent moisture, volatile matter).
	• Coal Quality Estimation parameters used during coal quality estimation have been standardised between models:
	  • Search ranges used are 250x250x0.5m, 500x500x0.5m, 1000x1000x0.5m, 2000x2000x0.5m, 4000x4000x0.5m.
	  • Samples used are a minimum of 2 and a maximum of 5
	  • A maximum of 2 samples from any one drill hole is allowed.
	  • Block discretization of 4,4,1 was applied
	  • Using the Vulcan "tetra unfolding" methodology, along the modelled coal seam surfaces.
	• At each stage of the process (initial data points, new surfaces, and final block model) the new data is validated back to the previous model, to ensure consistency.
	• Standard Block model validation was completed using visual and numerical methods.
	• No selective mining units were assumed in the estimate.

Moisture	• All moisture values are reported on an air dried basis, using air dried ply results to estimated moisture. Inherent moisture is measured for all drillholes samples. • Tonnages are estimated on an Air Dried dry basis.
Cut-off parameters	• A minimum seam thickness cut off for all modelled seams is 0.50m. As this is what is currently considered as recoverable using open cast methods. • A maximum ash cut-off of 25% has been applied to all coal seams except where seam continuity is required, which may include intervals with greater than 25% Ash. • Coal with Ash <8% is considered “bypass” coal and does not require any further processing. Coal with Ash >8% needs to be processed through the company’s Coal Handling and Processing Plant (CHPP). • Coal tonnes are only reported from the M1 & M2 seams and their respective splits (No M3 tonnes are reported).
Mining factors or assumptions	• Selected mining method chosen from long term experience of local conditions at nearby Cypress and Stockton mines. • Geotechnical parameters for cut slope design were developed based on historical cut slope performance, slope back analysis and laboratory testing of material strength parameters. Slopes are designed to comply with a Factor of Safety that exceeds 1.2 with its related probability of failure and potential failure dimensions. • Minimum recoverable coal thickness is 0.5m. With the expectation to extract 100% of the in-situ coal.
Metallurgical factors or assumptions	• Contaminated coal from mining will be processed via the company’s Coal Handling and Processing Plant (CHPP). The CHPP removes the dilutant material and a small portion of coal to provide a more saleable product. The plants performance has been routinely monitored since its inception. • Although not included in the resource estimate, studies have been conducted on the properties of the coal pertaining to combustion potential, Ash fusion temperatures and Hardgrove Grindability Index. • Small parcels of coal have been sent to customers for evaluation and testwork.
Environmen-tal factors or assumptions	• Cypress and Mt. William North are fully consented. • Currently no Resource Consents exist for the southern portion of the Upper Waimangaroa deposit. • A number of lithological units will be exposed during the mining process which will likely generate acid metal drainage. This will require engineering of water containment and treatment
Bulk density	• The relative density value is calculated using the available ash–density data (248 samples) to define an ash–density curve. • Non-coal units are assigned default density value based upon the lithology type.

Classification	• The resource has been classified into the Inferred/Indicated/Measured status by anaylsing 3 factors upon which the geological confidence is based.
	  • Number of informing drill holes used
	  • Proximity to major faults.
	  • Proximity to sub crop position

Criteria	Commentary
	• The competent person has reviewed the results of the resource classification process and made adjustments where necessary and or required. • The input data is comprehensive in its coverage of the coal seams and does not miss-represent the in-situ coal seams • The results of the validation of the block model exhibit a good correlation of the input data to the estimated grades • The Competent Person has taken into account all relevant factors in undertaking this estimation and considers the estimate to be a true reflection of the current understanding of the deposit.
Audits or reviews	• A brief review of the resource modeling process was undertaken internally in 2015, all issues raised have been addressed. • Palaris completed an external review of this estimation in May 2016 as part of Solid Energy's Vendor Due Diligence process. No substantial issues were raised. No Further estimation has taken place within this part of the Mining Permit since this review.
Discussion of relative accuracy/ confidence	• Based on the data available, the degree of accuracy of this statement is considered high for the Upper Waimangaroa deposit. The process for calculation has used: Standards, Guidelines and the JORC Code along with industry best practice where available to define the Resource estimates provided to confirm search estimation ranges and drill hole spacing for each resource classification

Section 4 Estimation and Reporting of Coal Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resource estimates are those undertaken by Stockton Geology Team employed by BT Mining Limited at the Cypress Mine as outlined in Section 1-3. • 3D surfaces are used to generate the resource block model which includes topography, seam structure and coal qualities are used for in-situ resource definition. Golder has relied on this information for the study and has not performed detailed model validation or model input checks. Golder considers the model to be reasonable and constructed using a robust modelling process. • A 3D block mining model was generated which included minimum seam thickness, mining losses and dilution using Vulcan™ software. • Mineral Resources are inclusive of Ore Reserves. • Definitions- ○ **ROM Coal =** "Run Of Mine" ○ **Bypass Coal** - is defined as coal recovered that is not contaminated by rock or other materials and which when mined, is a saleable product ash (<8%) ○ **Wash Coal-** is defined as either coal contaminated with non-coal lithology's (>8% and <55% Ash) or high ash in situ coal (>8% and 35% Ash) and requires processing/washing prior to becoming a saleable product. An estimated 22% of total reserve coal tonnes require washing to make a marketable product. ○ • Pit design extents were established using standard Lerchs-Grossman pit design techniques and based on preliminary economic and geotechnical inputs. • Mine design strips by bench were applied to develop a mine schedules and used as a basis for reporting reserves. • Reserve estimates include consideration of material modifying factors including: the status of environmental approvals; other governmental factors and infrastructure requirements for selected open pit mining methods and coal transportation to market (per JORC Code 2012). • Reserve tonnages have been estimated using a density value calculated using approximated in-ground moisture values (Preston and Sanders method). As such, all tonnages quoted in this report are wet tonnes. • All coal qualities quoted are on an Air Dried Basis (adb). • In 2017 there was an overall decrease in the previously reported export marketable reserves based on the following changes: • The model has been depleted to account for ongoing surface mining taking place in the Cypress North block

Criteria	Commentary
	• The estimated proportion of coal requiring benifcation increased from a modelled average of 8% to 22% following reconciliation with actuals that indicated up to 30% of ROM tonnes mined to date reported to the wash plant. The revision assumes an anticipated 5-10% decrease in actual mining dilution due to better control on roof and floor cleanup and mine plan and method improvements. • Updated Cypress North pit shell based on geotechnical updates (increased reserves) • The coal wash plant (CHPP) recovery and wash coal product ash % was adjusted based on actual wash plant performance. Marketable coal tonnes are reported on the basis of in-ground moisture and requires further assessment to bring up to standard in future reserve reporting
Site visits	• The Competent Person for this Ore Reserve Statement is a full time employee of Golder Associates (NZ) Limited. The Reserves Competent Person (CP) is Sue Bonham-Carter of Golder Associates (NZ) Ltd.. Ms. Bonham-Carter has over ten years experience working at the site , including in a mine planning role January to September 2017.
Study status	• Cypress mine is an operating mine. • The reportable Coal Reserve is based on actual site performance and costs that has determined an economically viable plan. Material Modifying Factors have been considered.
Cut-off parameters	• The cut off for Bypass coal is <8% Ash. • The cut off grades for contaminated coal (Wash Coal) is coal contaminated with non-coal lithology's (>8% and <55% Ash) or high ash in situ coal (>8% and 35% Ash), • The minimum mineable seam thickness is 0.5 m.
Mining factors or assumptions	• Lerch Grossman (LG) pit optimisation techniques were used to generate pit shells based on actual site costs and geotechnical input parameters. Pit optimization studies included restrictions for current land and mineral access determined by mining permits and consent limits. Pit Optimisation results were peer reviewed by Golder Associates (NZ) Limited in 2015 and considered valid for the 2017 Reserve estimates. The mining method is conventional drill and blast, load and haul open pit mining operation. This utilises truck and excavator for waste movement, while coal is loaded using a combination of loaders and excavators with haulage to the ROM hopper Coal Handling and Preparation Plant (CHPP), or stockpiles using dump trucks. The operations are supported by additional equipment including dozers, grader and watercarts. • Geotechnical parameters are based on geotechnical studies undertaken by the Stockton engineering geologists. Different parameters are applied to each pit. Pit designs have been based on geotechnical constraints and parameters. The typical highwall configuration is a batter height of 15m with batter angles between 30°- 76° using 5-8.5m wide benches. Maximum of 10% gradient and a 23m wide running surface is being used for in pit ramps and roads. • Allowances for mining dilution and recovery has been applied to the block model. The mining loss,contamination and dilution is based on the rock mass lithology above coal roof and below coal floor as follows in metres for each mineable horizon: Thickness (m) Roof Floor Mudstone Lost: 0.10 0.05 Mudstone Contaminated: 0.05 0.10 Mudstone Dilution: 0.25 0.25 Other Lost: 0.05 0.05 Other Contaminated: 0.10 0.10 Other Dilution: 0.05 0.05 • An additional dilution factor was added in 2017 to account for mining dilution introduced at the bench level due to sheeting requirments and silt accumulation estimated at 3 m mining horizons. Minimum recoverable in-situ thickness is 0.5m. • Minimum mining widths are dependent on volumes to be excavated and the size of the fleet to be used. Typically for the bulk excavator and truck fleet this is approximately 30

Criteria	Commentary
	meters. For the small excavators and trucks this is approximately 15 meters. • Current mining methods require the following infrastructure. Haul Roads, Drainage, pumps, sumps and dam structures, Lime Dosing Plants, coal stockpile areas, CHPP, coal load out and bins, aerial ropeway, train load out and bins, workshop, offices, store, maintenance and contractor facilities. Most of this infrastructure is in place with the main new infrastructure required being sumps, dams and water control as the mine expands into undisurbed areas.
Metallurgical factors or assumptions	• ***Bypass Coal*** **-** Is defined as coal recovered that is not contaminated by rock or other materials and which when mined, is a saleable product (ash <8%) • **Wash Coal**- is defined as either coal contaminated with non-coal lithology's (>8% and <55% Ash) or high ash in situ coal (>8% and 35% Ash) and requires processing/washing prior to becoming a saleable product. An estimated 22% of total ROM reserve coal tonnes require washing to make a marketable product. • Wash coal won is processed at the adjacent Stockton mine has a CHPP in operation to produce a saleable product. • Online analysis are utilised for identifying coal that is out of specification. • Additional samples are sent for petrographic analysis (Romax). • The processes used are standard for the coal industry and so are well tested technologies. • This has also been backed up by bulk samples being taken and tested for washability, yield and recovery factors. • Historical plant performance has been used to review these factors applied in the model, and these modifying factors updated in the block model 2017.
Environmental	• All Mining approvals, consents, Permit and License to operate have been granted for Cypress Mine. This is MP41515. • The Cypress mine operates in a sensitive environment and has a complex set of consent conditions that require diligent management. Environmental planning and management is fully integrated with coal mining at Cypress and the mine has annual rehabilitation targets. • Developing an area for mining includes systems to divert clean surface water around the area and ensure any water from the work site which is carrying sediment is collected and channelled into the mine's water treatment infrastructures. • Soil and vegetation are carefully lifted and taken to a holding area or immediately placed in an area of the mine undergoing rehabilitation. • Red tussock and Herb fields are carefully lifted and transported to specially design storage areas to allow them to be transplanted back in Cypress pit once the pit has been mined then backfilled to the original ground level. • No environmental impacts that cannot be mitigated have been identified.
Infrastructure	• Cypress is an operating satellite mine area of the greater Stockton Mine with existing infrastructure in place to support the operation. Most of this is based at the nearby Stockton mine (CML37150). This includes a Coal Handling and Processing Plant (CHPP), ROM, Water treatment plant, Lime dosing plant, Workshop, Offices, Aerial ropeway, Train load out, water treatment structures and Coal stockpiles, waste dumps, weighbridge area, contractors laydown yard, power station and explosives storage. • Labour is primarily sourced from the nearby town of Westport. • Accommodation for the labour source is off-site in the small nearby towns but primarily in Westport.
Costs	• Cypress is an operating mine and majority of the capital has already been spent. The current LOM requires capital to maintain these structures and also to develop additional water infrastructure for future mining (e.g. resource definition). • Operating costs are reviewed annually. These are based on historical actual's and forecasting for the following financial year. This is made up of machinery costs, fuel consumption, construction, fixed costs, administration costs, environmental costs and transport costs. • Annual Budget prices for major consumables and infrastructure is used. • Exchange rates Bloomberg (April 2015 forward curve 10 years). • CHPP is owned by BT Mining Limited and so costs are based on the demand for wash product in the annual budget. Historical data sourced from Solid Energy data provided as part of the purchase agreement has been used to calculate CHPP costs and quality output reviewed daily and adjusted. • Mine Rescue levy, License and Inspection levy, Energy Resources levy, Crown royalty, Coal Mining Licence fees, FME carbon and land rates are applied as per appropriate NZ legislation.

Criteria	Commentary
Revenue factors	• Coal prices – Hard Coking Coal (HCC) prices used was based on Wood Mackenzie April 2015 (long term forecast) • All other prices derived from HCC based on agreed company ratios (SHCC 87%, SSCC 70%). • Discount rate as per Price Waterhouse Cooper assessment July 2015.
Market assessment	• The supply and demand situation for coal is affected by a wide range of factors, and coal consumption changes with economic development and circumstances. BT Mining has sales agreements in place with some existing customers. Established external forecast analysts have provided guidance to assess the long term market and sales of Coal. • BT Mining Limited Marketing team is regularly in talks with new customers and investigate potential new markets.
Economic	• For the optimisation carried out June 2015 the following inputs have been taken into consideration: - mining, processing, civils, administration, haulage, aerial ropeway, rail, port costs and licenses and levy's as per appropriate NZ legislation. • Pit optimization was carried out using a revenue factor (RF) range of 0.4 to 2.0 in 0.1 intervals. • The incremental RFs allow for the generation of different pit shells, allowing different stages to be chosen rather than just mining the ultimate pit. For RFs > 1.1, can give an indication of the possible size of a pit should the price increase. • Sensitivity analysis has only been completed on commodity price variations. Cypress pits are sensitive to commodity price variations and also sensitive to overall slope angle variations.
Social	• BT Mining Limited currently holds the required DOC Permits for Mining and access to mine the Cypress Region. • The Cypress region requires additional permits to operate covering vegetation disturbance, wild life (kiwis, etc.), water discharge • As a part of resource consenting process and general site operations, regular communication and consultation has taken place with the local communities including the local Iwi.
Other	• BT Mining Limited acquired the Cypress deposit and adjacent Stockton Mine assets from Solid Energy New Zealand Ltd.(Subject to Deed of Company Arrangement) on 01 September 2017. • All material legal agreements, marketing arrangements and government approvals are in place and active for the existing operation. • There is no identified material naturally occurring risks that could impact on the project or Ore Reserves.
Classification	• Ore Reserves are based upon resources classified as either Measured or Indicated from the Ore Resource estimation and classification process. • The Ore Reserve classification results appropriately reflect the Competent Persons view of the deposits. • 0% of Probable ore reserves are derived from measured mineral resources.
Audits or reviews	• In 2008 a study was undertaken to access coal washability for the Coal Handling and Processing Plant (CHPP). • In 2009 a Definitive Feasibility Study was undertaken for the Millerton Region. This forms the foundation of the mining losses and dilution. • In 2010 a definitive Feasibility Study was undertaken on the Cypress Reserve model. • In 2012 a pre-feasibility study was undertaken into the Mt William North Resource. This forms part of the Cypress Model. • Palaris undertook a review of the Cypress reserve model in 2013 • Internal review Pit Optimisation Study has been undertaken in 2014. • A new Pit Optimisation study was completed in June 2015 by Golder Associates. • Palaris Pty undertook a review of the Cypress reserve model in 2016 as part of a Vender due diligence for Solid Energy New Zealand Ltd.(Subject to Deed of Company Arrangement). • The mining and CHPP performance were reconciled in 2017 with actuals.
Discussion of relative accuracy/ confidence	• Mineral Resources have been reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and reflects the relative accuracy of the Mineral Resource estimates. • The statements relate to global estimates of tonnes and grade. • Accuracy and confidence of modifying factors are generally consistent with the current operation. Modifying factors applied to the Cypress reserve are Mining Losses, Dilution

Criteria	Commentary
	and Contamination to Roof, Floor and at 3 m bench intervals of the coal seam. The amount of losses, dilution and Contamination are dependent on the lithology of the rock in the roof and floor, weather and mining method. • Accuracy and confidence of modifying factors are generally consistent with the current operation. Plant performance data sets are still limited and require reconciliation on at least an annual basis. • Marketable coal tonnes are reported on the basis of in-ground moisture only, further data and assessment is required to report product on a total moisture basis. • The accuracy of the Coal Reserve estimate is primarily dependent on the ability to sell the coal at the, estimated prices and the site operating costs. Site operating costs have been reviewed internally and also with assistance from Golder Associates (NZ) Ltd.

Appendix A

Maps and plans discussed within Table 1 are reported below.

Figure 1 Location Plan

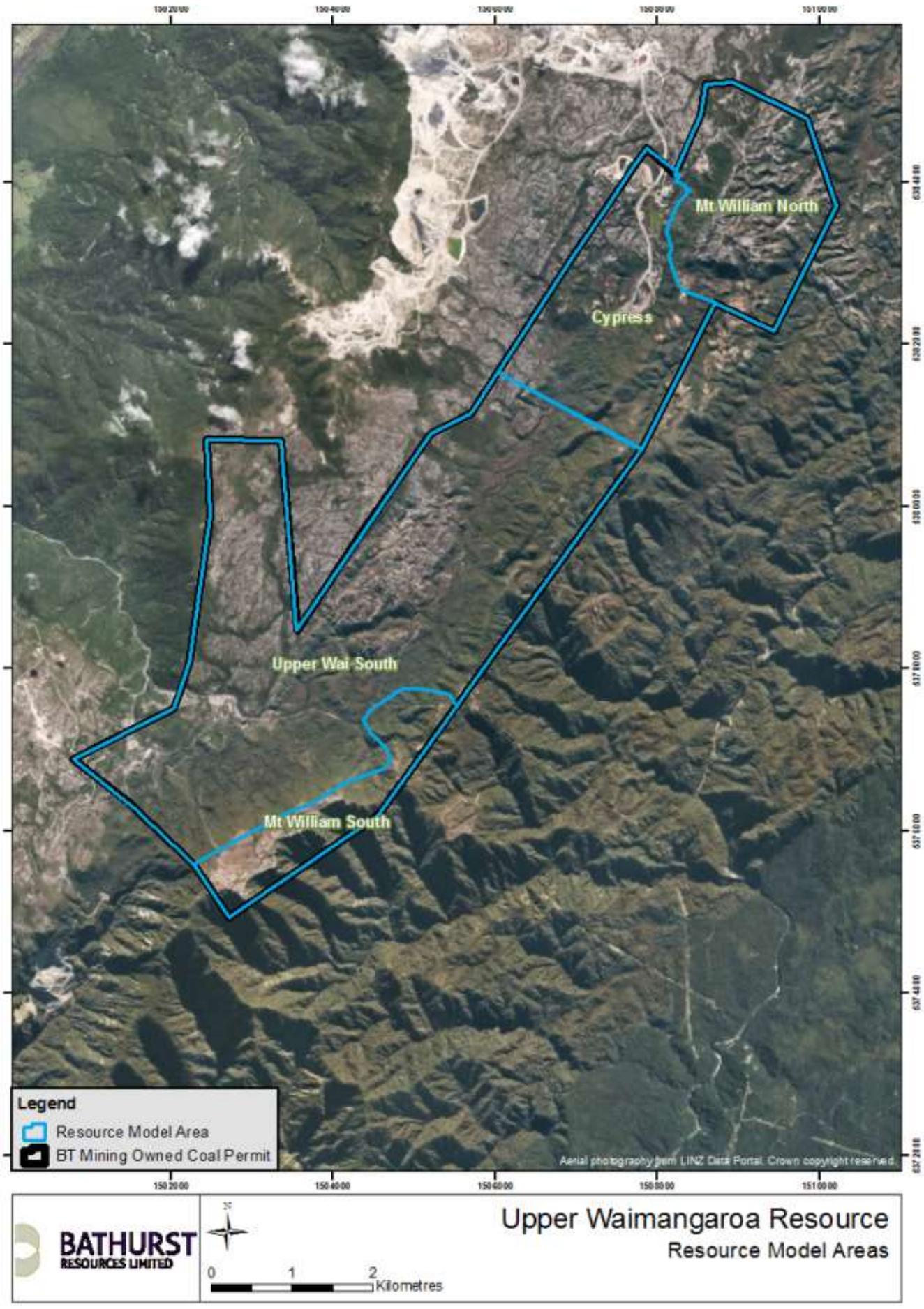


Figure 2 Resource Model areas

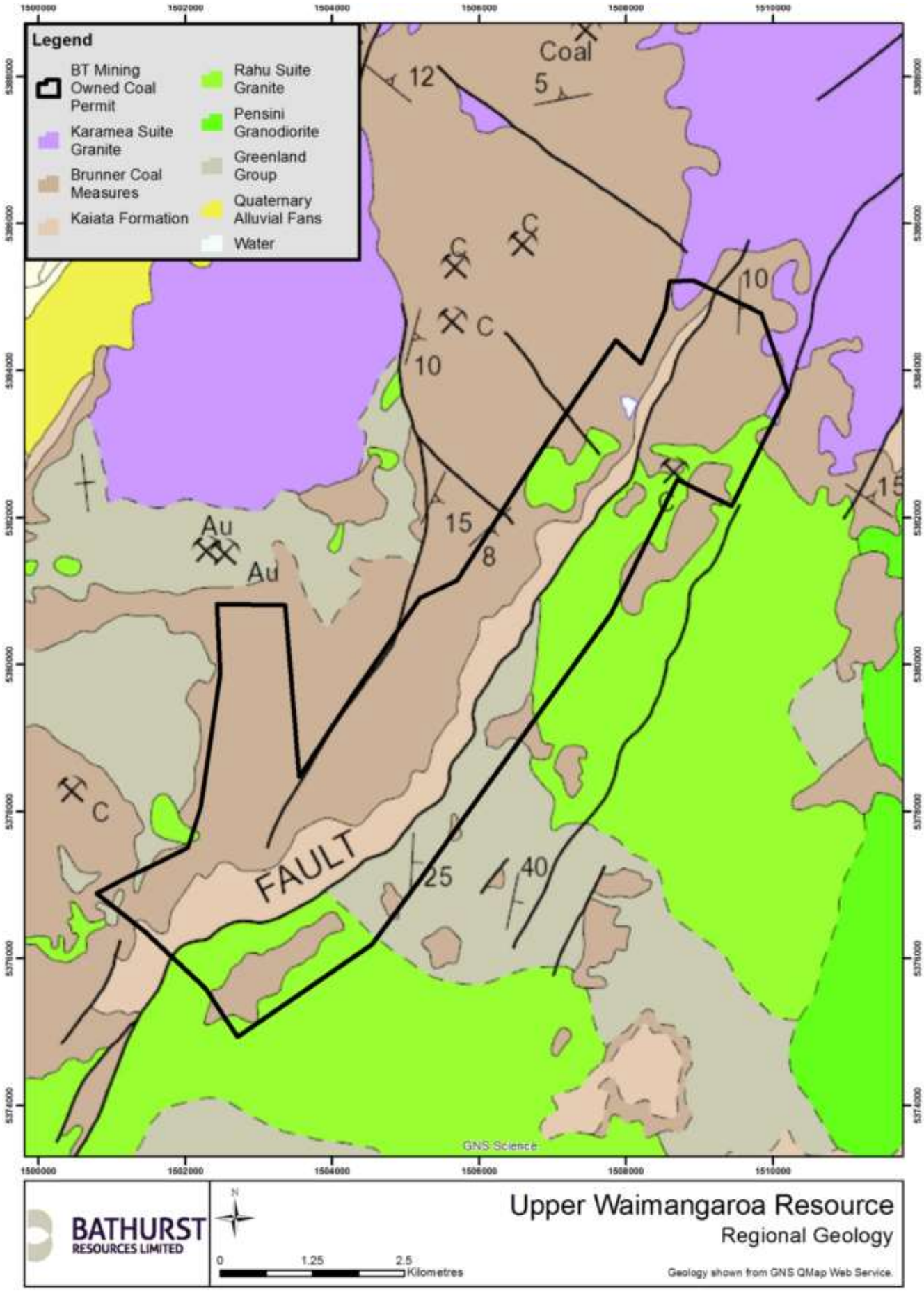


Figure 3 Regional Geology

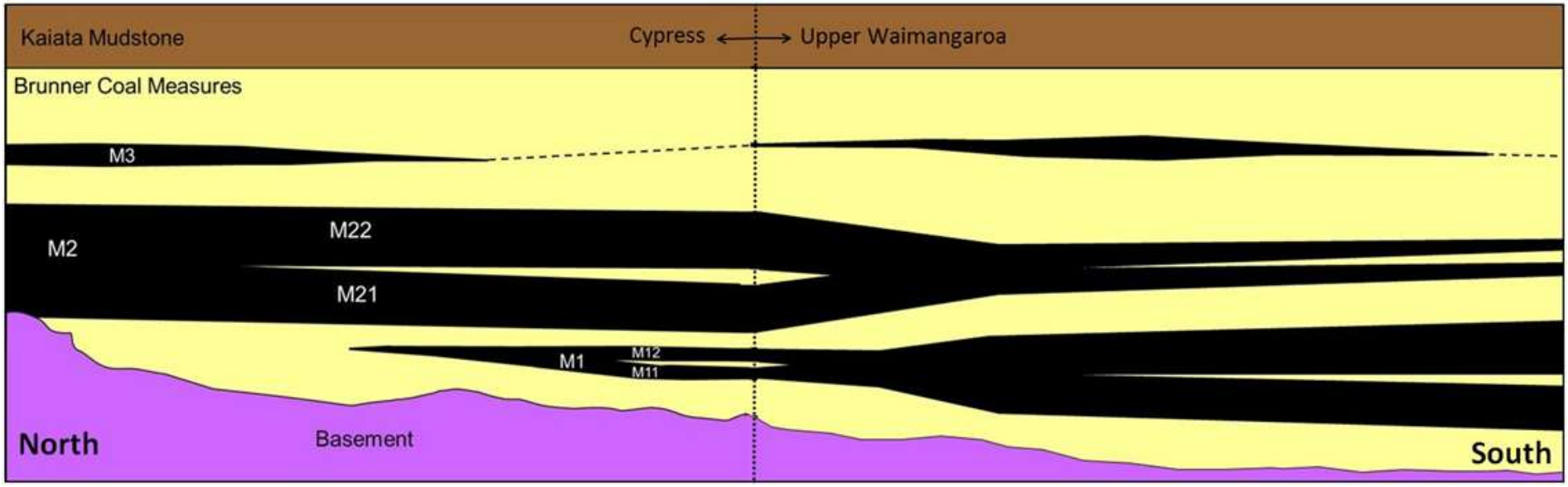


Figure 4 Schematic diagram of Upper Waimangaroa Coal Seam naming convention and correlation alongside that of the Cypress deposit to the north

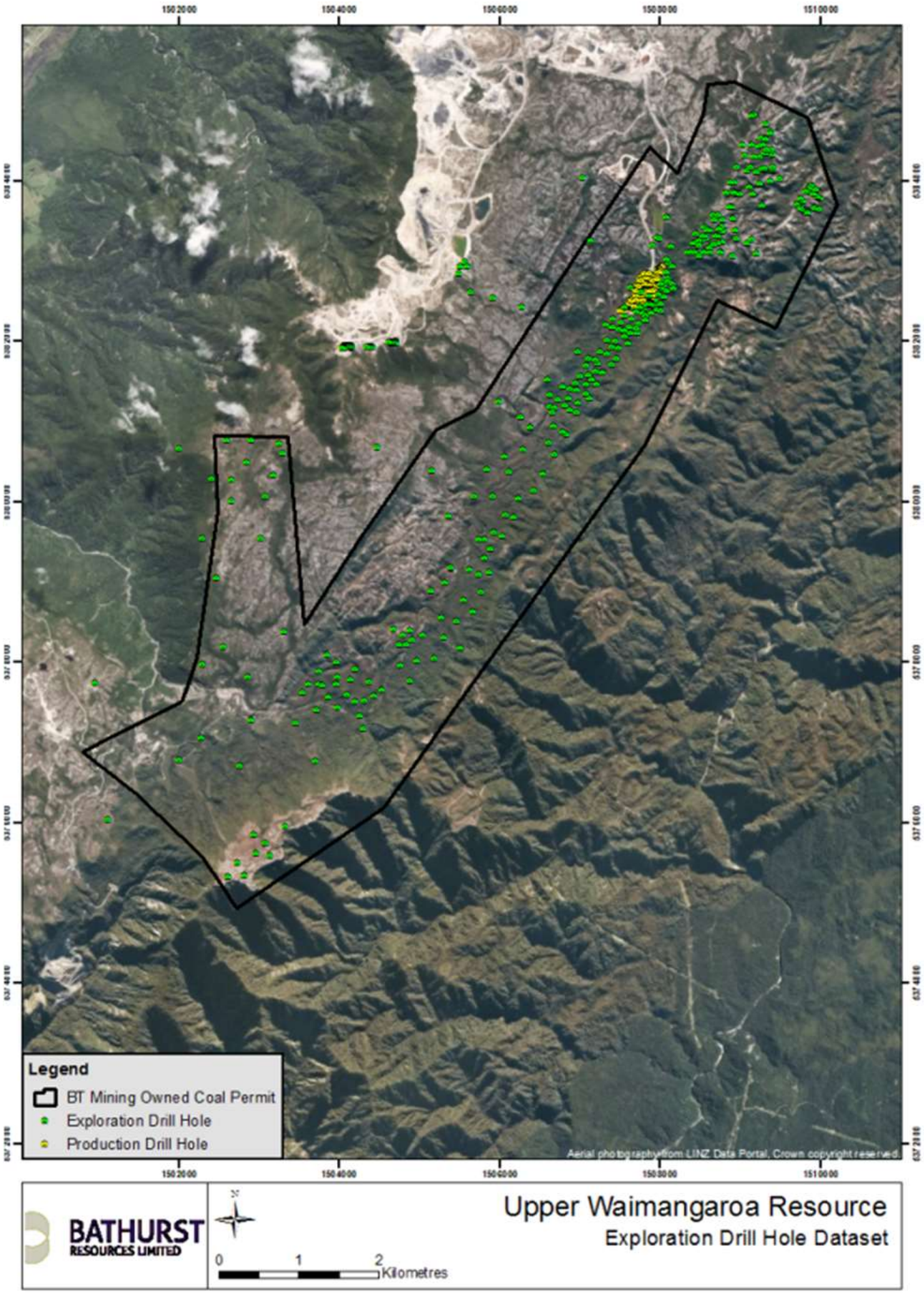


Figure 5 Plan showing the drilling dataset used to produce the resource model

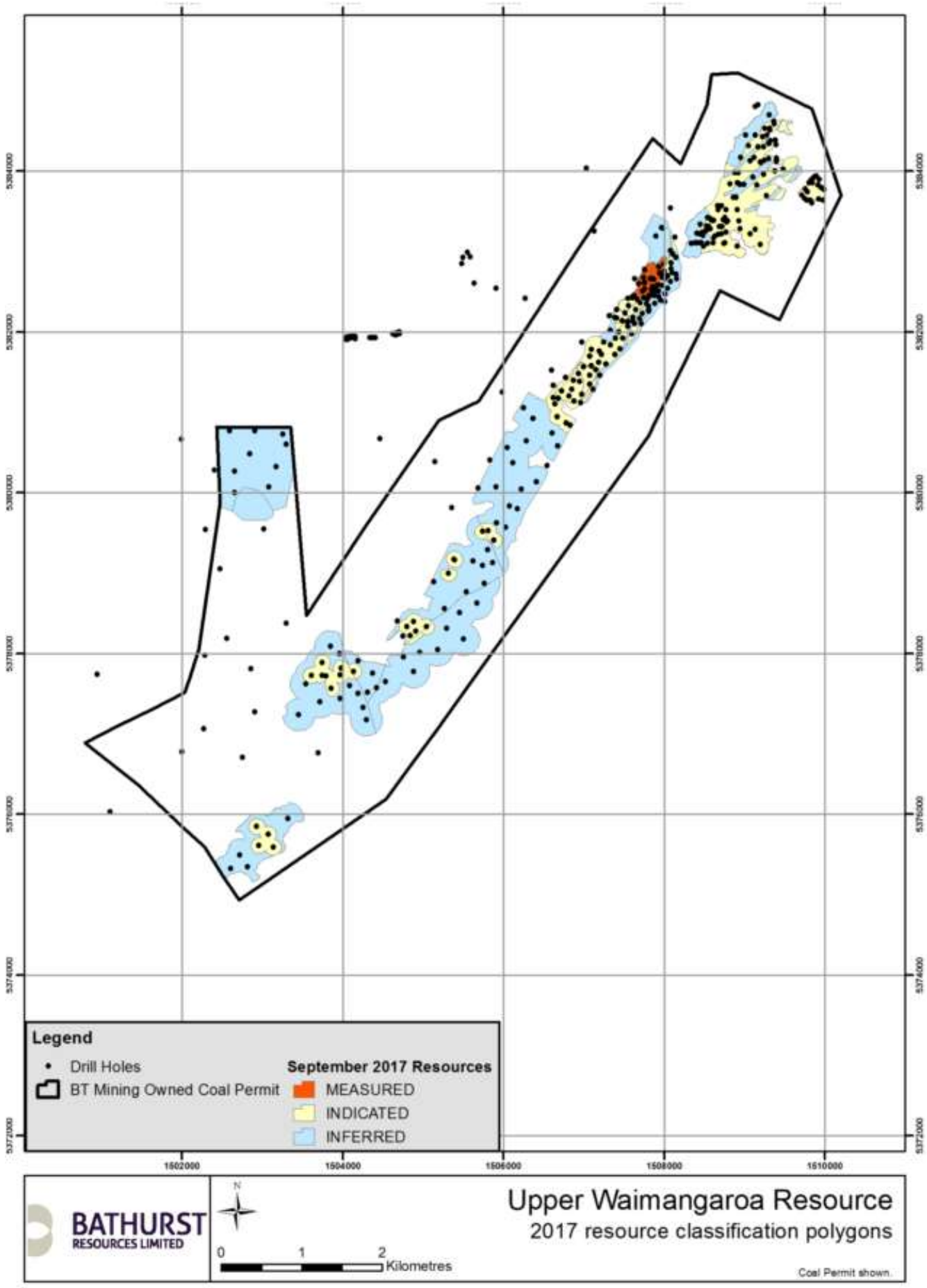


Figure 6 Plan showing the 2017 resource classification polygons

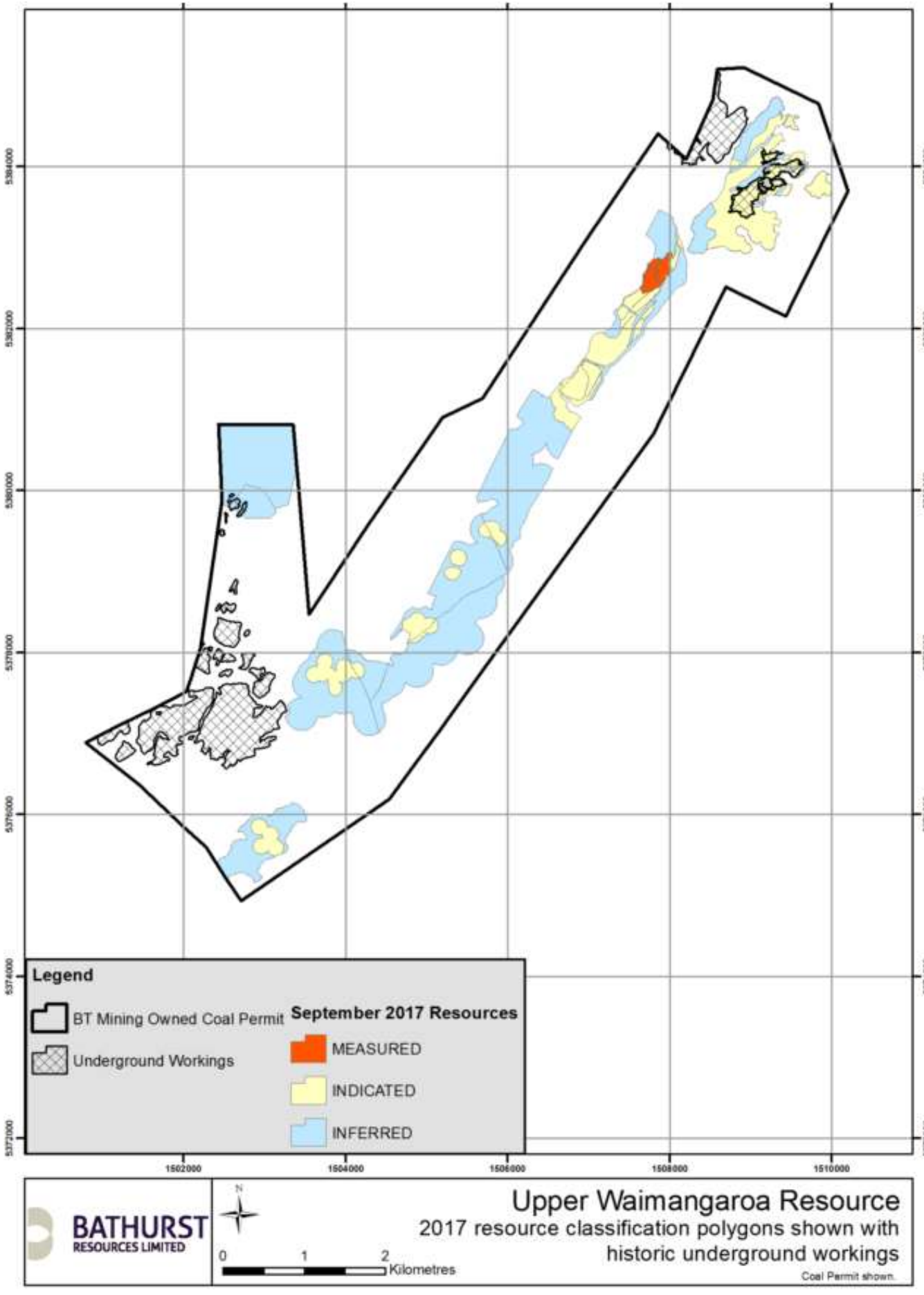


Figure 7 Extent of Underground Workings and 2017resource classification

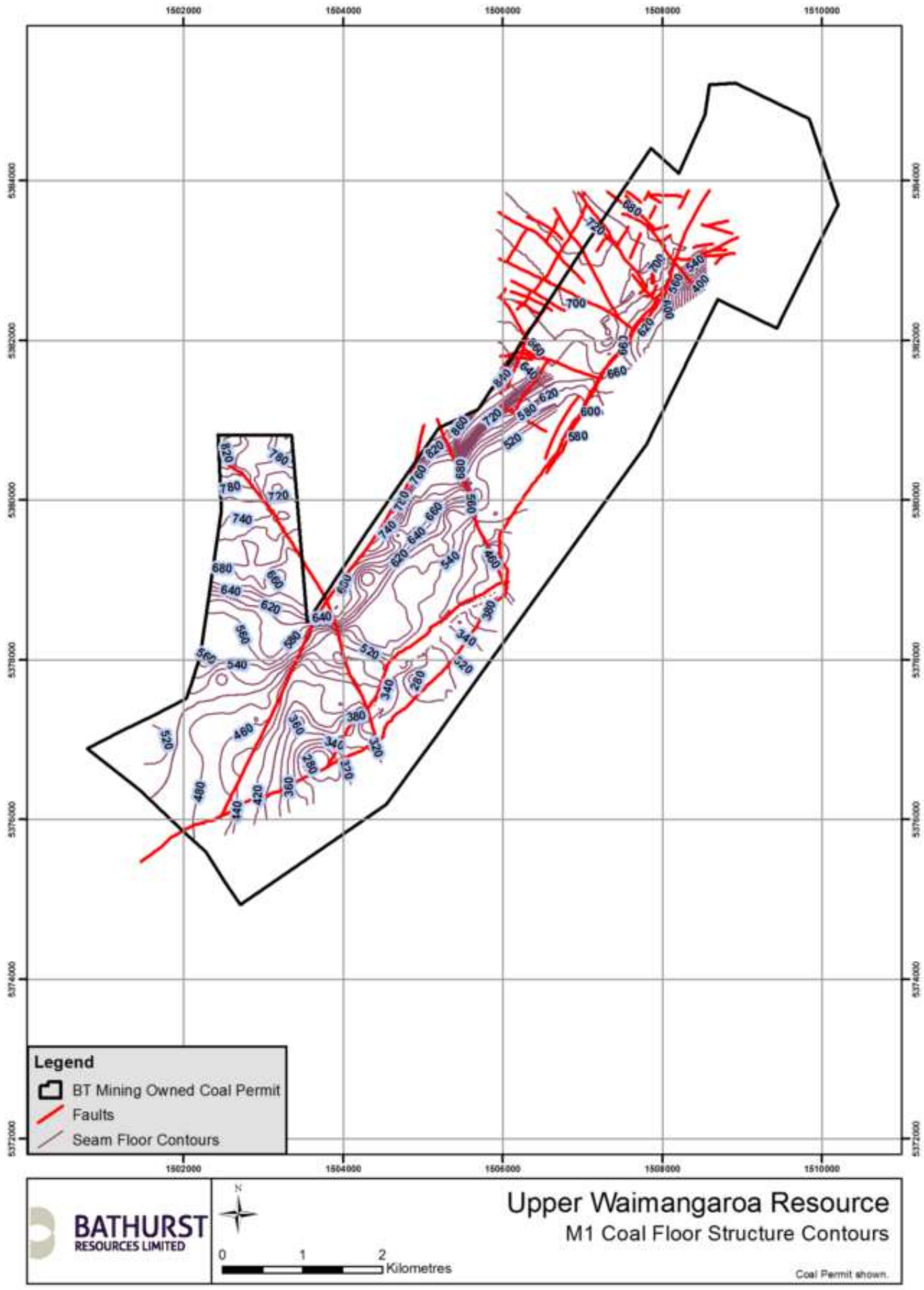


Figure 8 Plan showing the structure contours of coal seam floor

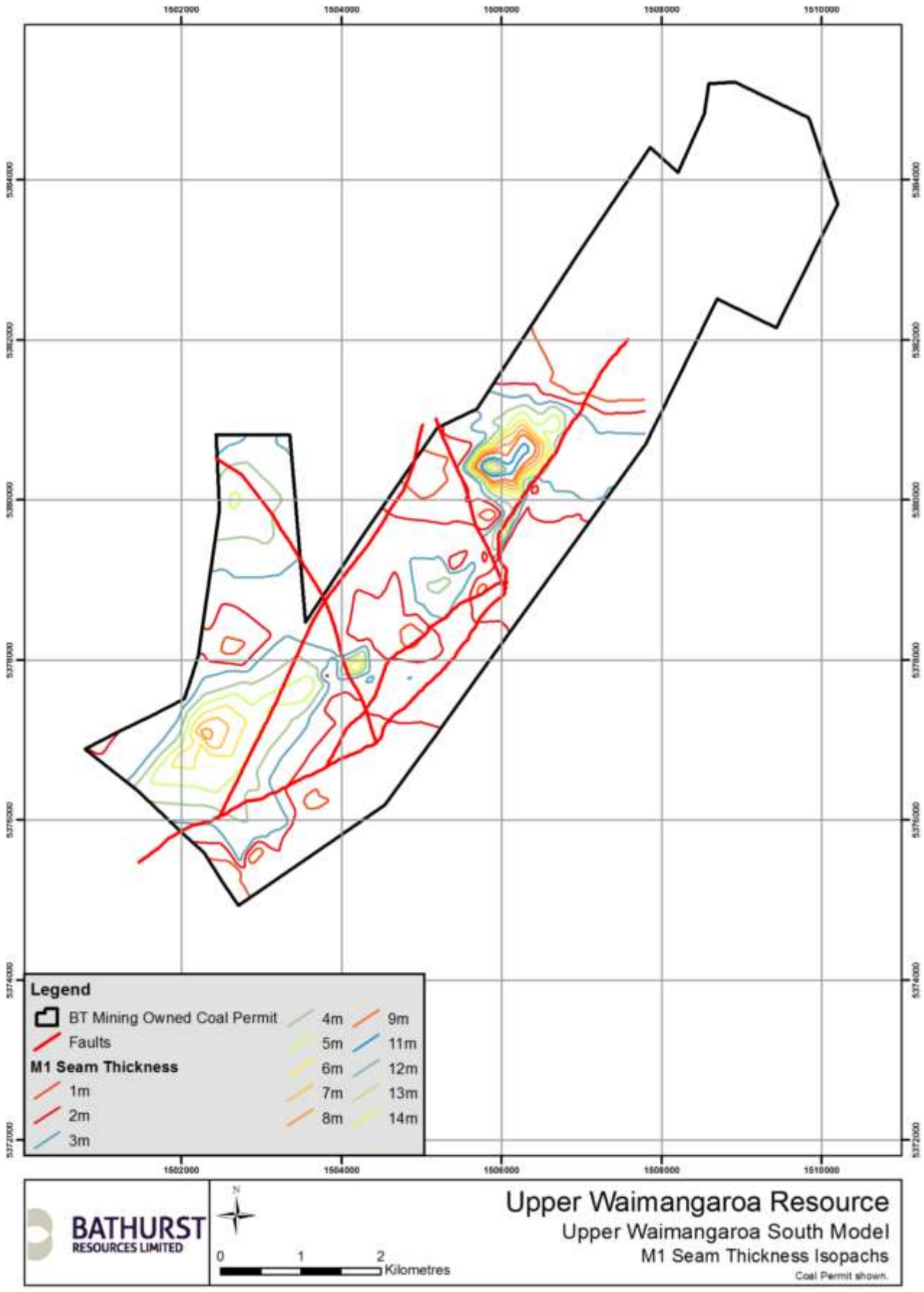


Figure 9 Plan showing full seam thickness (M1 Coal Seam) contours for the Upper Wiamangaroa South area

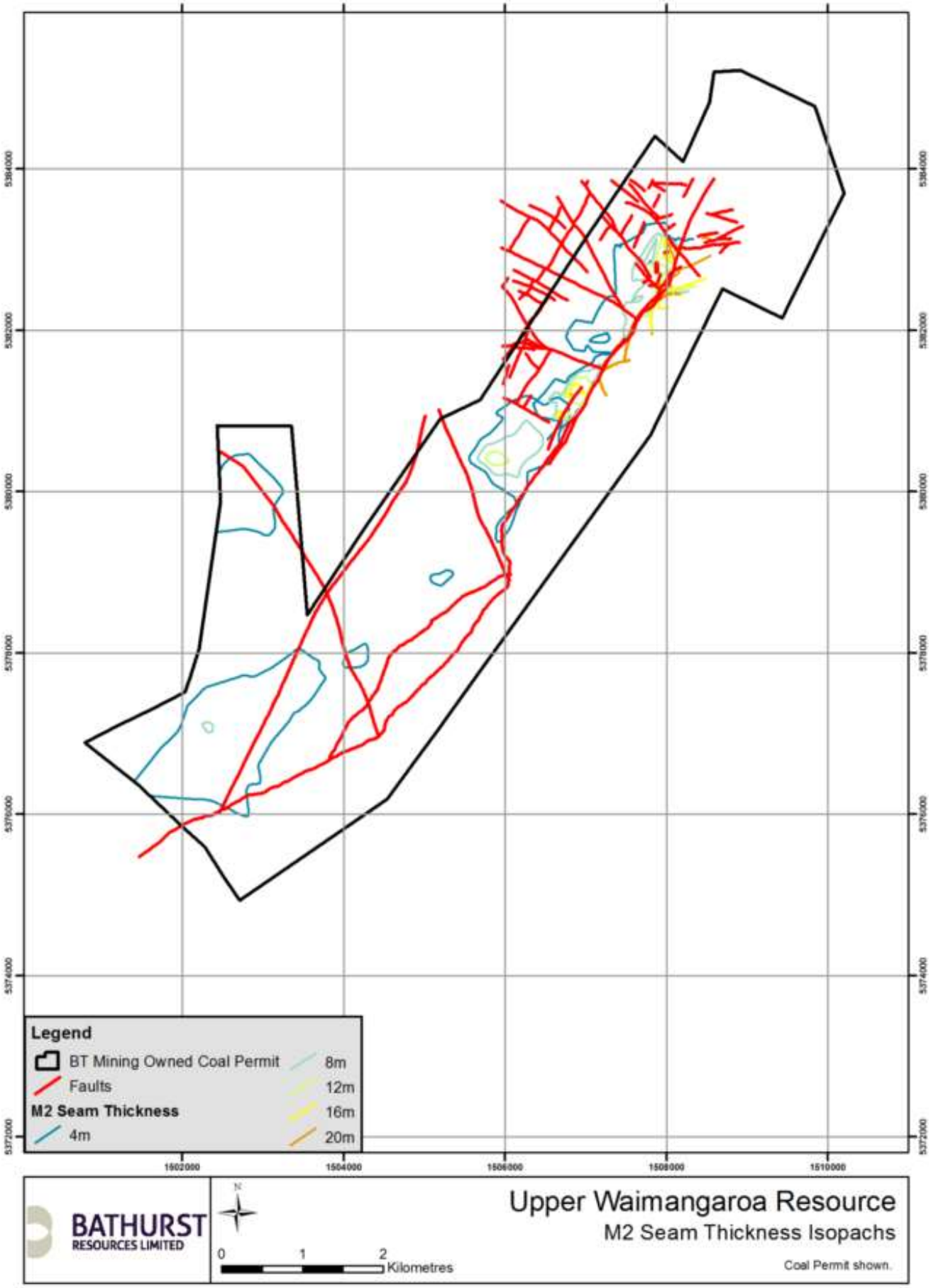


Figure 10 Plan showing full seam thickness (M2 Coal Seam) contours

Figure 11 Plan showing in-situ full M1 seam ash on an air dried basis across the Upper Waimangaroa South resource

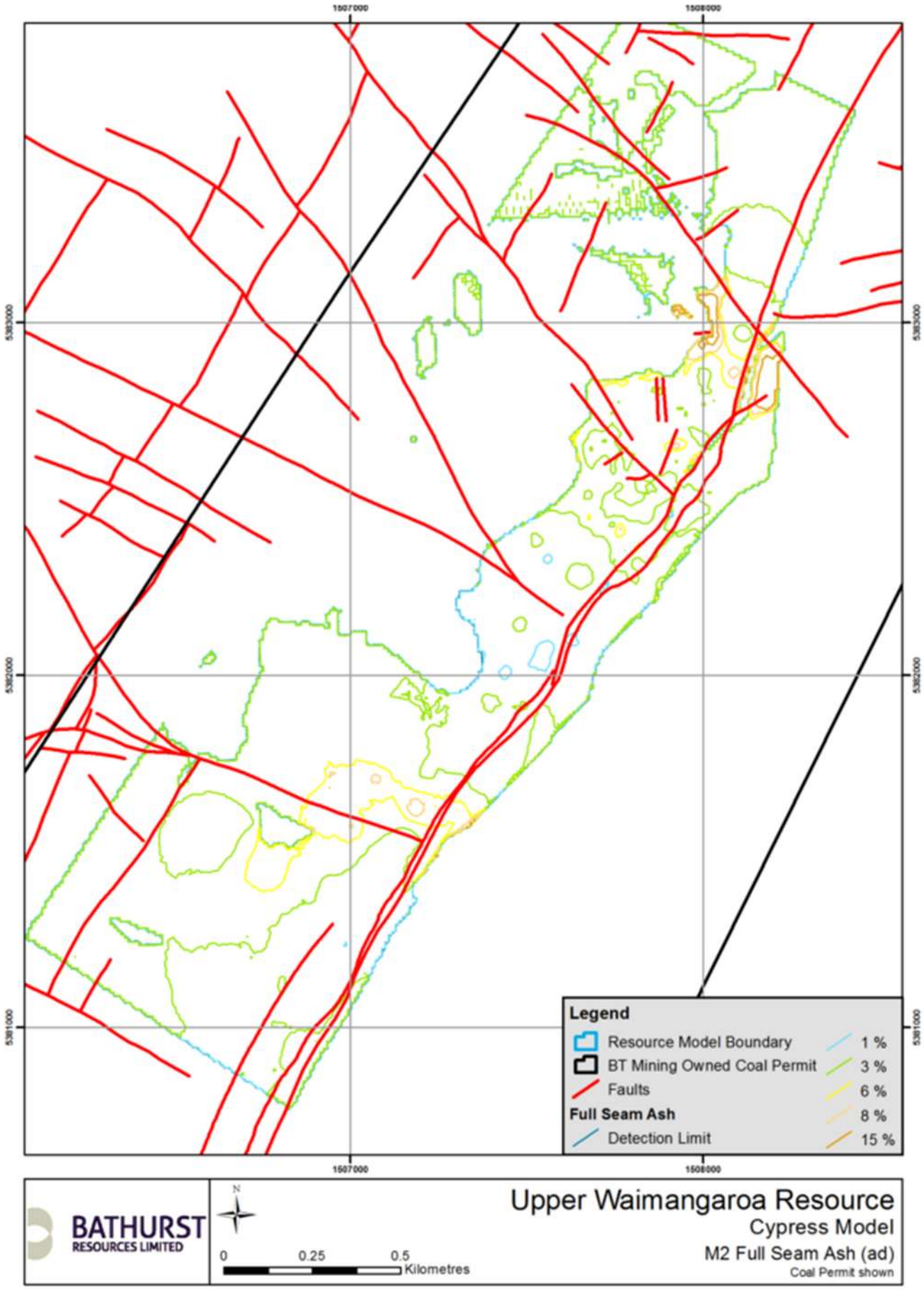


Figure 12 Plan showing in-situ full M2 seam ash on an air dried basis across the Cypress resource area

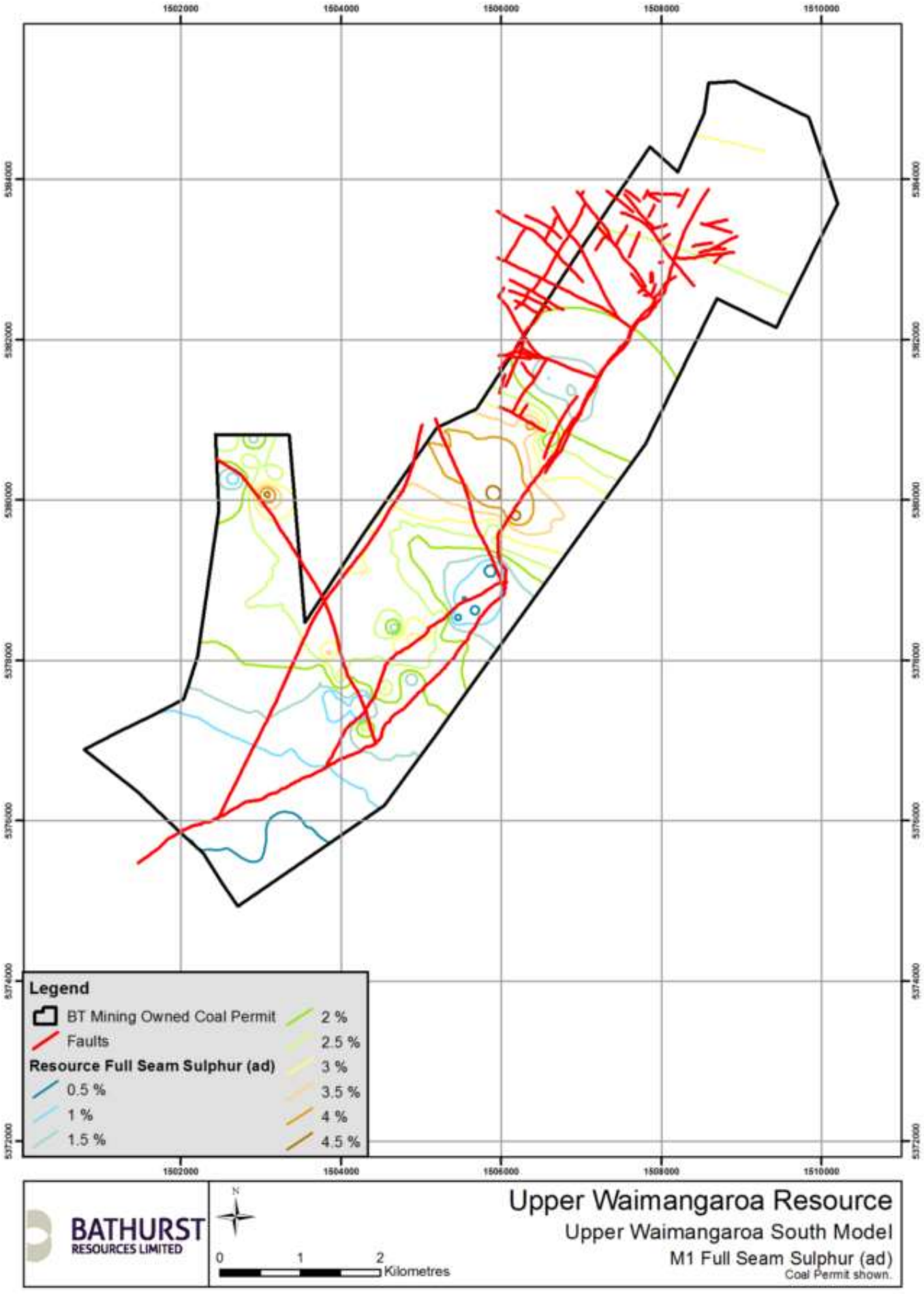


Figure 13 Plan showing full M1 seam sulphur on an air dried basis across the Upper Wiamangaroa South resource

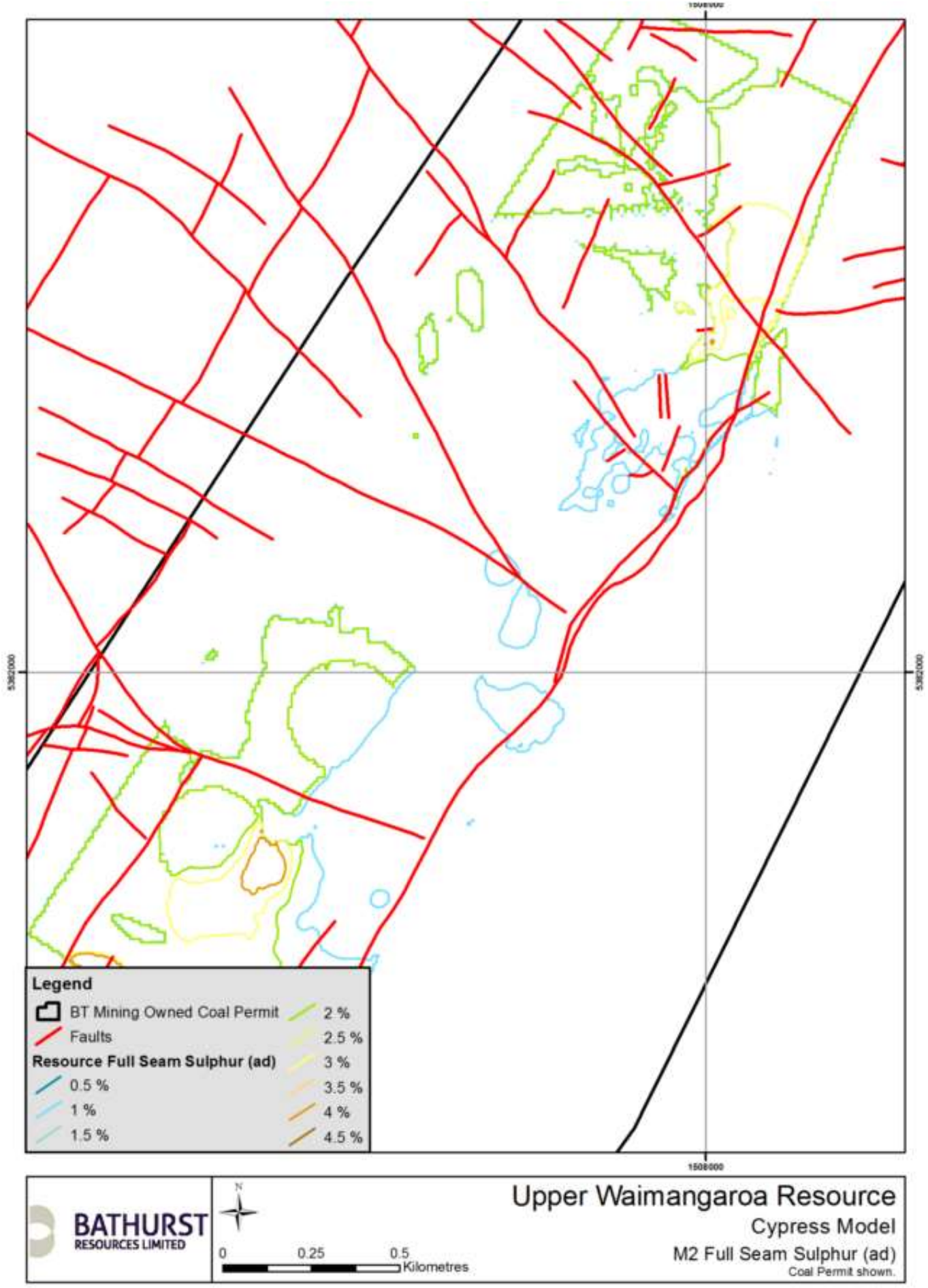


Figure 14 Plan showing full M2 seam sulphur on an air dried basis across the Cypress resource

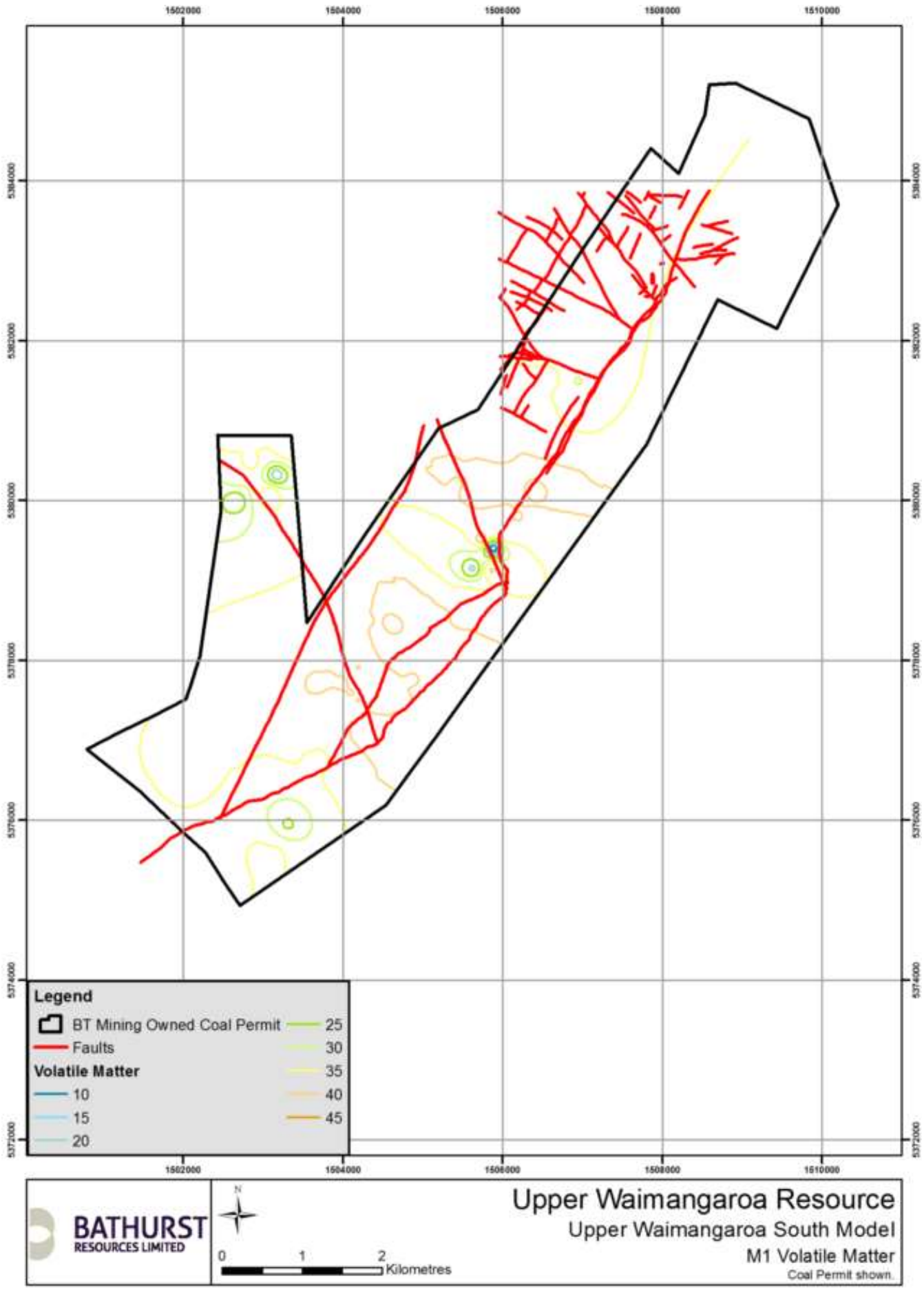


Figure 15 Plan showing full M1 seam Volatile Matter on an air dried basis across the Upper Wiamangaroa South resource

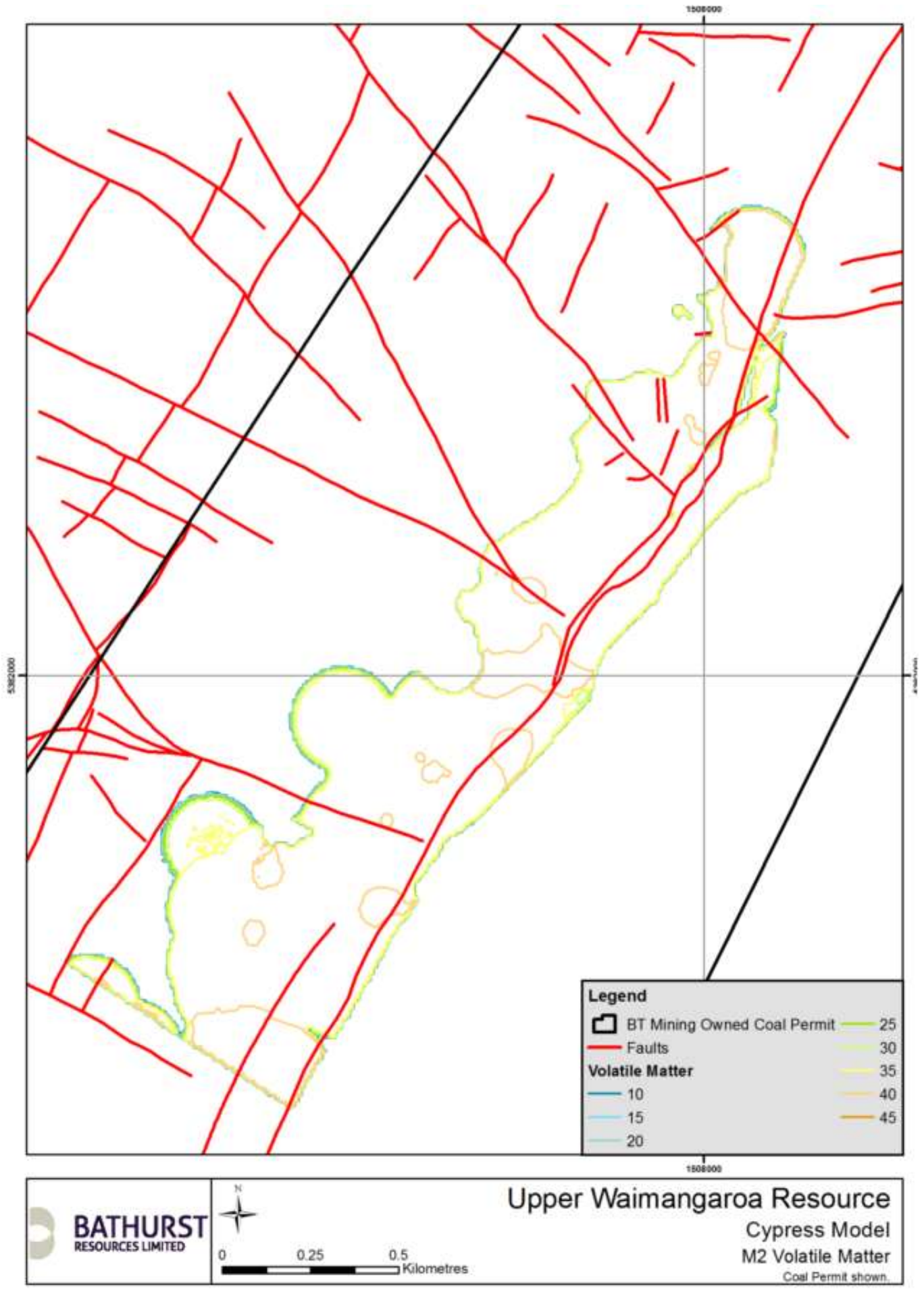


Figure 16 Plan showing full M2 seam Volatile Matter on an air dried basis across the Cypress resource

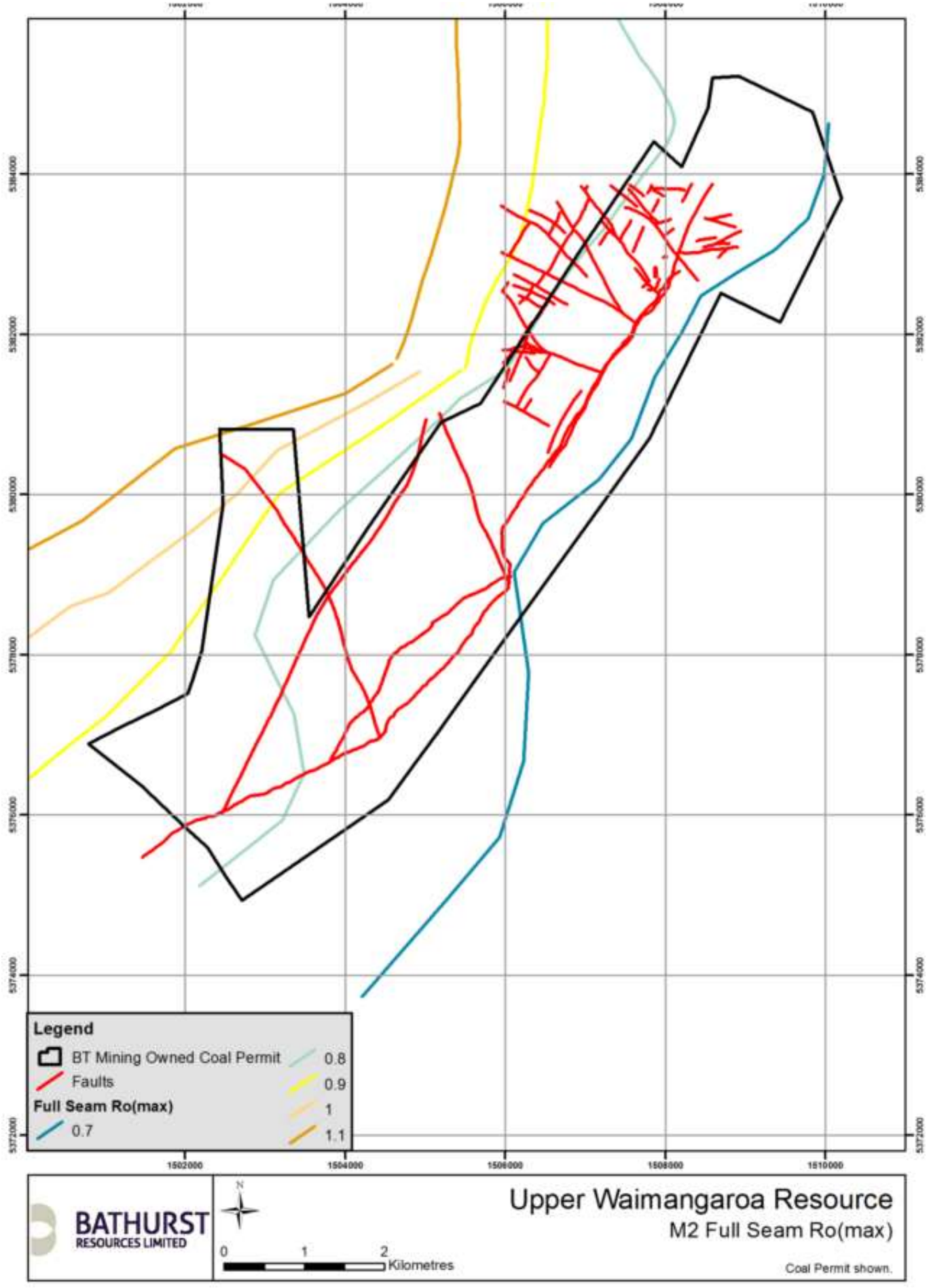


Figure 17 Plan showing the Romax for the M2 Coal Seam

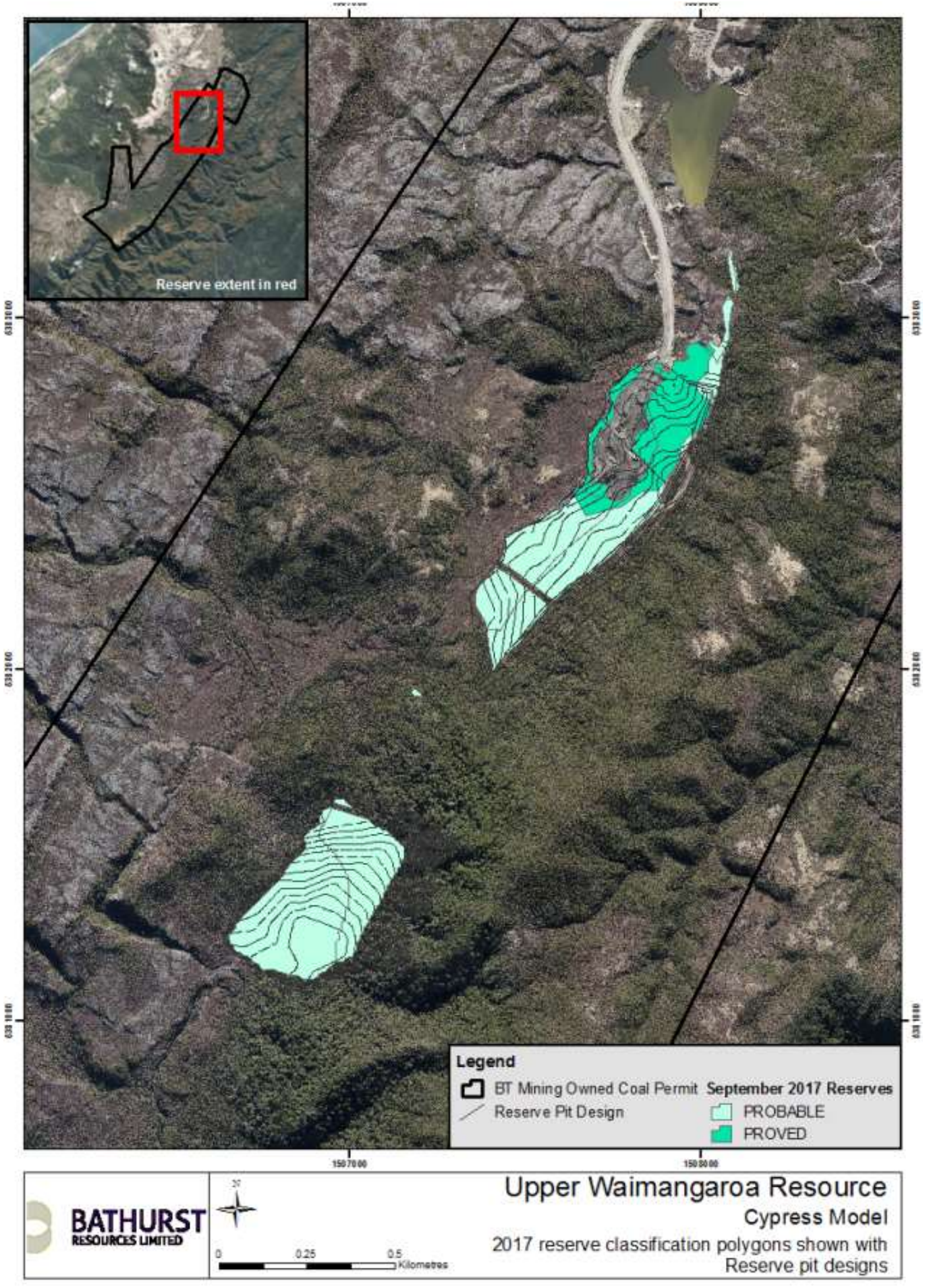


Figure 18 Upper Waimangaroa reserves pit shells

JORC Code, 2012 Edition – Table 1 report for the North Buller Project 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary

Sampling techniques	• North Buller is an historic mining district, with recorded coal production spanning over a century. Historic exploration data of varying quality is available for much of the area.
	• Modern exploration campaigns include data obtained since 2009
	  ○ 3 HQ Triple Tube core (TTC) holes drilled by L&M Ltd in 2009
	  ○ 96 PQ TTC holes, reduced to HQ where necessary. Drilled from 2012 – 2013.
	  ○ 3 outcrop trenches.
	• Drilling has aimed to infill areas around zones of historic workings that are lacking quality data and to test reliability of historic data. Drilling has been concentrated on a few key areas primarily due to ease of access and prospects for development.
	• Coal sampling was based on the Bathurst Resources Ltd (BRL) Coal Sampling procedures.
	• Coal quality ply samples have been selected on all coal logged by a geologist where the geologist had 95% confidence that the ash will fall below 50%. Material with an estimated ash over 50% was not sampled unless the material was a parting of < 0.1m in thickness within a coal seam whereby it would be included within a larger ply sample.
	• Ply samples were generally taken over intervals no greater than 0.5m.
	• All analytical data has been assessed and verified before inclusion into the resource model.

Drilling techniques	• BRL managed drilling campaigns have utilised the following drilling methods
	  ○ Full PQ triple tube core (TTC), in many cases overlying strata was open-holed through.
	  ○ HQ triple tube core only where necessary
	  ○ Washed drilled overburden where applicable
	• Historic drilling techniques included
	  ○ PQ triple tube core
	  ○ HQ triple tube core
	  ○ NQ triple tube core
	  ○ Washed drilled
	• All exploration drill holes were collared vertically
	• Recent drilling campaigns utilised PQ sized drilling to maximize core recovery.

Drill sample recovery	• Core recovery was measured by the logging geologist for each drillers run (usually 1.5m) in each drill hole. If recovery of coal intersections dropped below 85% the drill hole required a redrill. Drillers were paid an incentive if coal recovery was above 90%. • In some instances the recovery of thin rider seams (< 0.5m) has been poor due to the soft friable nature of the coal. Therefore the sample dataset for the rider seams and lower seam is not as evenly spatially distributed as the main seam. • Average total core recovery over the recent drilling campaigns in North Buller was 93%. • Where small intervals of coal were lost, and where geophysics indicated strongly that coal was lost, ash values were estimated using the results of overlying and underlying ply samples and the relative response of the open-hole density trace.
Logging	• BRL has developed a standardised core logging procedure and all core logging completed by BRL has followed this standard. • All modern drill core has been geologically and geotechnically logged by geologists under the supervision and guidance of a team of experienced exploration geologists. • As much data as possible has been logged and recorded including geotechnical and rock strength data. • All core was photographed prior to sampling. Depth metre marks and ply intervals are noted on core in each photograph. • Down-hole geophysical logs were used to aid core logging. • BRL aimed to geophysically log every drill hole that intersected coal providing that downhole conditions and operational constraints allowed. The standard suite of tools run included density, dip meter, sonic, and natural gamma. • Where drill hole conditions were poor or mine workings were intersected only in-rods density was acquired. In-rods density produced a reliable trace for use in seam correlation and depth adjustment but was not used for ash correlations. • Down-hole geophysics were used to correlate coal seams, to confirm depths and thickness

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>of coal seams and to validate drillers' logs. Geophysics were also used to accurately calculate recovery rates of coal.
• The geophysical logging company maintained and calibrated all tools as per their internal calibration procedures. Additionally, geophysics equipment was calibrated and tested using a calibration hole on the Denniston plateau with known depth to coal, thickness and quality. These calibration methods are deemed to be sufficient as both sites host the same Brunner Coal Measures.</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>• For all exploration data acquired by BRL, an in-house detailed sampling procedure was used.
• Sampling and sample preparation are consistent with international coal sampling methodology.
• Ply samples include all coal recovered for the interval of the sample. Core was not cut or halved. Ply sample intervals were generally 0.5m unless dictated by thin, split or parting thickness.
• All drilling in the recent campaigns have been completed using triple tube cored holes. No chip or RC samples were taken in these campaigns.
• Assay samples were completed at the core repository after transport from drill site in core boxes. Coal intervals were wrapped at the drill site prior to transport.
• Samples were taken as soon as practicable and stored in a chiller until transported to the coal quality laboratory.
• A series of random duplicate samples representing 4% of the total number of samples from North Buller has been completed by CRL Energy ltd. The results of this duplicate testing were comparable to that reported by SGS New Zealand Limited (SGS).
• Geochemical sampling for overburden characterisation has been completed by taking representative samples of core at set 5m intervals above the coal seam in a subset of drill holes.</td></tr>
<tr><td>Quality of assay data and laboratory tests</td><td>• All coal quality testing completed for BRL has been carried out by accredited laboratory SGS.
• SGS have used the following standards for their assay test work.
○ Proximate Analysis is carried out to the ASTM 7582 standard.
○ Ash has also used the standard ISO 1171.
○ Volatile matter has also used the standard ISO 562.
○ Inherent moisture has also used the ISO 5068.
○ Total sulphur analysis is carried out to the ASTM 4239 standard.
○ Crucible swell tests are completed using the ISO 501 standard.
○ Calorific value results are obtained using the ISO 1928 standard.
○ Loss on drying data is completed using the ISO 13909-4 standard.
○ Relative Density is calculated using the standard AS 1038.21.1.1.
• CRL completed much of the assay test work for samples collected prior to BRL taking over the projects.
• CRL used the following standards for their test work
○ Inherent Moisture tests utilized the ISO 117221 standard
○ Ash tests utilised the ISO 1171 standard
○ Volatile matter tests utilized the ISO 562 standard
○ Calorific value tests utilized the ISO 1928 standard
○ Crucible swelling index testing was carried out using the ISO 501 standard
• Both SGS and CRL are accredited laboratories.
• All analysis was undertaken and reported on an air dried basis unless stated otherwise.
• BRL has completed a total of 11 composite coal quality samples. Composite samples have been tested using the following standards:
<table>
<tr><th>Test Work</th><th>Standard Followed</th></tr>
<tr><td>Loss on air drying</td><td>(ISO 13909-4)</td></tr>
<tr><td>Inherent Moisture</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Ash</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Volatile Matter</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Fixed Carbon</td><td>by difference</td></tr>
<tr><td>Sulphur</td><td>(ASTM D 4239)</td></tr>
</table></td></tr>
</table>

Criteria	Commentary
	Swelling Index (ISO 501) **Calorific Value** (ISO 1928) **Mean Maximum Reflectance All Vitrinite (RoMax)** Laboratory Standard **Chlorine in Coal** (ASTM D4208) **Hardgrove Grindability Index** (ISO 5074) **GIESELER PLASTOMETER** (ASTM D 2639) **AUDIBERT ARNU DILATOMETER** (ISO 349) **FORMS OF SULPHUR** (AS 1038 Part 11) **ASH FUSION TEMPERATURES** (ISO 540) **ASH CONSTITUENTS (XRF)** (ASTM D 4326) **Ultimate Analysis** Laboratory Standard
Verification of sampling and assaying	• Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the North Buller coalfield. • Anomalous assay results were investigated, and where necessary the laboratory was contacted and a retest undertaken from sample residue. • Three twinned holes have been drilled at the project with consistent results obtained between drill holes. • Laboratory data is imported directly into an Acquire database with no manual data entry at either the SGS laboratory or at BRL. • Assay results files are securely stored on a backup server, once validated, drill hole information is 'locked' in an Acquire database to ensure the data is not inadvertently compromised.
Location of data points	• Modern drill hole positions have been surveyed using Trimble RTK survey equipment. • Historic mine plans have been georeferenced by locating and surveying historic survey marks, and mine portals drawn on mine plans. Some historic mine plans are poorly controlled spatially and a large variance from the current georeferenced images is possible. • New Zealand Trans Mercator 2000 Projection is used by BRL for most of its project areas. NZTM is considered a standard coordinate system for general mapping within New Zealand. Historic data has been converted from various local circuits and map grids using NZ standard cadastral conversions. • A LiDAR survey was carried out over the North Buller area in December 2012. This LiDAR data provides very accurate topographic data used in the model. Contractor's specifications state that, for the choice of sensor and operating settings used for this project, the LiDAR sensor manufacturer's specification states 0.15m (1-sigma) horizontal accuracy and 0.1m (1-sigma) as the open ground elevation accuracy. • Surveyed elevations of drill hole collars are validated against the LiDAR topography and ortho-corrected aerial photography. Historic hole collar elevations have been compared to the LiDAR surface and while most are within 1m to 2m of the surface. There are however a small number of historic holes with a large discrepancy in the RL of the collar and the LiDAR surface. This discrepancy may be due in part to earthworks.

Data spacing and distribution	• Drill hole spacing in North Buller is not homogenous. Recent drilling has targeted areas surrounding historic underground workings and where land access has been available. This has produced three areas of relatively high density drilling, namely Charming Creek, Chasm Creek Central and Coal Creek blocks.
	• Data spacing for the three drilling areas has been estimated by calculating the radius required to fill the total area of each project divided by number of drill holes within that area. Average drill hole spacing for these areas is summarised below.
	  ○ Charming Creek has an estimated average spacing of 125m.
	  ○ Chasm Creek central has an estimated average spacing of 100m.
	  ○ Coal Creek area has an estimated average drill hole spacing of 125m.
	• Average drill hole spacing for the entire project area is approximately 210m.
	• Drill hole spacing is not the only measurement used by BRL to establish the degree of resource uncertainty and therefore the resource classification. BRL uses a multivariate approach to resource classification.

Criteria	Commentary
	• The current drill hole spacing is deemed sufficient for coal seam correlation and resource estimation purposes within targeted areas. • Geostatistics has been applied to the North Buller dataset but variography results were poor due to the uneven distribution of drill holes and structural complexity of parts of the deposit. Full seam variography of ash indicated a maximum distance correlation of ~500m and therefore no resources have been classified where distance to nearest samples are greater than 500m. • The samples database is composited to 0.5m sample length prior to grade estimation. Any samples with composited length of less than 0.1m are not included in the estimation. Compositing starts at the top of seam and small samples are not distributed or merged.
Orientation of data in relation to geological structure	• All exploration drilling has been completed with a vertical orientation. Down hole deviation data was acquired by BRL during modern campaigns and showed little to no deviation in those holes. Holes without deviation plots are assumed to be vertical. • Any deviation from vertical is not expected to have a material effect on geological understanding as the average drill hole depth in the dataset is 45m with the deepest coal intersection of 116m. At a depth of 60m a 1° deviation would produce a horizontal deviation of 1m at the end of hole and a negligible thickness deviation. • The majority of the deposit presents a shallow seam dip between 5° – 10°. • Vertical drilling is considered to be the most suitable drilling method of assessing the coal resource at North Buller.
Sample security	• Stringent sample preparation and handling procedures have been followed by BRL. Ply samples are taken and recorded from drill core, bagged and placed within a locked chiller prior to being dispatched for analysis. • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core.
Audits or reviews	• BRL has reviewed the geological data available and considers the data used to produce the resource model is reliable and suitable for the purposes of generating a resource estimate. • Results of a duplicate sample testing programme comparing SGS and CRL showed a strong correlation between labs. • Senior BRL geologists undertake audits of the sample collection and analysis.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• BRL owns and operates two coal exploration permits in the North Buller area, northwest of Westport, New Zealand. • BRL has 100% ownership in the following coal permits: **Permit** / **Operation** / **Expiry** **Mining Permit 56233** / Coal Creek / 22/03/2031 **Exploration Permit 40628** / Buller / 10/01/2015 • BRL has been granted Mining Permit to replace EP51078 and it is reasonably expected that this permit application will be granted • An appraisal extension application has been submitted to NZP&M for EP40628 and the application is currently being processed. • The acquisition of the EP40628 and EP51078 permits (and any subsequent permits over the same area) from L&M includes a life of mine royalty based on a fixed percentage of FOB revenue. • The majority of the land in the North Buller area is Crown land administered by the Department of Conservation (DoC) as Ecological Areas (Section 21 Conservation act 1987) and Stewardship Areas (Part V Section 25 Conservation Act 1987). These areas are managed to protect the natural and historic values of the areas. Stewardship areas can be disposed of, but disposal is subject to a public process and it must be clear that their retention and continued management would not materially enhance the conservation or recreational values of adjacent land. • Another large landowner within the study area is Ngai Tahu. BRL currently has an agreement with Ngai Tahu to provide access to land for exploration purposes and it is reasonably expected that access for mining would be able to be negotiated.

Criteria	Commentary
Exploration done by other parties	• Historic geological investigations and reports for the North Buller area have been compiled spanning the past 120 years. • The historic drilling database includes the following drill holes compiled from historical data records.

Years	Agency	Range of Collar ID	# Holes	Drilling Method	# Holes in structure model	# holes in quality model	Geophysics Available
1907	NZ State Coal - Seddonville Colliery	431 - 436	6	unknown	4	0	0
1910 - 1912	Mines Department	415 - 430	16	unknown	16	0	0
circa 1918	Harbour Board	403, 437, 438	3	unknown	3	0	0
1896 - 1936	Westport - Cardiff Coal Co.	*	7	unknown	7	0	0
1931-1932	Cardiff Bridge Co-op Party	*	3	Diamond Core	1	0	0
unknown	unknown	401 - 402	2	unknown	1	0	0
Pre 1953	Charming Creek Mine	439 - 450	12	unknown	11	0	0
Pre 1968	Charming Creek Mine	451 - 462	12	unknown	10	0	0
unknown	Cardiff or Coronation Coal	463 - 469	7	unknown	6	0	0
unknown	Cardiff Holdings	470 - 474	5	unknown	1	0	0
circa 1964	Coal Creek Mine	475 - 481	7	unknown	4	0	0
Unknown	unknown	491 - 493	3	unknown	3	0	0
Pre 1952	unknown	404 - 413	10	unknown	7	0	0
Pre 1952	shaft	414	1	unknown	1	0	0
1986	Ministry of Energy	1432, 1442 - 1445	5	HQ core	5	4	5
1978	MWD	482 - 490	10	Diamond Core	9	0	0

	• All historic data has been validated against original source documents by L&M, Golder Associates (NZ) Ltd and again by BRL staff post acquisition of the project. Where data was deemed unreliable it was removed from the relevant resource model dataset. • BRL is continuing to source further historic plans and reports from a number of data libraries around New Zealand.
Geology	• The North Buller project is located in the Buller Coal field, New Zealand. • The Buller Coalfield is at the northern end of the Paparoa Trough, a north northeast trending half-graben that subsided in the Eocene and was subsequently uplifted in the Cenozoic. • The defined resource is contained within the Eocene aged Brunner Coal Measures. The coal measures consist of a fluviatile sequence of fine to very coarse sandstones, siltstone, mudstone and coal seams. The deposit generally contains a single seam deposited in elongate pods with some localised splitting of the seam and, in some areas, a pronounced rider seam package. The coal thickness can be up to 11m but generally averages 3-4m in thickness. • The coal measures thin towards the east and thicken to the west where a thick conglomerate forms the base of the formation. • Overlying the coal measures in most areas is the Kaiata Formation which consists of marine, slightly carbonaceous and calcareous mudstones. • Quaternary river gravel deposits are scattered throughout the project area. • Overburden thickness is generally around 30-40m but depths range from zero at the outcrop to over 300m in the northern extent of the model.
Drill hole Information	• Individual drill hole results are not tabulated and presented in this report however all drill hole data that pertains to the target coal seams has been loaded and modelled in the geological computer model used to estimate coal resources. • The exclusion of this information from this report is considered to not be material to the understanding of the deposit. • Incorporation of deviation data is not considered necessary, due to the gentle dips found in the area and shallow drilling methods resulting in insignificant deviation recorded in the exploration boreholes.
Data aggregation methods	• The maximum ash cut-off for building the North Buller structure model was set at 50% however, due to various reasons, some thin assay samples where ash is greater than 50% are included in the coal quality dataset due to the structure model including the interval within a coal seam. • Resources have been reported with an ash cut-off of 25%. • Seams have been sampled on a ply-by-ply basis with ply boundaries determined by reconciliation against down hole geophysics.

Criteria	Commentary
Relationship between mineralisation widths and intercept lengths	• All exploration drill holes have been drilled vertically and the coal seams are generally gently dipping. Therefore the reported seam intercept thickness is representative of the true seam thickness. • Dip meter and deviation plots are available for some holes. For those without this data it is assumed that a vertical orientation is achieved and, as most coal intersections are less than 100m in depth, any deviation from vertical would produce only a very minor effect on the reported depth to coal and coal thickness.
Diagrams	• Plans have been attached in the appendix.
Balanced reporting	• Exploration drilling results have not been reported. This has avoided any issues with unbalanced or biased reporting. • The Competent Person does not believe that the exclusion of this comprehensive exploration data within this report detracts from the understanding of this report or the level of information provided.
Other substantive exploration data	• Geotechnical logs and samples were taken by the geologist during all exploration by BRL. Geotechnical logs identified defect types, angles and character through cored intervals. • BRL has tested 45 samples for overburden classification for acid forming and neutralising potential in North Buller. These tests indicate that the majority of overburden is acid neutralising. • Further overburden characterisation testing will be conducted prior to any mining proposal.
Further work	• BRL has been granted an access arrangement from the Department of Conservation (DoC) for drilling activities on land administered by DoC in the North Buller project area. BRL is currently focusing resources on its Escarpment project and therefore no drilling is planned for North Buller in the near future. • Field mapping is continuing in North Buller to confirm future drilling targets outside of the current resource areas. • A bulk sample is planned to be taken from within the North Buller project area for marketing purposes.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly validated against original logs and results tables. • BRL utilises an Acquire database to store and maintain its geological exploration dataset. • The Acquire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values, standardised look-up tables for logging codes etc. • Manual data entry of assay results is not required as results are imported directly.
Site visits	• Hamish McLauchlan (the Competent Person) has worked as a senior geologist for over 10 years in the Buller coal field. • Hamish is familiar with the local and regional geology and style of deposit within the North Buller region.
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification. • BRL uses a multivariate approach to resource classification which takes into account a number of variables. • BRL considers the amount of geological data sufficient to estimate the resource. • Uncertainty surrounds the historic mine workings, both in the quality and quantity of coal extracted and surveying and positioning of underground workings. This is reflected in the resource classification • BRL has used a total of 10 synthetic holes in the structure model which are based on historic drill holes where geo-referencing of the collar locations is poor. • Quaternary river gravel deposits overly the coal measures as an unconformity over the northern portion of the project area. Some uncertainty surrounds the depth of weathering and the extent of the gravel deposits. A conservative approach to modeling this Quaternary erosional surface has been used in the model.
Dimensions	• The main coal seam varies in thickness from less than 1m thick up to 11m thickness locally.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

Depth of cover varies from 0m at outcrop to over 300m at the northern boundary of the model.

Inferred resources include coal to 118m below surface;
Indicated resources include coal to 102m below surface;
Measured resource includes coal down to 64m below surface.

The deposit roughly covers a 6km by 5km area. The deposit is bounded by the Mokihinui River to the north, and the Glasgow Fault to the east and the Lamplough Fault to the West.

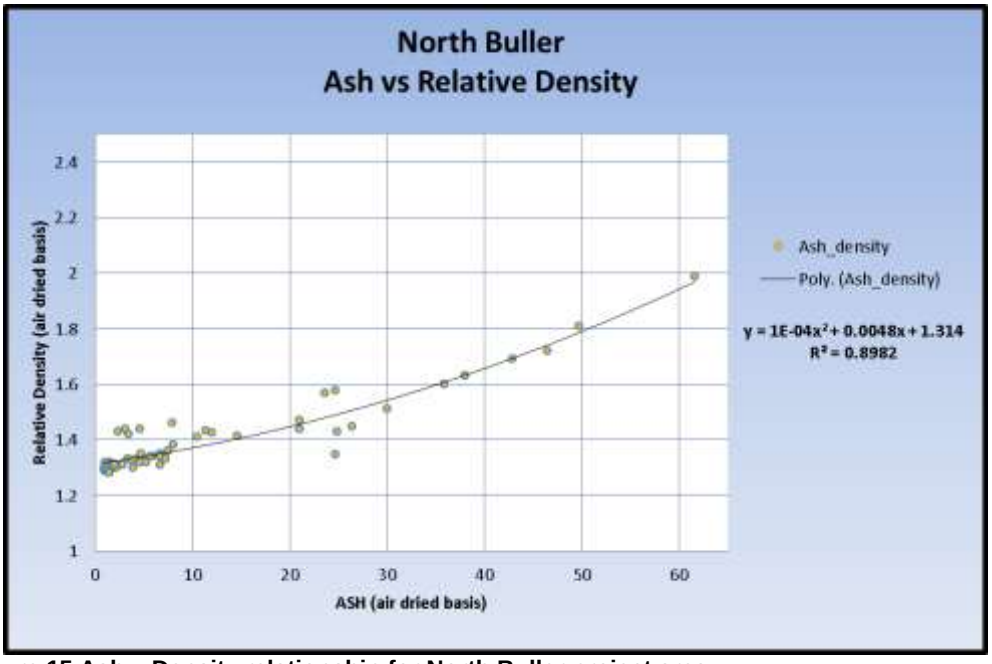
</td></tr>
<tr><td>Estimation and modeling techniques</td><td>

All available and reliable exploration data has been used to create a geological block model which has been used for resource estimation and classification.
All exploration drilling data is stored in Acquire and exported into a Vulcan drill hole database. All Mapping data is stored in Acquire and exported in various Vulcan layers. Interpretive data is stored within Vulcan in various layers.
A coal horizons definition has been developed and is used in the stratigraphic modeling process.
Vulcan 8.2.1 was used to build the structure model. Grid spacing is 10m x 10m. This spacing was selected to be 1/5 of the minimum drill spacing of a targeted area.
Vulcan’s stacking method was used to produce the structure model. This method triangulates a reference surface (coal roof) and then stacks the remaining horizons by adding structure thickness using inverse distance.
The maximum triangle length for the reference surface was set to 2,000m.
Based on geostatistics for full seam thickness, the maximum search radius for inverse distance is 2,000m. The inverse distance power is set to 2, with maximum samples set to 8.
Structure grids are checked and validated before being used to construct the resource block model.
Vulcan 8.2.1 is used to build the block model and to grade estimate. The process is automated using a Lava script.
The coal structure surfaces, along with LiDAR topography surfaces and quaternary unconformity surfaces are used to build the block model. The block dimensions are constructed at 10m x 10m. Vertical thickness for coal blocks is 0.5m, whilst overburden blocks are set to 5m maximum thickness.
Grade estimation is performed utilising Vulcan’s Tetra Projection Model. The main seam, and two discontinuous rider seams are estimated for ash, sulphur, air dried moisture and in-situ moisture, volatile matter, crucible swell index, and calorific value. All qualities are estimated simultaneously. A total of 10 search passes are used to grade estimate the model.
Geostatistics has been performed on the coal quality dataset to examine and define the estimation search parameters for each quality. The maximum search radius is set to the maximum range of influence found in the semi-variogram for each variable.
Grade estimation is computed using an inverse distance squared function.
Various methods have been used to check the validity of the block estimation. This includes manual inspection of the model, QQ plots of block model qualities versus the coal quality database and other comparison tools.
Resource tonnages within the model have been discounted where the resource falls within an historic underground workings area. The primary mining method utilised historically in North Buller area is Bord and Pillar mining, however the Charming Creek mine and other mines used a hydro extraction method beginning in the mid-1950s. Three different classifications have been attributed to the historic workings, with each classification having a different extraction rate. Historic extraction rates are estimated using mining extraction reports and tonnage reports. The extraction rates used to discount coal tonnages in the resource model are as follows:
<table>
<tr><th>Mining Method</th><th>Extraction Rate</th></tr>
<tr><td>First worked</td><td>35%</td></tr>
<tr><td>Pillars extracted</td><td>53%</td></tr>
<tr><td>Undifferentiated</td><td>50%</td></tr>
</table>

</td></tr>
<tr><td>Moisture</td><td>

Resource tonnages are reported using natural bed moisture, calculated from air dried density, air dried moisture and in-situ moisture using the Preston Sanders equation.

</td></tr>
</table>

Criteria	Commentary
	• Block air dried density is calculated from the block air dried ash value using the ash-density relationship derived from the project dataset.
Cut-off parameters	• Structure grids have been developed based on a 50% ash cutoff. Some higher ash samples are retained within the coal quality dataset to allow simplification of the seam model where higher ash partings become more abundant. • No lower cutoff has been applied. There is an inherent minimum limit to ash samples in modern results due to a laboratory lower detection limit of 0.17%. • Coal resources are reported down to a seam thickness of 0.5m (one block) with an ash cutoff of 25%.
Mining factors or assumptions	• Minimum seam thickness is set at 0.5m or one block in height. An ash cut-off of 25% is used for reporting resources. • No other mining factors such as strip ratios, mining losses and dilutions have been applied when developing the resource model.
Metallurgical factors or assumptions	• BRL understands that as the majority of the reported resource has a high sulphur content, the North Buller coal will likely require blending with a low sulphur coal before a saleable product is obtained. • No other metallurgical assumptions have been applied in estimating the resource.
Environmental factors or assumptions	• Any open pit mining and coal transport will be conducted amid environmentally and culturally sensitive areas. The project area is a likely habitat for endangered snail and kiwi species. High rainfall rates, potentially acid-generating overburden and historical acid mine drainage are all items that will have to be considered in future prefeasibility studies. • Environmental values of the project area ranges from low to high. Low values relate to de-vegetated and exotic forest areas owned and managed by Ngai Tahu, and terrace and river flat pastoral farming operations. Areas of high environmental values incorporate the DoC managed Ecological Areas (Section 21 Conservation act 1987) and the Charming Creek Walkway. • Current overburden characterisation testing has shown that the majority of Kaiata Mudstone overburden is acid-neutralising. This material could be used to counteract any acid forming material derived from the Brunner Coal Measures. • No other environmental assumptions have been applied in developing the resource model.
Bulk density	• A total of 108 relative density (air dried) sample results are available for the North Buller project area taken from 19 drill holes. • The relative density samples are not well distributed throughout the project area however the sample set covers a full range of ash values from 0.92% to 61.6%. • From this dataset an ash-density curve was generated with a coefficient of determination of R^2=0.8982.  **Figure 15 Ash – Density relationship for North Buller project area.** • After grade estimation, density was calculated using the block ash value and the derived density equation.

Criteria	Commentary
	• An in-situ density value was then computed using the Preston Saunders method. • In-situ moisture determinations have been collected from drill core ply samples.

Classification	• BRL classifies resources using a multivariate approach.
	• Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction and proximity to faults.
	• Closely spaced drilling with valid samples increases the confidence in resource assessments.
	• The confidence is reduced by:
	  ○ A block being within an underground worked area due to extraction rate uncertainty.
	  ○ A block being within 20m of an underground worked area due to uncertainty with historic survey of the workings and georeferencing of mine plans.
	  ○ A block is in an area of steep structure dip, usually in areas of large faults.
	  ○ A block lies within an area of thin or splitting seam resulting in uncertainty of geological continuity.
	• If an area is within an historically worked area the resource is considered as Inferred as a minimum.

Audits or reviews	• A comprehensive internal review of the resource model has been carried out by BRL.
Discussion of relative accuracy/ confidence	• Statistical comparisons between the resource block model and the coal quality data set have been carried out and are within expected ranges. Some anomalies exist due to non-normal data distribution. Techniques utilised include QQ plots and probability plots. • No coal production is currently taking place within the resource area and therefore no reconciliation is available at this time to test the accuracy of the resource model.

Appendix

Maps and plans discussed within Table 1 are reported below.

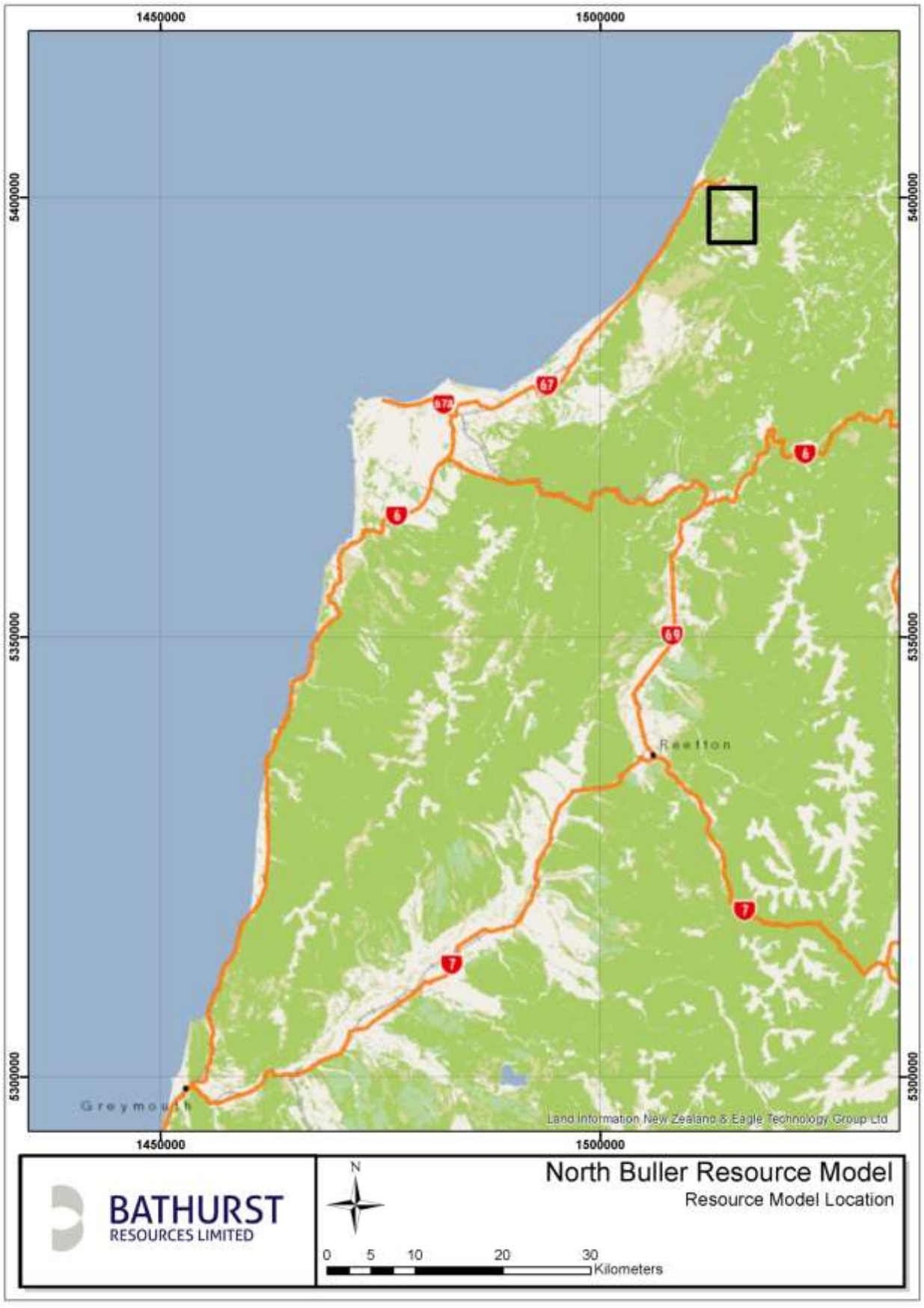


Figure 16 Location of North Buller project and the resource model boundary

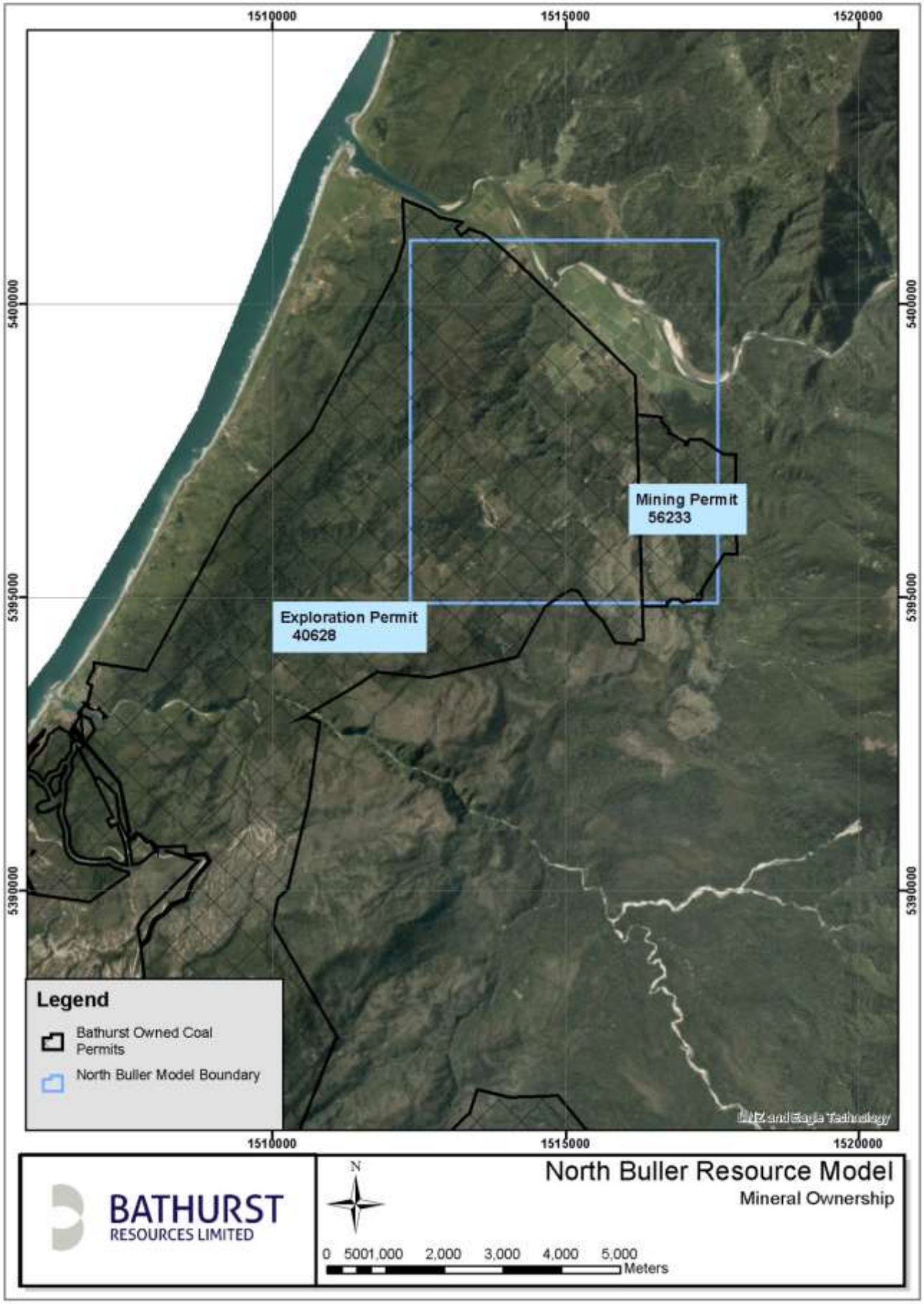


Figure 17 Plan showing BRL owned coal permits in North Buller

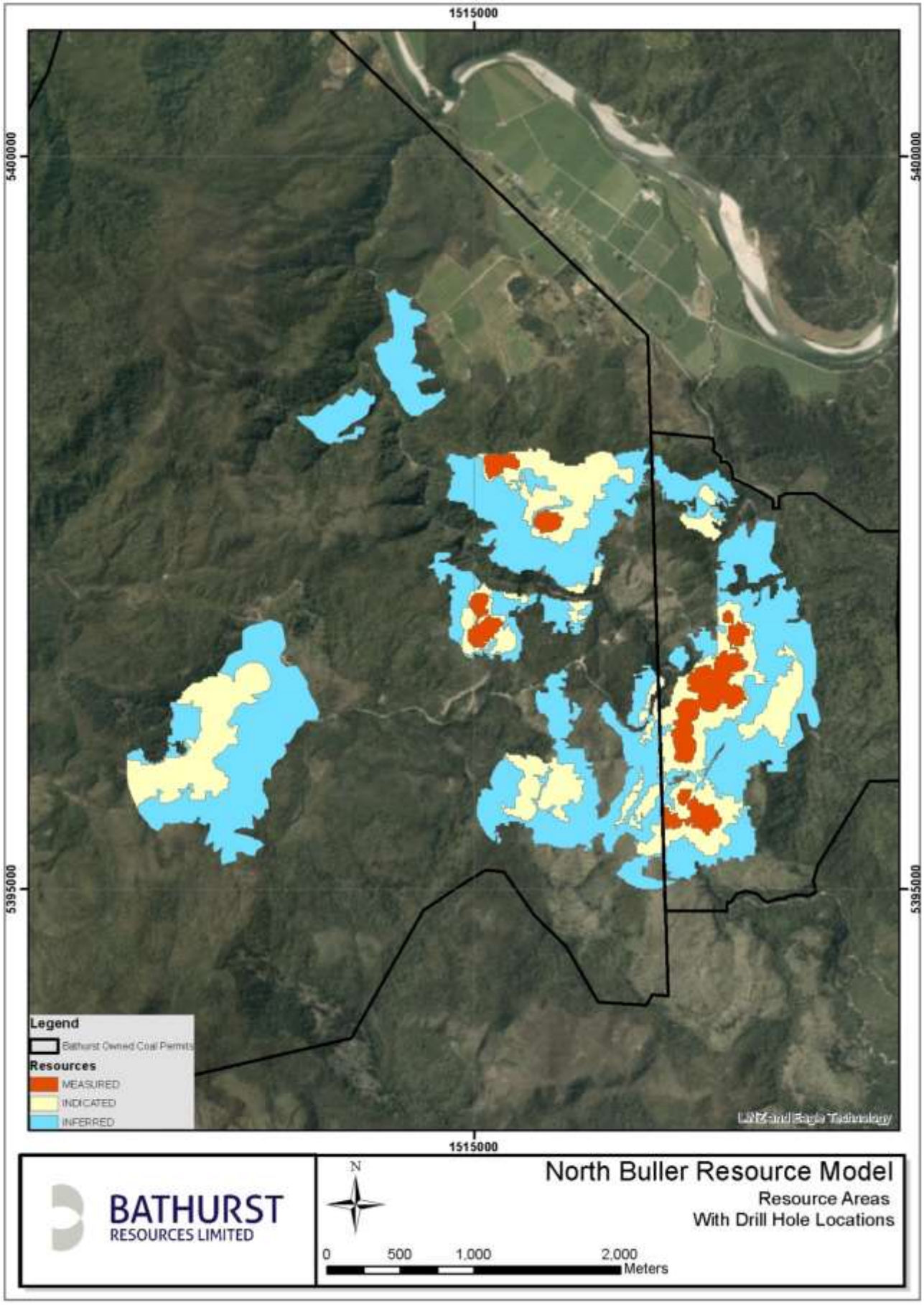


Figure 18 Plan showing the mineral ownership and resource areas for the North Buller project

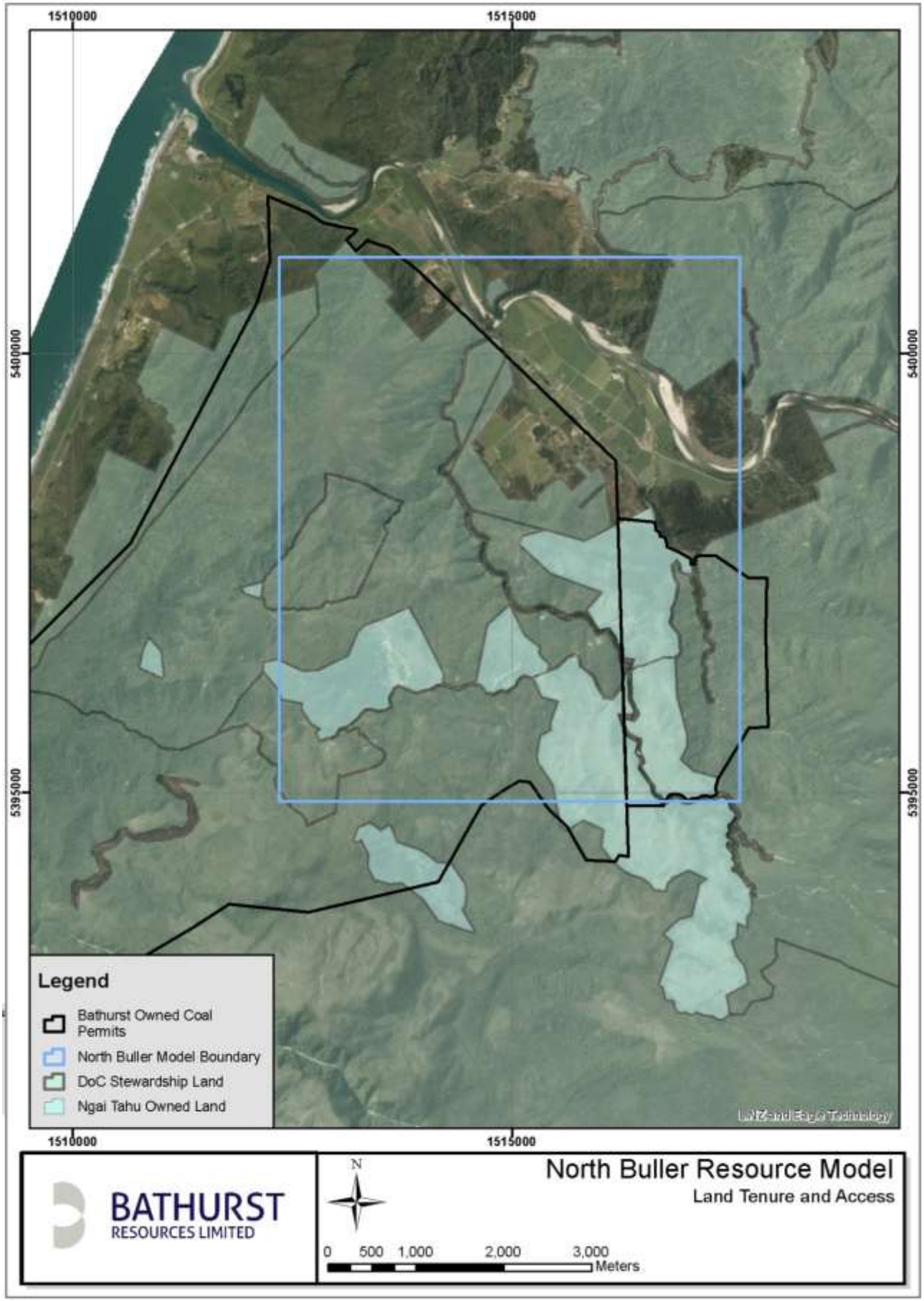


Figure 19 Land ownership in the North Buller project area. Land titles not coloured are held by private parties or LINZ. BRL has access arrangements in place with both DOC and Ngai Tahu for exploration activities

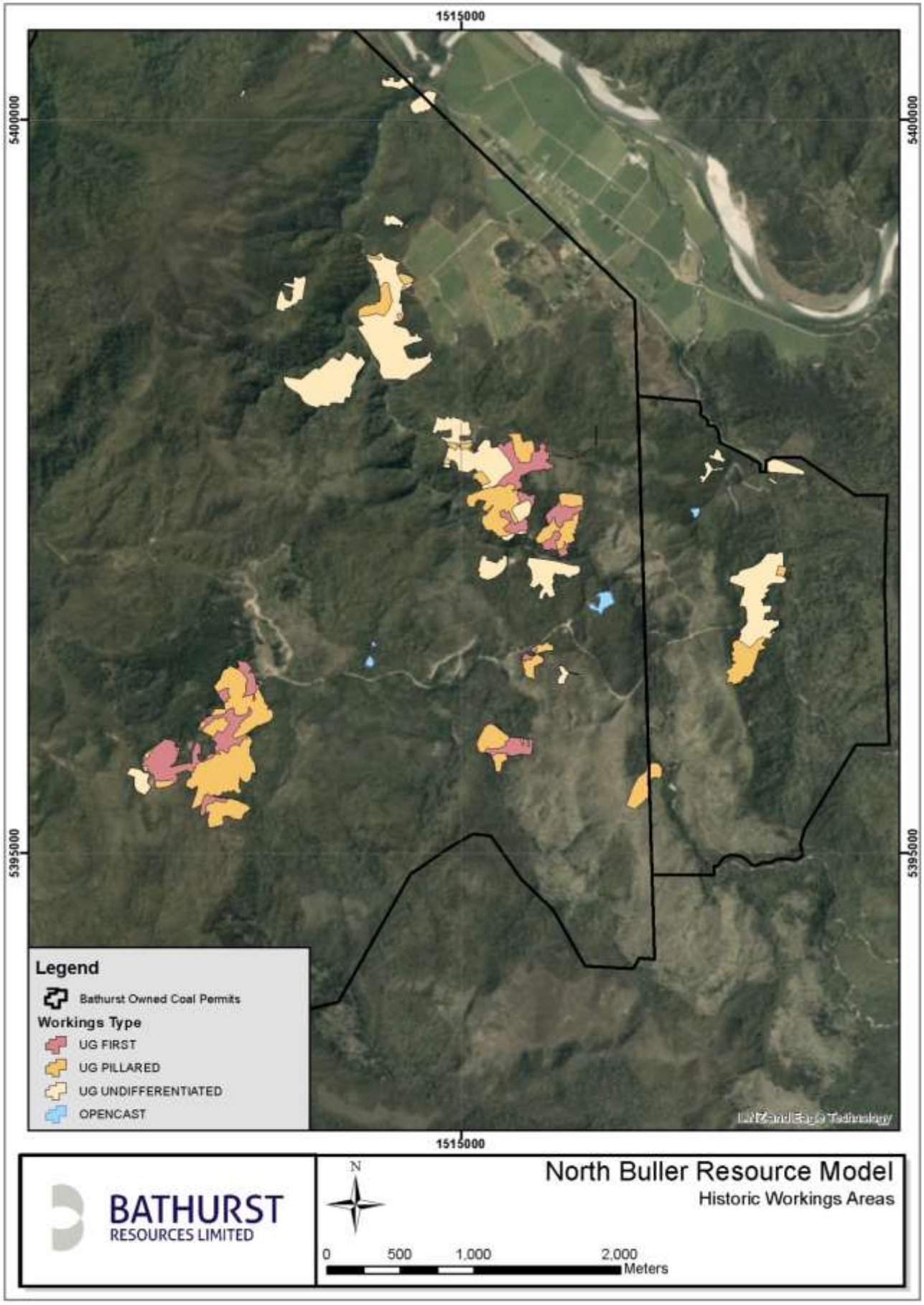


Figure 20 There is a rich history of coal mining in the Seddonville area. This plan shows the extents of historic mining within project area

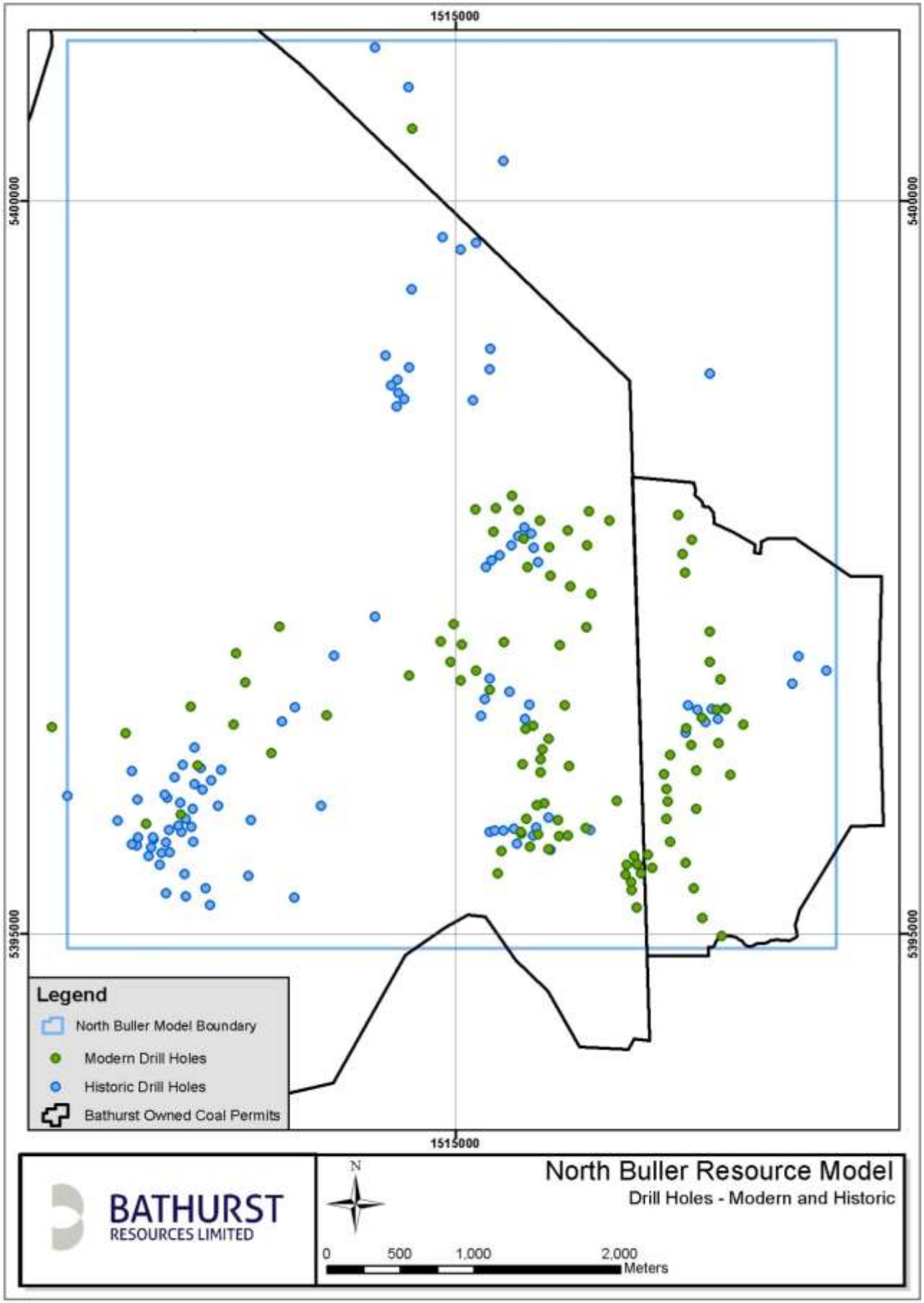


Figure 21 Plan showing the drill hole dataset used to build the North Buller resource model

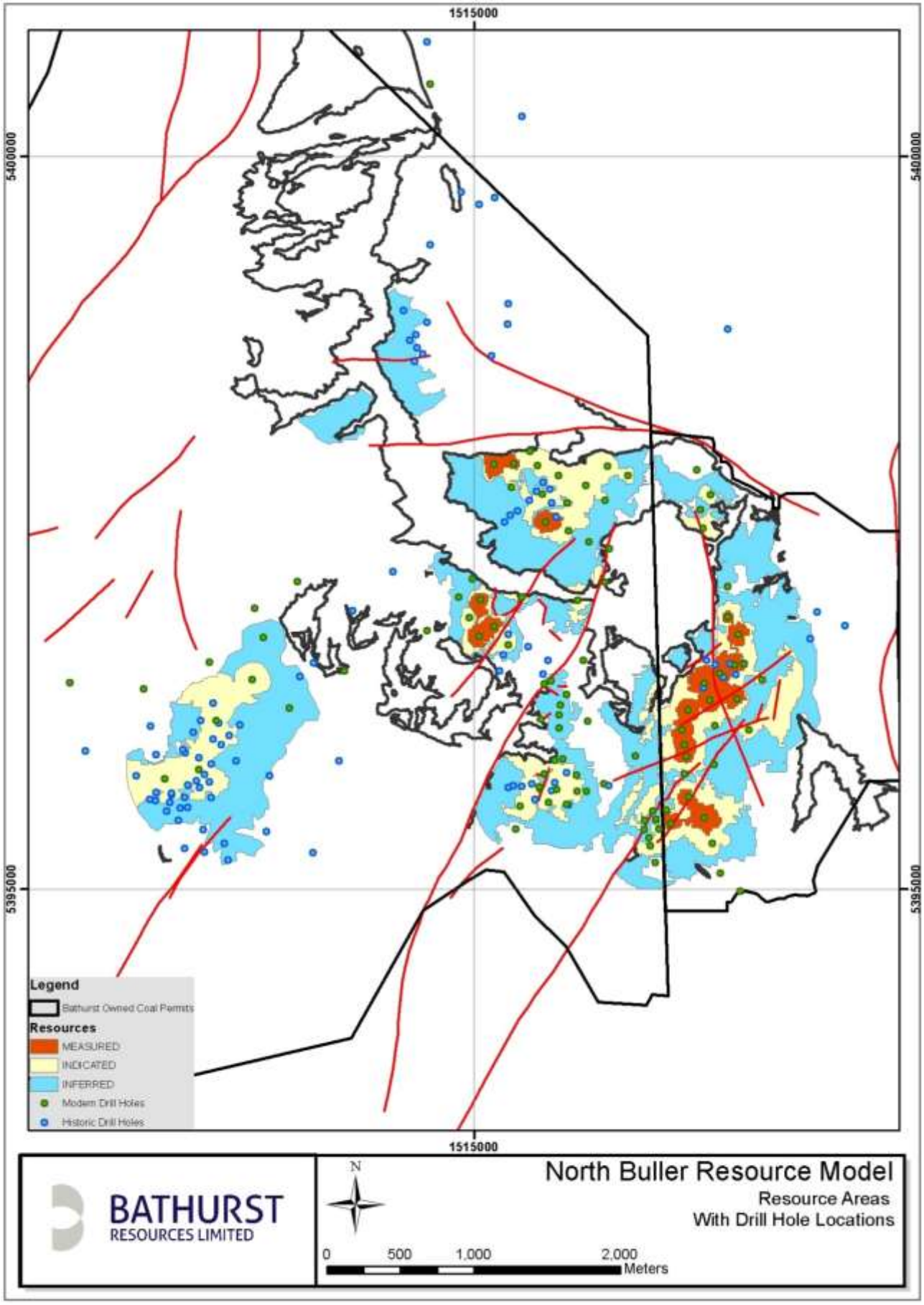


Figure 22 Plan showing the resource classification polygons. Modelled outcrop, faults and drill holes are also shown

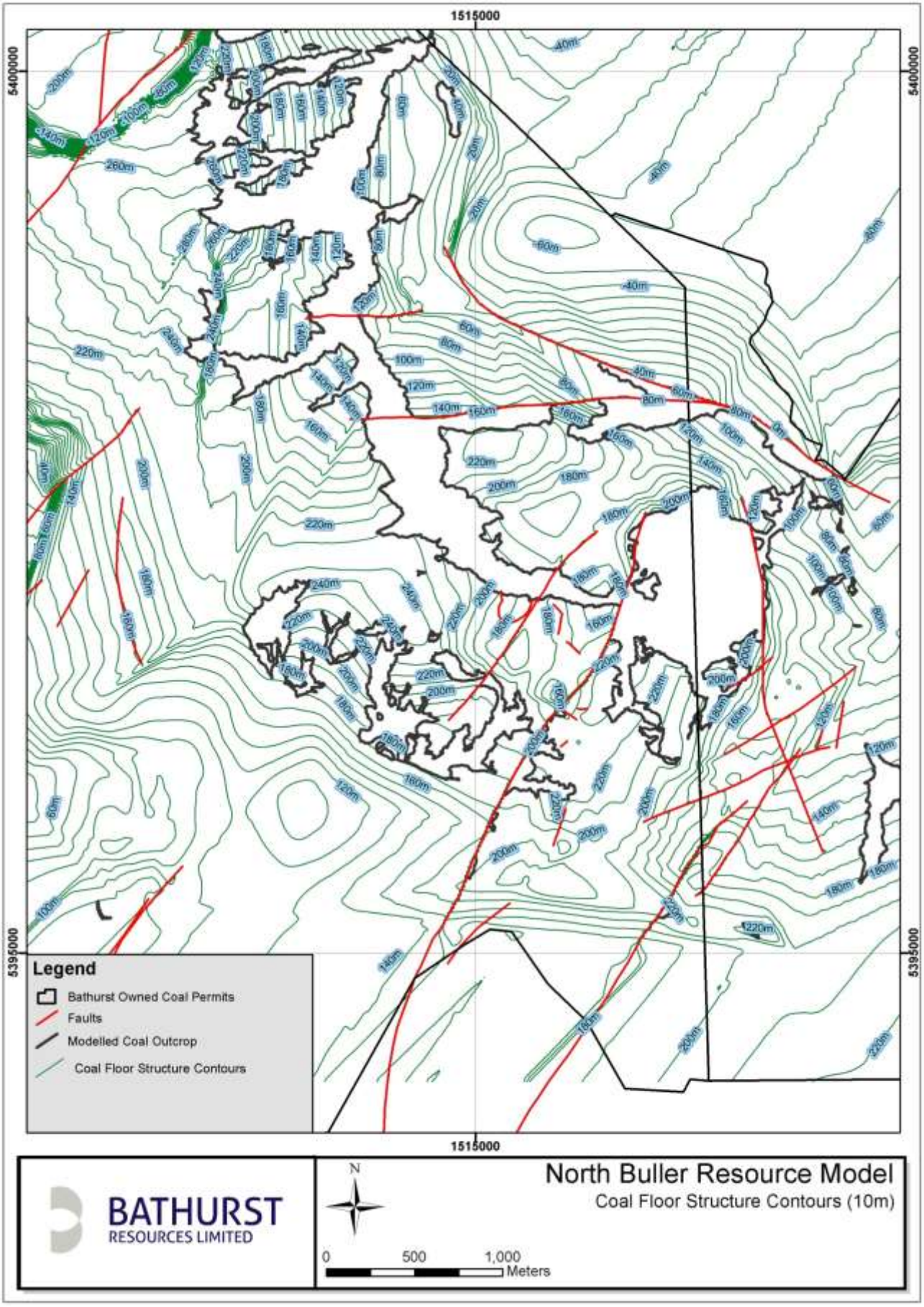


Figure 23 Plan showing the coal floor structure contours. Contours are shown at 10m levels

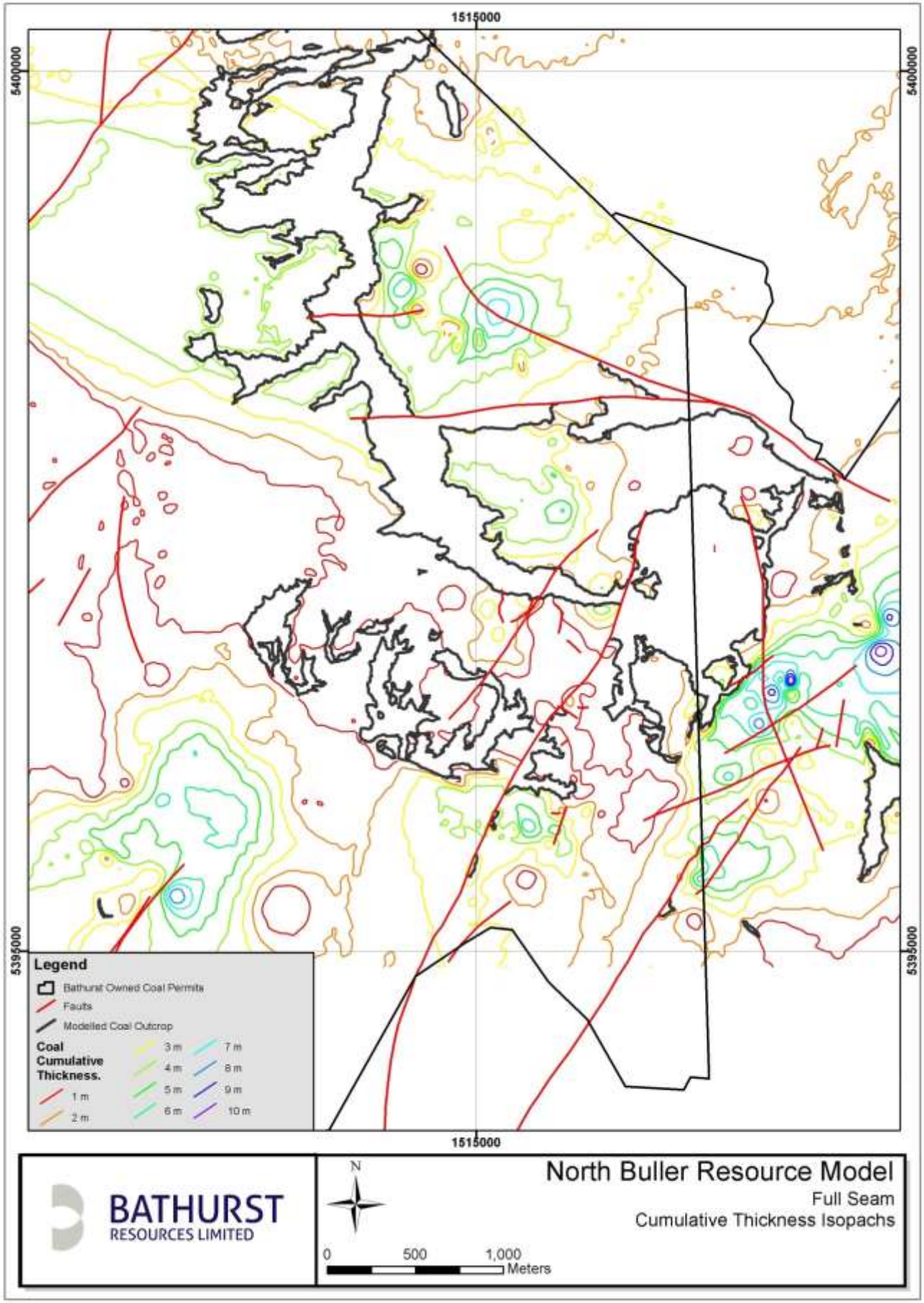


Figure 24 Plan showing the aggregate coal thickness over the project area. Modelled coal outcrop and faults are also shown

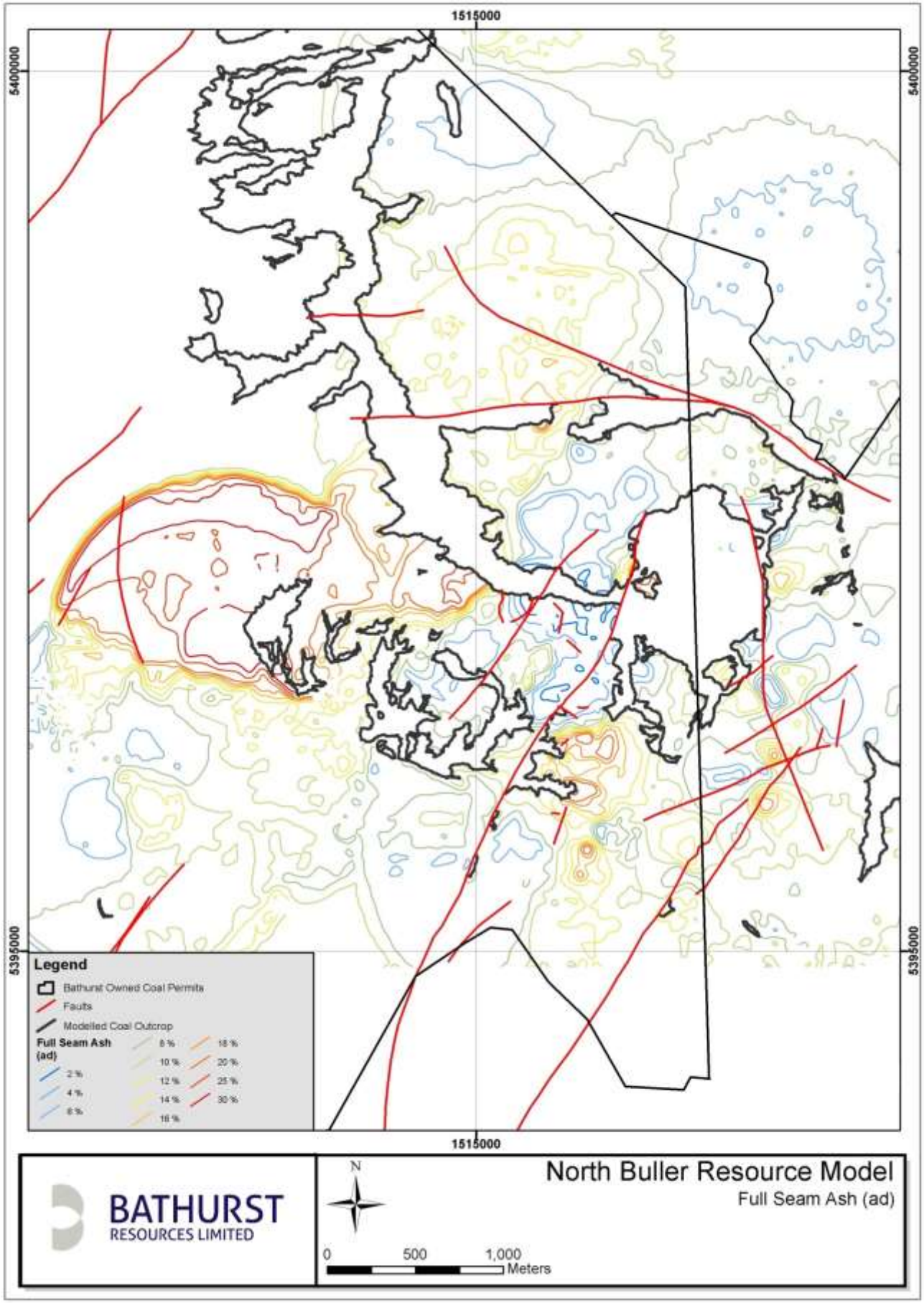


Figure 25 Plan showing the aggregate coal seam ash on an air dried basis

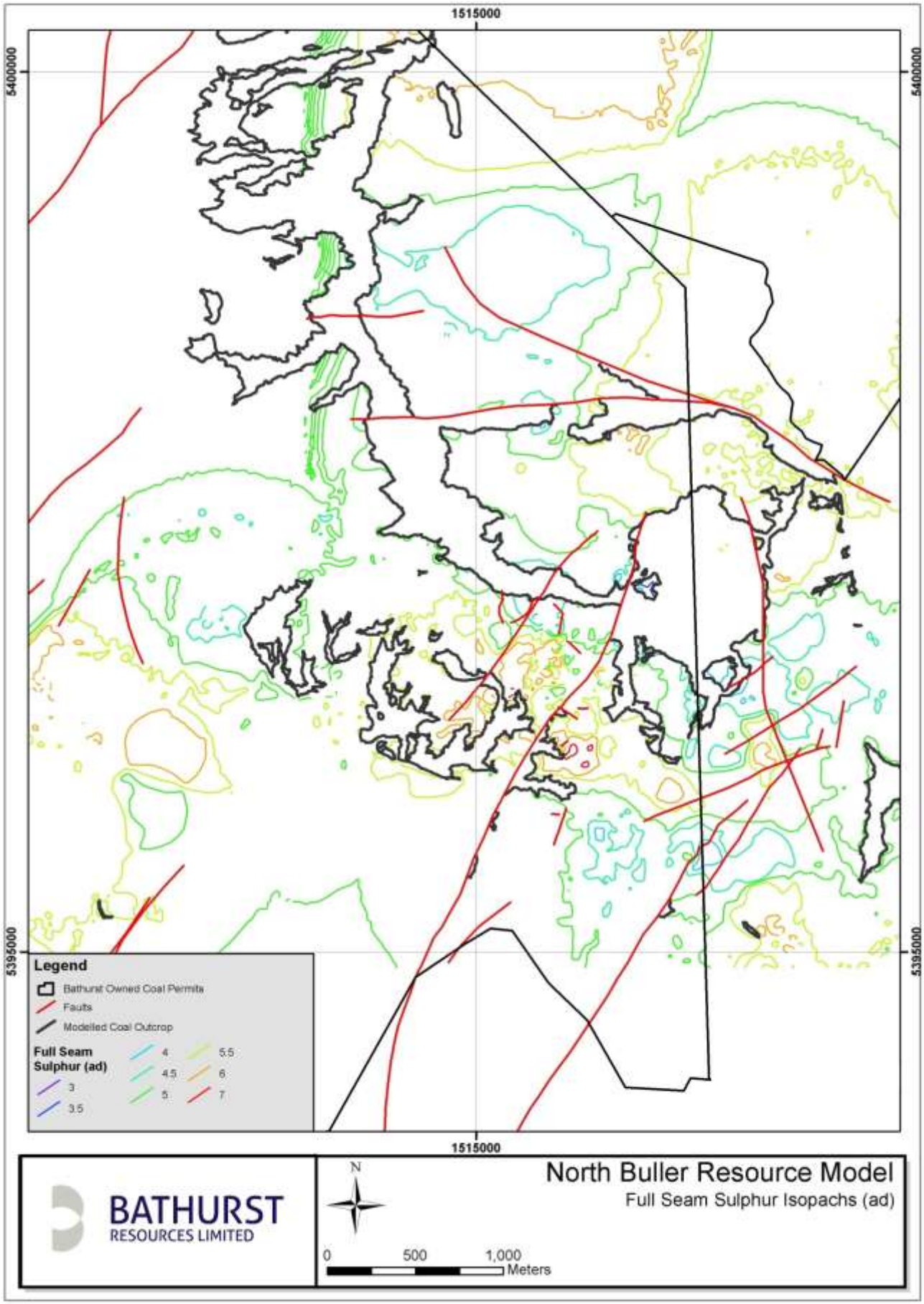


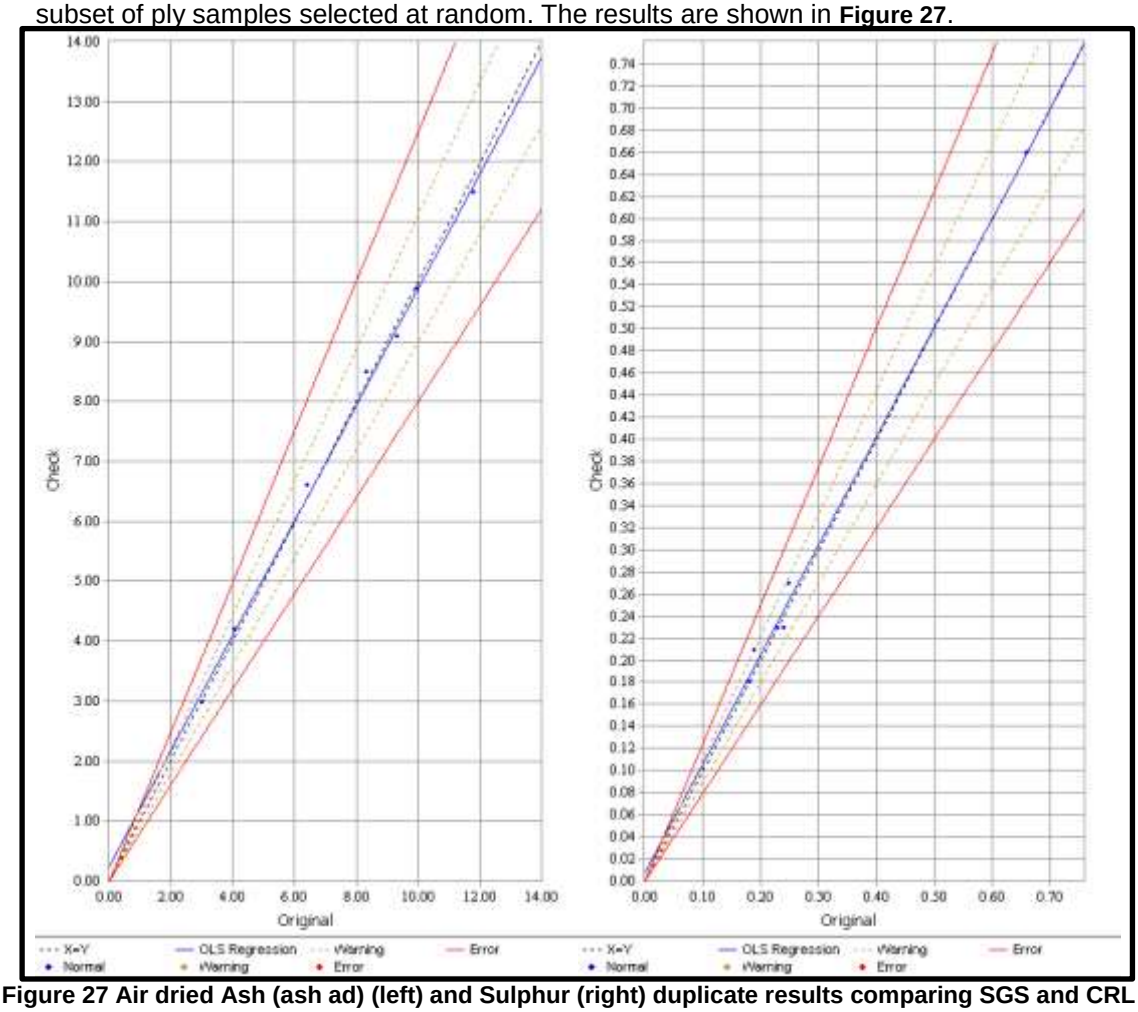
Figure 26 Plan showing the aggregate coal seam sulphur on an air dried basis

JORC Code, 2012 Edition – Table 1 report for Takitimu 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Multiple campaigns of data acquisition have been carried out in the Ohai Coal field over the past century. • A combination of open holed (wash drilled), reverse circulation, and cored drilling techniques has been used. Extensive logged and sampled trenching (channel sampling) has also been employed. • Modern exploration campaigns include data from 2006: ○ 38 reverse circulation hammer drill holes ○ 2 HQ reverse circulation blade drill holes ○ 23 wash drilled drill holes ○ 134 HQ/PQ triple tube diamond cored holes ○ 259 logged channel samples and trenches • Historic drilling includes ○ 35 holes drilled from 1944 to 1962 ○ 14 drill holes completed in the 1980's ○ no down hole geophysics data is available for these holes • Recent drilling has aimed to infill areas to improve confidence and to test reliability of historic data. Drilling has concentrated on areas deemed closer to production therefore tighter drill spacing exists in the Takitimu and Coaldale pits compared to Black Diamond. • Down hole geophysics are available for 63 of the modern drill holes. • Exploration drill holes are ordinarily geophysically logged provided that hole conditions and operational constraints allowed. The standard suite of tools run included density, dip meter, sonic, and natural gamma. • In rods density produced a reliable trace for use in seam correlation and depth adjustment and is used to correlate coal seams, to confirm depths and thickness of coal seams and to validate drillers' logs. Geophysics was also used to accurately calculate recovery rates of coal intersections. • RC boreholes drilled in 2009-2010 were geophysically logged for natural gamma with Auslog Model A051 Combination natural gamma/single-point resistivity/spontaneous potential sonde, 43 mm dia. Calibration method used a gamma test source jig, model P6721. • Diamond bore holes were geophysically logged for density with a 9034 sidewall density tool. Calibration method used for 9239 was concrete block and water tank • Outcrop trench and channel samples provide a significant proportion of the sample dataset. Coal seam thickness and partings between seams were measured vertically. Trench data is entered into the drilling database in a form that replicates a drill hole at that location.
Drilling techniques	• All BRL managed drilling campaigns have utilized the following drilling methods ○ Full PQ triple tube core ○ Full HQ triple tube core ○ Combination wash drill / triple tube core ○ Reverse circulation 133mm • Historic drilling techniques include ○ HQ triple tube core ○ Rotary wash, fishtail bit • All drill holes with the exception of three geotechnical drill holes were collared vertically. • Channel sampling of faces are utilised extensively in the Nightcaps projects.
Drill sample recovery	• Core recovery was measured by the core logging geologist for each driller's run (usually 1.5m) in each drill hole. If recovery of coal intersections dropped below 90% the drill hole required a redrill. • Average total core recovery over the recent drilling campaigns was 90.6% with core recovery of coal at 96.2%. • Where small intervals of coal were lost, and geophysics indicated strongly that coal was lost, ash values were estimated using the results of overlying and underlying ply samples and the relative response of the down hole density trace. • Little recovery data is available for historic drill holes.
Logging	• BRL has developed a standardized core logging procedure and all core logging completed by BRL has followed this standard.

Criteria	Commentary
	• All modern drill core has been geologically and geotechnically logged by logging geologists under the supervision and guidance of experienced exploration and geotechnical geologists. • Drill core was photographed prior to sampling. Depth metre marks and ply intervals are usually noted on core in each photograph. • Down hole geophysical logs were used to aid core logging and adjust depth where applicable.
Sub-sampling techniques and sample preparation	• For all exploration and resource modeling data acquired by BRL an in-house detailed sampling procedure was used. • Sampling and sample preparation are consistent with international coal sampling methodology. • Drill core ply samples include all coal recovered for the interval of the sample. Core was not cut or halved. Ply sample intervals were generally 0.5m unless dictated by thin split split or parting thickness. Coal sample size is considered adequate to be representative of the coal seam quality • For historical data, sample preparation processes are unknown. However no historical drill hole coal quality results are used in the resource estimation. • Trench samples were taken representatively from excavated and cleaned outcrop, preventing sampling of weathered coal and other contamination of the sample. Sample intervals were measured vertically and were generally 0.5m or less, however thicker sample intervals of up to 4m were used for thick coal seams. No field sample duplicates have been taken or analysed. Sample sizes generally aim to be at least 1kg of coal per 0.5m sampled. • All diamond core samples and RC chip samples were collected as soon as practicable after drilling and bagged then sent to the SGS Minerals Laboratory in Ngakawau where they were crushed and split at the laboratory. • Some grade control drill holes and channel samples have been analysed at the on site laboratory for ash and sulphur using standards in accordance with ISO 17025 requirements for laboratory practices.
Quality of assay data and laboratory tests	• SGS has been the predominant accredited laboratory used by BRL for coal quality testing on exploration drill holes used in the resource model. • SGS have used the following standards for their assay test work. ○ Proximate analysis is carried out to the ASTM 7582 standard ○ Ash is also reported to the standard ISO 1171 ○ Volatile matter has also used the standard ISO 562 ○ Inherent moisture has also used the ISO 5068 ○ Total sulphur analysis is carried out to the ASTM 4239 standard ○ Calorific value results are obtained using the ISO 1928 standard. ○ Loss on drying data is completed using the ISO 13909-4 standard. ○ Relative density is calculated using the standard AS 1038.21.1.1 • CRL Energy Ltd completed much of the assay test work for samples collected prior to BRL taking over the projects. • CRL used the following standards for their test work; ○ Inherent moisture tests utilized the ISO 117221 standard ○ Ash tests utilized the ISO 1171 standard ○ Volatile matter tests utilized the ISO 562 standard ○ Calorific value tests utilized the ISO 1928 standard ○ Both SGS and CRL are accredited laboratories. • All analysis was carried out and reported on an air dried basis unless stated otherwise. • Some coal quality testing completed for BRL on in pit channel samples and grade control drill holes used in the resource model has been carried out by the onsite laboratory which uses the following standards in accordance with ISO 17025 requirements laboratory practices; ○ Sample preparation is carried out as per ISO 5063/2 brown coal and lignite's –Principles of sampling ○ All coal is crushed to -3mm and a minimum of 650 grams of coal is extracted using a rotary divider. ○ Coal is dried, the loss on air drying determined and ground to -212 microns in a ring mill. ○ Coal is representatively spot sampled into a lab sample bottle and is then tested for inherent moisture, ash and sulphur. ○ LOD carried out as per ISO 5068-1 ○ Inherent moisture is carried out using the ISO 5068-2 ○ Ash has been analysed using the standard ISO 1171-1997. • Duplicate results from the onsite lab are compared to results tested at SGS; results are comparable between the two labs, however some differences between inherent and total moisture has been observed. No moisture results from the onsite lab are used for resource

Criteria	Commentary
	estimation however ash and sulfur (ad) results from 3 grade control drill holes and 72 channel samples are used in the grade estimation. • SGS has reviewed onsite sampling and calibration procedures in 2013 as per the initial setup of the lab in 2009. Periodic reviews and audits are completed every six months by an external party. • Onsite coal sampling procedures have been audited and tested by consultant Trevor Daly Consulting in 2010 and 2013 and again in 2016.
Verification of sampling and assaying	• Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the Nightcaps coalfield. • Anomalous assay results were investigated, and where necessary the laboratory was contacted and a reanalysis undertaken from sample residue. • 6 twinned holes have been drilled at the project, but no field duplicate trench samples have been taken • In pit channel samples have been conducted for grade control purposes; these have been used to cross validate historic and RC drilling and to provide an increased density of coal quality data for model estimation around active mining areas. • Laboratory data is imported directly into an Acquire database with no manual data entry at either the laboratory or at BRL. • Geophysical data has been used to establish coal seam thickness and depths on the margins of coal seams in RC drill holes where sampling uncertainty inherent in RC drilling made coal sample and intersection depths less reliable. • In 2014 BRL commissioned a series of duplicate samples to be completed by CRL Energy ltd. These samples have repeated tests performed by SGS New Zealand Limited (SGS) on a subset of ply samples selected at random. The results are shown in **Figure 27**.  **Figure 27 Air dried Ash (ash ad) (left) and Sulphur (right) duplicate results comparing SGS and CRL laboratories.**
Location of data points	• The site currently uses the Bluff Circuit 1949 Geodetic Datum. • LiDAR and digital imagery was acquired on 10th April 2013 using an Optech M200 LiDAR system and CS8900 medium format digital camera.

Criteria	Commentary
	• The data was collected flying 1,300m above the lowest ground and using a scanner field of view of 44 degrees. Outgoing pulse rate was set at 70kHZ and minor scan frequency 33.5 Hz. • The topographic surface used to build the model is derived from a combination of Lidar data, and LINZ topographical data where Lidar coverage in outer areas is unavailable. The topographic surface is updated with end of month mine surveys for active mining and dumping areas. • The Takitimu mine has had its own survey department since 2013 and exploration data is surveyed by in house trained survey technicians. Prior to 2014 surveying was completed by BTW South based in Cromwell. • EOM surveys surveyed by aerial drone are conducted quarterly by Landpro based in Cromwell and Gore. • All in-pit surveying of coal roof and floor and channel samples has been conducted by sufficiently trained BRL staff. • Historic data has been converted from various local circuits and map grids to the Bluff Circuit 1949 Geodetic Datum. • Surveyed elevations of drill hole collars are validated against the Lidar topography and EOM survey surfaces.
Data spacing and distribution	• Spacing for the Nightcaps project, including Black Diamond, Coaldale and Takitimu project areas, has been calculated by finding the radius required to fill the total area of the project divided by number of drill holes within that area. • The project has an average drill hole spacing of 147m. Channel sampling reduces this average spacing to 104m. • Drill hole spacing is not the only measurement used by BRL to establish the degree of resource uncertainty and therefore the resource classification. BRL uses a multivariate approach to resource classification which is explained further in Section 3. • The current drill hole spacing is deemed sufficient for coal seam correlation purposes. • Geostatistics have been applied to the Nightcaps dataset. Variography results have been applied to grade estimation search parameters. • The samples database is composited to 0.5m sample length prior to grade estimation. • Any samples with composited length of less than 0.1m are not included in the estimation. Compositing starts at the top of seam and small samples are not distributed or merged.
Orientation of data in relation to geological structure	• All recent exploration drilling has been completed at a vertical orientation. The exception to this is three diamond drill holes that have been drilled with a dip of 45 degrees and azimuth of 286. These holes were drilled to assess the geotechnical properties of the western Coaldale highwall and were intended to intersect a fault. • All historic drill holes are vertical; those without deviation plots are assumed to be vertical. • Any deviation from the vertical is not expected to have a material effect on geological understanding due to the shallow nature of project. Average drill hole depth in the dataset is 47.7m with the deepest coal intersection of 86.4m. • The majority of the deposit presents a shallow seam dip between 3° – 15° although some localized steep dips do exist near fault margins. • Vertical drilling is considered to be the most suitable drilling method of assessing the coal resource in the Nightcaps coal fields.
Sample security	• Stringent sample preparation and handling procedures have been followed by BRL. Ply samples are taken and recorded from drill core, sealed in plastic and sent directly to the laboratory. • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core.
Audits or reviews	• BRL has reviewed the geological data available and considers the data used to produce the resource model is reliable and suitable for the purposes of generating a reliable resource estimate. • Senior geologists undertake audits of the sample collection and analysis processes.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure	• The Nightcaps Resource Model includes two coal permits and a privately held land parcel with coal rights attached that are wholly owned by Bathurst Coal Ltd. • Exploration Permit (EP) 51260 covers an area of 690.51 hectares, and contains a portion of the resource area. It is considered that there are reasonable prospects to convert all or part of

Criteria	Commentary
status	the EP to a mining permit. • Mining Permit 53614 covers the western margin of the Coaldale opencast pit and Black Diamond and is entirely included within the resource model.

Permit/Rights	Operation	Mining Type	Expiry
Exploration Permit 51620	Ohai	N/A	14/04/2020
Mining Permit 53614	Coaldale	Opencast	04/06/2022
Private Coal Lot 1 DP 4505	Coaldale/Takitimu	N/A	N/A

- Royalties are paid to the Crown on coal mined from within MP53614 and an Energy Resources Levy is paid to the crown on all coal extracted from private and crown owned coal.
- A deferred consideration payment of 5% of gross sales revenue at mine gate is payable on all coal produced by the company in the Ohai area. The deferred consideration is for the acquisition of the New Brighton EP 40625 as announced in March 2015.
- BRL owns a portion of the Coaldale resources as coal rights attached to the land title.
- An access arrangement (AA) is in place to access a small parcel of private land in the southern portion of MP53614. There are no royalty payments included as part of this agreement.
- An AA is in place to access a parcel of private land in the north eastern portion of MP53614.. There are royalty payments included as part of this agreement. The royalty is adjusted to the PPI and LCI price indices.
- BRL have a sale and purchase agreement to purchase areas for mining at the Black Diamond project.
- BRL has a lease agreement with the Southland District Council over a large land parcel covering the Takitimu project and mine infrastructure. The lease includes rights to explore for, extract and sell coal from within the parcel.
- **Figure 35** and **Figure 36** in the Appendix show BRL's land ownership and access, and mineral rights within the project area.

Exploration done by other parties	• All exploration later than 2011 has been carried out by BRL • Prior to BRL managed exploration, modern exploration was conducted by CRL for Takitimu Coal Limited prior to the purchase by BRL. • Historic data has been traced back to original reports and logs held at Archives NZ storage centers. Historical data has been thoroughly investigated for reliability and quality and, where the integrity of the data is limited, it has been omitted from the model.
Geology	• The Project is located in the Ohai Coal field, New Zealand. • The Ohai Coalfield is a fault bounded basin containing Cretaceous sub-bituminous coal. • The defined resource is contained within the Morley and Beaumont formations. • The Cretaceous Ohai group contains three formations – the Wairio, New Brighton and the Morley Formations. • The Eocene Nightcaps group contains two formations – the Beaumont and Orauea Formations. • The two groups are separated by an unconformity clearly distinguishable by micro-flora. • Most production has come from seams in the Morley Formation which tend to have higher quality coal. Coal seams are faulted and folded into complex structures. Coal thickness and extent varies as seams are often lenticular and split or washed out by fluvial sand channels and syndepositional faulting and folding are indicated • Morley coal measures of the Ohai Group have a combined vertical seam thickness which averages 4.1m however 23m thick seams have been recorded. • Coal ranks range from sub-bituminous A to high volatile bituminous C. • Beaumont coal measures of the Nightcaps Group have a combined vertical seam thickness which averages 1.4m however 7m thick seams have been recorded. Coal ranks from sub bituminous C-B rank. • The Nightcaps Group Beaumont Formation coal measures are conformably overlain by Eocene Orauea Formation mudstone.
Drill hole Information	**Table 3 Showing summary of drilling data available within the model area.**

Years	Agency	Range of Collar ID	# Holes	Drilling Method	# Holes in structure model	# holes in quality model	Geophysics Available

Criteria	Commentary

1944-1947	Various	d133 - d144	9	unknown	3	0	0
~1955	Various	236-245, 247-250, 255, 372, 376	17	unknown	13	0	0
1962	Black Diamond Colleries	280A - 285A	6	WD	6	0	0
1981 - 1984	Coal and Energy NZ Ltd	SC101 - SC111	11	Wash drilled, core	10	10	0
1989	Downer Mining	DMDH01 - DMDH03	3	Wash drilled	0	0	0
2006	Takitimu Coal Ltd	NC001 - NC012	14	HQ triple tube, OH	12	7	14
2007	Takitimu Coal Ltd	T001	1	Trench	1	0	0
Mar 2009	Takitimu Coal Ltd	NC013 - NC027	15	HQ triple tube, RC hammer, RC blade	15	15	11
Feb 2010	Takitimu Coal Ltd	NC028 - NC044	17	RC hammer	16	12	16
2010	Takitimu Coal Ltd	T002 - T004	3	Trench	2	0	0
Aug 2010 - Sep 2010	Takitimu Coal Ltd	NC045 - NC060	16	Triple tube core, OH, RC hammer	11	9	8
2012 - 2014	Takitimu Coal Ltd	NC061 - NC078, NC086 - NC117	50	triple tube core, Open holed	48	29	13
2013	Takitimu Coal Ltd	T005 - T011	7	Trench	7	3	0
2013 - 2014	Takitimu Coal Ltd	CS001 - CS107	107	Trench	93	86	0
2015	Takitimu Coal Ltd	BKDT001 - BKDT043	43	Trench	11	6	0
2014 - 2017	Takitimu Coal Ltd	CS107- CS175	68	Trench	66	55	0
2015 - 2017	Takitimu Coal Ltd	NC130-NC164	35	triple tube core	35	32	1

- Exploration drilling results have not been reported in detail.
- The exclusion of detailed exploration data from this report is considered to not be material to the understanding of the report.

Data aggregation methods	• The nominal cut off for ash (ad) for constructing the Takitimu structure model is set at 35%. • The resource model is built as a block model with 0.5m block thicknesses for coal. Coal ply data is used to grade estimate the block model. • Some coal composite samples for full seam, minable sections have been taken for thorough analysis including ash constituents, forms of sulphur, ash fusion temperatures, and ultimate analysis. These composite samples are not used in grade estimation.
Relationship between mineralisation widths and intercept lengths	• All exploration drill holes have been drilled vertically and the coal seams are generally gently dipping. Therefore any reported seam intercept thickness is representative of the true seam thickness.
Diagrams	• Coal quality isopach plots and coal structure contour plots for both Morley and Beaumont coal are shown in the appendix.
Balanced reporting	• Not applicable. Detailed exploration drilling results and coal intersections has not been reported.
Other substantive exploration data	• Exploration drilling results have not been reported in detail. • The Coaldale pit is in commercial production. • Substantial ash constituent data has been compiled on coal samples and coal composite samples for the Coaldale and Black Diamond Prospects.
Further work	• Further infill drilling and geotechnical drilling is planned around the Black Diamond prospect.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly checked and validated against original logs and results tables. Where reliability of the data is poor the data is excluded from the modelling process. • BRL utilizes an Acquire database to store and maintain its geological exploration dataset. • An Acquire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values and standardized look-up tables for logging codes etc. • Manual data entry of assay results is not required as results are imported directly. • The database is automatically backed up on an offsite server.
Site visits	• Hamish McLauchlan (the competent person) has worked for the past 20 years on coal projects throughout New Zealand. The competent person visits the sites regularly.
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification. • Dry, mineral matter and sulphur free volatile matter is the principal quality used to differentiate and correlate Beaumont and Morley coal seams. • BRL considers the amount of geological data sufficient to estimate the resource however an increased data density may increase confidence of some areas. • Uncertainty surrounds the historic underground and opencast workings, both in the quality and quantity of coal extracted and the surveying of underground workings. This is reflected in the resource classification. • Some residual uncertainty of quality and confidence of historic drilling data remains despite thorough evaluation of the historic logs and drill locations.
Dimensions	• A number of coal seams are present with two main seams in the Beaumont formation and up to four in the Morley formation. The total combined coal thickness varies from less than 1m thick up to 25m thickness locally. • The model covers a 2.4km by 3.6km area. The deposit consisting of the Takitimu, Coaldale and Black Diamond prospects covers an area approximately 230Ha. The deposit is bounded by the Tinker Nightcaps fault to the North East and the Fern fault to the North West. The Takitimu deposit is separated from the Coaldale and Black Diamond deposits by the Trig E fault.
Estimation and modeling techniques	• All available and reliable exploration data has been used to create a geological block model which has been used for resource estimation and classification. • All exploration drilling data is stored in Acquire and exported into a Vulcan drill hole database. Mapping data is stored in Acquire and is exported into Vulcan. • Interpretive design data is stored within Vulcan in various layers. • Due to the model having two unconformable coal bearing formations the model is subdivided into two separate domains for formation (Morley and Beaumont). The Morley seams are truncated by the overlying unconformable Beaumont coal measures. • The model is domained further into two fault blocks (North, South) using the large Trig E, Fern, and the Tinker/Nightcaps faults as bounding surfaces. • Each domain is modeled for structure and grade separately. • Vulcan is used to build the structure model. Grid spacing is 10m x 10m. • Maptek's Integrated Stratigraphic Modeler module is used to produce the structure model. The stacking method is used which triangulates a reference surface and then stacks the remaining horizons by adding structure thickness using triangulation. • Structure grids are checked and validated before being used to construct the resource block model. • Vulcan is used to build the block model and to grade estimate. The process is automated using a Lava script. • The stratigraphic structure grids for each domain, along with end of month site survey combined with lidar topography surface, Beaumont unconformity surface, and other mining related surfaces for Coaldale and Takitimu were used to build the block model. The block dimensions are constructed at 10m x 10m. Vertical thickness for coal blocks is 0.5m. • Grade estimation is performed utilizing Vulcan's Tetra Projection Model. Beaumont seams and Morley seams are estimated in the North and South domains. Coal qualities are estimated on an air dried basis. Ash, moisture, volatile matter, and calorific value are estimated simultaneously. Sulphur is estimated using a different search ellipse as indicated by

geostatistics. Variability in sulphur may be related to post depositional fluid flow in NE-SW trending fault structures. Sulphur is shown to be elevated in close proximity to these fault zones. Sulphur grade estimation in the North fault block is subdomained in proximity to one of these faults.

- Geostatistics of the coal quality dataset has been examined to determine any spatial relationships and define the estimation search parameters for each coal seam quality and thickness. The maximum search radius is set to the maximum range of influence found in the semi-variogram for ash dependant variables and for sulphur.
- Grade estimation is computed using an inverse distance cubed function for ash dependent qualities, and inverse distance squared function for sulphur.
- Various methods have been used to check the validity of the block estimation. This includes manual inspection of the model, QQ plots of the model qualities vs coal quality database and other comparison tools.
- Mining reconciliation has been completed on the resource model to check model accuracy within the Coaldale mining area. To date the results are within the bounds of expected variability based on resource classification used with mining factors applied. No other bulk reconciliation has been completed.
- Resource tonnages within the model have been discounted where the resource falls within historic underground workings areas. The primary underground mining method utilised historically in the Nightcaps area is bord and pillar mining. Extraction rates using this type of mining generally reduce as seam thickness increases. Historic extraction rates are estimated using old mining extraction reports, and work completed by Yardley *et al.* 1986.

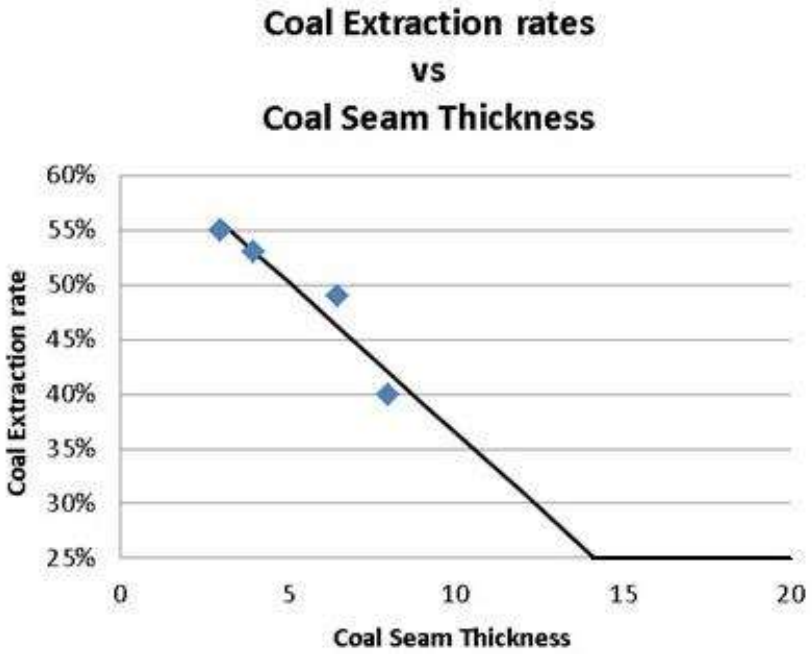
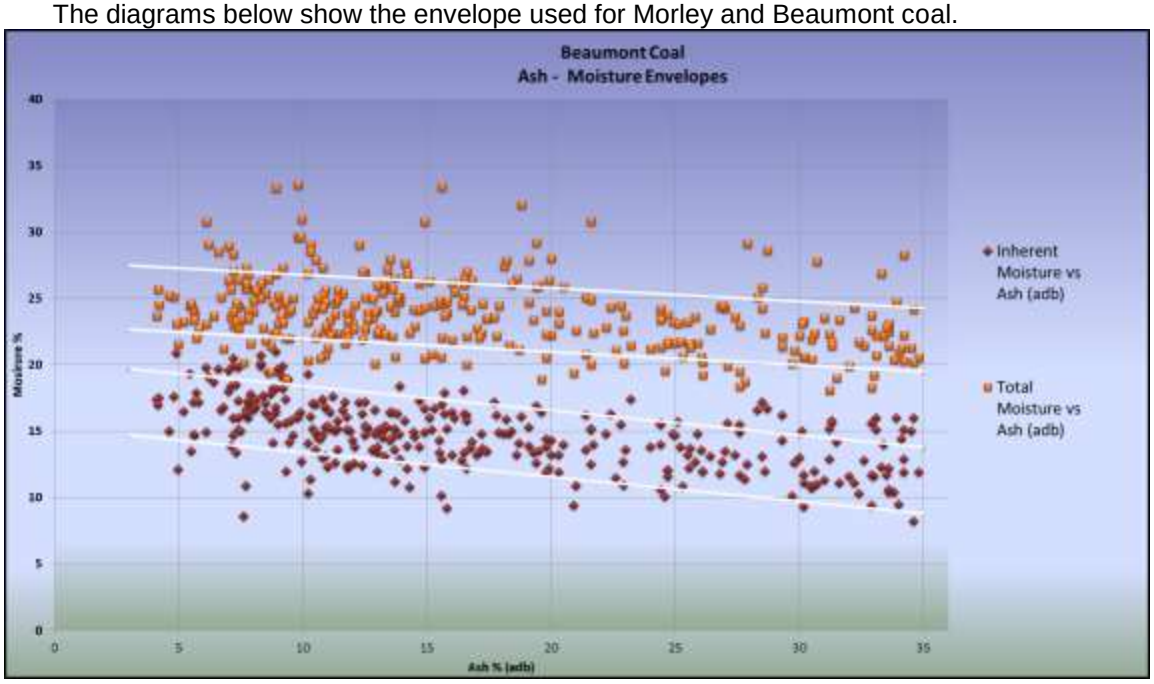


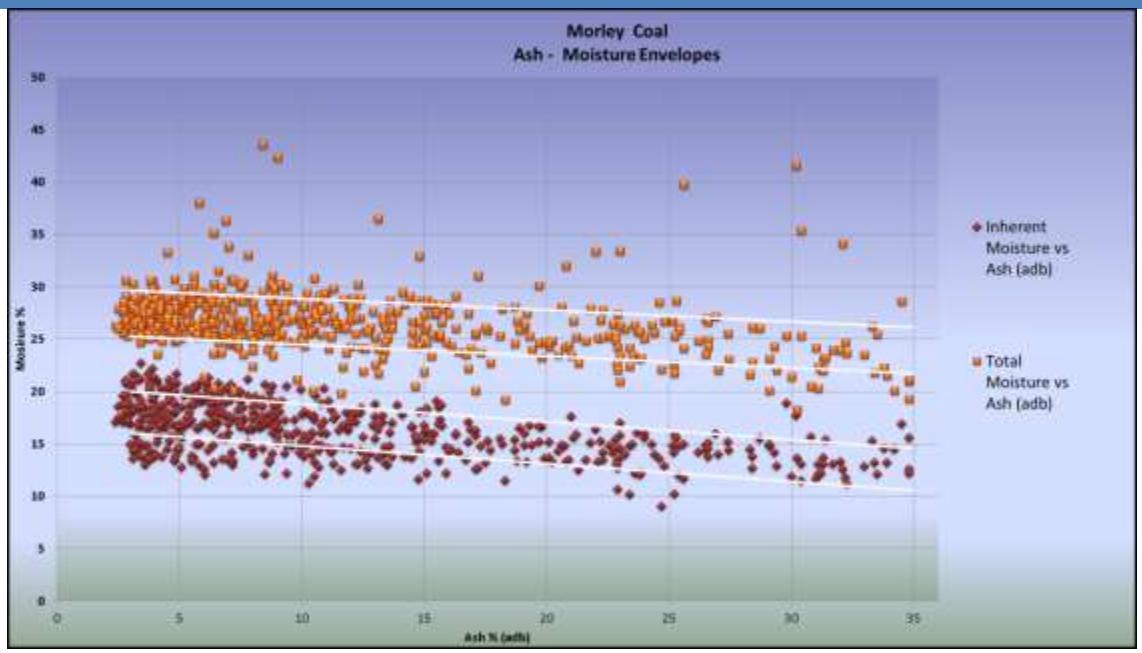
Figure 28 Historic underground extraction rates applied to areas of underground workings based on coal seam thickness

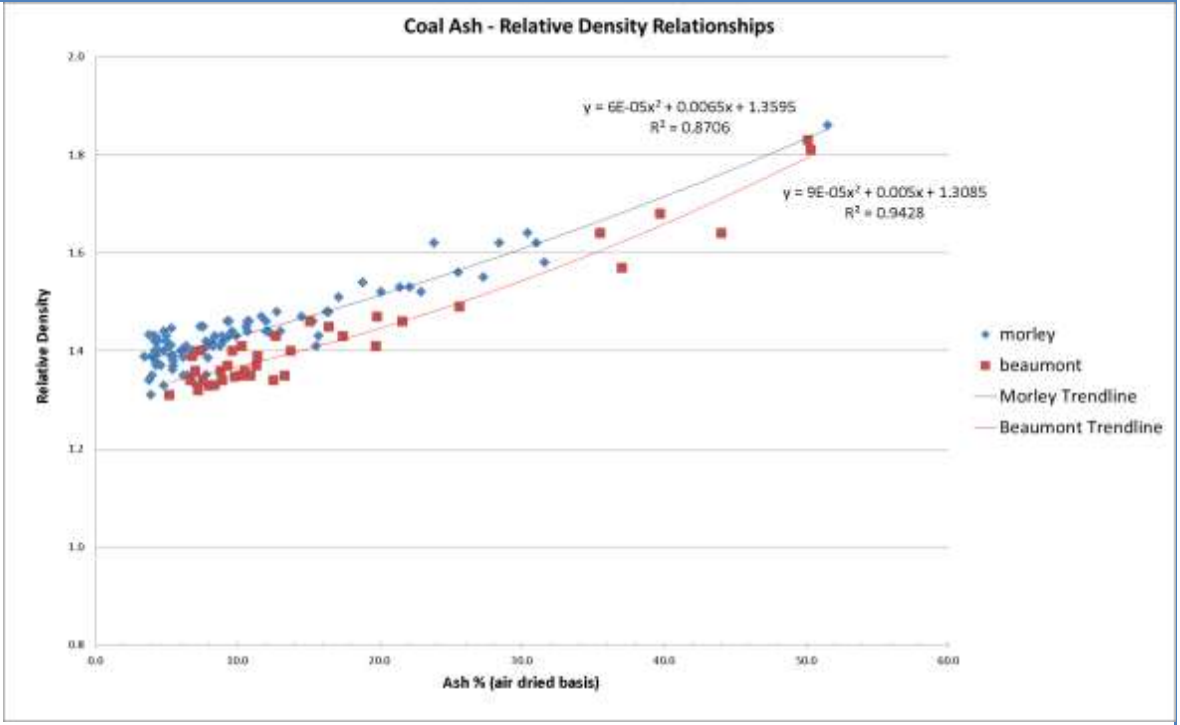
- Opencast mining was also undertaken in the Nightcaps project.
- The extraction rates used to discount coal tonnages in the resource model are as follows:

Mining Method	Extraction Rate
Underground workings	Morley coal discounted at rate shown in Figure 28 with a minimum rate of 25% extracted. Beaumont coal discounted by 10% due to collapsed ground.
Opencast	100% of all coal seams

- Reconciliation data from the Takitimu pit supports these extraction rates on a medium to long term basis.
- Behre Dolbear Australia Pty Limited (BDA) notes that Bathurst has adopted a procedure over old workings of discounting the estimated resources to account for the depletion of coal from underground mining and due to possible structures not identified by drilling. Based on reconciliations from mining to date at Takitimu, this approach has been established as a

Criteria	Commentary
	reasonably reliable, if somewhat conservative, method of estimating resources where there are clearly areas of depletion. BDA accepts that this appears to be a reasonable approach but cautions there will be areas where the resources may differ from the estimates. • No acid mine drainage occurs at the Coaldale and Takitimu operations due the nonacid forming lacustrine depositional environment of the coal measures and therefore acid generation models have not been completed.
Moisture	• Moisture, both on an air dried and total moisture basis, is estimated into the resource model from the sample database after using a cutoff envelope to cut samples that vary excessively from the norm. Natural variability in bed moisture is amplified by excessive variability in the sampling process and laboratory testing methods. • The cutoff envelope used was derived from ±0.67 times the standard deviation of the dataset. The diagrams below show the envelope used for Morley and Beaumont coal.  **Figure 29 Inherent moisture and total moisture cutoff envelopes for Beaumont coal**

Criteria	Commentary
	 **Figure 30 Inherent moisture and total moisture cut-off envelopes for Morley coal.** • This technique compares favourably to the Run of Mine coal sampling data from Coaldale and Takitimu open pit operations, and provides a more accurate representation of coal bed moisture than using a single value for total moisture across the deposit and estimating qualities on a dry basis. • Resource tonnages are reported using natural bed moisture, calculated using the Preston Sanders equation.
Cut-off parameters	• Structure grids have been developed based on a 35% ash cutoff. Some higher ash intervals are retained within the coal quality dataset to allow simplification of the seam model. • No lower ash cutoff has been applied. • Moisture data has an upper and lower cutoff applied as described in the previous section. • Coal resources are reported down to a seam thickness of 0.5m (one block) with an ash cutoff of 25%. • Resources have been defined as economic by using a breakeven Lerchs-Grossman optimized pit shell using budgeted mining costs and contracted coal sales values. No resources have been reported outside of this pit shell.
Mining factors or assumptions	▪ The Coaldale pit is in commercial production utilising truck and excavator mining. ▪ Long term coal sales contracts are tied to inflation (Labour Cost Index, Producers Price Index) for the mining industry. • No other mining factors such as mining losses and dilutions have been applied when developing the resource model.
Metallurgical factors or assumptions	• No metallurgical assumptions have been applied in estimating the resource as there is currently no wash plant required at the Coaldale operation. It is not expected that a wash plant would be required for future coal processing.
Environmental factors or assumptions	• No environmental assumptions have been applied in developing the resource model. ▪ The Coaldale pit is currently in commercial production and there is a large area available for waste disposal. ▪ Overburden has been shown not to be acid forming.
Bulk density	• A total of 89 relative density (air dried) sample results are available for the Morley coal, and 38 samples are available for Beaumont coal. • The samples are distributed throughout the Takitimu-Coaldale-Black Diamond project area and the sample set covers a range of ash values from 3.8% to 50.3%. • From this dataset an ash-density curve was generated with a coefficient of determination of R^2=0.87 for Morley Coal, and R^2=0.94 for Beaumont coal.

Criteria	Commentary
	 **Figure 31 Graph showing Ash (ad) - Relative Density (ad) relationship for both Morley and Beaumont coal** • Air dried density is calculated using the air dried block ash value and the derived density equations. Morley coal: Density (ad) = (0.00006 * ash^2) + (0.0065 * ash) + 1.3595 Beaumont coal: Density (ad) = (0.00009 * ash^2) + (0.005 * ash) + 1.3085 • An insitu bulk density value is computed using the Preston Saunders method; Density (ps) = (RD * (100 – mo_ad)) / (100 + RD*(mo_ar - mo_ad)- mo_ar) Where RD is relative density on an air dried basis, mo_ad is inherent moisture, and mo_ar is total bed moisture. ▪ The Coaldale pit is in commercial production and reconciliations have confirmed density estimates.
Classification	▪ BRL classifies resources using a multivariate approach. ▪ Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction, historic fire affected areas and proximity to faults and unconformities. ▪ Closely spaced drill holes with valid coal quality samples (point of observation) increases the confidence in resource assessments. ▪ The confidence is reduced by: ○ A block being within an area of historic underground workings due to extraction rate uncertainty. ○ A block being within 20m of historic underground workings due to uncertainty with historic survey of the workings and georeferencing of mine plans. ○ A block lying in an area where structure dip is greater than 20° due to proximity to large faults. Faulting can impact coal thickness and quality and some faults are poorly constrained. ○ A block lying within an area with thin or splitting seams resulting in uncertainty of geological continuity. Where a seam is thin or is splitting, a small change in thickness can have a large impact to reported vs actual coal tonnages and qualities. ○ A block being within an area close to a possible ‘washout’ or erosion of Morley coal as indicated by historic underground mine plans and extents. ○ A block lying within an area identified to be affected by historic underground mine fires. ○ A block underlies the modelled regional unconformity between Beaumont and Morley formations by less than 2m due to uncertainties in unconformity surface topology. • Essentially, in an area that is not affected by the above conditions, a distance to nearest sample of less than 75m would be classified as Measured, less than 150m is classified as Indicated and less than 500m would be classified as Inferred. • The following figures show the resource classification polygons for Morley and Beaumont

Criteria	Commentary

Coal. Economic resources are reported from within these polygons provided they lie within the breakeven Lerchs-Grossman optimized opencast pit shell.

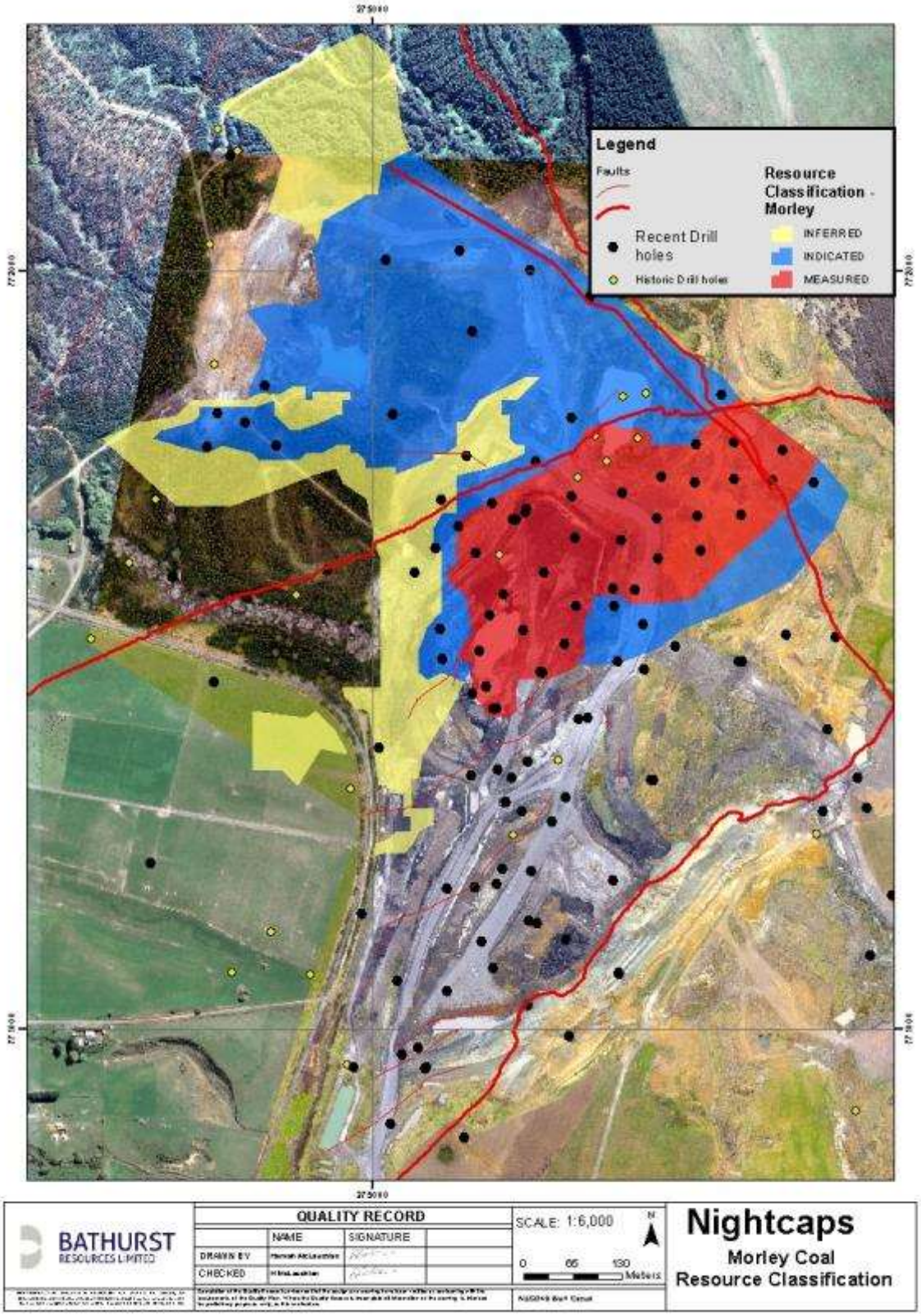
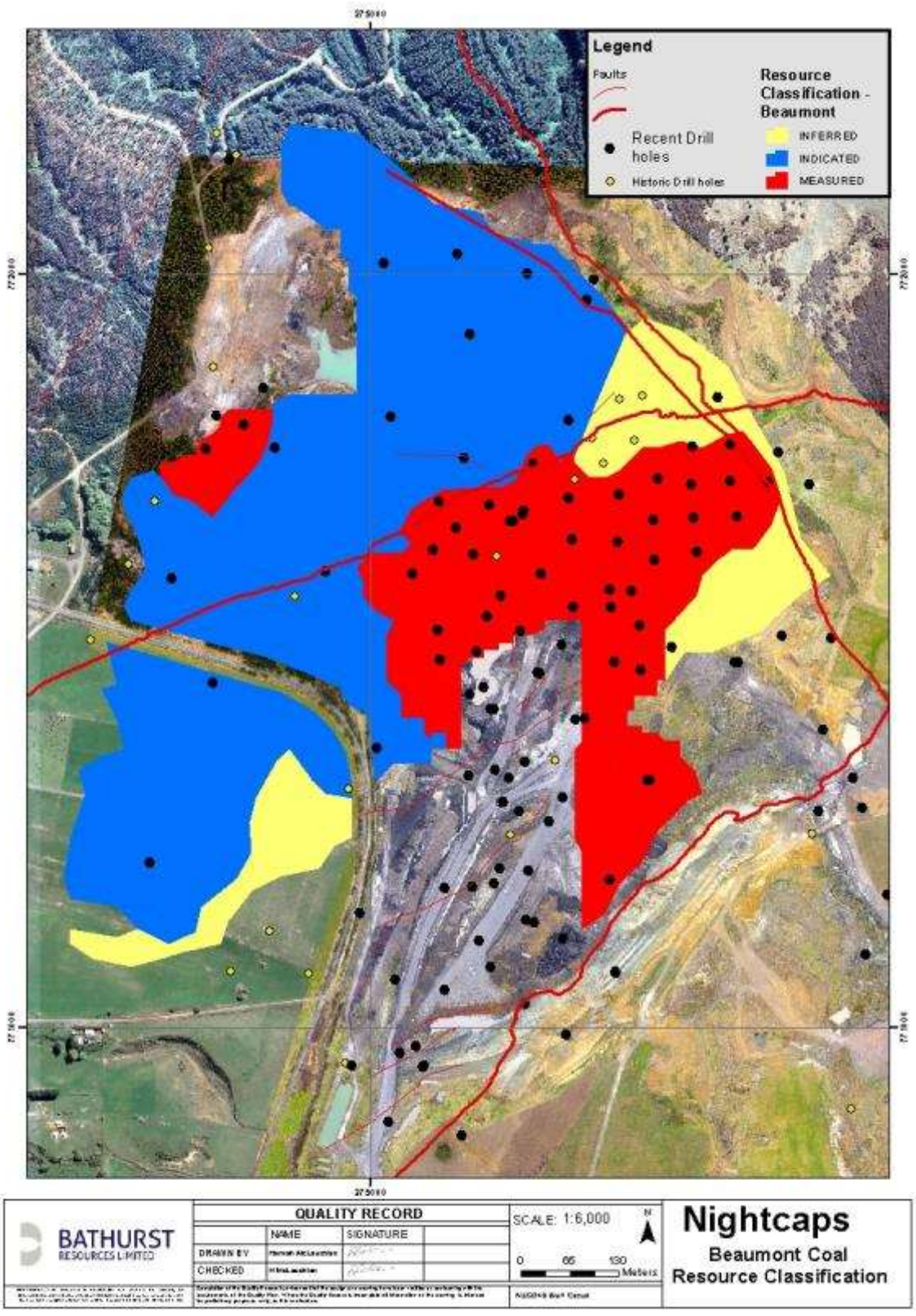


Figure 32 **Morley Coal Resource Classification Areas**

Criteria	Commentary
	
	Figure 33 Beaumont Coal Resource Classification areas
Audits or reviews	• A comprehensive internal review of the resource model has been carried out by BRL. • The model has been thoroughly reviewed by BRL mine planners and Core Mining Consultants as part of the mine planning for Coaldale operations and the Black Diamond project. • The 2017 Resource Model represents an update to the 2016 Resource Model and incorporates all the drilling and exploration data to 30th June 2017
Discussion of relative accuracy/	• The competent person has reviewed the resource estimates and has visited the existing Coaldale and Takitimu operations as well as proposed developments at Black Diamond. The competent person has examined the methodology used to estimate the resources and

Criteria	Commentary
confidence	reserves and is satisfied that the processes have been properly conducted. The estimation methodology is generally in accordance with, if not at a higher standard to, industry practice and the estimates can be regarded as consistent with the standards of JORC 2012. • Statistical comparisons between the resource block model and the coal quality data set have been carried out and are within expected ranges. • The Coaldale mine utilises the resource model modified to a reserve model for mine planning and scheduling. Production reconciliation for the 3 years of Coaldale production completed in July 2016 shows that ROM coal produced reconciles to within 10% of the expected coal resources defined by the model. Classification of mined coal in this period was split evenly between Measured and Indicated coal.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• A 3D Resource Block model of topography, structure and quality are used for in situ Resource definition. • Mineral Resources are inclusive of Ore Reserve
Site visits	• The Reserves competent person visits the site regularly.
Study status	• Takitimu is an operating mine project. The reportable Ore Reserve is based on the life of mine (LOM) plan and has determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered.
Cut-off parameters	• Pit optimisation runs were completed to determine economic pit limits • BRL supplied cost and revenue data. • A maximum ROM ash of 15% (arb) and a minimum coal thickness of 0.5m are applied.
Mining factors or assumptions	• The Takitimu mining area has been operational since 2007, with the current Coaldale pit starting in 2012. Costs and prices are derived from actual and budget. Hence, a Feasibility Study was not completed. • Mining recovery of 90% is applied to the in situ coal. Periodically, the ROM coal production is reconciled against depletion of the mining model. Reconciliation to-date shows more coal produced than modelled from the same areas. • The Takitimu mine utilises truck and shovel for waste and coal movement. The operations are supported by additional equipment including dozers, graders, and water carts. • Geotechnical studies have been completed for Coaldale and will be required for Black Diamond prior to development. • Moisture Adjustments: Moisture is modified during both the mining and processing operations. In situ moisture is determined by the process described in Section 3 and is the base point for all moisture adjustments. Recoverable Coal Reserves are stated on a ROM moisture basis, as received by the processing plant. Marketable Coal Reserves are stated on a product moisture basis, as sold.
Metallurgical factors or assumptions	• The ROM coal produced at Takitimu is crushed and screened on site. A process recovery of 95% is used based on a processing reconciliation study. • Product coal specifications include ash, sulphur, moisture and calorific value.
Environmental	• All environmental approvals are currently in place to operate the mine • Waste rock characterisation results show that the material is non-acid or metal producing, as such it does not require special placement requirements or procedures in the dumps
Infrastructure	• All necessary infrastructure is in place and operational for the current operation.
Costs	• All infrastructure is in place at Takitimu. The primary ongoing capital requirements are for equipment replacement and this is included in the economic model. • All operating costs were based on the 2017 Takitimu 3 year budget estimates provided by BRL and include allowances for royalties, commissions, mining costs, train loading and administration. • Prices are at the mine gate. Customers pay for transport. • Product specifications and penalties for failure to meet specification were provided by BRL.

Criteria	Commentary
Revenue factors	• Prices are at the mine gate. Customers pay for transport. • Product specifications and penalties for failure to meet specification were provided by BRL.
Market assessment	• Long term supply contracts are in place.
Economic	• No NPV analysis was completed as it is an operating mine. For JORC Reserves reporting purposes, detailed mine design and schedules are generated. This work includes identifying the mining sequence and equipment requirements. • BRL generates detailed cash flow schedules and identifies incremental and sustaining capital.
Social	• BRL have key stakeholder agreements in place.
Other	• All mining projects operate in an environment of geological uncertainty. The Competent Person is not aware of any other potential factors, legal, marketing or otherwise, that could affect the operations viability. • Updating of approvals is an ongoing process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Classification	• Classification of Ore Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. • For the Takitimu operation, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the mine is currently operating and the level of mine planning adequate. • The Inferred Coal Resources have been excluded from the Reserve estimates.
Audits or reviews	• Internal peer review and reconciliation by BRL of the Reserves estimate has been completed.
Discussion of relative accuracy/ confidence	• Periodically, the ROM coal production is reconciled against depletion of the mining model. To-date more coal has been produced than modelled from the same areas. • Accuracy and confidence of modifying factors are generally consistent with the current operation.

Appendix

Maps and plans discussed within Table 1 are reported below.

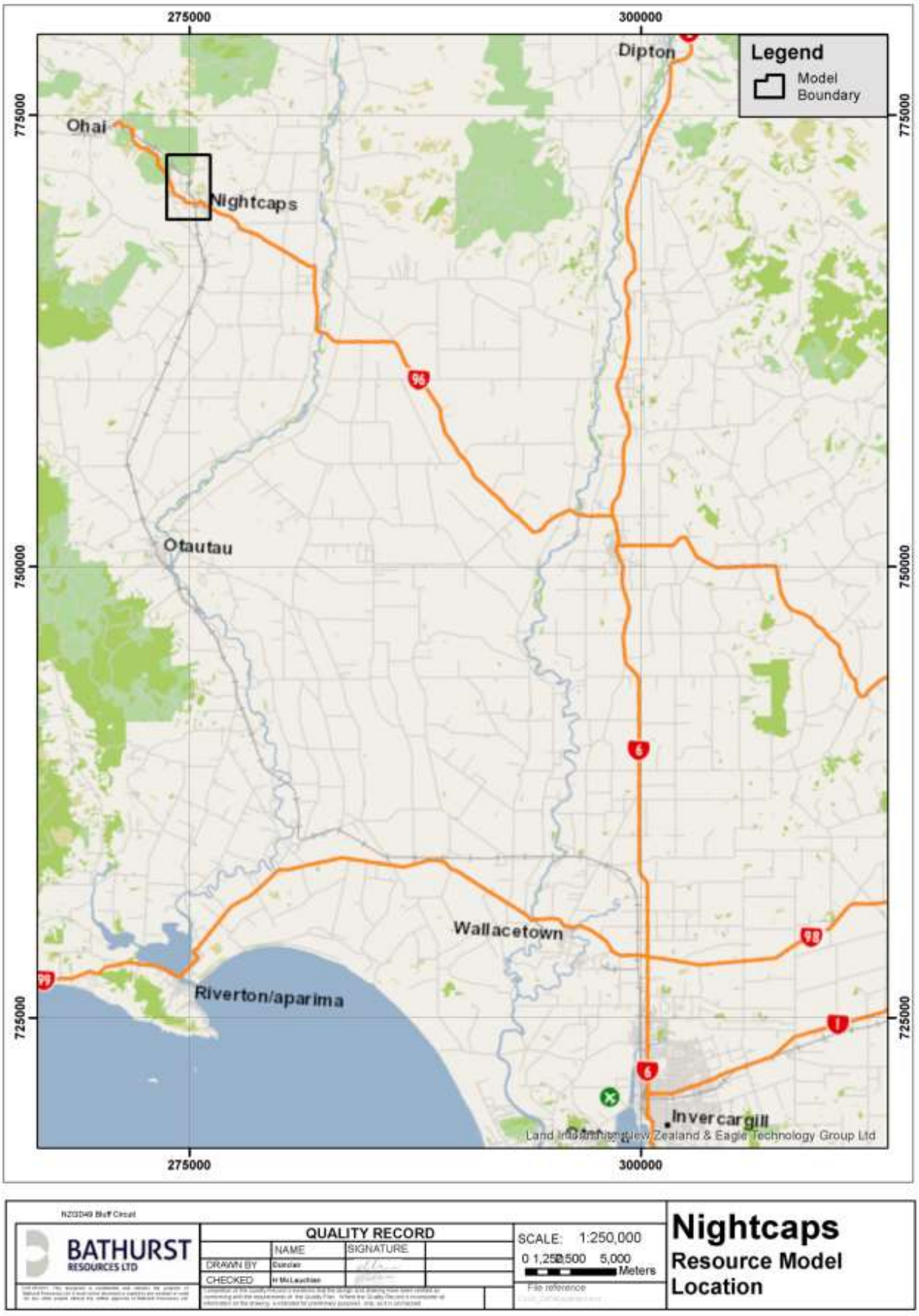


Figure 34 Location of resource

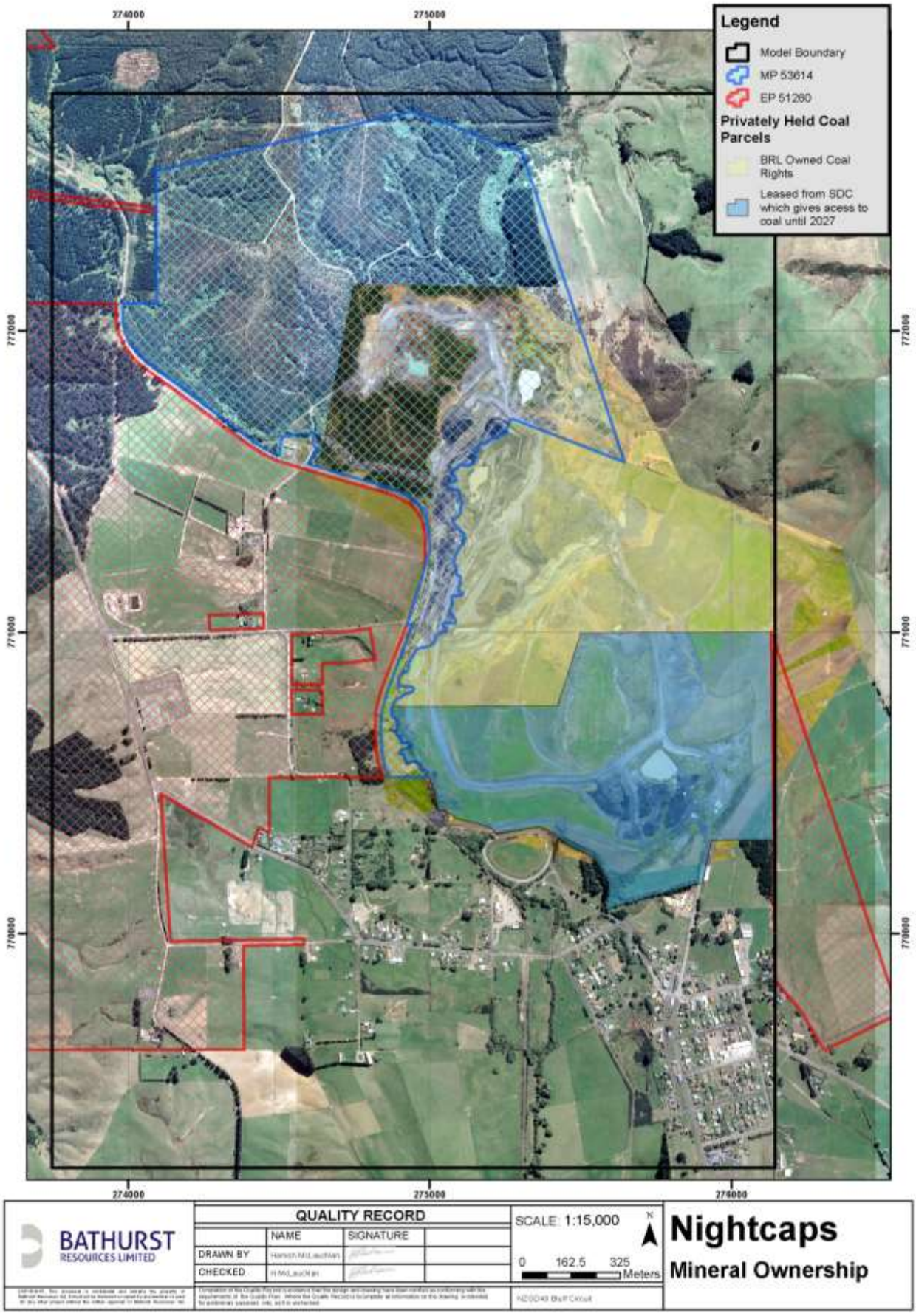


Figure 35 Land areas that BRL holds coal ownership rights

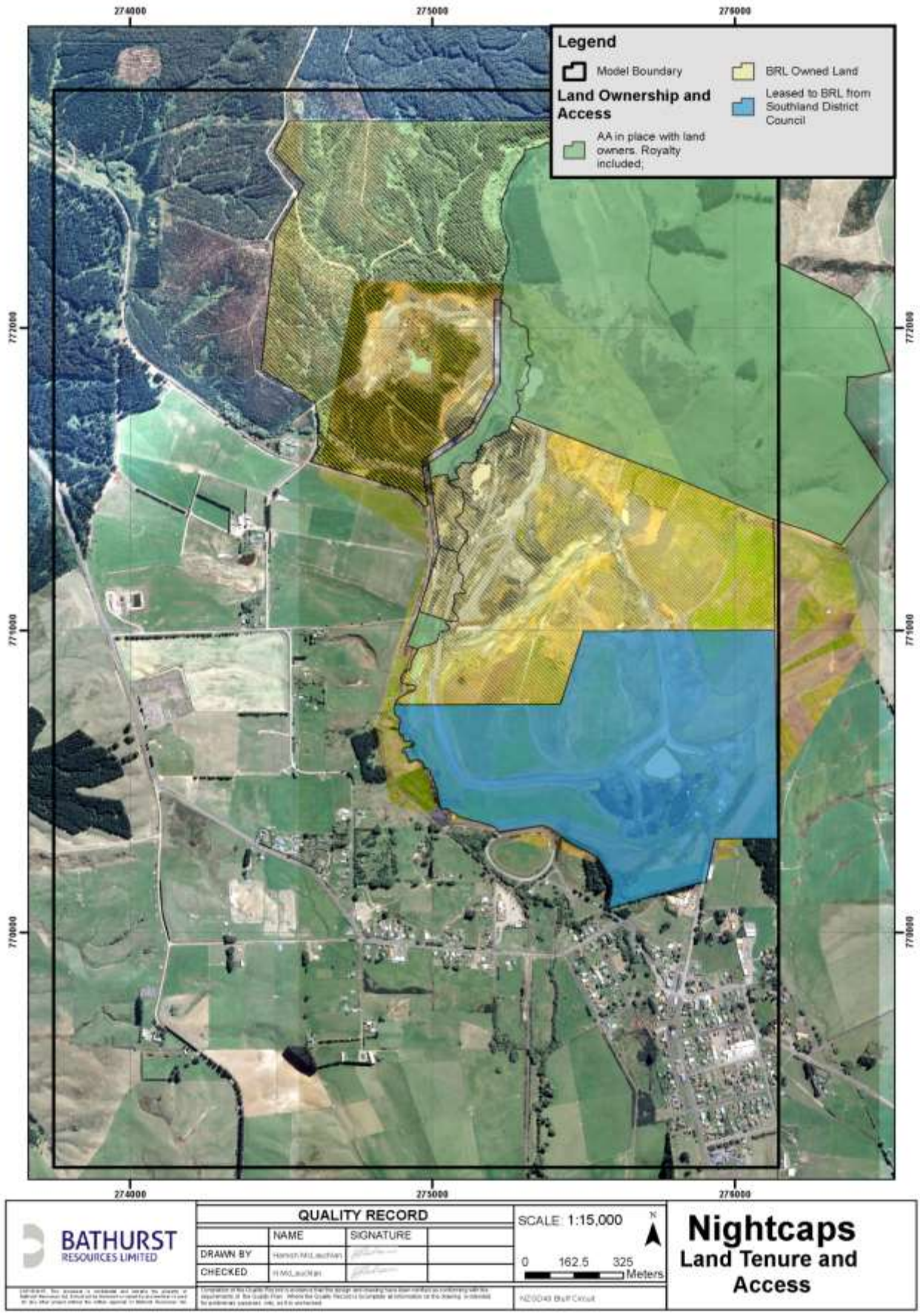


Figure 36 Access arrangement and land ownership status of land parcels within the project Areas

Figure 37 Three regions within the Resource Model

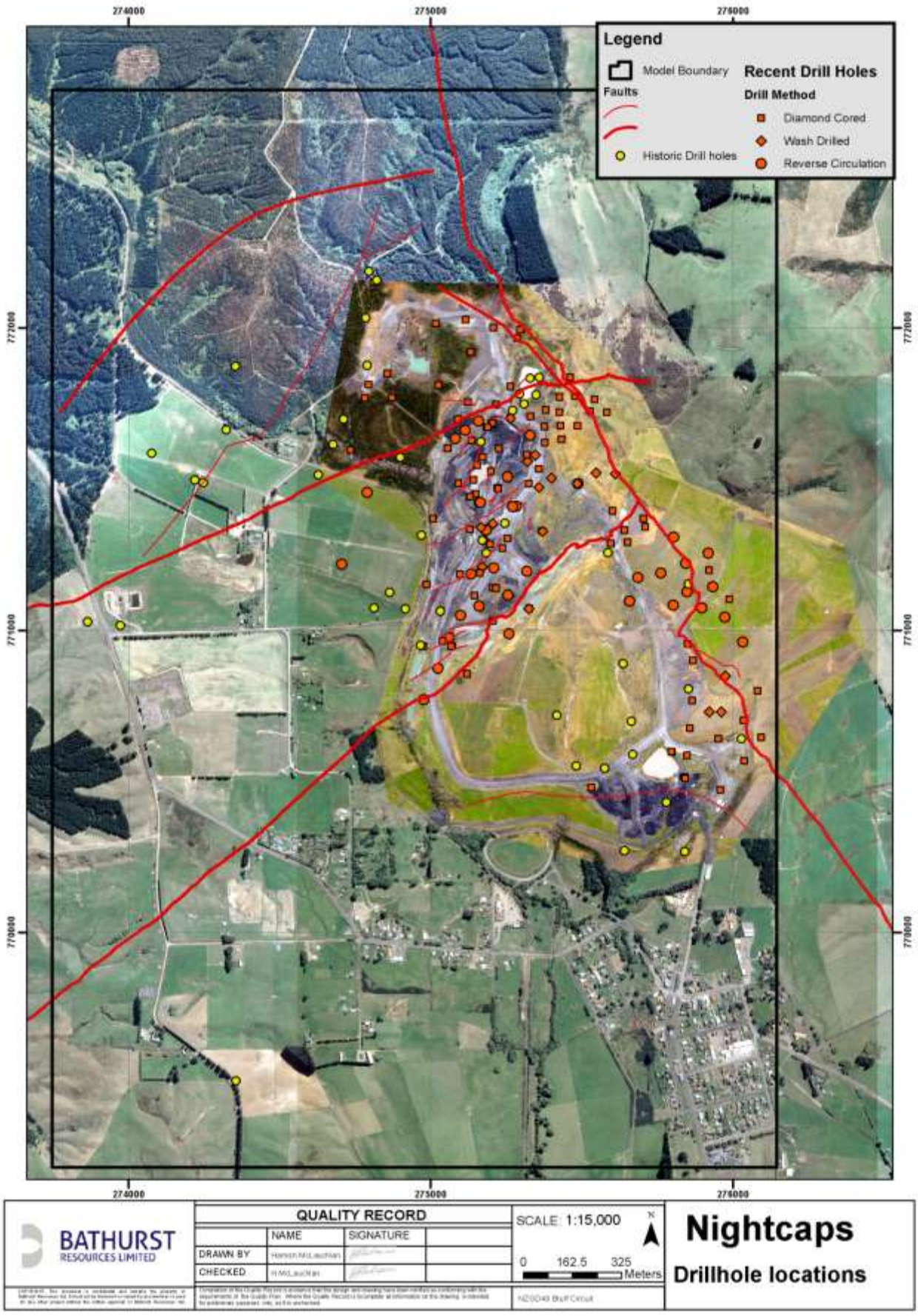


Figure 38 Location of drilling and major faults within Resource Area

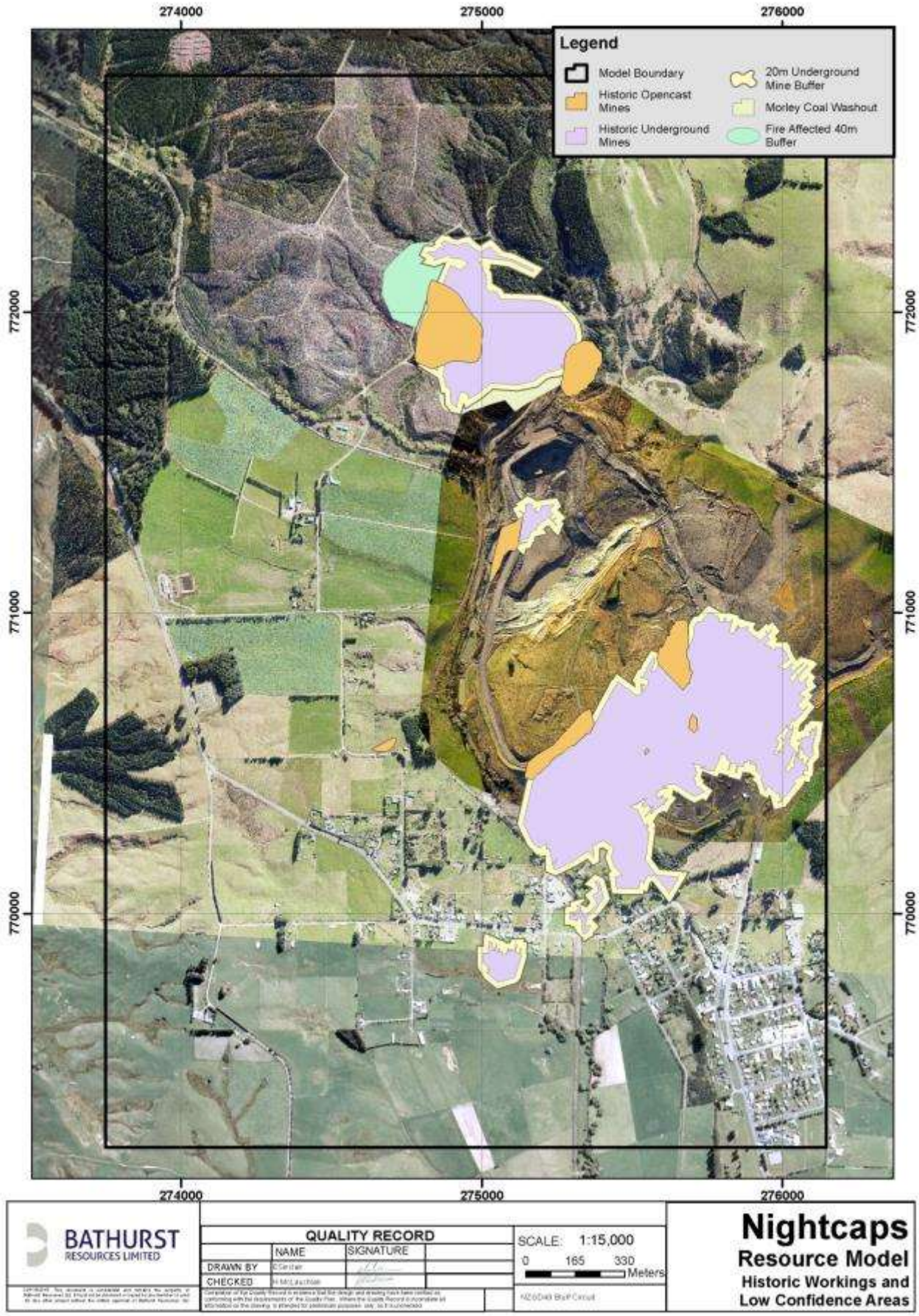


Figure 39 Location of historic mine workings and areas of low confidence.
Note: Recent opencast mined areas are not shown

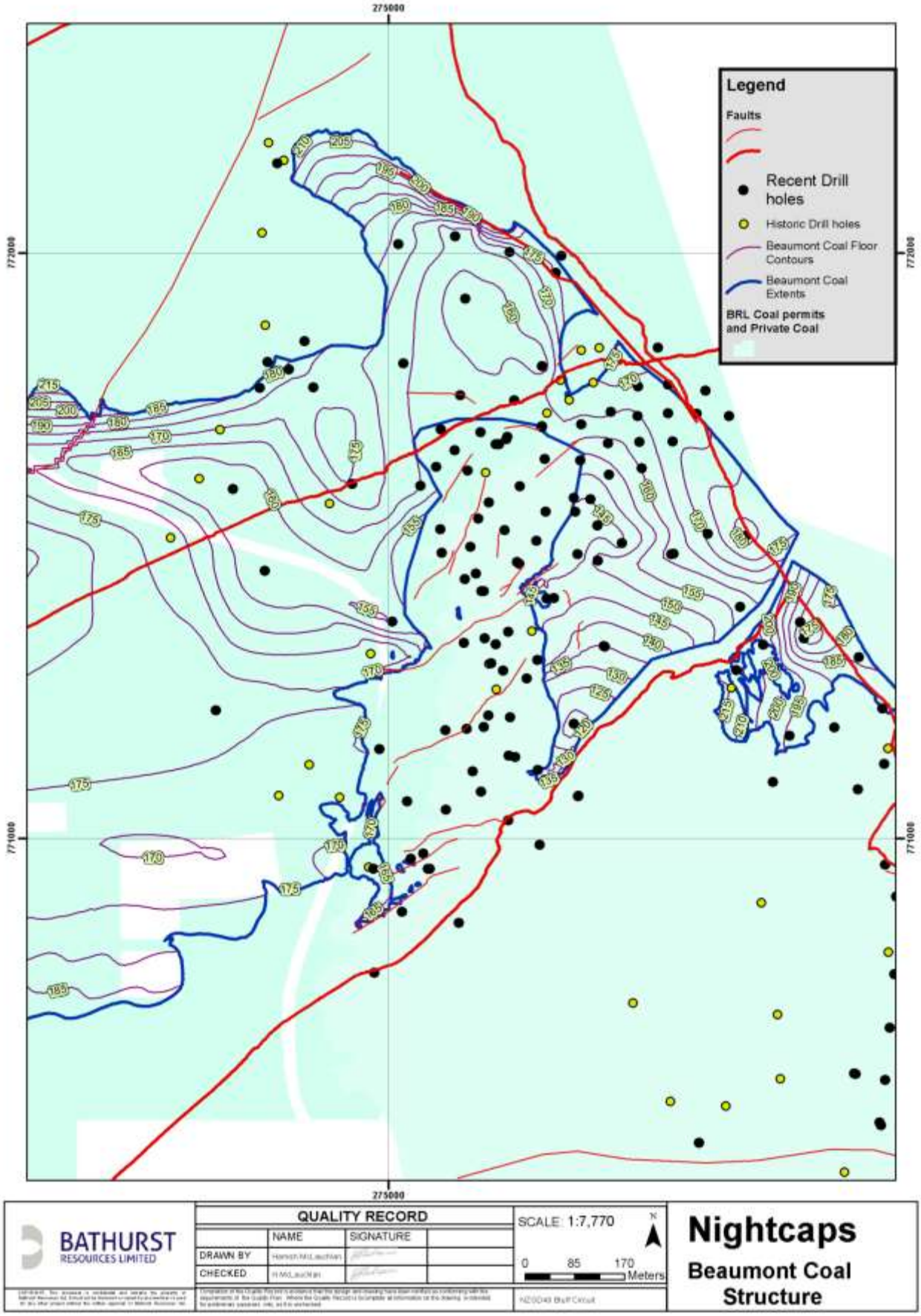


Figure 40 Beaumont Formation coal floor contours

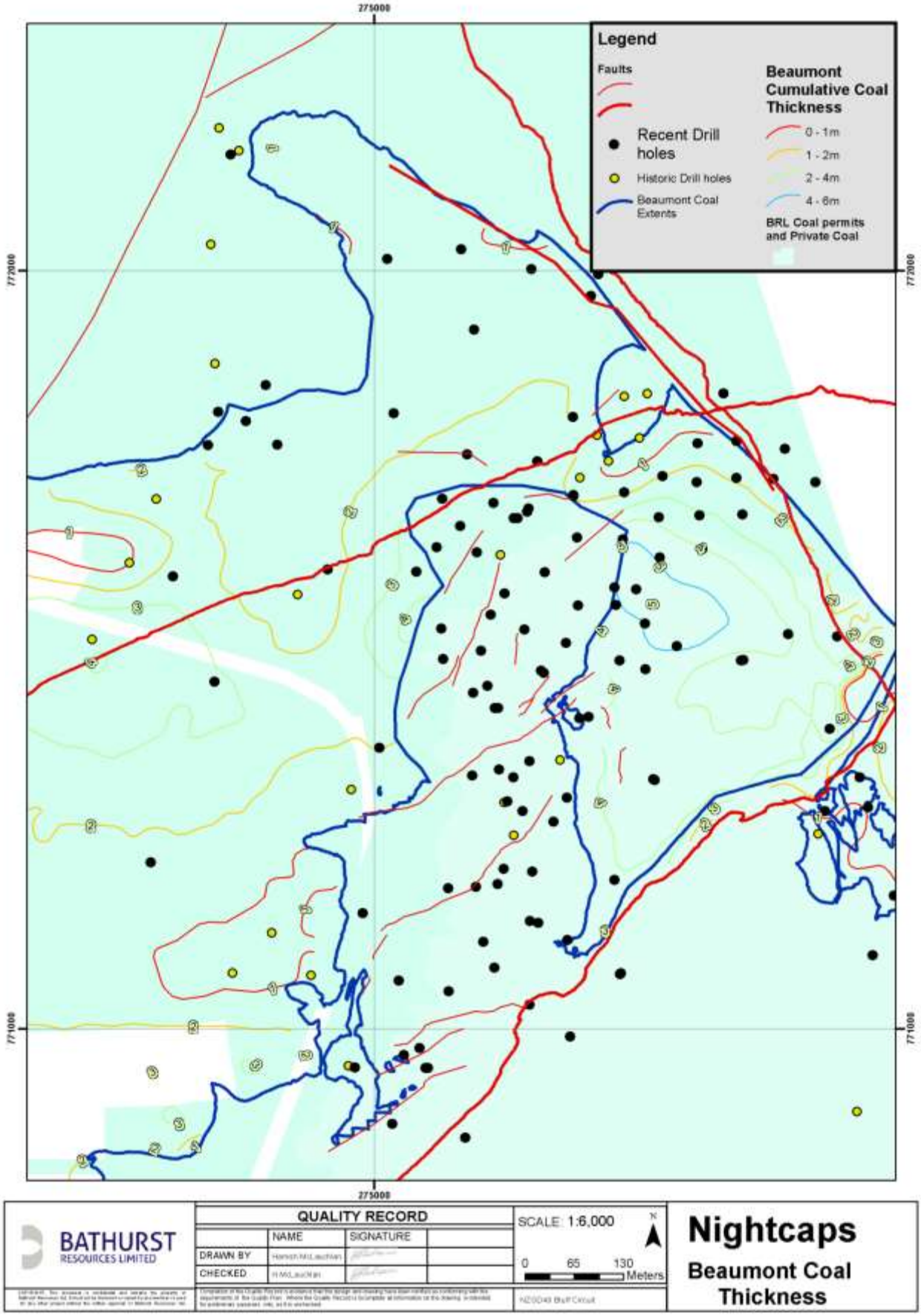


Figure 41 Beaumont Formation full seam cumulative thickness isopachs

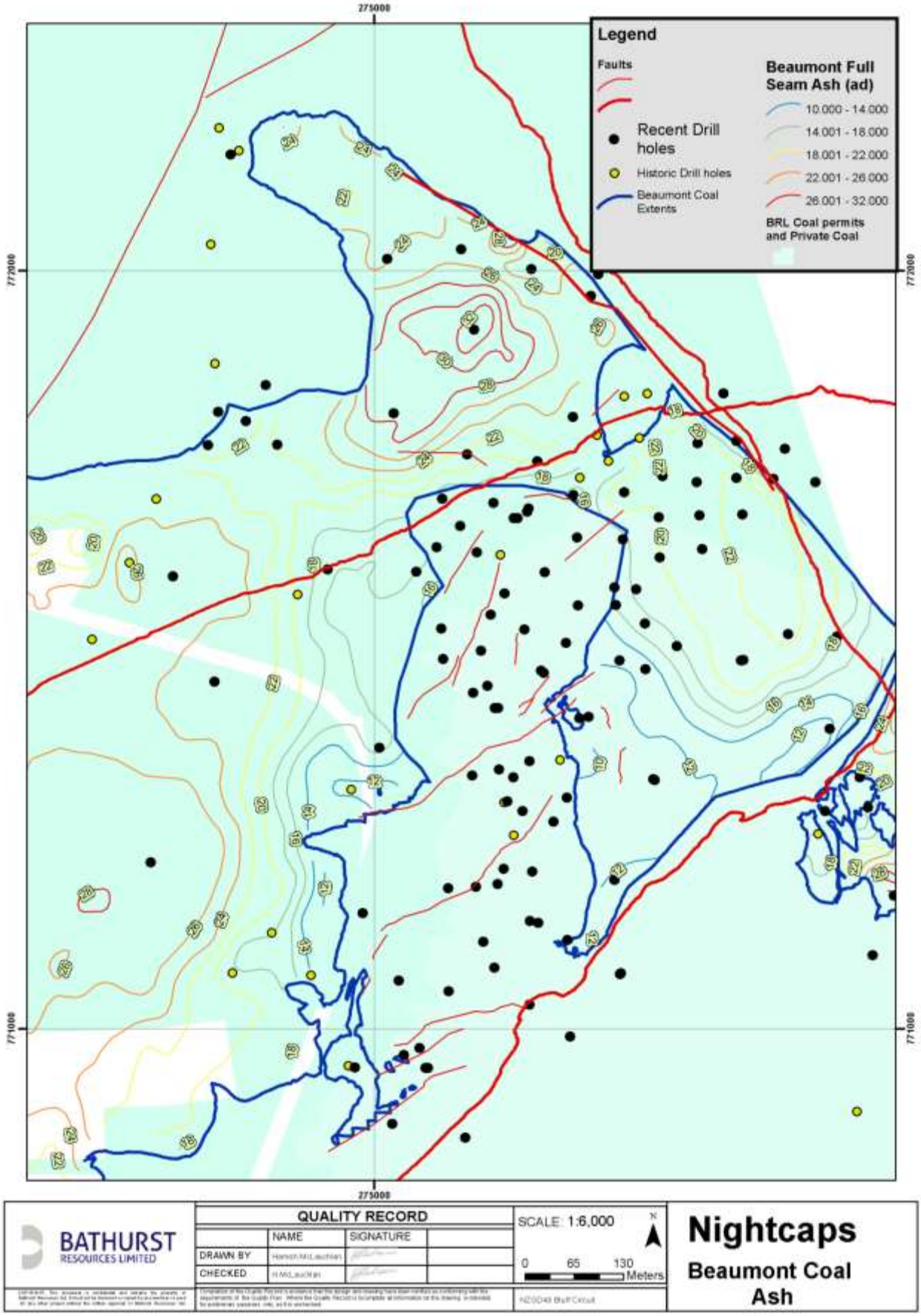


Figure 42 Beaumont Formation full seam ash isopachs

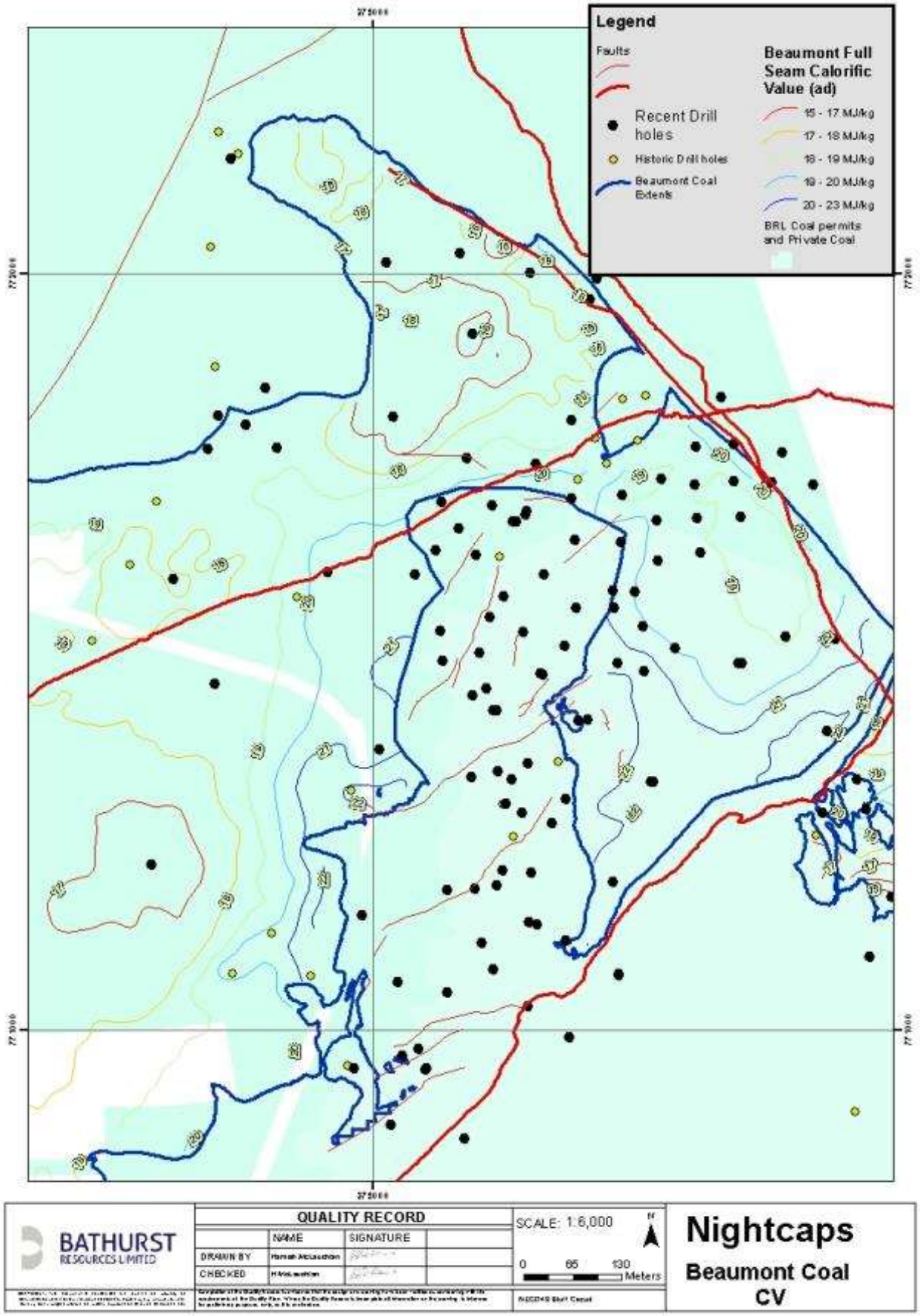


Figure 43 Beaumont Formation full seam calorific value isopachs

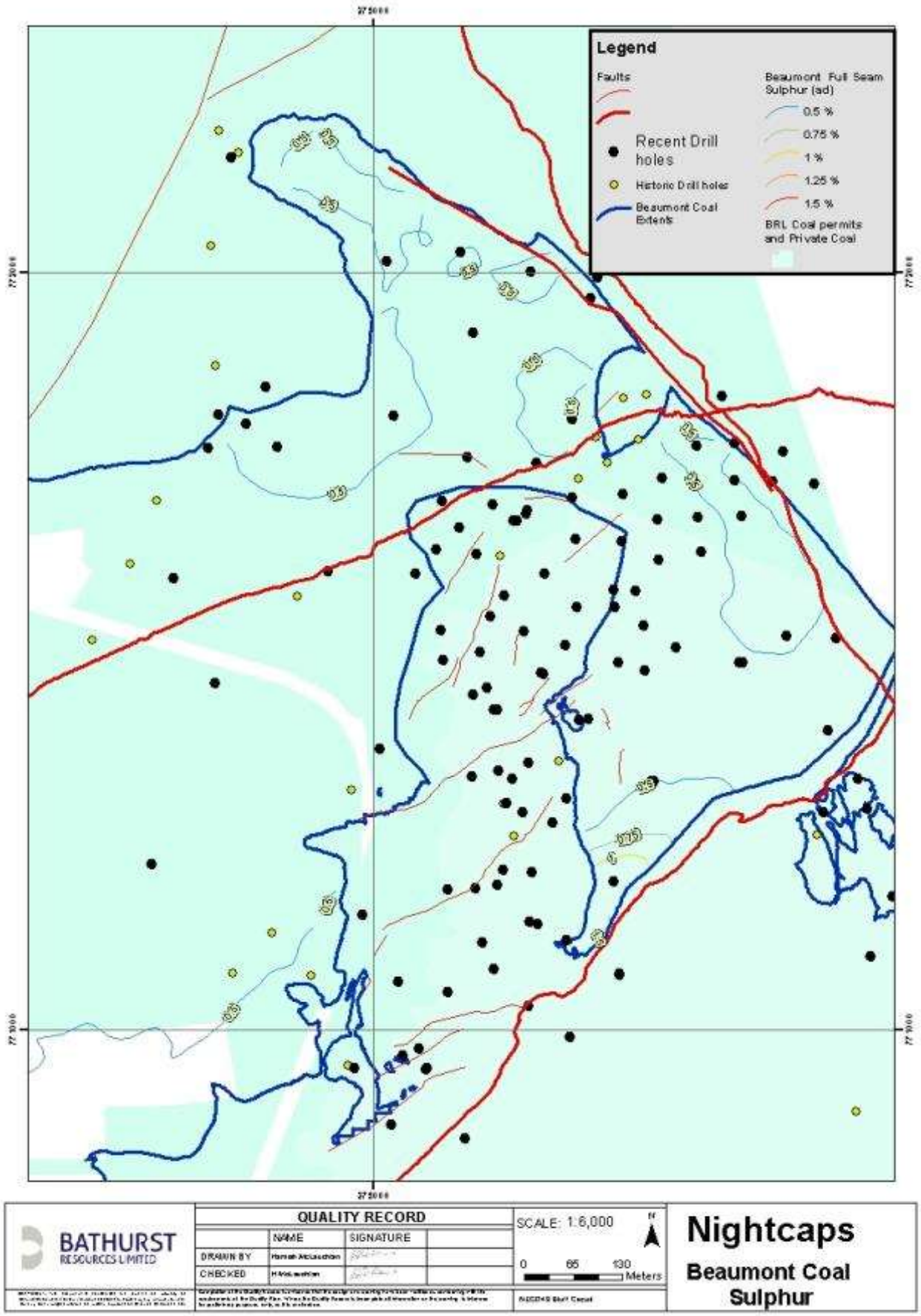


Figure 44 Beaumont Formation full seam sulphur isopachs

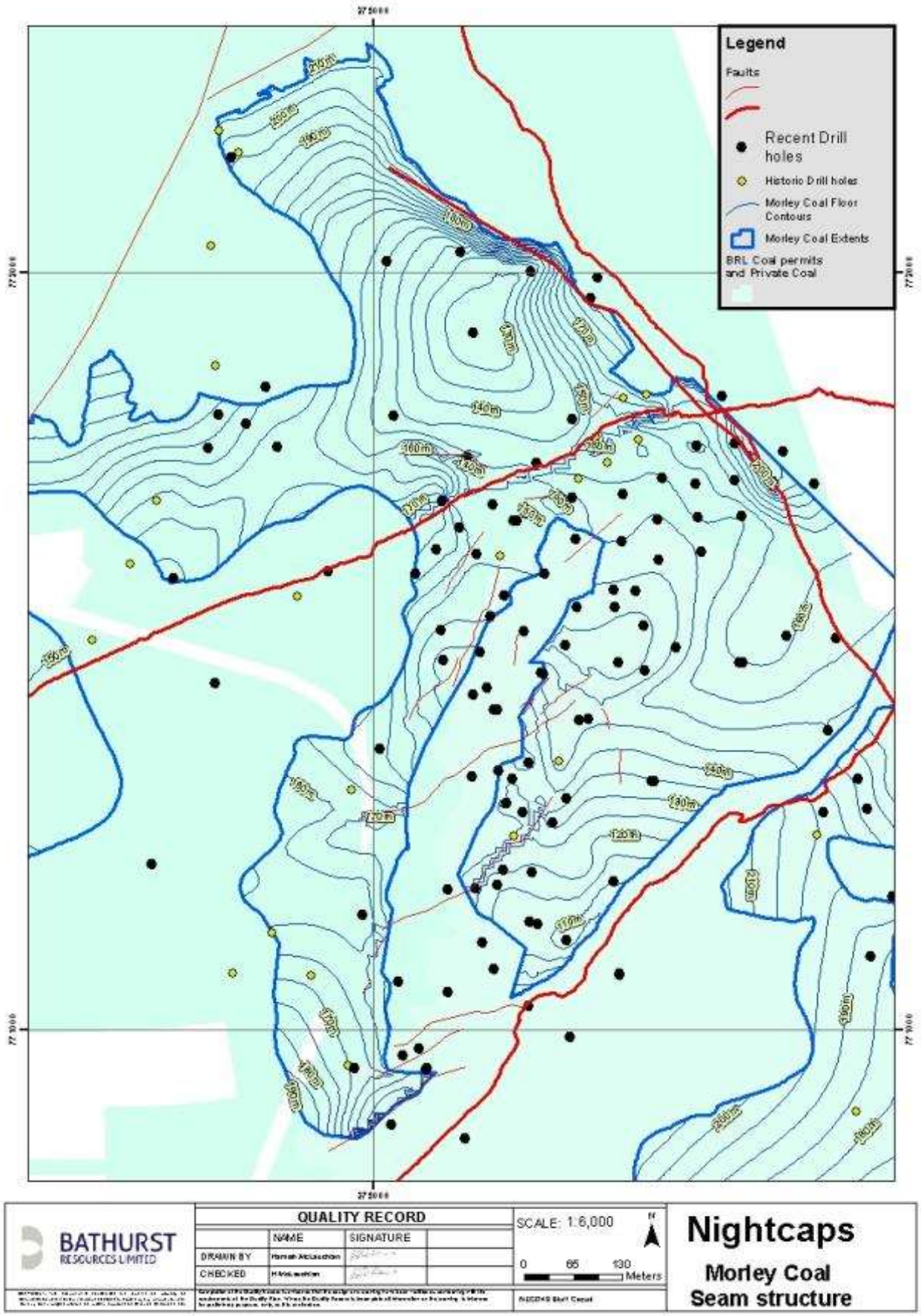


Figure 45 Morley Formation coal floor contours

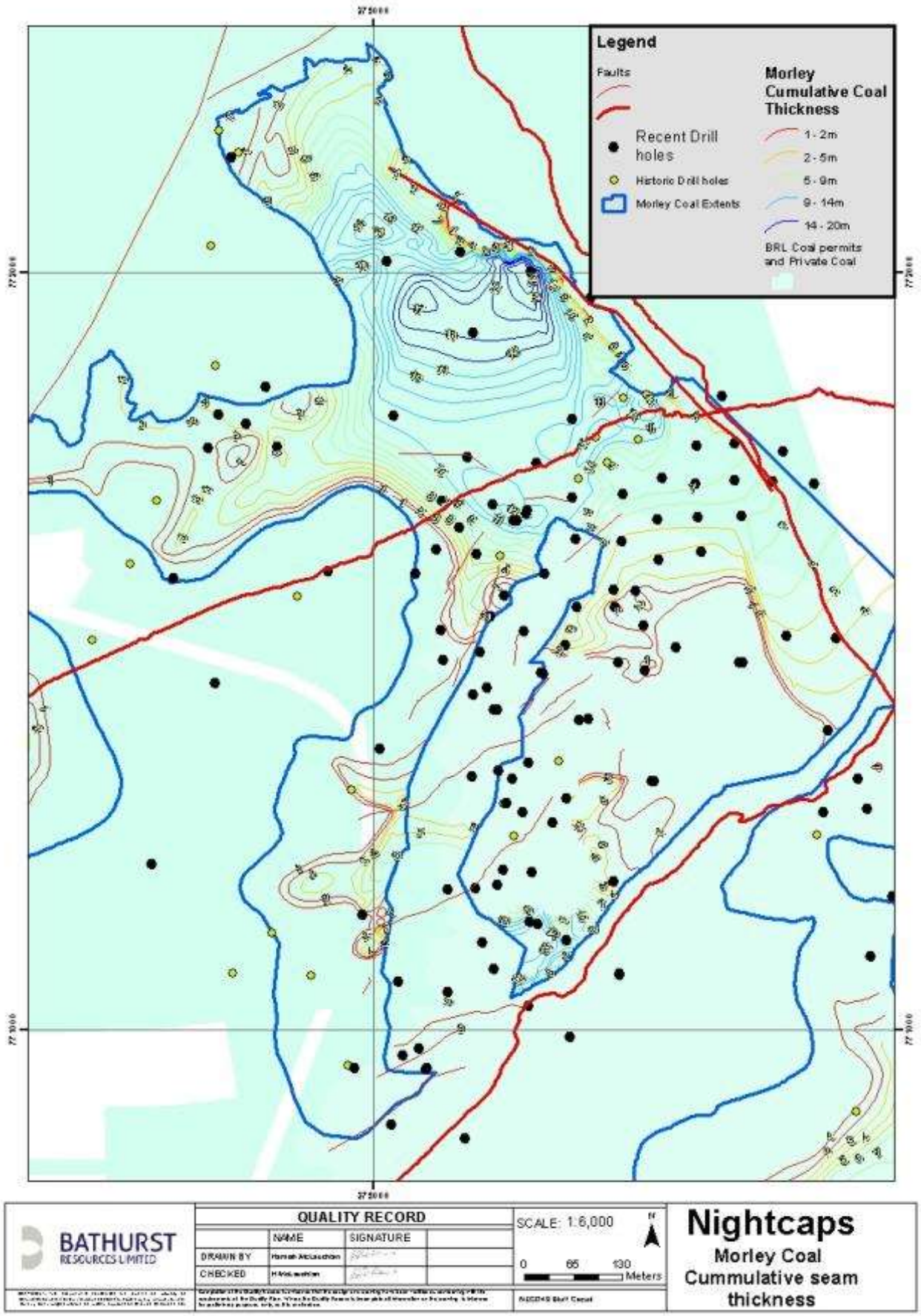


Figure 46 Morley Formation full seam cumulative coal thickness isopachs

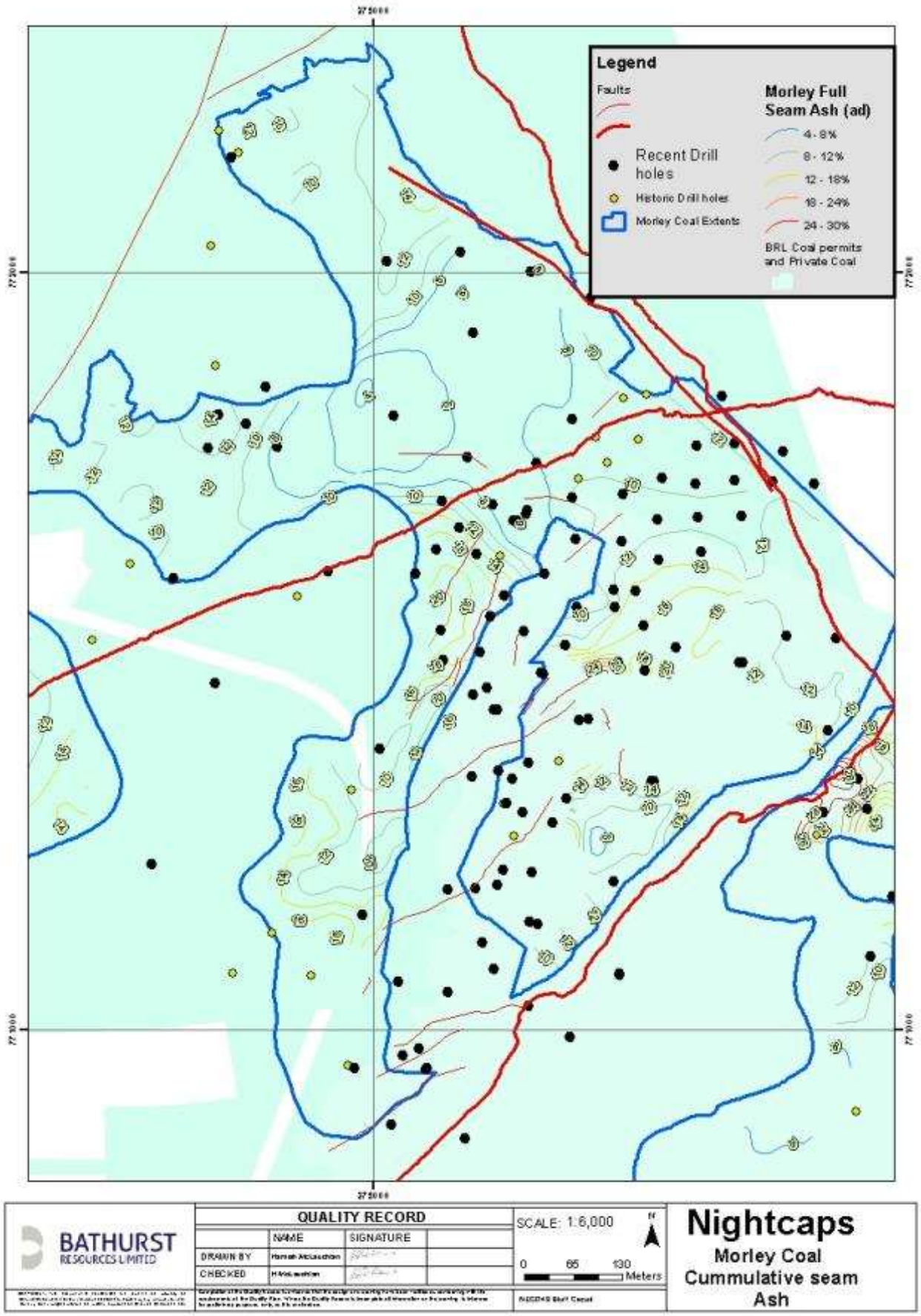


Figure 47 Morley Formation full seam ash isopachs

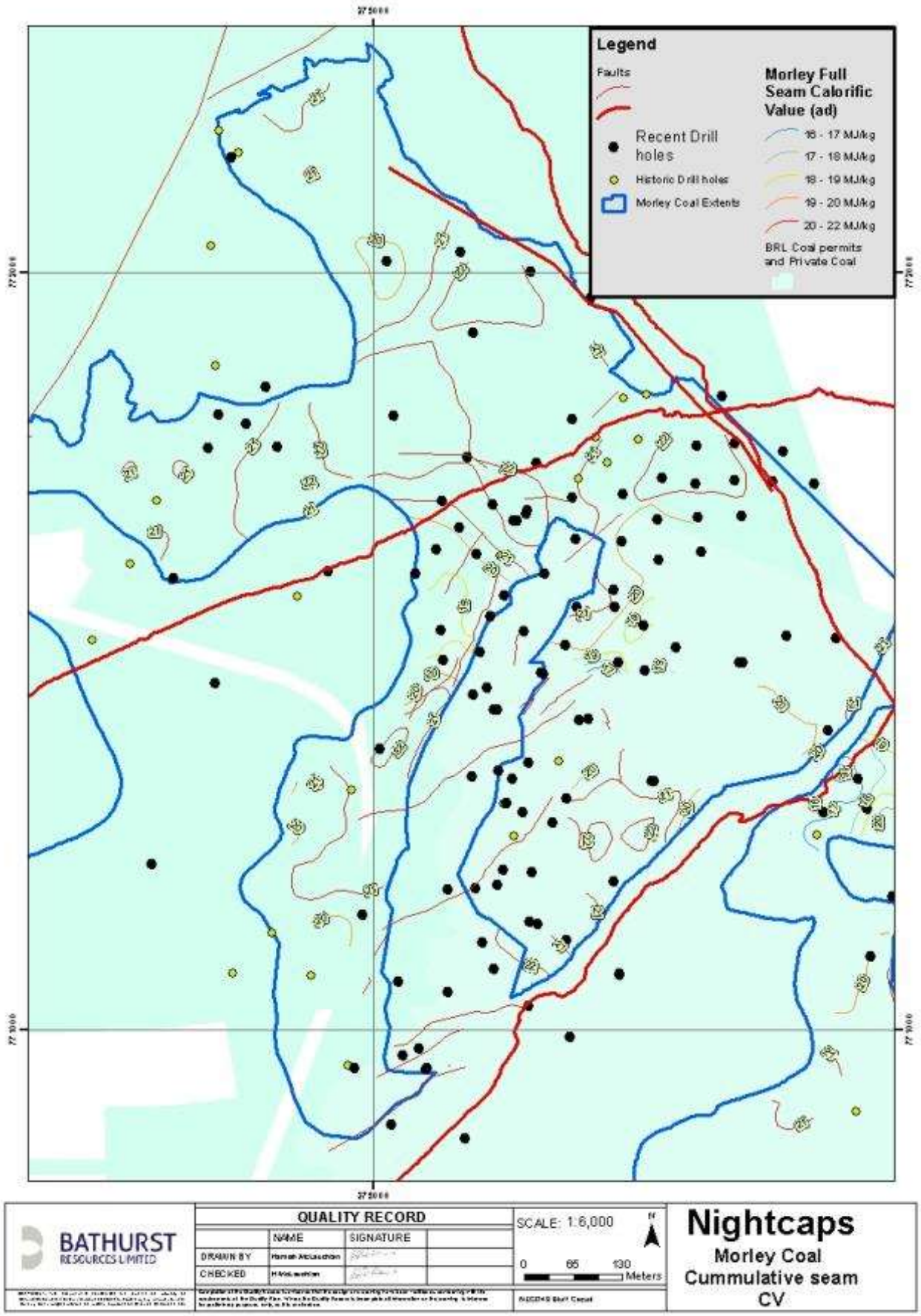


Figure 48 Morley Formation full seam calorific value isopachs

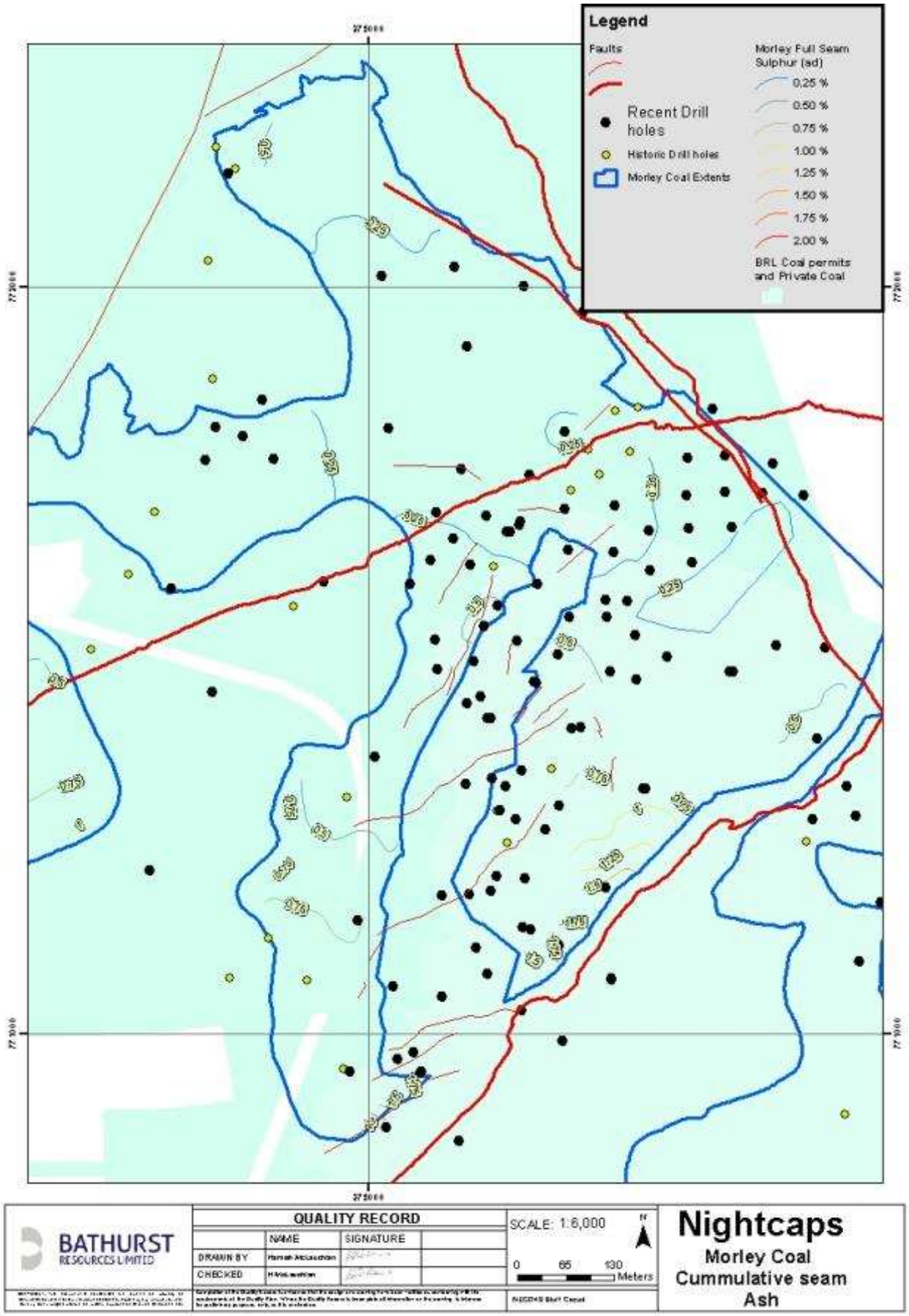


Figure 49 Morley Formation full seam sulphur isopachs

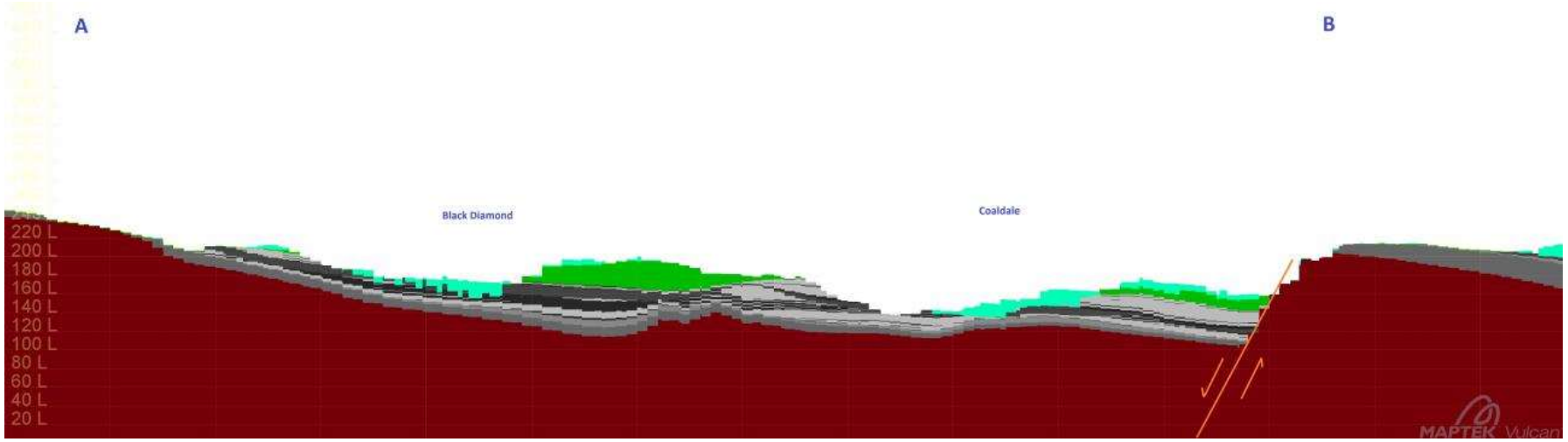


Figure 50 Section view through the deposit. The Fern fault and Trig E faults are shown.

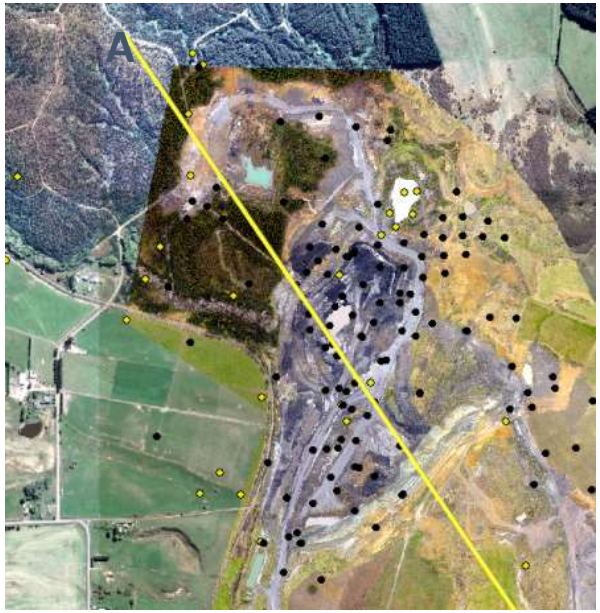


Figure 51 Plan view showing the section through A-B. Model boundary is shown in blue.

JORC Code, 2012 Edition – Table 1 Report for the New Brighton Project 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Multiple campaigns of data acquisition have been carried out in the Ohai Coal field over the past century. • Drill holes included within the New Brighton exploration dataset includes holes drilled outside of Exploration Permit (EP) 40625 and EP 51260. • A combination of open holed (wash drilled), Reverse Circulation, and cored drilling techniques has been used. Some logged and sampled trenching (channel sampling) has also been employed. • Bathurst Resources Ltd (BRL) managed exploration campaigns include data from 2013 and 2015 and consists of: ○ 4 Wash drilled drill holes ○ 14 HQ/PQ triple tube (3T) diamond cored holes ○ 8 Trenches • Previous drilling dataset includes ○ JY Series (2011) – 8 holes ○ MR Series (2011) – 5 holes ○ NBC Series (2011) – 11 holes ○ TWB drill hole (2009) – 1 hole ○ NBR Series (2007,2008) – 5 holes ○ ECMBDH Series (2007) – 4 holes ○ OM Series (2005, 2007, 2009, 2011) – 7 holes ○ LMC Series (2005, 2007,2008) – 19 holes ○ LMR Series (2005) – 15 holes ○ PIT Series (2005) – 19 Trenches ○ TP Series (1995) – 2 holes ○ 300 Series (1984, 1986) – 9 holes ○ 800 Series (1986) – 5 holes ○ Historic Data of Various vintages – 45 holes • BRL managed drilling has aimed to infill areas to improve confidence and to test reliability of the legacy of the dataset. Two holes drilled were twinned next to an LMC Series hole to obtain coal for marketing purposes. • Downhole geophysics are available for 11 of the BRL managed drill holes. • Where available, downhole geophysics were used to correlate coal seams, to confirm depths and thickness of coal seams and to validate drillers' logs. Geophysics were also used to accurately calculate recovery rates of coal intersections. • Ply samples were generally taken over intervals no greater than 0.5m and included the full core sample. • Outcrop trench and channel data is entered into the drilling database in a form that replicates a drill hole at that location. Coal seam thickness and partings between seams were measured vertically. • All analytical data has been assessed and verified before inclusion in the resource model. Unreliable data is omitted.
Drilling techniques	• All BRL managed drilling campaigns have utilized the following drilling methods ○ Full PQ Triple tube core ○ Full HQ Triple tube core ○ Combination wash drill / Triple tube core • Legacy drilling techniques include ○ HQ Triple Tube Core ○ Reverse Circulation 133mm ○ Wash drilled using tricone/blade/strata bits ○ Rotary wash, fishtail bit • Excavated trenches with logged intersections make up 10-15% of the primary sample dataset.
Drill sample recovery	• Core recovery was measured by the logging geologist for each driller's run (usually 1.5m) in each drill hole. If recovery of coal intersections dropped below 90% the drill hole required a redrill. In the 2013 drilling program drillers were paid an incentive if coal recovery was above 90%.

Criteria	Commentary
	• Average total core recovery over BRL managed drilling campaigns was 83.4% with core recovery of coal at 89.6% (this increases to 95.4% when NC085 is excluded. NC085 may have intersected the edge of underground workings). • Where small intervals of coal were lost, and geophysics indicated strongly that coal was lost, ash values were estimated using the results of overlying and underlying ply samples and the relative response of the down hole density trace. • Little recovery data is available for historic drill holes and those of previous operators.
Logging	• BRL has developed a standardized core logging procedure and all core logging completed by BRL has followed this standard. ○ Drill core has been geologically and geotechnically logged by logging geologists under the supervision and guidance of a team of experienced exploration and geotechnical geologists. ○ Drill core was photographed prior to sampling. Depth meter marks and ply intervals are noted on core in each photograph. ○ Down hole geophysical logs were used to aid core logging and adjust depth. • The standard of logging varies for legacy drilling campaigns.
Sub-sampling techniques and sample preparation	• For all exploration and resource modeling data acquired by BRL an in-house detailed sampling procedure was used. ○ Ply samples include all coal recovered for the interval of the sample. Core was not cut or halved. ○ The diamond core was lithologically logged and the lithology intervals were used to determine actual coal quality ply sample depth at the drill site or in the core shed. ○ All diamond core samples were collected as soon as practicable after drilling and double bagged then sent to the SGS Minerals Laboratory in Ngakawau where they were crushed and split at the laboratory. • Some legacy campaigns did cut/halve coal ply samples. • The legacy drilling campaigns vary in the standard of sampling processes, some of which are unknown.
Quality of assay data and laboratory tests	• SGS has been the predominant accredited laboratory used by BRL for coal quality testing on exploration drill holes used in the resource model. • SGS has used the following standards for their assay test work. ○ Proximate Analysis is carried out to the ASTM 7582 standard ○ Ash has also used the standard ISO 1171 ○ Volatile matter has also used the standard ISO 562 ○ Inherent moisture has also used the ISO 5068 ○ Total sulphur analysis is carried out to the ASTM 4239 standard ○ Calorific value results are obtained using the ISO 1928 standard. ○ Loss on drying data is completed using the ISO 13909-4 standard. ○ Relative Density is calculated using the standard AS 1038.21.1.1 • CRL Energy Ltd completed much of the assay test work for samples collected prior to BRL taking over the projects. • CRL used the following standards for their test work; ○ Inherent Moisture tests utilized the ISO 117221 standard ○ Ash tests utilized the ISO 1171 standard ○ Volatile matter tests utilized the ISO 562 standard ○ Calorific value tests utilized the ISO 1928 standard ○ Both SGS and CRL are accredited laboratories. • All analysis was carried out and reported on an air dried basis unless stated otherwise.
Verification of sampling and assaying	• Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the Nightcaps/Ohai coalfield. • Anomalous assay results are investigated, and where necessary the laboratory is contacted and a reanalysis undertaken from sample residue. • Laboratory data is imported directly into an Acquire database with no manual data entry at either the laboratory or at BRL. • Geophysical data has been used to establish coal seam thickness and depths on the margins of coal seams in RC drill holes where sampling uncertainty inherent in RC drilling made coal sample and intersection depths less reliable.
Location of data points	• New Zealand Trans Mercator 2000 Projection (NZTM) is used by BRL for the Canterbury project area. NZTM is considered a standard coordinate system for general mapping within New Zealand. Historic data has been converted from various local circuits and map grids

Criteria	Commentary
	using NZ standard cadastral conversions. • LiDAR and digital imagery was acquired in April 2013 using an Optech M200 LiDAR system and CS8900 medium format digital camera. • The data was collected flying 1,300m above the lowest ground and using a scanner field of view of 44 degrees. Outgoing pulse rate was set at 70kHZ and minor scan frequency 33.5 Hz. • The topographic surface used to build the model is derived from a combination of Lidar data, and LINZ topographical data where Lidar coverage in outer areas is unavailable. • Historic data has been converted from various local circuits and map grids to NZTM. • Surveyed elevations of drill hole collars are validated against the Lidar topography.
Data spacing and distribution	• Data spacing for the New Brighton project has been calculated by finding the radius required to fill the total area of the EP40625 permit divided by number of drill holes within that area. The central area of the permit has a lower average DH spacing. • The project has an average primary sample spacing of 240m however New Brighton central has an average primary sample spacing of 112m • Drill hole spacing is not the only measurement used by BRL to establish the degree of resource uncertainty and therefore the resource classification. BRL uses a multivariate approach to resource classification which is explained further in Section 3: Classification. • The current drill hole spacing is sufficient for coal seam correlation purposes in the majority of the areas. Difficulties lie in seam correlation due to the abundant seams and often complex structural mechanisms such as faults and unconformities. • Many drill holes have not been drilled deep enough to intersect all seams in the stratigraphic sequence, or have not completed diagnostic tests confirming Ohai group or Nightcaps group coal measures. • Only 75% of drill holes have had downhole geophysics completed which is important for coal seam correlations. • The samples database is composited to 0.4m sample length prior to grade estimation. This is the mean sample length from BRL managed drilling. • Compositing starts at the top of seam and small samples are not distributed or merged.
Orientation of data in relation to geological structure	• All recent exploration drilling has been completed at a vertical orientation. • All previous drill holes are vertical except one; those without deviation plots are assumed to be vertical. OM07b was drilled as a coal seam gas hole (250m west of EP40625) and was deviated towards horizontal to drill through a thick seam to intersect OM05. OM07b is not used in the modelling process. • Any deviation from the vertical is not expected to have a material effect on shallow, open pit resources. Average drill hole depth in the dataset is 96m however 18 holes have a depth >200m. • The majority of the deposit presents a moderate seam dip between 10° – 20° although some localized steep dips do exist near fault traces. • Vertical drilling is considered to be the most suitable drilling method of assessing the coal resource at the New Brighton Project.
Sample security	• Stringent sample preparation and handling procedures have been followed by BRL. Ply samples are taken and recorded from drill core, sealed in plastic and sent directly to the laboratory. • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core.
Audits or reviews	• BRL has reviewed the geological data available and considers the data used to produce the resource model is reliable and suitable for the purposes of generating a reliable resource estimate. • Senior geologists undertake audits of the sample collection and analysis processes.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The New Brighton Resource Model includes two exploration permits owned by BRL and privately held land coal rights attached to land titles in and around the Ohai Township and to the west and east of EP 40625. An area of open ground exists to the east of EP 40625 and is included in the model area. Coal resources have only been reported within EP40625. • Exploration Permit 51260 covers an area of 690.51 Hectares, parts of which lie within the modelled area. • Exploration Permit 40625 covers an area of 658.37 Hectares. It is considered that there are

Criteria	Commentary
	reasonable prospects to convert all or part of the EP to a mining permit.

Permit/Rights	Operation	Mining Type	Expiry
Exploration Permit 51620	Ohai	Opencast, Underground	14/04/2020
Exploration Permit 40625	Ohai	Opencast, Underground	02/09/2017

- It is considered that there are reasonable prospects to negotiate access arrangements for mining with land owners covering the reported resource areas.

Exploration done by other parties

- The majority of the New Brighton exploration drilling was carried out by the L & M Group of companies between 2005 and 2011.
- Historic data has been traced back to original reports and logs held at Archives NZ storage centers. Historical data has been thoroughly investigated for reliability and quality and where the integrity of the data is limited it has been omitted from the model. Historic data includes old underground workings plans, geological reports and drilling logs.

Geology

- The Project is located in the Ohai Coal field, New Zealand.
- The Ohai Coalfield is a fault bounded basin containing Cretaceous sub-bituminous coal.
- The defined resource is contained within the New Brighton, Morley and Beaumont Formations.
- The Cretaceous Ohai Group contains three formations – the Wairio, New Brighton and the Morley Formations.
- The Eocene Nightcaps group contains two formations – the Beaumont and Orauea Formations.
- The two groups are separated by an unconformity clearly distinguishable by micro-flora.
- Most production has come from seams in the Morley Formation which tend to have higher quality coal. Coal seams are faulted and folded into complex structures. Coal thickness and extent varies as seams are often lenticular and split or washed out by fluvial sand channels and syndepositional faulting and folding are indicated
- Morley coal measures of the Ohai Group have a combined vertical seam thickness which averages 4.1m however 50m thick seams have been recorded in OM05 250m west of the permit.
- Coal ranks range from sub-bituminous A to high volatile bituminous C.
- Eocene Beaumont coal measures of the Nightcaps Group have a combined vertical seam thickness which averages 1.4m however 7m thick seams have been recorded within the Coaldale pit. Coal ranks from sub bituminous C-B rank.
- The Nightcaps Group Beaumont Formation coal measures are conformably overlain by Eocene Orauea Formation mudstone.

Drill hole Information

Table 4 Showing summary of drilling data available within the model area.

Years	Agency	Range of Collar ID	# Holes	Drilling Method	# Holes in structure model	# holes in quality model	Geophysics Available
1923 - 1955	Various	Various	45	unknown	24	2	0
1984	State Coal Mines	351 - 355	3	Cored	3	1	3
1986	Lime & Marble Ltd	371 - 379	6	Cored	6	5	6
1986	Mines Department	882 - 886	5	Cored, washdrilled	5	5	5
1995	Southgas Resources Ltd	TP05-06	2	Wash drilled	2	0	2
2005	Kenham Holdings Ltd (L&M)	PIT01 - PIT18, PIT_4m	19	Trench	8	3	0

Criteria	Commentary

2005	L&M	LMR05 - LMR19	15	RC hammer	14	8	9
2005	L&M	LMC01 - LMC03	3	HQ triple tube	3	3	0
2005	L&M	OM1	1	Cored, washdrilled	1	1	0
2007	Eastern Corporation	ECMBDH01 - ECMBDH05	4	Trench	4	0	4
2007	L&M	LMC04 - LMC11	8	Triple tube core, OH, RC hammer	8	7	8
2007 - 2011	L&M	OM2 - OM7, OM7a, OM7b	6	Wash drilled	3	0	3
2007 - 2008	L&M	NBR01 - NBR06	5	triple tube	5	1	0
2008	L&M	LMC13 - LMC21	8	triple tube core	8	4	6
2009	L&M (Nightcaps Contracting)	TWB-01	1	Wash drilled	1	0	1
2011	L&M	NBC11-1 to NBC11-23	11	HQ triple tube	9	4	6
2011	L&M	MR1 - MR5	5	triple tube core	5	1	5
2011	L&M	JY2 - JY9	8	triple tube core	8	6	6
2013	Bathurst Resources Ltd	NC079 - NC085	7	triple tube core	5	5	3
2015	Bathurst Resources Ltd	NBT001 - NBT008	8	Trench	2	2	0
2015	Bathurst Resources Ltd	NC119 - NC129	11	triple tube core, Open holed	7	6	8

- Exploration drilling results for individual holes have not been reported.
- As coal is a bulk commodity the exclusion of detailed exploration data from this report is considered to not be material to the understanding of the report.

Data aggregation methods	• The nominal cut-off for ash (ad) for constructing the New Brighton resource model is set at 35%. • The resource model is built as a block model with 0.5m block thicknesses for coal. Coal ply data is used to grade estimate the block model.
Relationship between mineralisation widths and intercept lengths	• All exploration drill holes have drilled vertically and the coal seam is generally gently dipping, therefore the reported seam intercept thickness is representative of the true seam thickness.
Diagrams	• Coal quality isopach plots and coal structure contour plots for New Brighton, Morley and Beaumont coal are shown in the appendix.
Balanced reporting	• As coal is a bulk commodity detailed exploration drilling results and coal intersections have not been reported.
Other substantive exploration data	• Exploration drilling results have not been reported in detail. • Some coal composite samples for full seam, minable sections have been taken for thorough analysis including ash constituents, forms of sulphur, ash fusion temperatures, and ultimate analysis. These composite samples are not used in grade estimation. • A bulk sample of ~5000 tonnes was taken in 2013 from the New Brighton Central prospect. Coal quality results from this sample on an as received basis were 4.7% ash and CV of 21.6 MJ/kg.
Further work	• The final work program commitment for EP40625 is due in 2017. This program of work includes drilling a number of cored holes to define a mineable reserve, updating mining studies including mining costs, constraints to mining, water management studies, and detailed mine planning and scheduling, leading to a technical pre-feasibility study.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly checked and validated against original logs and results tables. • BRL utilizes an Acquire Database to store and maintain its geological exploration dataset. • An Acquire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values and standardized look-up tables for logging codes etc. • Manual data entry of assay results is not required as results are imported directly. • The database is automatically backed up on an offsite server.
Site visits	• Hamish McLauchlan (the Competent Person) has worked for the past 20 years on coal projects throughout New Zealand. The Competent Person visits the site regularly.
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification. • Dry mineral matter and sulfur free volatile matter is the principal quality used to differentiate and correlate Beaumont and Morley coal seams where palynology samples are unavailable. • BRL considers the amount of geological data sufficient to estimate the resource, however an increased data density may increase confidence of some areas. • Uncertainty surrounds the historic mine workings, both in the quality and quantity of coal extracted and the surveying of underground workings. This is reflected in the resource classification. • Some residual uncertainty of quality and confidence of legacy drilling data remains despite thorough evaluation of the logs and drill locations.
Dimensions	• A number of coal seams are present in the stratigraphic sequence. Up to three coal seams exist in each of the Beaumont, Morley and New Brighton Formations, with one existing in the Wairio Coal Measures. The total combined coal thickness varies from less than 1m thick up to 50m thickness locally (gas drill hole OM05). • The model covers an area 4.8km by 4.85km. • Two primary prospect areas exist within EP 40625. These are New Brighton Central covering an approximate area of 1.5km by 0.5km, and the Mossbank West prospect covering an area approximately 1km by 0.5km. • The deepest coal reported as resources lies 130m below the surface. All resources are contained within an RF 1.0 optimized pit shell using current mining at Takitimu based on appropriate economics for the New Zealand domestic market.
Estimation and modeling techniques	• All available and reliable exploration data has been used to create a geological block model which has been used for resource estimation and classification. • All exploration drilling data is stored in Acquire and exported into a Vulcan drill hole database. Mapping data is stored in Acquire and is exported into Vulcan. • Interpretive design data is stored within Vulcan in various layers. • Due to the model having two unconformable coal bearing formations the model is subdivided into two separate domains for formation (Ohai Group and Nightcaps Group). The Ohai Group seams are truncated by the unconformable Beaumont coal measures. • Each domain is modeled for structure and grade separately. • Vulcan is used to build the structure model. Grid spacing is 10m x 10m for New Brighton Central prospect and 25m x 25m for the remainder of the project area. • Maptek's Integrated Stratigraphic Modeler module is used to produce the structure model. The stacking method is used which triangulates a reference surface and then stacks the remaining horizons by adding structure thickness. • Structure grids are checked and validated before being used to construct the resource block model. • Vulcan is used to build the block model and to grade estimates. The process is automated using a Lava script. • The stratigraphic structure grids for each domain, along with lidar topography surface, and Beaumont unconformity surface were used to build the block model. The block dimensions were constructed at 10m x 10m for the New Brighton Central prospect and 25m x 25m for the remainder of the project area. Vertical thickness for the coal blocks is 0.5m for both models. • Grade estimation is performed utilizing Vulcan's Tetra Projection Model at the first daughter level. Coal qualities are estimated on an air dried basis except bed moisture. Ash, sulphur, inherent and total moisture, volatile matter, and calorific value are estimated simultaneously. • Grade estimation is computed using an inverse distance function with power of 2.5. • Various methods have been used to check the validity of the block estimation. This includes manual inspection of the model, QQ plots of the model qualities vs coal quality database and other comparison tools.

Criteria	Commentary
	• Resource tonnages within the model have been discounted where the resource falls within historic underground workings areas. The primary mining method utilised historically in the New Brighton and Mossbank areas is bord and pillar mining and opencast mining. Historic extraction rates are estimated using old mining extraction reports, and tonnage reports. The extraction rates used to discount coal tonnages in the resource model are as follows: **Mining Method** / **Extraction Rate** Underground workings — 50% of all seams Opencast — 100% of all seams • Behre Dolbear Australia Pty Limited (BDA) notes that Bathurst has adopted a procedure over old workings of discounting the estimated resources to account for the depletion of coal from underground mining and to account for possible structures not identified by drilling. Based on reconciliations from mining to date at Takitimu, this approach has been established as a reasonably reliable, if somewhat conservative, method of estimating resources where there are clearly areas of depletion. BDA accepts that this appears to be a reasonable approach, but cautions there will be areas where the resources may differ from the estimates. • No acid mine drainage is thought to occur within the Ohai Coalfield due the nonacid forming lacustrine depositional environment of the coal measures and acid generation test work has not been completed at New Brighton as it is assumed the coal measures at New Brighton exhibit the same nonacid forming behavior.
Moisture	• Moisture, both on an air dried and total moisture basis, is estimated in the resource model from the sample database after using a cutoff envelope to cut samples that vary excessively from the norm. Natural variability in bed moisture is amplified by excessive variability in the sampling process, and laboratory testing methods between labs and over time • Where ply sample results do not include moisture, moisture is calculated using a derived relationship of moisture vs ash. • Resource tonnages are reported using natural bed moisture, calculated using the Preston Sanders equation.
Cut-off parameters	• Structure grids have been developed based on a 35% ash cutoff. Some higher ash intervals are retained within the coal quality dataset to allow simplification of the seam model. • No lower ash cutoff has been applied. • Coal resources are reported down to a seam thickness of 0.5m (one block) with an ash cutoff of 25%. • Resources have been defined as economic by using a breakeven Lerchs-Grossman optimized opencast pit shell which is run over all the coal within the resource model. No resources have been reported outside of this pit shell.
Mining factors or assumptions	▪ No mining factors such as mining losses and dilutions have been applied when developing the resource model however current economic and mining parameters for domestic coal sales were used to define the RF1 optimized pit shell which was used to define coal that has reasonable prospects for *eventual economic extraction*.
Metallurgical factors or assumptions	• No metallurgical assumptions have been applied in estimating the resource. It is not expected that a wash plant would be required for coal processing.
Environmental factors or assumptions	• No environmental assumptions have been applied in developing the resource model. ▪ It is assumed that overburden is not acid forming as is the case at other mines in the Ohai coal field.
Bulk density	• A total of 66 relative density (air dried) sample results are available for the New Brighton project area. • The samples are distributed throughout the Takitimu-Coaldale-Black Diamond project area and the sample set covers a range of ash values from 1.7% to 56.2%. • From this dataset an ash-density curve was generated with a coefficient of determination of R^2=0.98 for New Brighton Coal, R^2=0.92 for Morley Coal, and R^2=0.84 for Beaumont coal. • Air dried density is calculated using the air dried block ash value and the derived density equations. New Brighton coal: Density (ad) = (0.0091 * ash) + 1.3181 Morley coal: Density (ad) = (0.0097 * ash) + 1.2944 Beaumont coal: Density (ad) = (0.0105 * ash) + 1.25 • An insitu bulk density value is computed using the Preston Saunders method; Density (ps) = (RD * (100 – mo_ad)) / (100 + RD*(mo_ar - mo_ad)- mo_ar)

Criteria	Commentary
	Where RD is relative density on an air dried basis, mo_ad is inherent moisture, and mo_ar is total moisture.
Classification	▪ BRL classifies resources using a multivariate approach. ▪ Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction and proximity to faults and unconformities. ▪ Closely spaced drill holes with valid coal quality samples (point of observation) increases the confidence in resource assessments. ▪ The confidence is reduced by: ○ A block being within an area of historic underground workings due to extraction rate uncertainty. ○ A block being within 20m of historic underground workings due to uncertainty with historic survey of the workings and georeferencing of mine plans. ○ A block is in an area where structure dip is greater than 20° due to proximity to large faults. Faulting can impact coal thickness and quality and some faults are poorly constrained. ○ A block lying within an area with thin seams resulting in uncertainty of geological continuity. Where a seam is thin or is splitting, a small change in thickness can have a large impact to reported coal tonnages and qualities. ○ A block being within an area close to a possible 'washout' or erosion of Morley coal as indicated by historic underground mine plans and extents. ○ A block underlies the modelled regional unconformity between Beaumont and Morley formations by less than 2m due to uncertainties in unconformity surface topology. **Essentially, in an area that is not affected by the above conditions, a distance to nearest sample of less than 75m would be classified as Measured, less than 120m is classified as Indicated and less than 300m would be classified as inferred.**
Audits or reviews	• An internal review of the resource model has been carried out by BRL.
Discussion of relative accuracy/ confidence	• The Competent Person has reviewed the resource estimates and has visited the New Brighton project area. The Competent Person has examined the methodology used to estimate the resources and reserves and is satisfied that the processes have been properly conducted. The estimation methodology is generally in accordance with, if not at a higher standard to, industry practice and the estimates can be regarded as compliant under the JORC 2012 code. • Statistical comparisons between the resource block model and the coal quality data set have been carried out and are within expected ranges. Techniques utilised include QQ plots and probability plots.

Appendix

Maps and plans discussed within Table 1 are reported below.

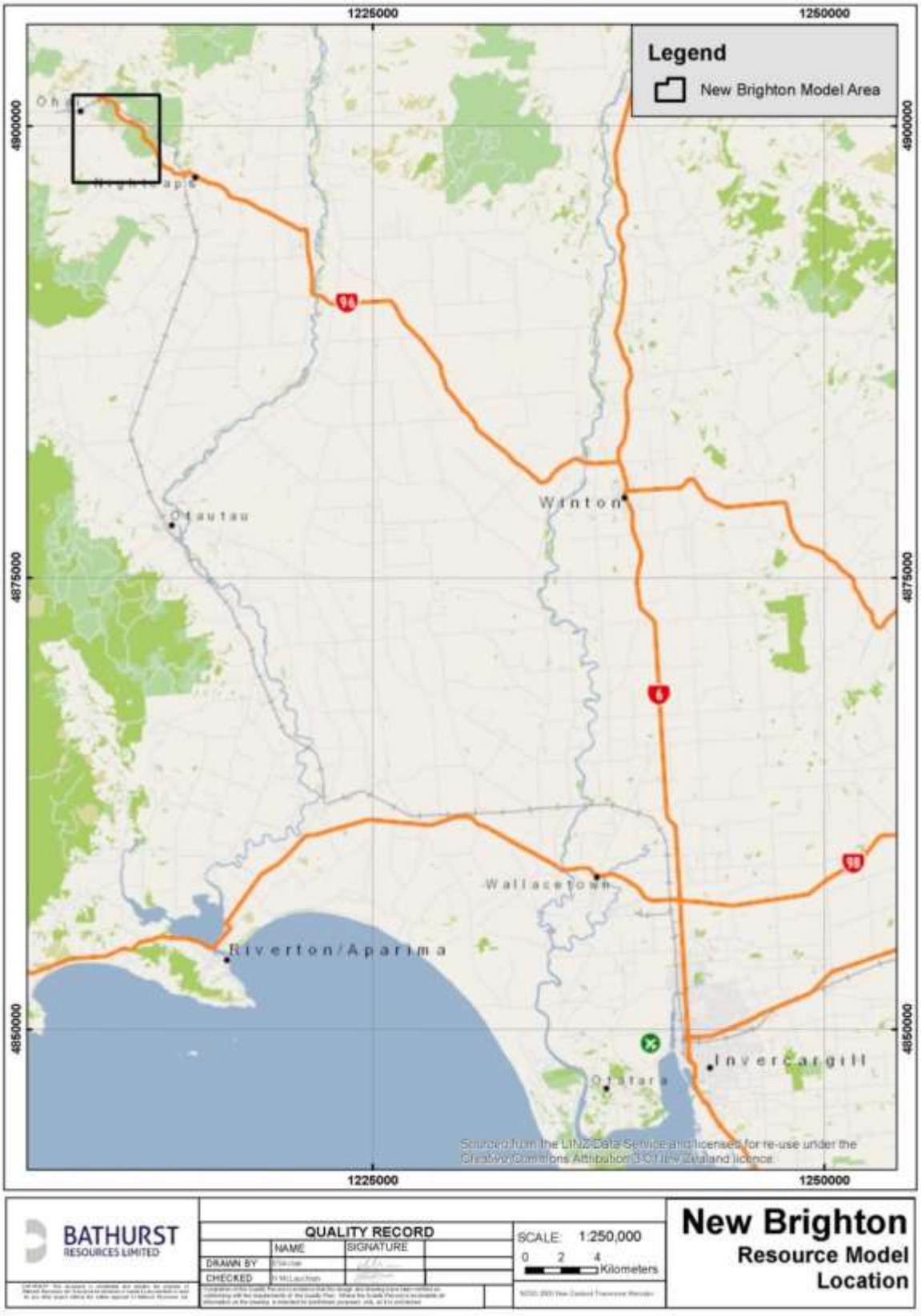


Figure 52 Location of New Brighton Project

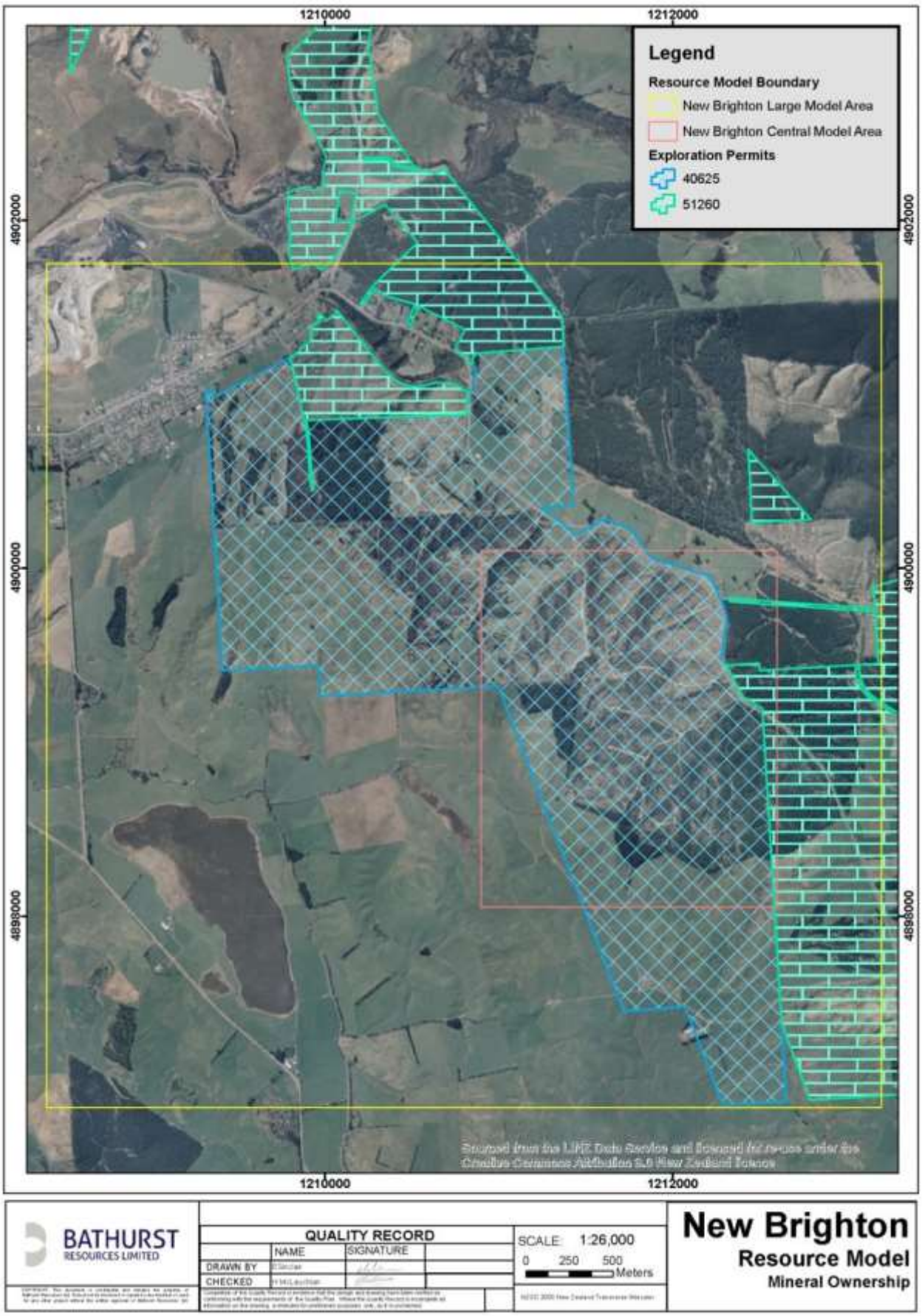


Figure 53 Shows BRL Owned Coal Exploration Permits within the New Brighton Model Area

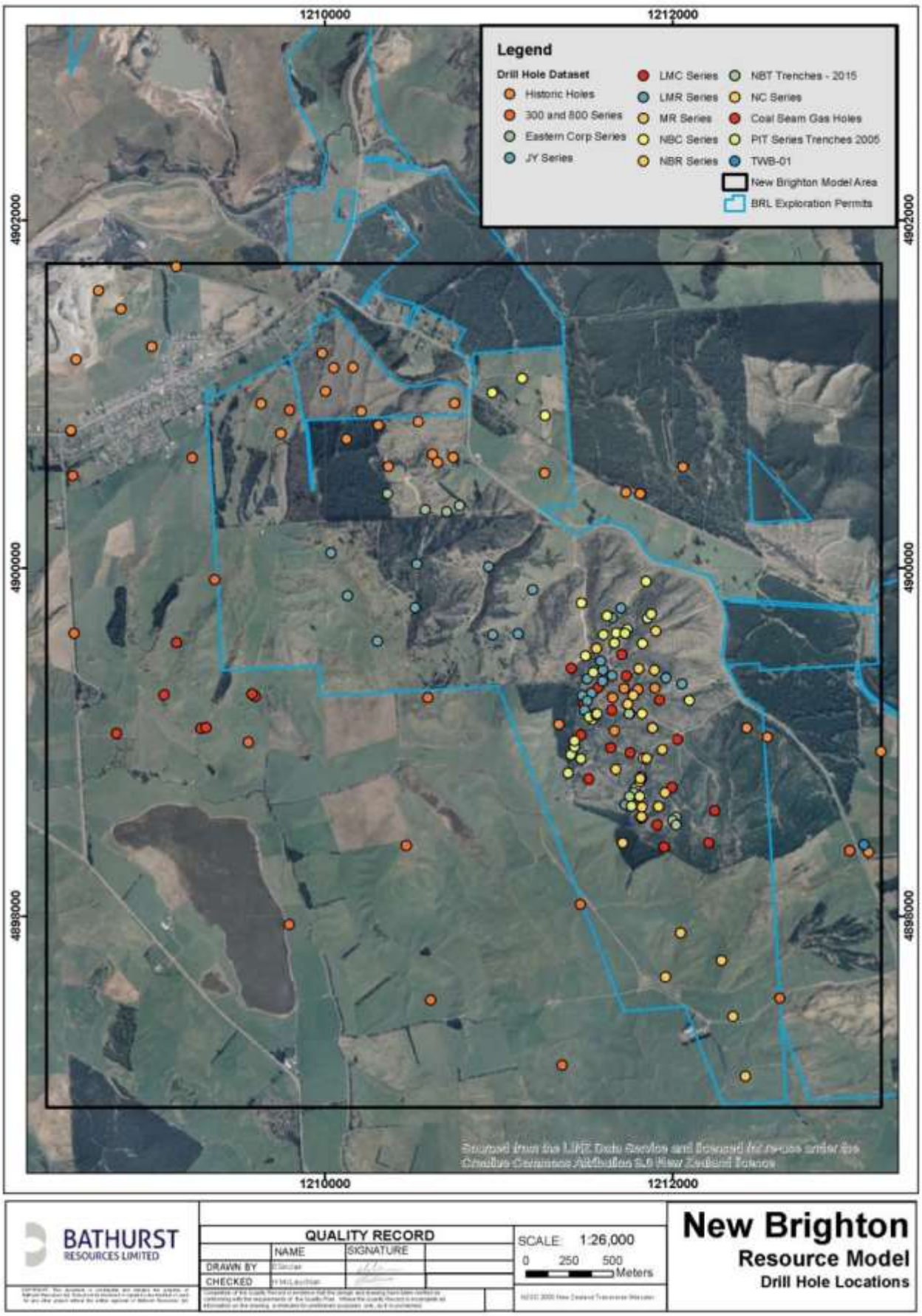


Figure 54 Location of Drilling within Resource Area

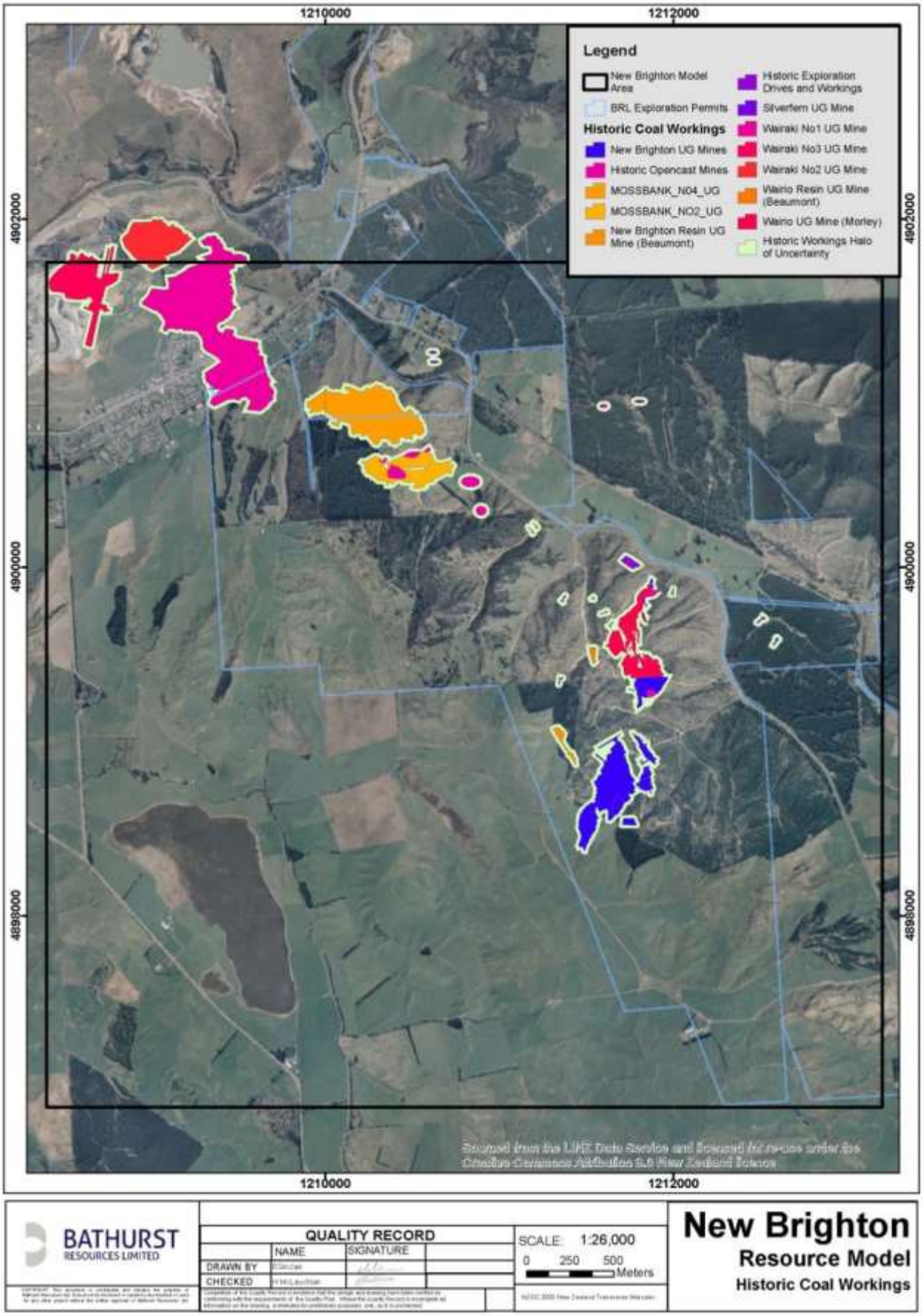


Figure 55 Location of Historic Mine Workings. Note: Recent Opencast Mined Areas Are Not Shown

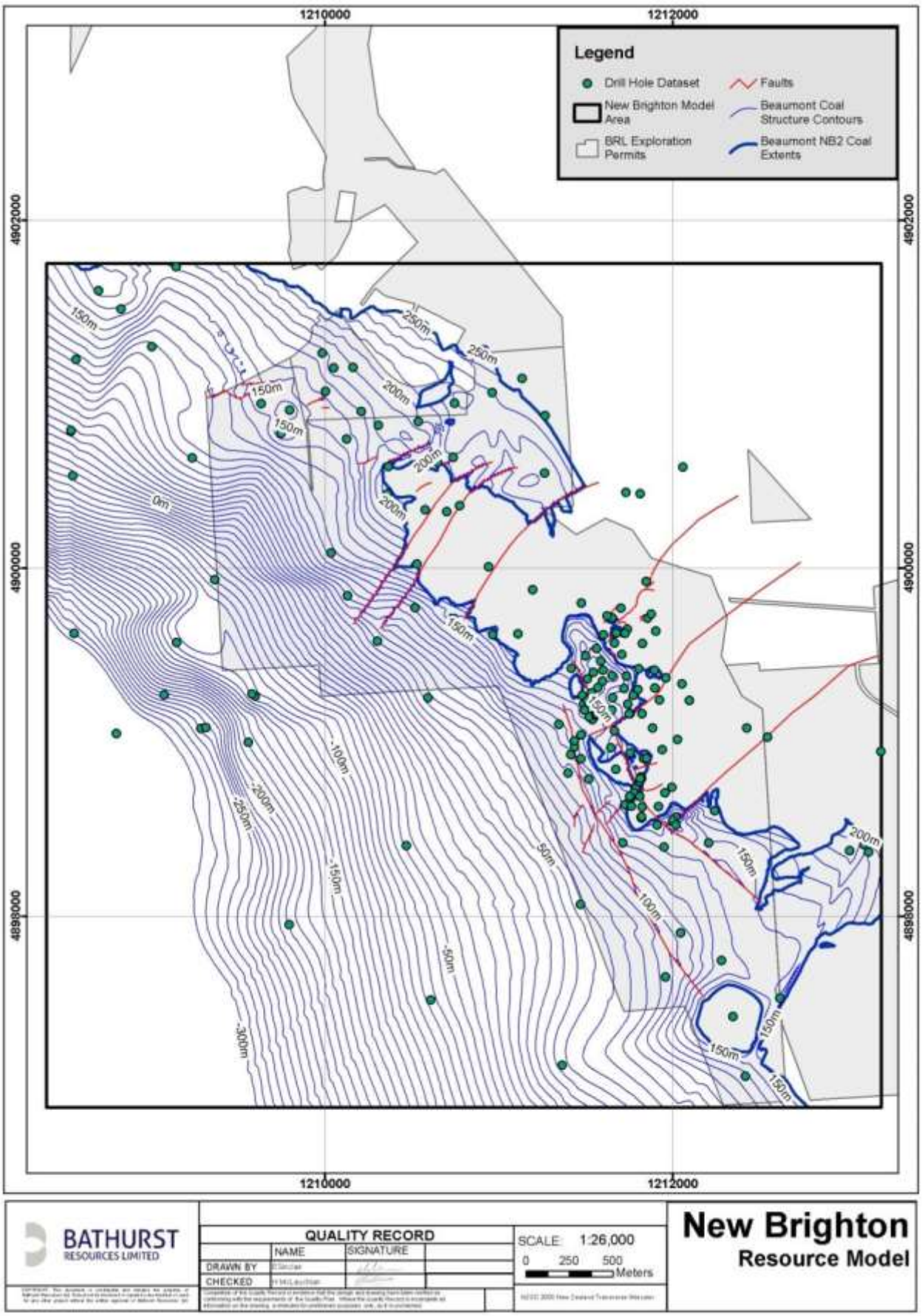


Figure 56 Beaumont Formation Coal Floor Contours

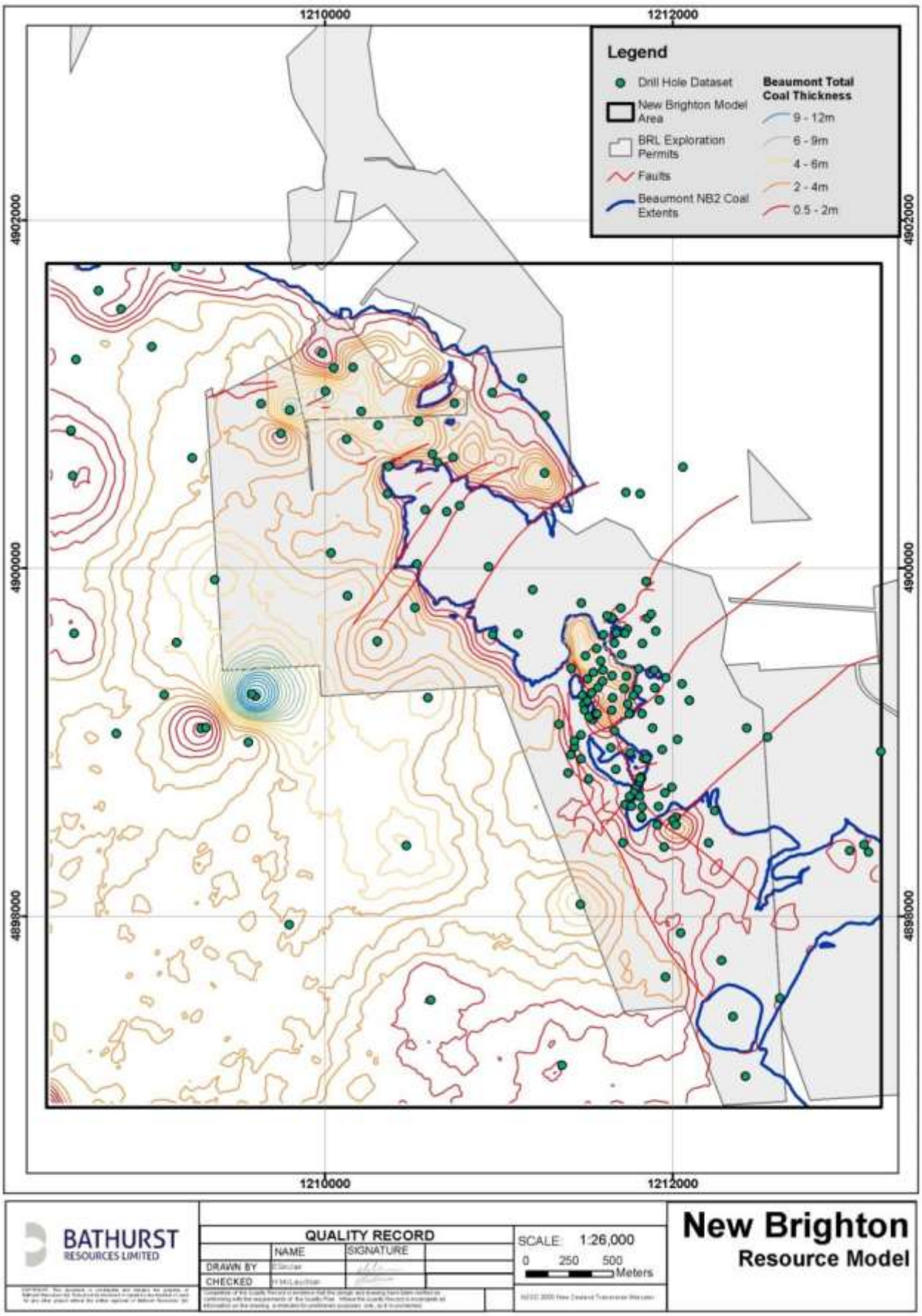


Figure 57 Beaumont Formation Full Seam Cumulative Thickness Isopachs

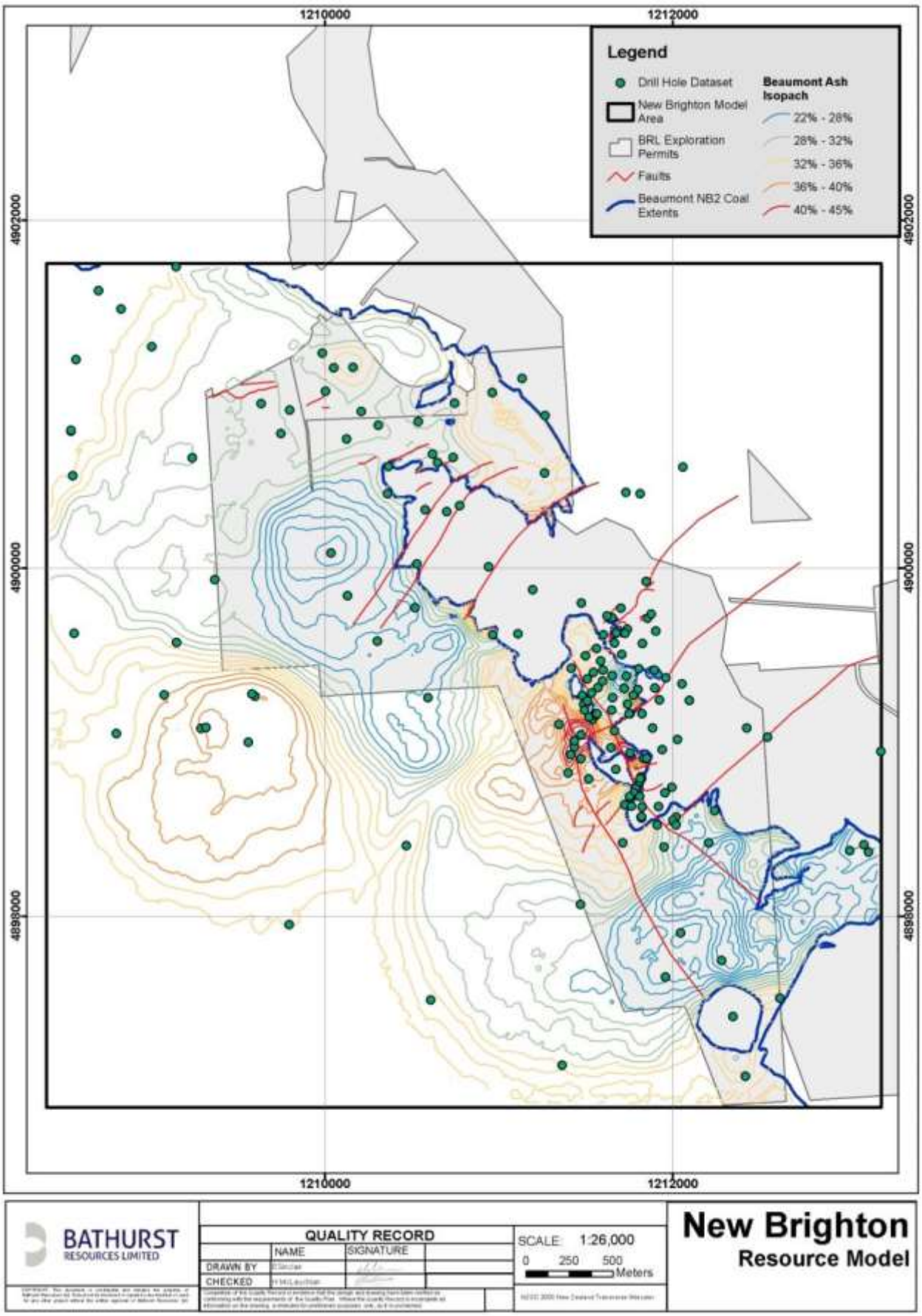


Figure 58 Beaumont Formation Full Seam Ash Isopachs

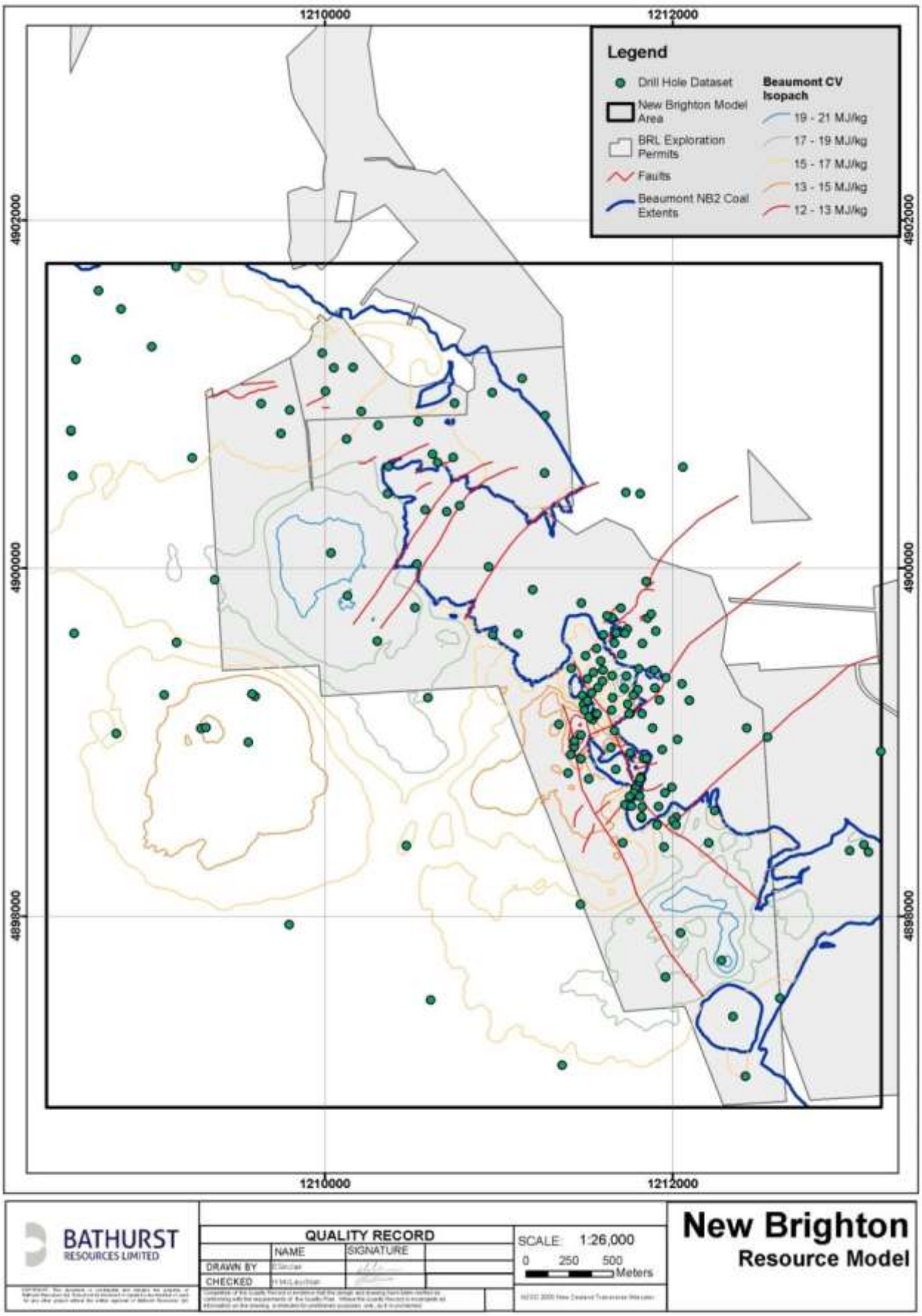


Figure 59 Beaumont Formation Full Seam Calorific Value Isopachs

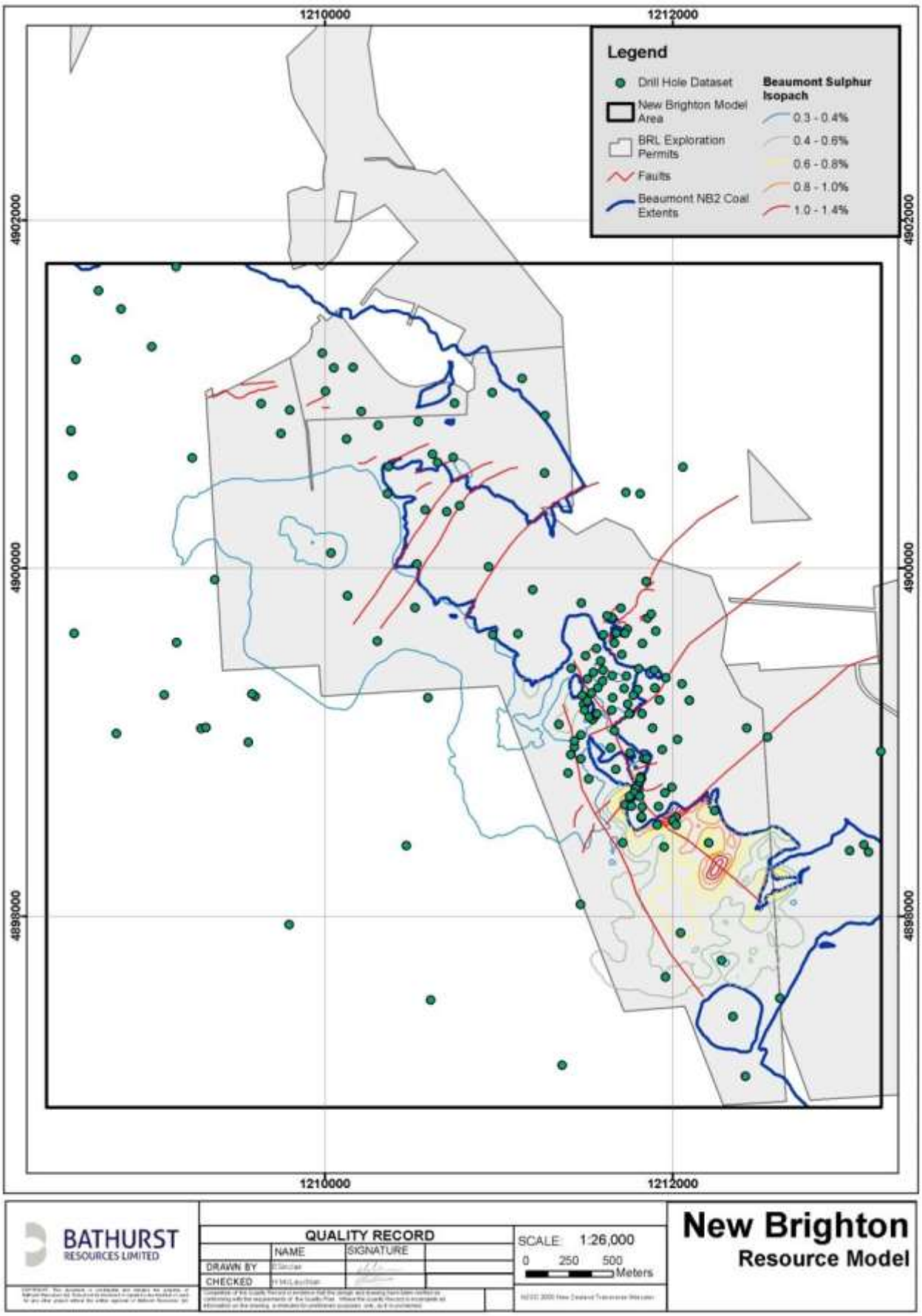


Figure 60 Beaumont Formation Full Seam Sulphur Isopachs

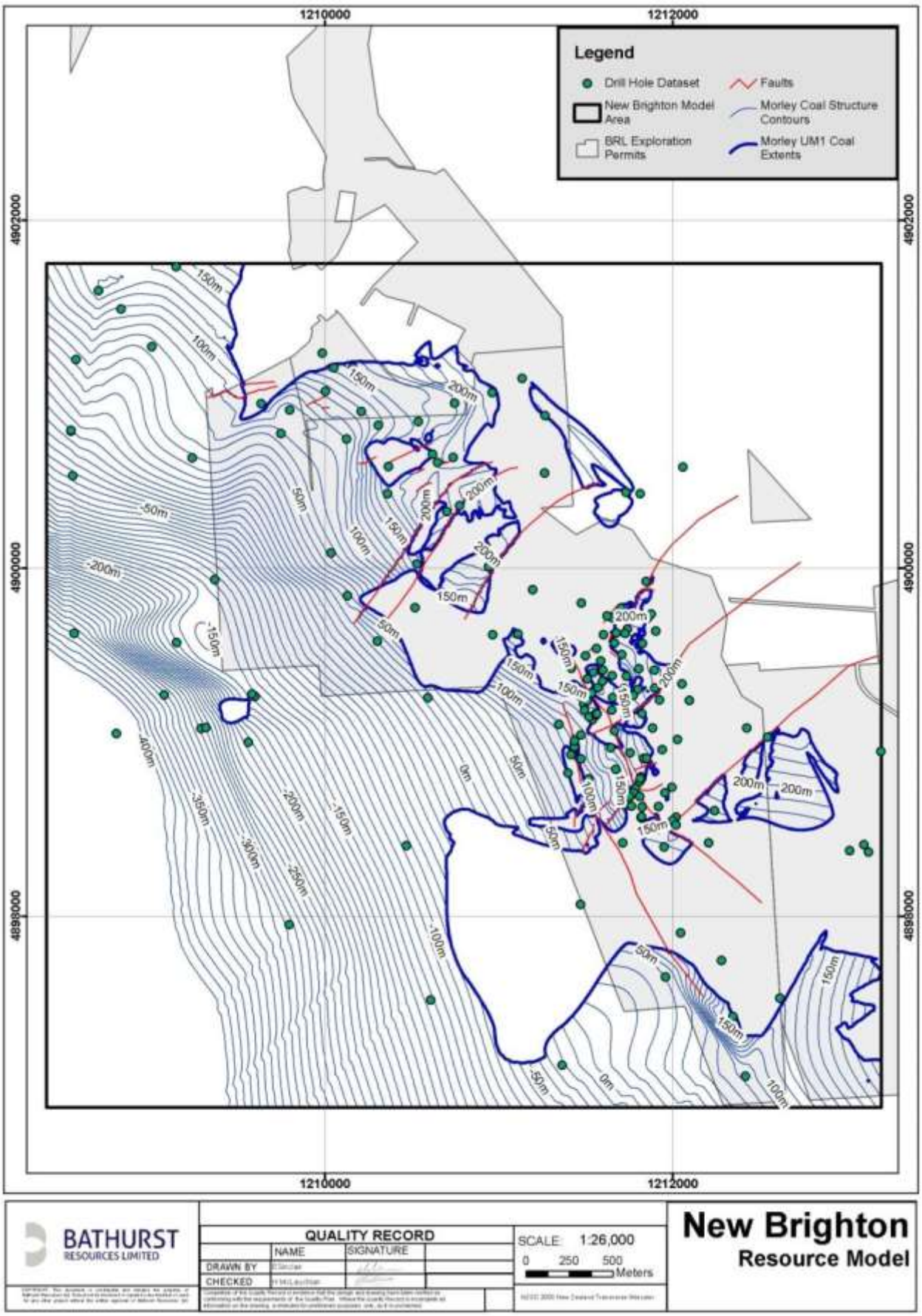


Figure 61 Morley UM1 Seam Coal Floor Contours

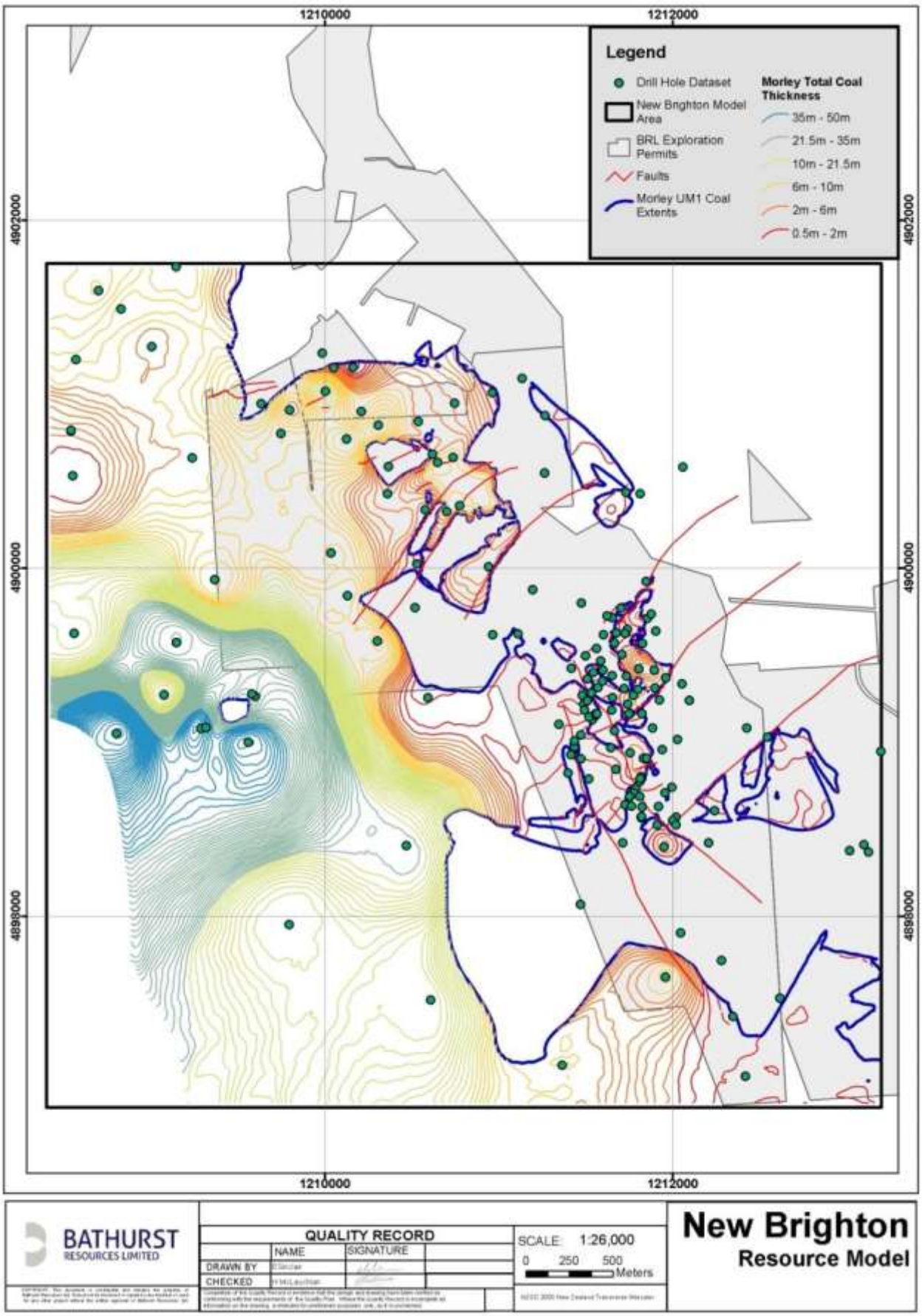


Figure 62 Morley Formation Full Seam Cumulative Coal Thickness Isopachs

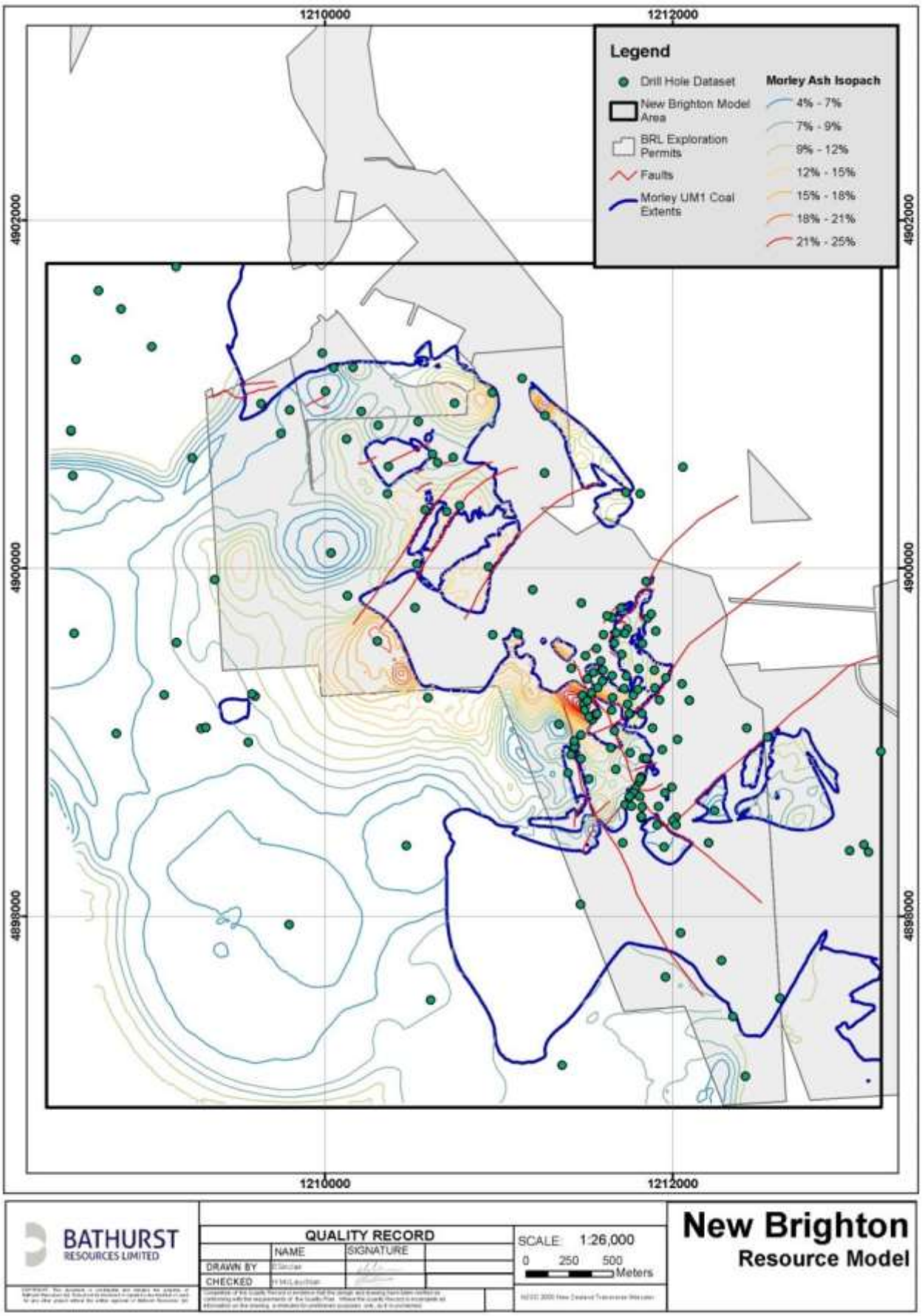


Figure 63 Morley Formation Full Seam Ash Isopachs

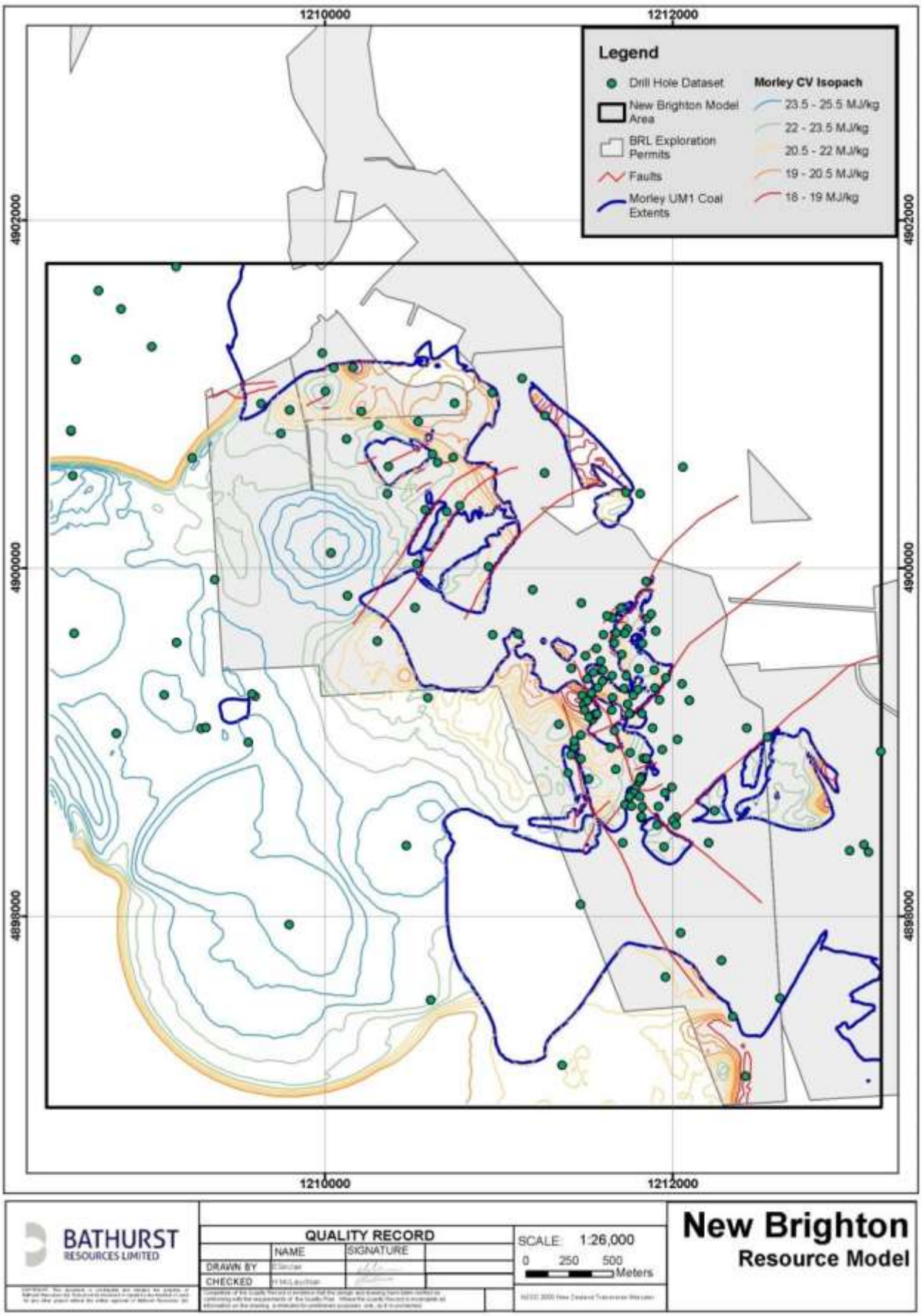


Figure 64 Morley Formation Full Seam Calorific Value Isopachs

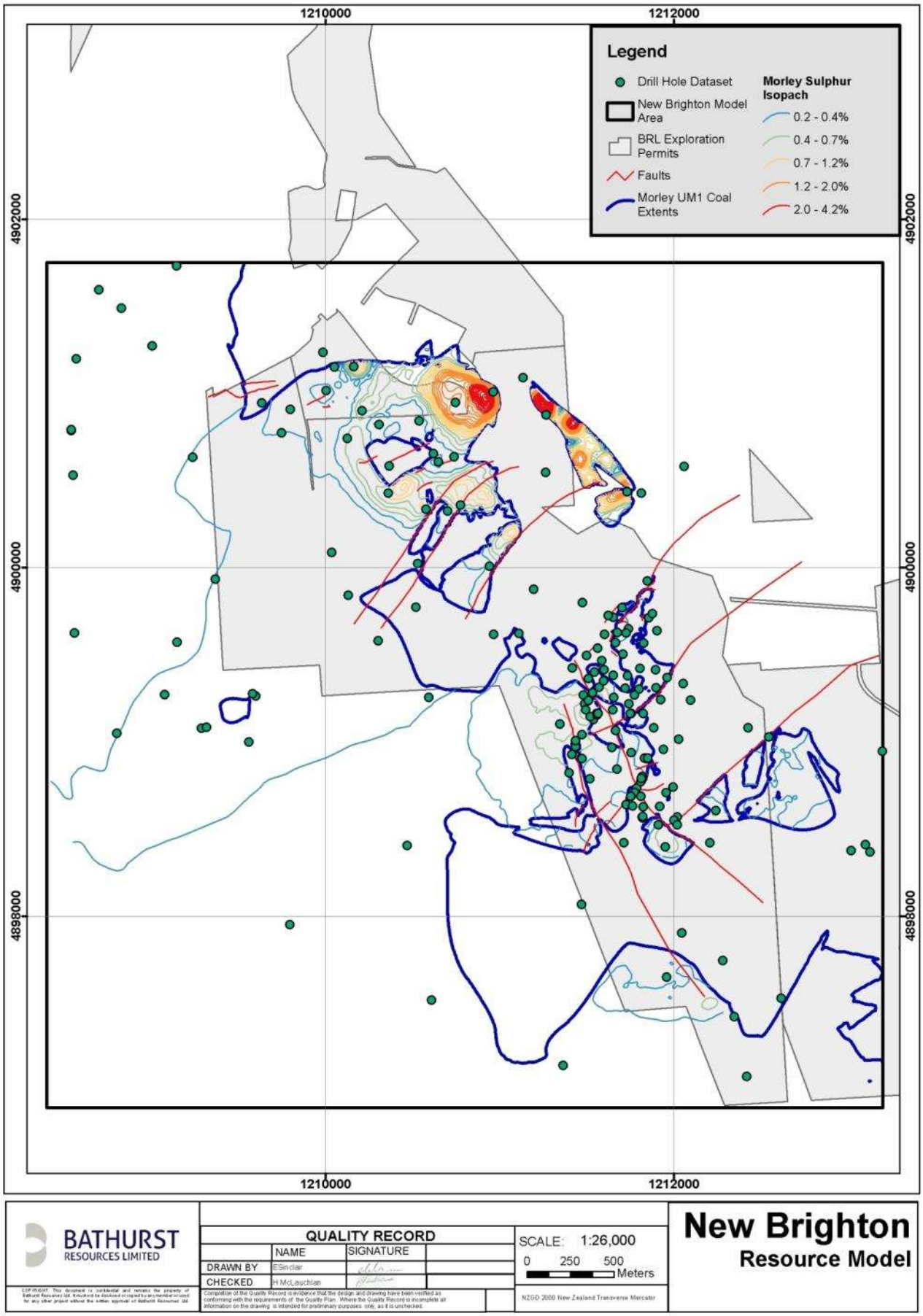


Figure 65 Morley Formation Full Seam Sulphur Isopachs

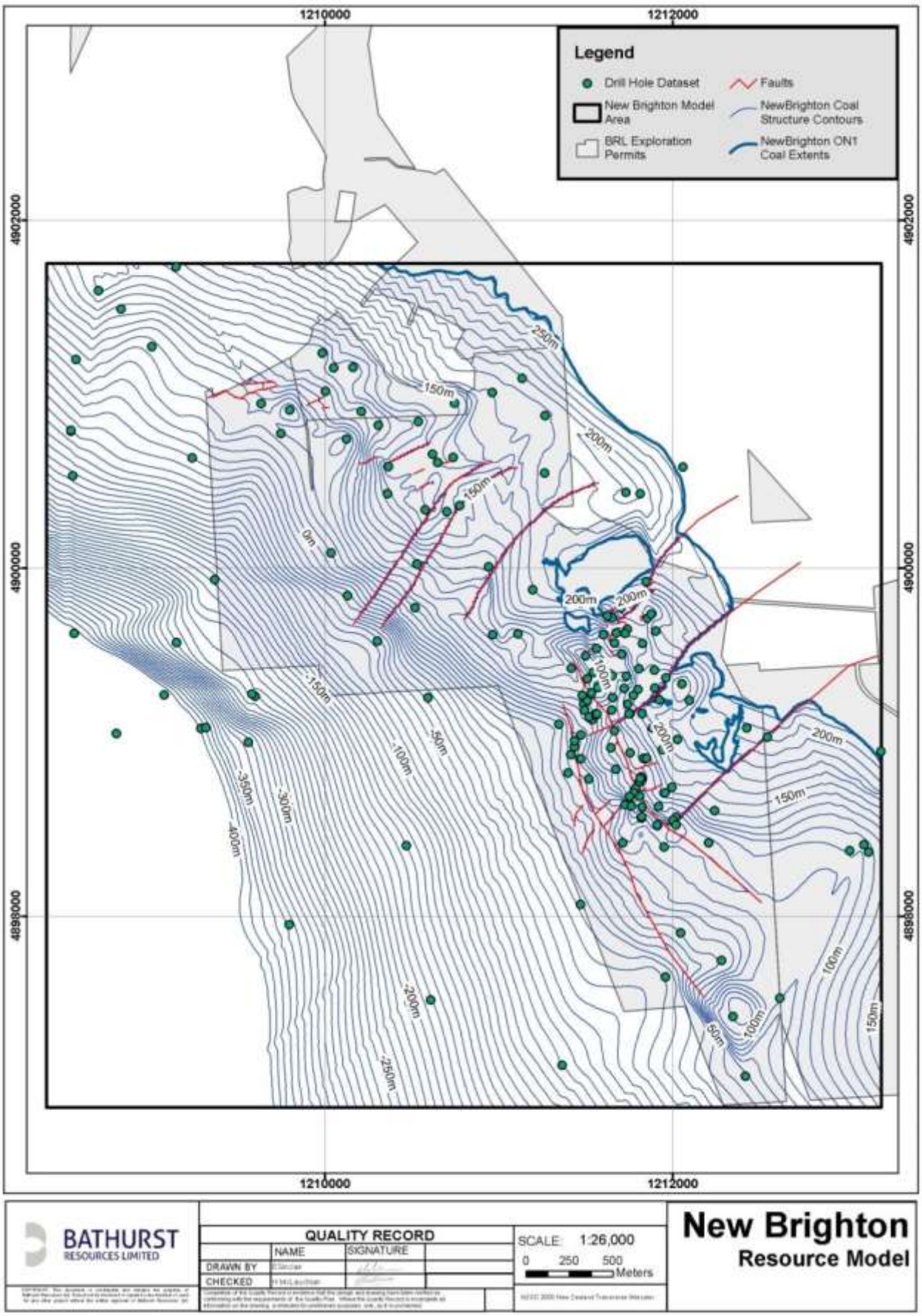


Figure 66 New Brighton (ON1 Seam) Coal Floor Contours

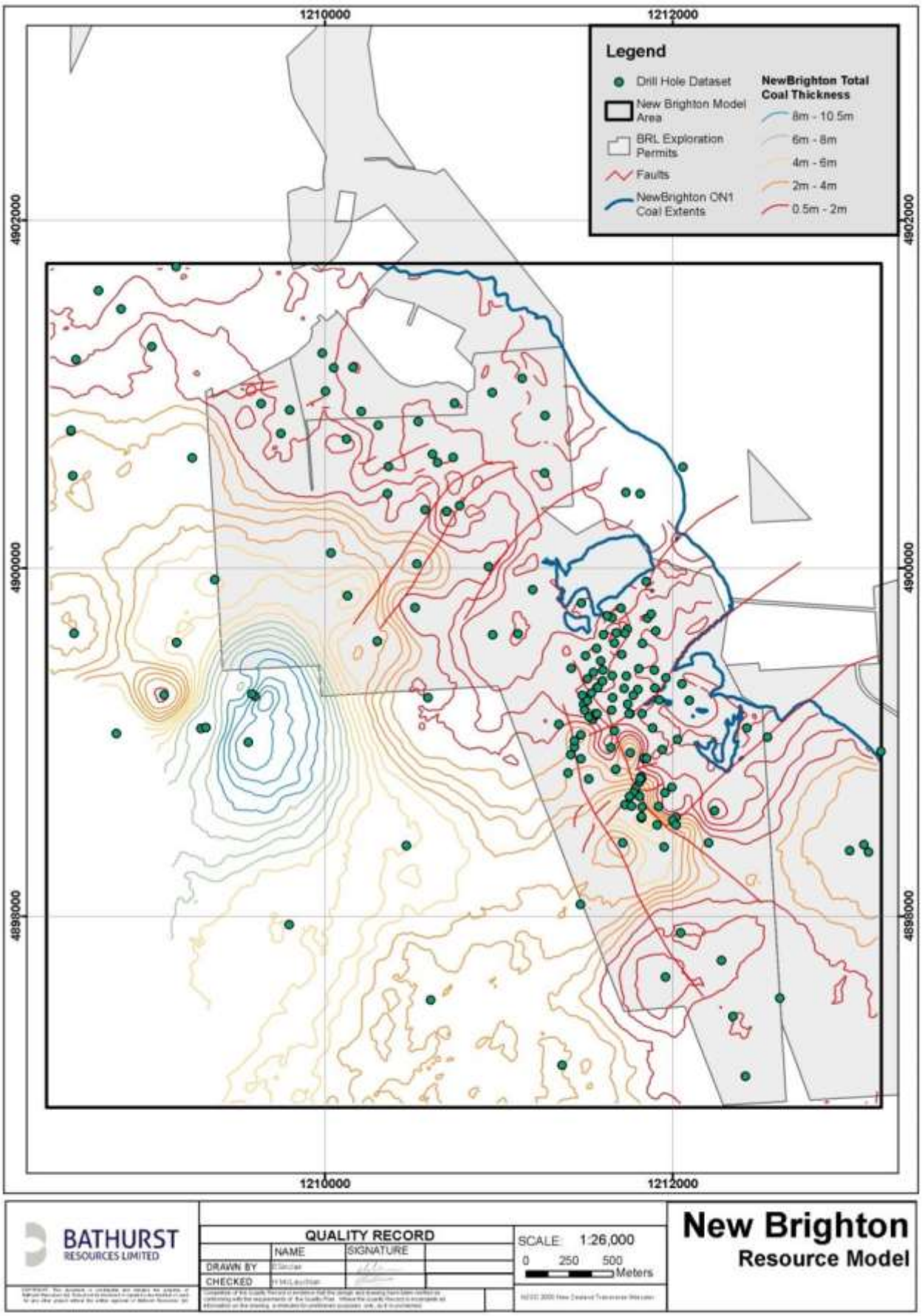


Figure 67 New Brighton Formation Cumulative Coal Thickness Isopachs

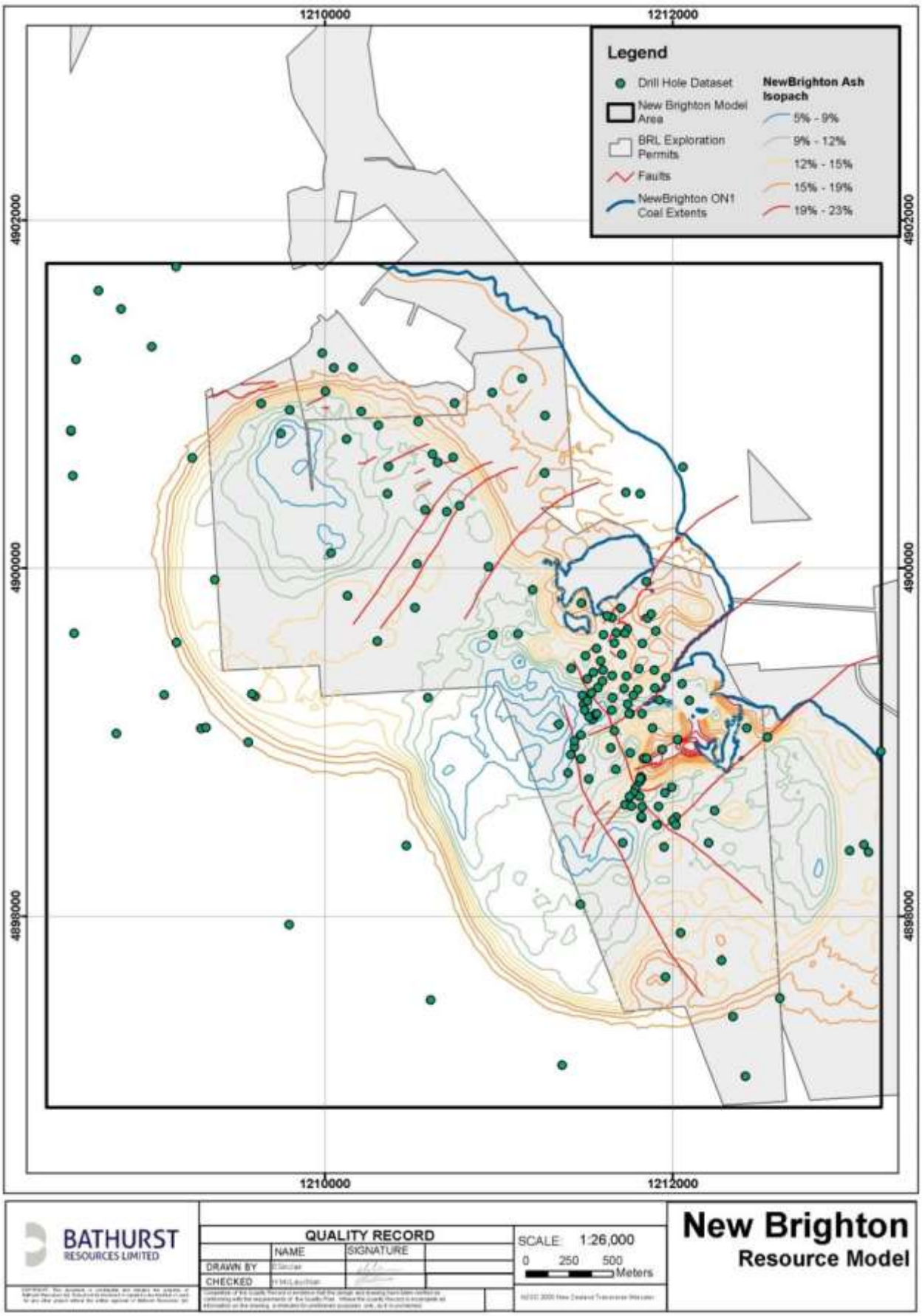


Figure 68 New Brighton Formation Full Seam Ash Isopachs

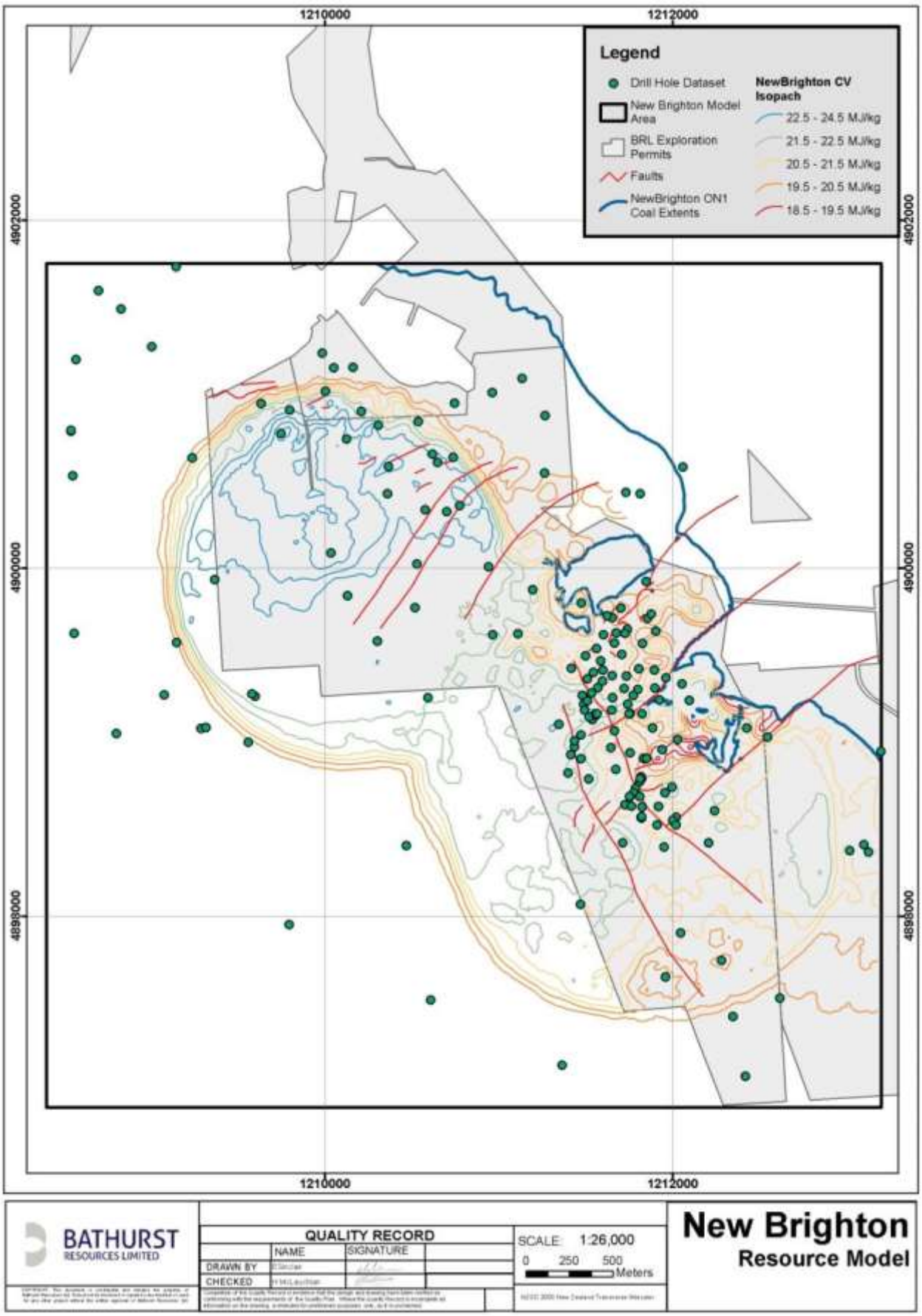


Figure 69 New Brighton Formation Full Seam Calorific Value Isopachs

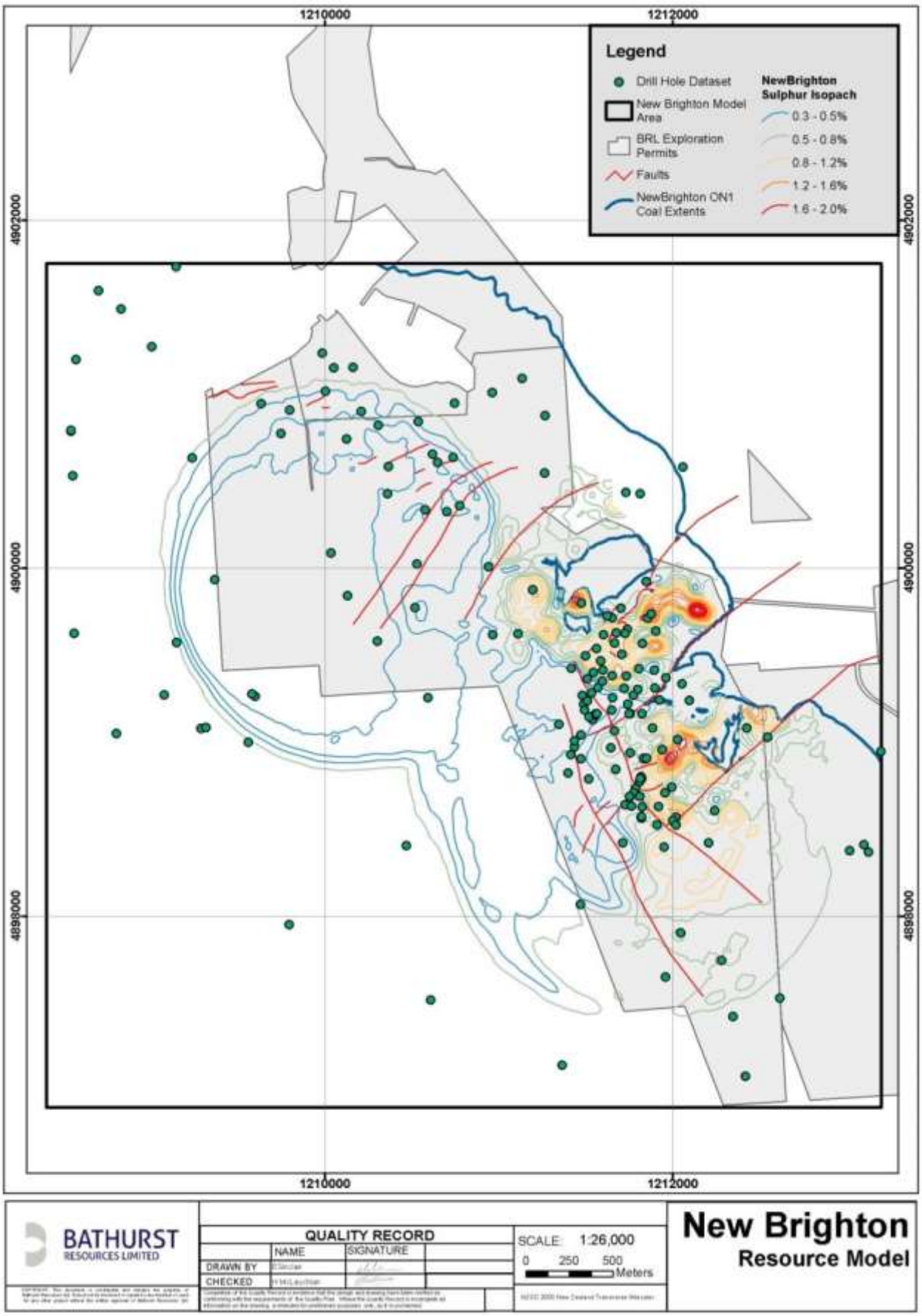


Figure 70 New Brighton Formation Full Seam Sulphur Isopachs

JORC Code, 2012 Edition – Table 1 Report for the Canterbury Project 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary

Sampling techniques	• Malvern Hills, Coalgate, Canterbury is a historic mining district, with recorded coal production from over 77 mines since 1872. Some historic exploration data of varying quality is available for parts of the area.
	• Modern exploration includes
	  ○ 45 PQ/HQ Triple Tube core (TTC) drill holes
	  ○ 13 percussive probe holes
	  ○ 13 RC drill holes
	  ○ 57 outcrop trenches and mapped seam intersections.
	• Recent drilling has aimed to infill areas around zones of historic workings that are lacking quality data and to test reliability of historic data. Drilling in the last 12 months has been concentrated on extending resources to the North East of the current operations.
	• BRL target to geophysically log every drill hole where down hole conditions and operational constraints allowed. Initially Field Tech Services Ltd was contracted for down hole geophysical services, utilising a natural gamma tool. From June 2016 the geophysical logging equipment was hired and operated by BRL geologists,
	• Natural gamma was usually run through a PVC standpipe installed into each hole after completion, or through the insitu drill string. Natural gamma produces a very reliable trace for use in seam correlation and depth adjustment due to relatively abundant clays in the Broken River Formation coal measures.
	• Down hole geophysics data was essential to correlate coal seams, to confirm depths and thickness of coal seams and to validate drillers' logs. Geophysics was also used to accurately calculate recovery rates of coal.
	• Coal sampling was based on the BRL Coal Sampling procedures. Coal quality ply samples have been selected on all coal logged by a geologist where the geologist had 95% confidence that the ash will fall below 50%. Material with an estimated ash over 50% was not sampled unless the material was a sandstone parting of < 0.1m in thickness within a coal seam whereby it would be included within a larger ply sample.
	• Outcrop trench and channel samples provide a significant proportion of the sample dataset. Coal seam thickness and partings between seams were measured either vertically or as a true thickness. Trench data is entered into the drilling database using azimuth and dip orthogonal to seam dip.
	• Outcrop coal samples were collected as channel samples through the coal seams.
	• All analytical data has been assessed and verified before inclusion into the resource model.
	• No Deep holes (>120m) have been drilled in the project area and therefore no down dip information of the deposit is available.
	• Due to the coal seam dip no single drill hole has been drilled that intersects all of the coal seams in the stratigraphic sequence.

Drilling techniques	• BRL managed exploration and drilling campaigns have utilized the following drilling methods
	  ○ Full PQ Triple Tube Core (TTC) In one case overlying strata was open holed through.
	  ○ Full HQ Triple Tube Core.
	  ○ RC and conventional percussive probe holes
	  ○ PQ reducing to HQ Triple Tube Core where necessary
	  ○ Trenches excavated using a 20T and 30T excavators
	  ○ Trench/Channel samples taken within active mining areas
	• Historic exploration and drilling techniques include
	  ○ Air circulation blade and hammer
	  ○ Reverse circulation blade and hammer
	  ○ Air core
	  ○ Rotary wash
	  ○ Trenches excavated using a 20T excavator and by hand methods
	• Exploration drill holes have been drilled at a range of inclinations ranging from vertical to 45°. Drill core from angled holes was not orientated.

Drill sample	• Core recovery was measured as the length of core recovered divided by the length of

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>recovery</td><td>drillers run and noted by the core logging geologist. If recovery of coal intersections dropped below 90% the drill hole may require a redrill (no redrills have yet been required).
• Recovery of coal seams in the Canterbury deposit has been very good due to the strong nature of the coal with average coal recovery at 96.5%. Downhole Gamma geophysical data was used to confirm coal recoveries.
• Average total core recovery over the recent drilling campaigns in Canterbury was 86.5%, however when broken down it shows that overlying soil, loess and quaternary gravel recovery was 61.7% while coal measure core was recovered at a rate of 91.7%.
• Where small intervals of coal was lost and where geophysics indicated strongly that coal was lost, ash values were estimated using the results of overlying and underlying ply samples and the relative response of natural gamma trace.
• Sample recovery has been deemed not applicable to trench and channel sampling.</td></tr>
<tr><td>Logging</td><td>• BRL has developed a standardised core logging procedure and all core logging completed by BRL have followed this standard.
• All modern drill core has been geologically and geotechnically logged by either experienced geologist or by geologists under the supervision and guidance of experienced exploration geologists.
• As much data as practicable has been logged and recorded including geotechnical and rock strength data.
• All drill core was photographed prior to sampling. Depth meter marks and ply intervals are noted on core in each photograph.
• Down hole geophysical logs were used to aid core logging and to ensure true down hole depths are recorded.</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>• For all exploration data acquired by BRL, an in house detailed sampling procedure was used. Sampling and sample preparation are consistent with international coal sampling methodology.
• Drill core ply samples include all coal recovered for the interval of the sample. Core was not cut or halved. Ply sample intervals were generally 0.5m unless dictated by thin split or parting thickness. Coal sample size is considered adequate to be representative of the coal seam quality.
• All modern sampled drilling has been completed using triple tube cored holes. No chip or RC samples are taken in these campaigns.
• For historical data, sample preparation processes are unknown. However no historical drill hole coal quality results are used in the resource estimation.
• Trench samples were taken representatively from excavated and cleaned outcrop, preventing sampling of weathered coal and other contamination of the sample. Sample intervals were measured vertically, orthogonal to the seam or at the angle of the trench plunge and were generally 0.5m or less. No field sample duplicates have yet been taken or analysed. Sample sizes generally aim to be at least 1kg of coal per 0.5m sampled.
• Most assay samples were collected on site however some were completed at the core repository after transport from drill site in core boxes. Samples are stored in sealed plastic bags are taken as soon as practicable to the coal quality laboratory.</td></tr>
<tr><td>Quality of assay data and laboratory tests</td><td>• All coal quality testing completed for BRL has been carried out by accredited laboratory SGS.
• SGS have used the following standards for their assay test work.
○ Proximate Analysis is carried out to the ASTM 7582 standard
○ Ash has also used the standard ISO 1171
○ Volatile matter has also used the standard ISO 562
○ Inherent moisture has also used the ISO 5068
○ Total sulphur analysis is carried out to the ASTM 4239 standard
○ Crucible swell tests are completed using the ISO 501 standard
○ Calorific value results are obtained using the ISO 1928 standard.
○ Loss on drying data is completed using the ISO 13909-4 standard.
○ Relative Density is calculated using the standard AS 1038.21.1.1
• BRL has completed a total of 24 full seam composite samples. Composite samples have been tested using the following standards:
<table><tr><th>Test Work</th><th>Standard Followed</th></tr><tr><td>Loss on air drying</td><td>(ISO 13909-4)</td></tr></table></td></tr>
</table>

Criteria	Commentary
	Inherent Moisture (ASTM D 7582 mod) **Ash** (ASTM D 7582 mod) **Volatile Matter** (ASTM D 7582 mod) **Fixed Carbon** by difference **Sulphur** (ASTM D 4239) **Swelling Index** (ISO 501) **Calorific Value** (ISO 1928) **Mean Maximum Reflectance All Vitrinite (RoMax)** Laboratory Standard **Chlorine in Coal** (ASTM D4208) **Hardgrove Grindability Index** (ISO 5074) **GIESELER PLASTOMETER** (ASTM D 2639) **AUDIBERT ARNU DILATOMETER** (ISO 349) **FORMS OF SULPHUR** (AS 1038 Part 11) **ASH FUSION TEMPERATURES** (ISO 540) **ASH CONSTITUENTS (XRF)** (ASTM D 4326) **Ultimate Analysis** Laboratory Standard • All analysis was undertaken and reported on an air dried basis unless stated otherwise.
Verification of sampling and assaying	• Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the Canterbury Coalfield. • Anomalous assay results were investigated, and where necessary the laboratory was contacted and a retest undertaken from sample residue. • No twinned holes have been drilled at the project, and no field duplicate trench samples have been taken. • Laboratory data is imported directly into an Acquire database with no manual data entry at either the SGS laboratory or at BRL. • Assay results files are securely stored on a backup server, once validated, drill hole information is 'locked' in an acquire database to ensure the data is not inadvertently compromised. • BRL commissioned a series of duplicate samples to be completed by CRL Energy ltd. These samples have repeated tests performed by SGS New Zealand Limited (SGS) on a subset of ply samples selected at random. Results of the duplicate testing showed an average variation of 1.2% of the value for each quality showing good analytical precision.
Location of data points	• Modern drill hole positions have been surveyed using Trimble RTK survey equipment. • Historic mine plans have been georeferenced by locating and surveying historic survey marks, and mine portals drawn on mine plans. Some surveyed mine plans are available from registered surveyors and engineers and these have been georeferenced using a standard coordinate system. • Some historic mine plans are poorly constrained spatially and a large variance from the current georeferenced images is possible. • New Zealand Trans Mercator 2000 Projection (NZTM) is used by BRL for the Canterbury project area. NZTM is considered a standard coordinate system for general mapping within New Zealand. Historic data has been converted from various local circuits and map grids using NZ standard cadastral conversions. • A LiDAR survey was carried out over the Canterbury area in January 2013. This LiDAR data provides very accurate topographic data used in the model. Contractors specifications state that for the choice of sensor and operating settings used for this project the LiDAR sensor manufacturer's specification states 0.15m (1-sigma) horizontal accuracy and 0.1m (1-sigma) as the open ground elevation accuracy. • Surveyed elevations of drill hole collars are validated against the LiDAR topography and ortho corrected aerial photography. Historic hole collar elevations have been compared to the LiDAR surface and while most are within 1m to 2m of the surface, there is however a small number of historic holes with a large discrepancy in the RL of the collar and the LiDAR surface which may be due to survey errors, coordinate system conversion errors, or

Criteria	Commentary
	earthworks/mining.
Data spacing and distribution	• Drill hole spacing in Canterbury is not homogenous. Recent exploration and drilling has targeted potential pit extension areas to the south west and the north east of the actively mined area. Historic exploration data focuses on the current open pit and further to the north and south of the current operation. • The exploration work has been concentrated along strike of the steeply dipping coal measure sequence and therefore produces a very linear dataset. • Drill holes and trench sample locations are unable to be spaced equally or on a grid pattern due to the steep nature of the deposit and limitation of site access. Sample locations are often located to confirm specific matters such as economic pit shell limits ,coal quality concernsand to confirm coal seam correlation. • Recent drilling campaigns have relied on a frame work of Triple Tube Core holes infilled with percussive holes. Infill holes are used to confirm the geological structure and seam thickness between cored holes. • Primary sample spacing has not been estimated over the deposit. There are 23 coal seam packages in the deposit and only a subset of these seams are intersected by each drill hole or trench, therefore the average sample spacing for each individual seam in the deposit varies. • Drill hole spacing is not the only measurement used by BRL to establish the degree of resource uncertainty and therefore the resource classification. BRL uses a multivariate approach to resource classification, whereby sample spacing within each seam daughter seam provides the primary evidence of continuity used to classify that daughter seam. • The current drill hole spacing is deemed sufficient for coal seam correlation purposes within targeted areas, However due to the lensoidal nature of the coal seams within the Broken River Formation some coal seam correlations northeast of the modern drilling and mapping data may be incorrect. • Geostatistics of the Canterbury dataset has been examined but variography results for many seams were poor due to the uneven distribution of drill holes with coal qualities combined with the large number of seams and structural complexity within the deposit. • The samples database is composited to full daughter seam thickness prior to coal quality grid estimation.
Orientation of data in relation to geological structure	• Drilling carried out by BRL has been orientated to intersect orthogonal to the general stratigraphic strike-dip plane of the deposit. Structure dip ranges from 20° in the south to 50° north of the current pit. • Drill hole inclination was recorded at the surface using a inclinometer and compass. Drill hole deviation has not been verified by down hole survey tools, but any deviation from design is not expected to have a material effect on geological understanding of the deposit as the average drill hole depth in the dataset is 52m with the deepest coal intersection of 96m downhole. At a depth of 60m an overall deviation of 1° would produce a horizontal deviation of 1m at the end of hole and a negligible thickness deviation for seams intersected at that depth. • Angled drilling is considered the most suitable drilling method for the Canterbury deposit to provide unbiased data. • Trenches are usually orientated perpendicular to the strike of bedding. Surface intersections are surveyed and are then adjusted to simulate a drill hole. Trench data is logged in such a way as to simulate a drill hole drilled from the collar point of the trench.
Sample security	• Stringent sample preparation and handling procedures have been followed by BRL. • Ply samples are taken and recorded from drill core, bagged and securely stored prior to being dispatched for analysis. • Samples are normally hand delivered to SGS by BRL staff, thus removing the potential for third parties to tamper with the samples. • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core.
Audits or reviews	• BRL has reviewed the geological data available and considers the data used to produce the resource model is reliable and suitable for the purposes of generating a resource estimate to the extent that the resource has been classified. • Results of a duplicate sample testing program comparing SGS and CRL assay results shows little analytical error or bias between laboratories. • The competent person undertakes audits of the sample collection and analysis.

Section 2 Reporting of Exploration Results

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>

Coal ownership is complex throughout the Canterbury Coalfield.
The majority of potential coal resources within the Malvern Hills Coalfield, north of the Selwyn River, are classified as coal that is privately owned with coal rights being attached to the land title.
The ownership of coal rights is separate from the land ownership in a number of land parcels surrounding the Canterbury mine. Blocks to the Northeast of the current mining operation are held by Nimmo Collieries and by Charles Dean. Canterbury Coal Mine Limited has agreements in place to access this coal.
Royalty agreements in place for this private coal are based on the mine gate value of coal sold. Mine gate value is defined as the price received at point of sale minus ex-mine costs such as freight, handling and commissions.
Some crown coal does exist and BRL has 100% ownership in the following coal permits:

<table>
<tr><th>Permit[1]</th><th>Operation</th><th>Expiry</th></tr>
<tr><td>Mining Permit 41372</td><td>Malvern Hills</td><td>11/12/2025</td></tr>
</table>
Coal within permit 41372 is owned by the crown and Wakaepa Farms in a 50/50 split.

BRL holds land access agreements over all of the areas that it currently operates at the Canterbury project and over all areas containing reported resources.
Much of the remainder of land that makes up the Canterbury project is owned by Matariki Forests (formerly the Selwyn Plantation Board). An access arrangement is in place to allow BRL to access through the areas, allow exploration activities and to undertake mining. This agreement expires April 1st 2020.
BRL have not reported any resources for the Canterbury project where land access and/or mineral rights have not been granted.

</td></tr>
<tr><td>Exploration done by other parties</td><td>

Historic geological investigations and reports for the Canterbury Coal field have been compiled spanning the past 140 years.
All historic data used to develop the resource model has been validated against original source documents by BRL staff. Most historic data was deemed unreliable due to a number of factors, primarily spatial survey data was missing or poor. Unreliable historic data was not included within the resource model dataset.
The Historic drilling database includes the following drill holes compiled from the historical data records.

<table>
<tr><th>Years</th><th>Agency</th><th>Range of Collar ID</th><th># Holes</th><th>Drilling Method</th><th># Holes in structure model</th><th># holes in quality model</th><th>Geophysics Available</th></tr>
<tr><td>1919-1921</td><td>Homebush Brick and Coal</td><td>HB_Bore_01 - HB_Bore_13</td><td>13</td><td>Diamond</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>1921</td><td>Homebush Coal company</td><td>Gov_1 - Gov_7</td><td>7</td><td>Diamond</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>1944</td><td>Klondyke Colleries</td><td>Klondyke_1 - Klondyke_7</td><td>7</td><td>Diamond</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td><1949</td><td>Deans</td><td>DEANS_1 - DEANS_5</td><td>5</td><td>unknown</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>1987</td><td>Coal Corp</td><td>CoalCorp_1 - CoalCorp_4</td><td>4</td><td>unknown</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td><1997</td><td>?</td><td>CCL_N1 - CCL_N2</td><td>2</td><td>unknown</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>1997</td><td>Yardley</td><td>CCL_Y1 - CCL_Y8</td><td>8</td><td>Rotary air</td><td>3</td><td>0</td><td>0</td></tr>
<tr><td>2002</td><td>CCL</td><td>CCL_T1 - CCL_T47</td><td>47</td><td>Trenching</td><td>9</td><td>7</td><td>0</td></tr>
<tr><td>2006</td><td>CCL</td><td>CCL_DB01 - CCL_DB16</td><td>16</td><td>RC and Air core</td><td>14</td><td>0</td><td>0</td></tr>
</table>

BRL is continuing to source historic plans and reports from a number of data libraries around New Zealand. Historic data will be validated and added to the exploration dataset if it is deemed reliable.

</td></tr>
<tr><td>Geology</td><td>

The project is located in the Canterbury Coalfield, Malvern Hills, New Zealand.
The defined resource is contained within the late Cretaceous to Early Paleocene aged Broken River Formation., formed during the Tertiary transgressive-regressive cycle between the Rangitata and Kaikoura Orogenys.
Overlying the coal measures is the Conway Formation, dominated by micaceous and quartz

</td></tr>
</table>

Criteria	Commentary
	rich fine sandstones and mudstones indicative of littoral to shallow marine settings. • Pleistocene aged glacial outwash gravels and tills mask underlying stratigraphy over much of the area. Younger river gravels also dominate larger river valleys within the area. • Glacial derived windblown loess deposits mantle much of the area. • Igneous intrusions are present in the Malvern Hills area. Some contact metamorphism of coal measures has been observed with localized rank increases observed in some Canterbury coal samples, however none have been noted in the current resource area. • Generally the project area is structurally simple. Coal seams are not greatly affected by cross cutting faults. Seam dips range between 20° in the south to 50° the north of the current open pit area. In some locations it has been observed that localised slumping has caused overturning of the coal seams.
Drill hole Information	• No exploration results are being presented in this report, rather this report is focused on advanced projects that have been defined by geological models with associated resource estimates completed. • Due to consistent nature of coal deposits and the bulk nature of the commodity exclusion of this information from this report is considered to not be material to the understanding of the deposit.
Data aggregation methods	• Exploration drilling results have not been reported. • The maximum ash cut off for building the Canterbury structure model was set at 50%. • Resources have been reported with a block ash cutoff of 25%. • A minimum coal seam vertical thickness cutoff of 0.3m was used to remove thin coal seams from the resource model.
Relationship between mineralisation widths and intercept lengths	• Exploration drilling results have not been reported. • Coal seams in the project area strike ~060° and dip between 20° and 50° to the south east. • All recent drill holes were drilled at an angle orthogonal to coal seam structure dip. • Some historic drilling was also inclined to intersect seams at close to 90°. Most historic holes were drilled vertically. • Coal seam thicknesses are reported as apparent thickness down hole.
Diagrams	• Plans have been attached in the appendix.
Balanced reporting	• No exploration results are being presented in this report, rather this report is focused on advanced projects that have been defined by geological models with associated resource estimates completed. • The exclusion of this information from this report is considered to not be material to the understanding of the deposit.
Other substantive exploration data	• The resources reported in this report relate to the area in and around and existing operating coal mine. • Geotechnical logs and samples were taken by the geologist during all exploration by BRL. Geotechnical logs identified defect types, angles and character through cored intervals. Geotechnical samples were taken of seam roof, floor and overburden material. • Geochemical characterisation of overburden material for acid base accounting (ABA) purposes has been conducted. These results have been used to construct an ABA model.
Further work	• Further exploration is planned along strike both to the north and south of the current opencast pit. • Channel sampling of coal seams within the active pit are undertaken periodically.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly validated against original logs and results tables. Where reliability of the data is poor the data is excluded from the modelling process. • BRL utilizes an Acquire database to store and maintain its geological exploration dataset. • The Acquire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values, standardized look-up tables for logging codes. • Manual data entry of assay results is not required as results are imported directly from reported laboratory results files.

Criteria	Commentary
Site visits	• Hamish McLauchlan (the competent person) visits the Canterbury project area on a regular basis.
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification. • Downhole gamma logs are a key tool in correlating the often thin and numerous seam packages between drill holes. • BRL uses a multivariate approach to resource classification which takes into account a number of variables. • BRL considers the amount of geological data sufficient to estimate the resource. • Uncertainty surrounds historic underground mine workings, both in the quality and quantity of coal extracted, which seam was mined and surveying and spatial location of underground workings. This uncertainty is reflected in the resource classification. • Quaternary gravel deposits overlie the coal measures unconformably over the southern portion of the project area. Some uncertainty surrounds the depth of erosion and the extent of the quaternary deposits. A conservative approach to modelling this Quaternary erosional surface has been used in the model, and is reflected within the resource status.
Dimensions	Depth of cover varies from 0m at outcrop to over 200m at the Southeastern boundary of the model. The strike length of the deposit is in excess of 4km.
Estimation and modelling techniques	• All available and reliable exploration data has been used to create a geological block model for resource estimation and classification. • All exploration drilling data is stored in Acquire and exported into a Maptek Vulcan drill hole database. • Mapping data including coal seam thickness and roof/floor points is stored in Acquire and exported into Vulcan. • Interpretive data is stored within Vulcan in various layers. • A horizons definition has been developed and is used in the stratigraphic modeling process. • Vulcan 9.1.8 was used to build the structure model. Grid spacing is 5m x 5m. This spacing was selected to be 1/5 of the minimum data spacing of a targeted area and to model steeply dipping strata more accurately. • Vulcan's Hybrid method is used to produce the structure model. This method triangulates a reference surface and then stacks the remaining horizons by adding structure thickness grids. Thickness grids are created using inverse distance. Design data from other horizons is incorporated into the final grid structure. • The maximum triangle length for the reference surface was set to 800m. • The maximum search radius for inverse distance is 800m. The inverse distance power is set to 2, with maximum samples set to 6. • Structure grids are checked and validated before being used to construct the resource block model. • Vulcan 9.1.8 is used to build the block model. The process is automated using a Lava script. • The coal structure surfaces, along with LiDAR topography surface, quaternary unconformity, and opencast mined out surfaces are used to build the block model. The block dimensions are constructed at 5m x 5m. Vertical thickness for coal blocks is 0.25m, whilst overburden blocks have no maximum thickness. The model is rotated at 060° to align with the strike of the coal measure deposits. • Coal seam existence has been masked by a 0.3m vertical thickness cutoff. No resources are reported for daughter seams of less than 0.3m vertical thickness • Quality grids for each daughter seam are built using composited samples for each daughter seam using an inverse distance squared function. • All seams have a maximum search radius of 500m. If a coal block is not estimated during the grade estimation process the blocks are not reported as resources. • Quality grids for air dried ash, sulphur, volatile matter, and inherent moisture and in situ moisture are estimated. Calorific value is calculated from ash on a dry basis. • Geostatistics of the coal quality dataset has been investigated to examine and define the estimation search parameters; however the results have been poor due to the non-normal distribution of the data along strike of the deposit. • Coal quality grids are built for each seam daughter with the maximum search radius set to 500m. The grids are built using the inverse distance function with a power of 2 and maximum samples of 6.

Criteria	Commentary
	• Various methods have been used to check the validity of the block estimation. This includes manual inspection of the model, QQ plots of block model qualities vs the coal quality database and other comparison tools. • Reconciliations of production versus plan are completed quarterly with coal production generally 5-10% over modelled coal tonnage. Production data on coal quality follows modelled coal quality. • Resource tonnages within historic underground workings areas have been discounted by an estimated average extraction rate. The primary underground mining method utilised historically in Malvern Hills area is bord and pillar mining although some minor hydro mining took place at Nimmo's underground operation in the 1970's but production was limited due to a lack of available water. Historic extraction rates vary however the rate used to discount coal tonnages within worked seams in the model is 50% of the original unmined tonnage.
Moisture	• Resource tonnages are reported using natural bed moisture, calculated from air dried density, air dried moisture and in situ moisture using the Preston Sanders equation.
Cut-off parameters	• Stratigraphic structure grids have been developed based on a 50% ash cutoff. • No lower cutoff has been applied. There is an inherent minimum limit to ash samples in modern results due to a laboratory lower detection limit of 0.17% (adb). • Coal resources are reported down to a seam thickness of 0.25m (one block), however all seams are masked from the model where modelled structure thickness is less than 0.3m thick(vertical) with an ash cutoff of 25%.
Mining factors or assumptions	• It is assumed that any future mining operation would have a minimum vertical daughter seam thickness of 0.3m as a minimum mining horizon cutoff. The current opencast operation mines some seam splits that are thinner than this. • Only coal that falls within an optimized pit shell with revenue factor 0.75 is reported as resources. Costs and revenue parameters used in the pit optimization are based on the 2017 Canterbury budget and include allowances for royalties, commissions, mining costs, coal processing and administration, and basic mining and processing losses. • No other mining factors such as strip ratios, mining losses and dilutions have been applied when developing the resource model, or reporting resource tonnages.
Metallurgical factors or assumptions	• No metallurgical assumptions have been applied in estimating the resource. • Currently no wash plant is used at the Canterbury operation. The ROM coal produced is processed through a crushing/screening plant where losses are minimal.
Environmental factors or assumptions	• Studies for ABA characterisation of overburden, and boron leaching studies have been completed. It is not expected that these will prevent eventual economic extraction of the resource • No other environmental assumptions have been applied in developing the resource model. • All environmental approvals are currently in place to operate the current section of the mine • Updating of approvals for mine footprint expansion is an ongoing process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Bulk density	• After grade estimation air dried density is calculated from the air dried ash value using the ash-density relationship derived from the project dataset. • An in situ density value is then computed using the Preston Saunders method. • In situ moisture determinations have been collected from drill core ply samples and unweathered outcrop/trench samples taken from the active pit.

Classification	• BRL classifies resources using a multivariate approach.
	• Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction and proximity to faults and unconformities. The result reflects the Competent Person's view of the deposit.
	• Closely spaced drilling with valid samples increases the confidence for each seam in resource assessments.
	• The confidence is reduced by:
	  ○ A block being within an underground worked area due to extraction rate uncertainty.
	  ○ Thin coal, where thickness is 0.5m or less.
	  ○ A block lies below but within 2m of the quaternary unconformable surface.

Audits or reviews	• A review of the resource model has been carried out by the competent person.
Discussion of	• Statistical comparisons between the resource block model and the coal quality data set

Criteria	Commentary
relative accuracy/ confidence	have been carried out and are within expected ranges. Some anomalies exist due to non-normal data distribution. Techniques utilised include QQ plots and probability plots. • Reconciliations of production versus plan are completed quarterly with coal production generally within 5-10% of the modelled coal tonnage. Production data on coal quality is insufficiently recorded to reconcile modelled coal quality.

Canterbury Coal Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• A 3D Resource Block model of topography, structure and quality are used for in situ Resource definition. • Mineral Resources are inclusive of Ore Reserve.
Site visits	• The Reserves competent person visits the site regularly.
Study status	• Canterbury Coal is an operating mine project. The reportable Ore Reserve is based on the life of mine (LOM) plan and has determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered.
Cut-off parameters	• Pit optimisation runs were completed to determine economic pit limits • BRL supplied cost and revenue data. • A maximum ROM ash of 15% (arb) and a minimum coal seam vertical thickness of 0.3m vertical are applied.
Mining factors or assumptions	• The Canterbury Coal mining area has been operational since approximately 2005, with the current operation starting in 2013. Costs and prices are derived from actual and budget estimations. Hence, a Feasibility Study was not completed. • Mining recovery of 80% is applied to the in situ coal. Periodically, the ROM coal production is reconciled against depletion of the mining model. Reconciliation to-date shows more coal produced than modelled from the same areas. • The Canterbury Coal mine utilises truck and shovel for waste and coal movement. The operations are supported by additional equipment including dozers, graders, and water carts. • Geotechnical studies have been completed for Canterbury existing operations and will be an ongoing requirement for new pits prior to development. • Moisture Adjustments: Moisture is modified during both the mining and processing operations. In situ moisture is determined by the process described in Section 3 and is the base point for all moisture adjustments. Recoverable Coal Reserves are stated on a ROM moisture basis, as received by the processing plant. Marketable Coal Reserves are stated on a product moisture basis, as sold.
Metallurgical factors or assumptions	• The ROM coal produced at Canterbury Coal is crushed and screened on site. A process recovery of 95% is used based on a processing reconciliation study. • Product coal specifications include ash, sulphur, moisture and calorific value.
Environmental	• All environmental approvals are currently in place to operate the current section of the mine • BRL is in the process of seeking approvals to expand the current operations. • Waste rock characterisation results show that the a portion of the waste material is acid producing, as such it requires special placement requirements and procedures in the dumps
Infrastructure	• All necessary infrastructure is in place and operational for the current operation.
Costs	• All infrastructure is in place at Canterbury Coal. The primary ongoing capital requirements are for equipment replacement and this is included in the economic model. • All operating costs were based on the 2017 Canterbury Coal 5 year budget estimates provided by BRL and include allowances for royalties, commissions, mining costs, road haulage loading and administration. • Prices are at the mine gate. Customers are responsible for transport costs. • Contracted product specifications and penalties for failure to meet specification are included in the cost model.

Criteria	Commentary
Revenue factors	• BRL uses a weighted average of contracted coal price. These price assumptions are considered reasonable for the purposes of estimating Reserves.
Market assessment	• Long term supply contracts are in place.
Economic	• No NPV analysis was completed as it is an operating mine. For JORC Reserves reporting purposes, detailed mine design and schedules are generated. This work includes identifying the mining sequence and equipment requirements. • BRL generates detailed cash flow schedules and identifies incremental and sustaining capital.
Social	• BRL have key stakeholder agreements in place.
Other	• All mining projects operate in an environment of geological uncertainty. The Competent Person is not aware of any other potential factors, legal, marketing or otherwise, that could affect the operations viability. • The Competent Person understands that the pit shells used as the basis of this Statement are based on extending the operation to the north and south along strike. Updating of approvals is an ongoing process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Classification	• Classification of Ore Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. • For the Canterbury Coal operation, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the mine is currently operating and the level of mine planning adequate. • The Inferred Coal Resources have been excluded from the Reserve estimates.
Audits or reviews	• Internal peer review and reconciliation by BRL of the Reserves estimate has been completed.
Discussion of relative accuracy/ confidence	• Periodically, the ROM coal production is reconciled against depletion of the mining model. To-date more coal has been produced than modelled from the same areas. • Accuracy and confidence of modifying factors are generally consistent with the current operation.

Appendix

Maps and plans discussed within Table 1 are reported below.

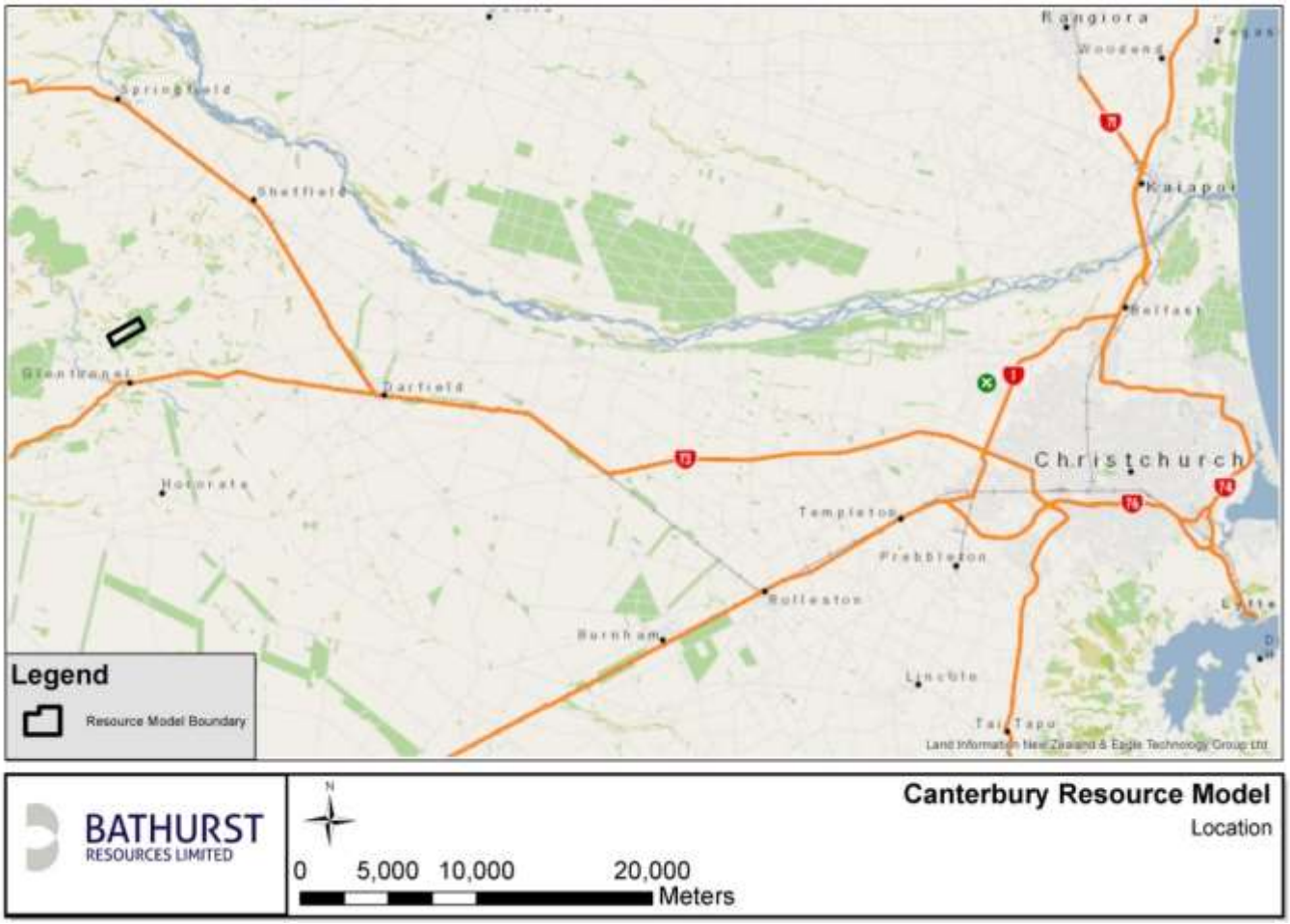


Figure 71 Location plan showing the proximity of the resource model area to regional centres and markets.

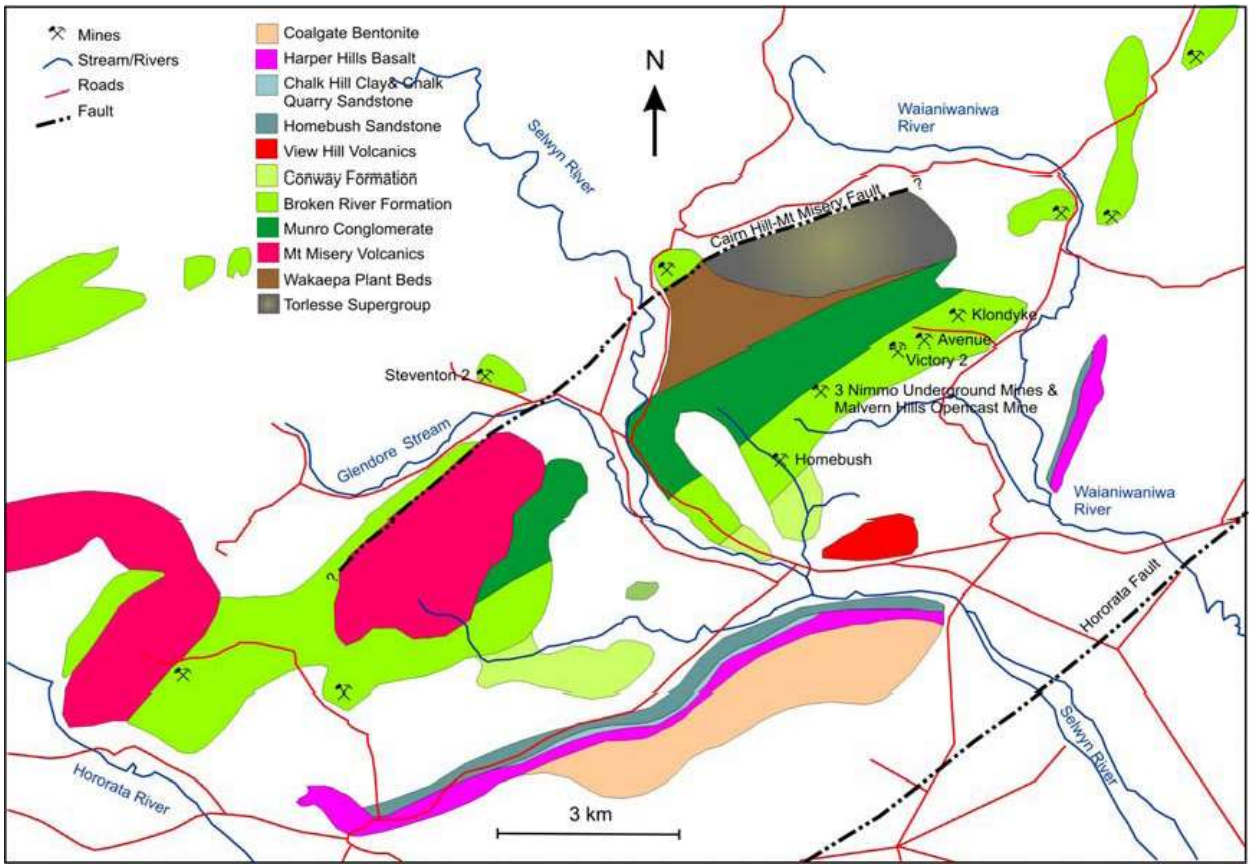


Figure 2: Generalised map of Malvern Hills Coalfield showing geological units and faults with locations of mines noted in the text (From Seale 2006 after Carlson et al., 1980; Duff, 1986; Duff and Barry, 1989; Field and Browne, 1989; Mathews, 1989; Tappenden, 2003. Refer to details below for details of the stratigraphic units).

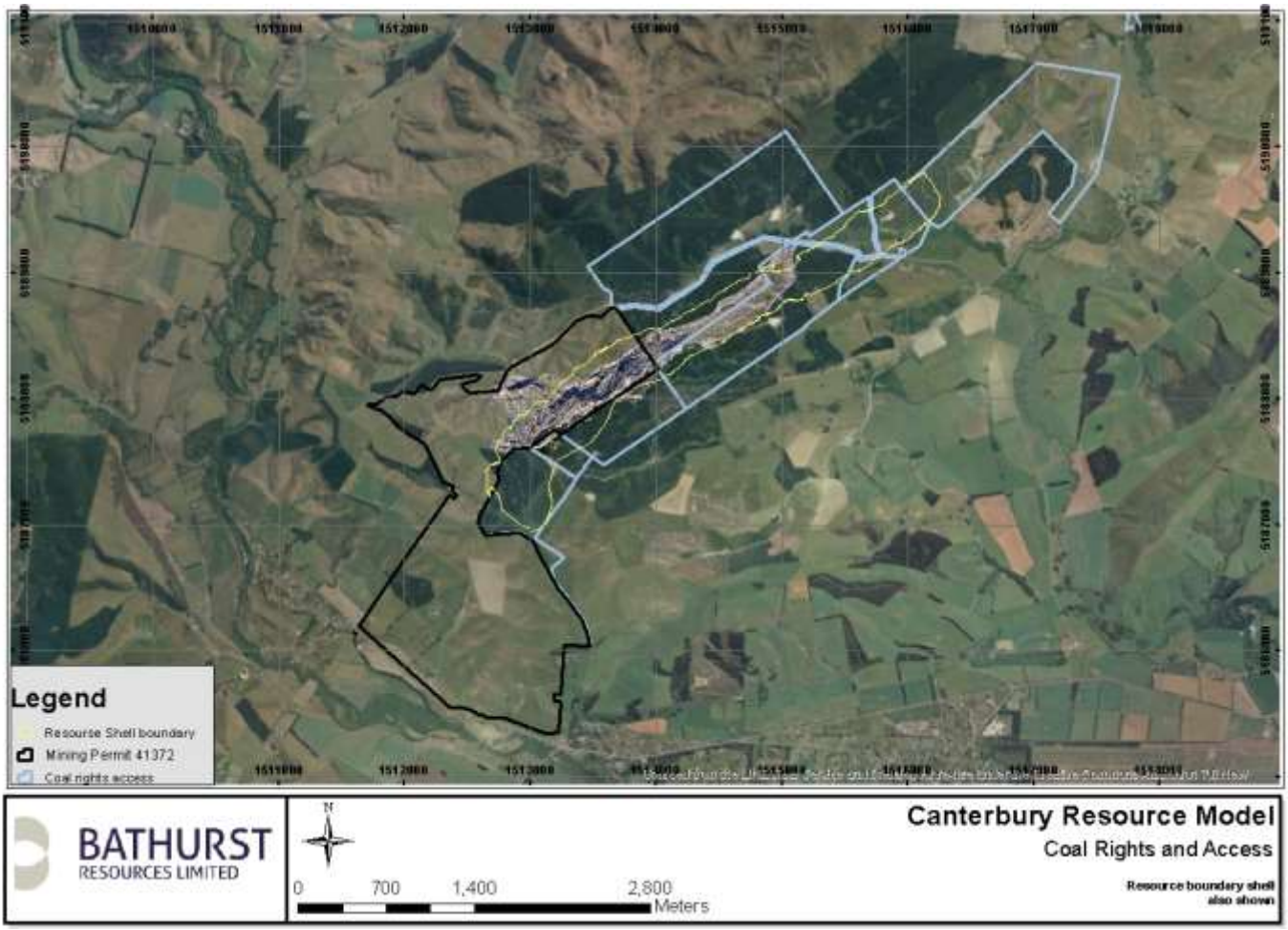


Figure 72: Coal right access

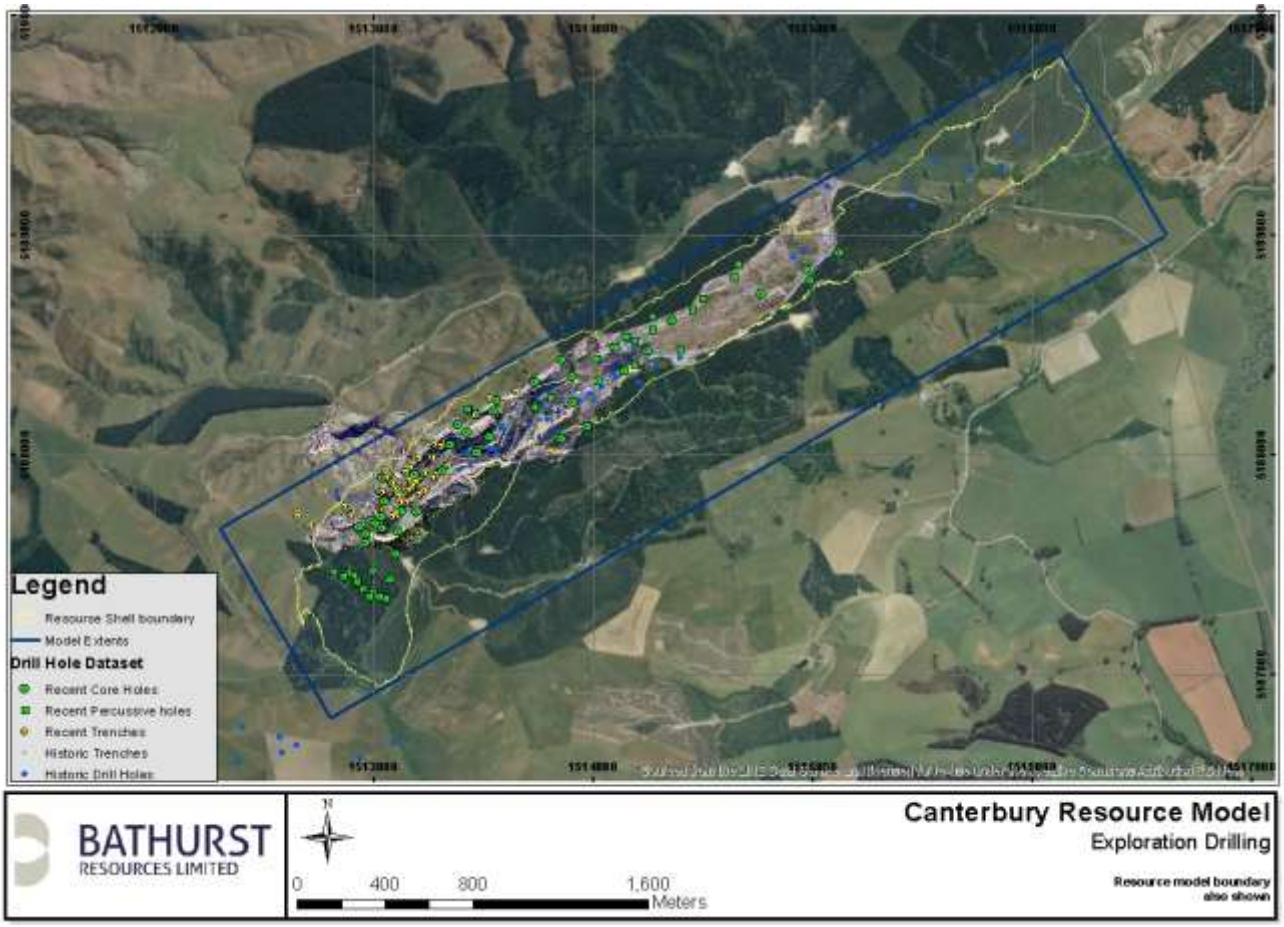


Figure 73 Exploration drill hole dataset for the Canterbury project.

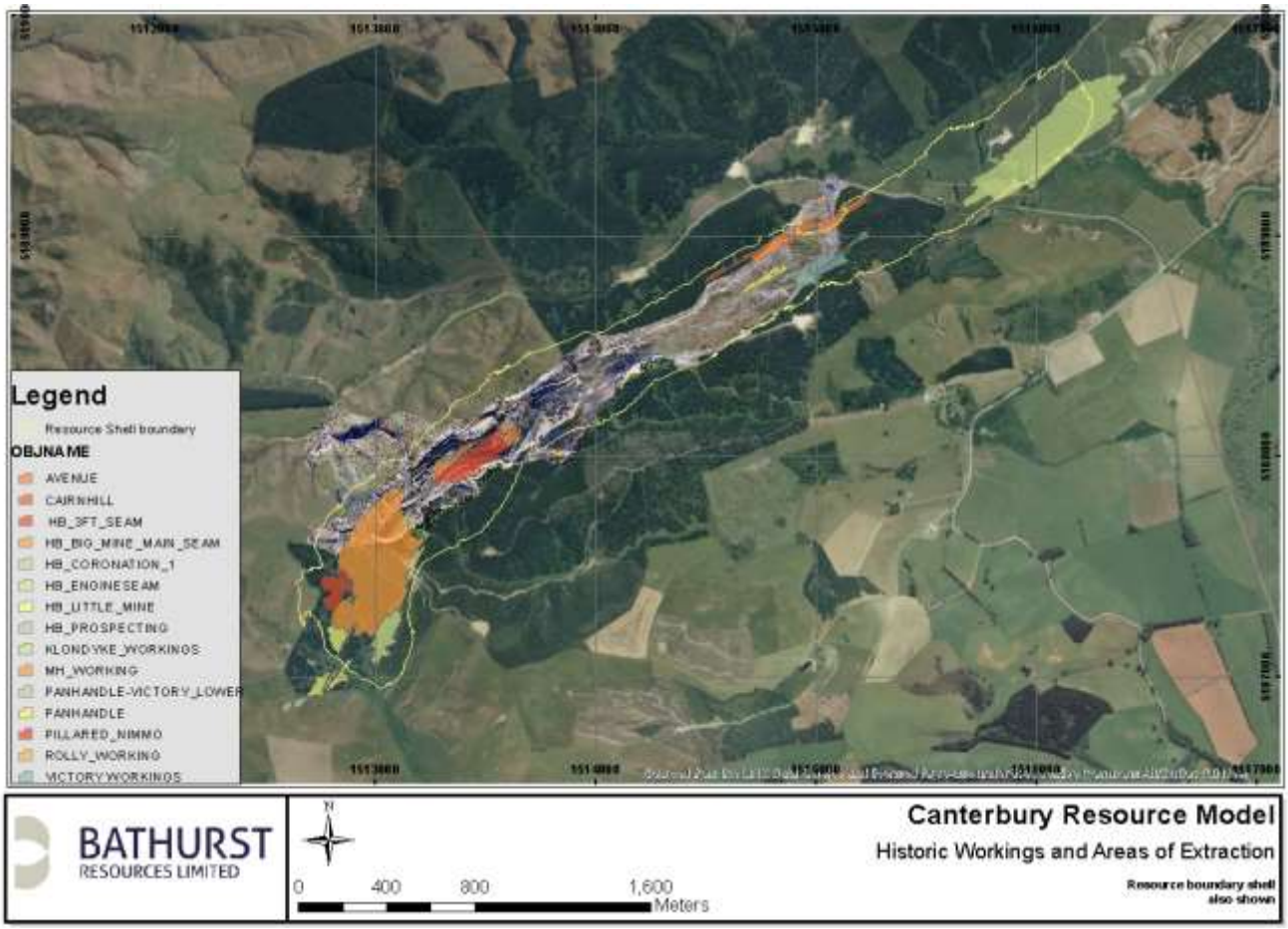


Figure 74 Extent of historic underground coal mines in the project area.

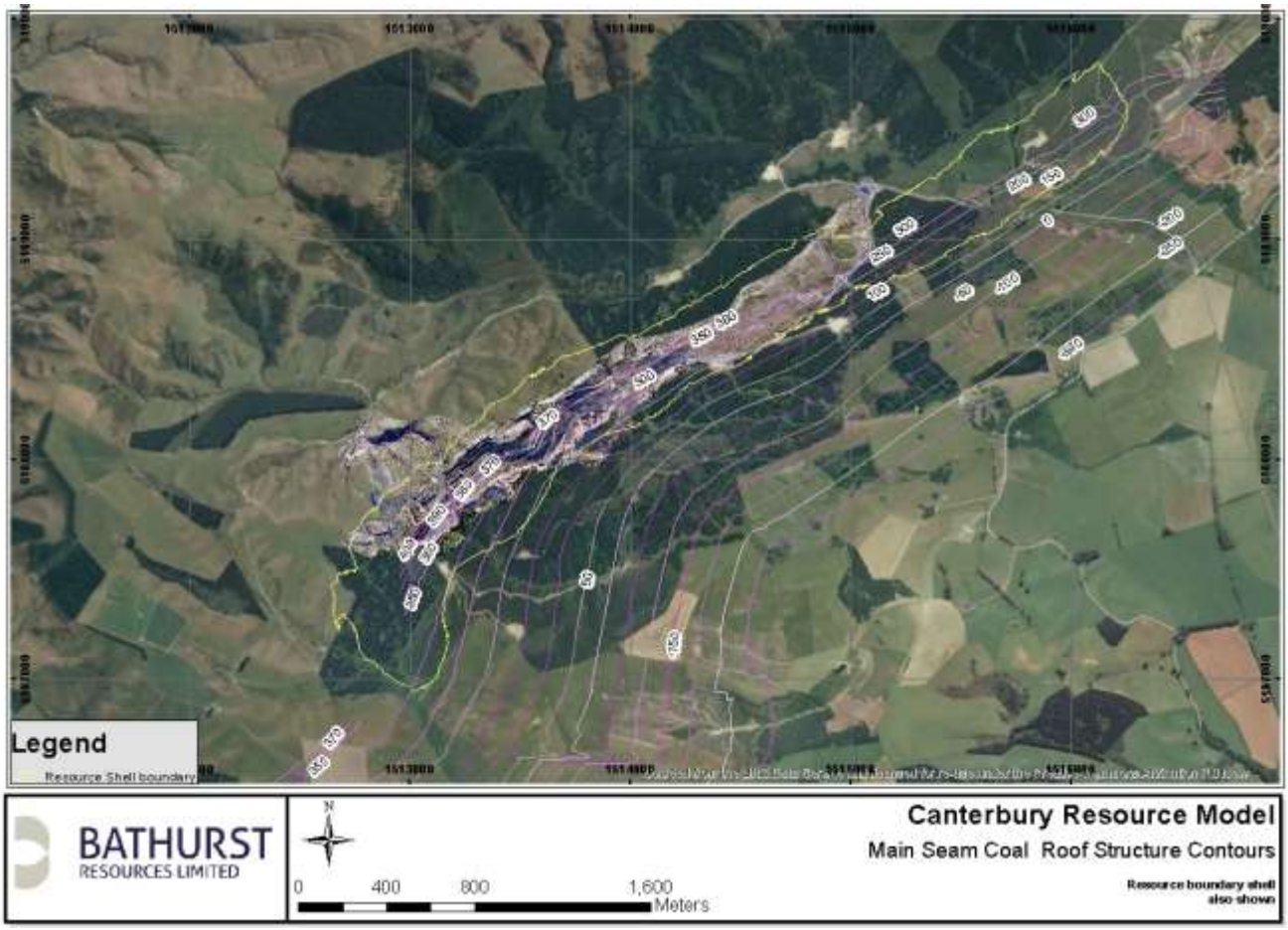


Figure 6 Structure contours of the Main Seam roof.

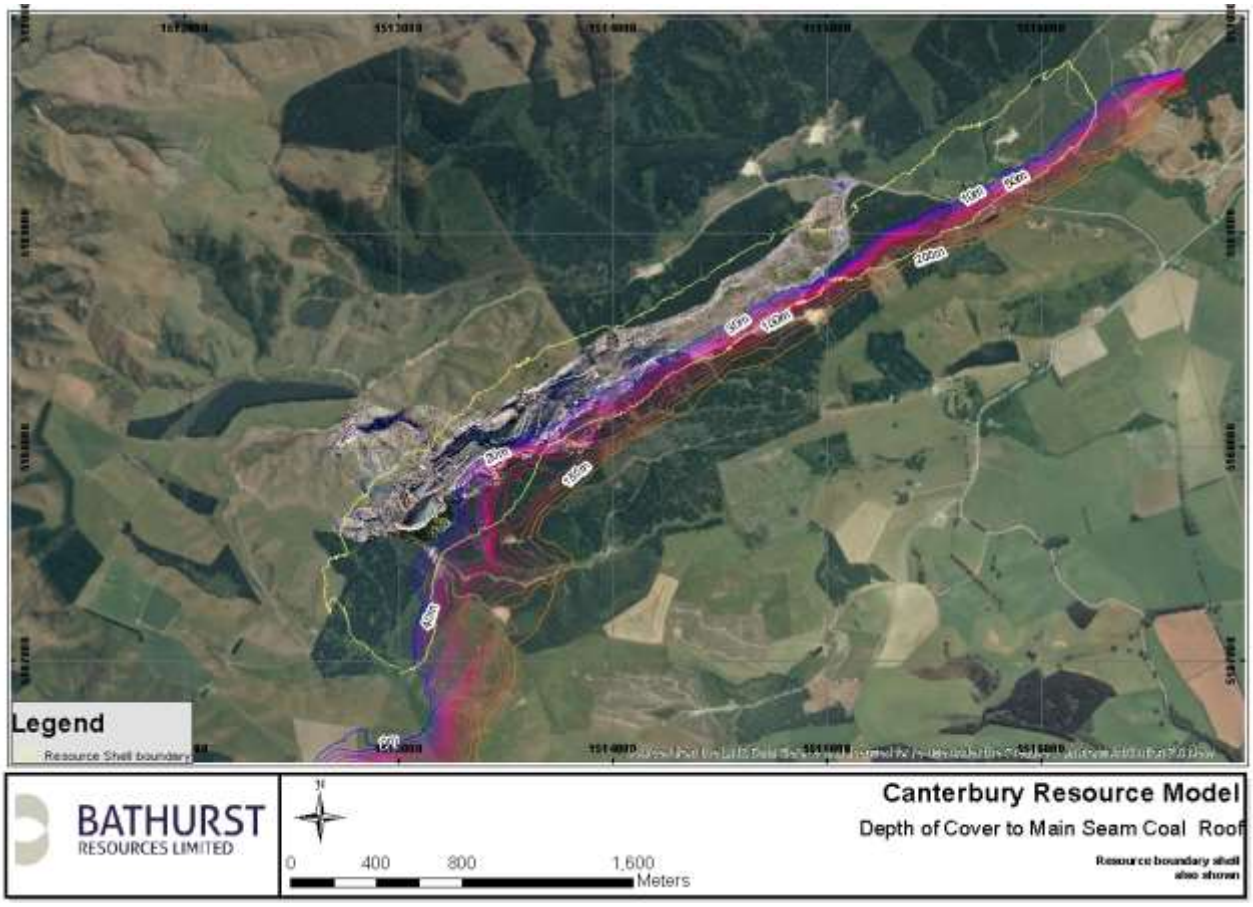


Figure 7 Depth to the Main coal seam roof.

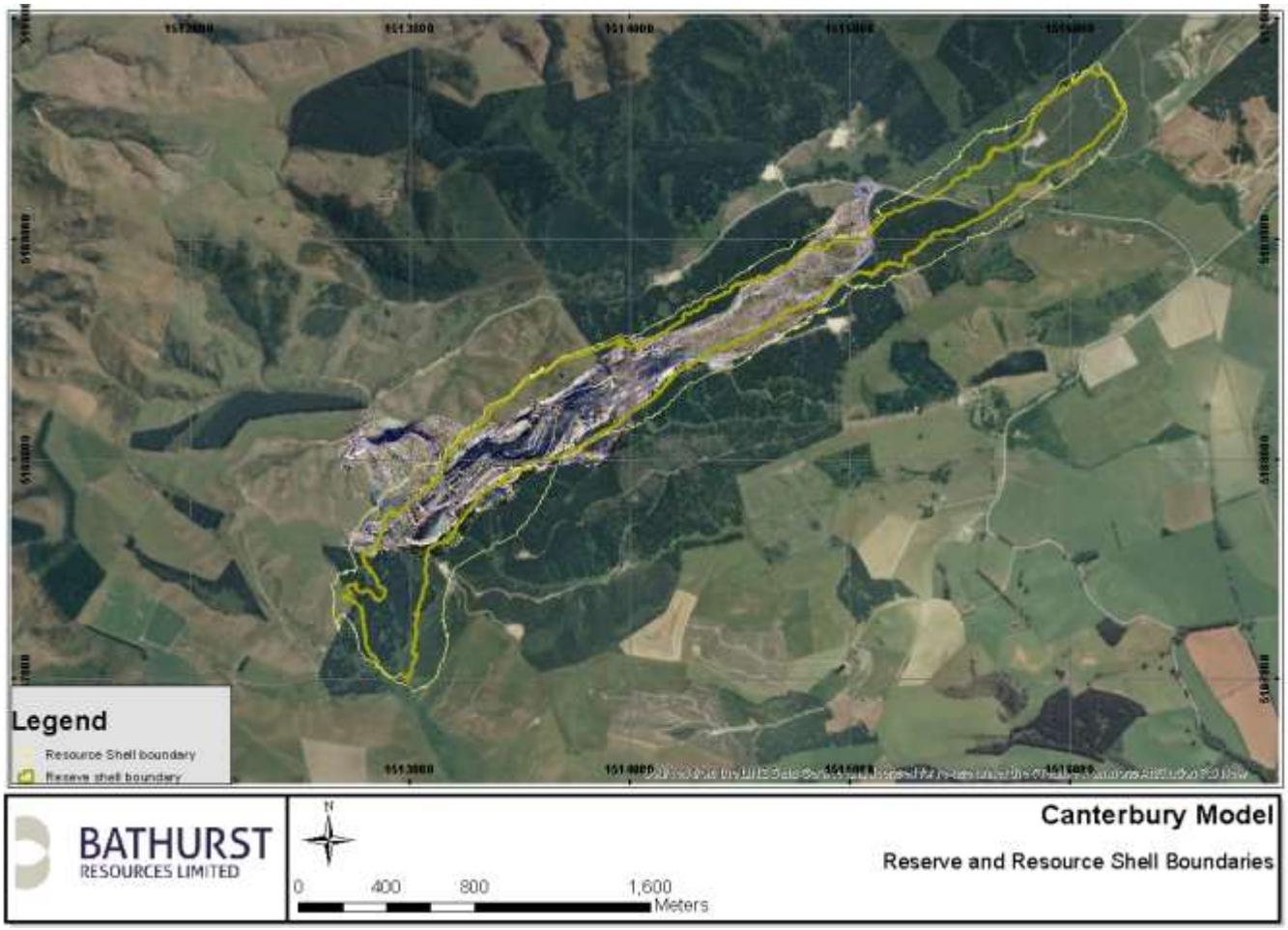


Figure 8 Canterbury Reserve and resource shell boundaries

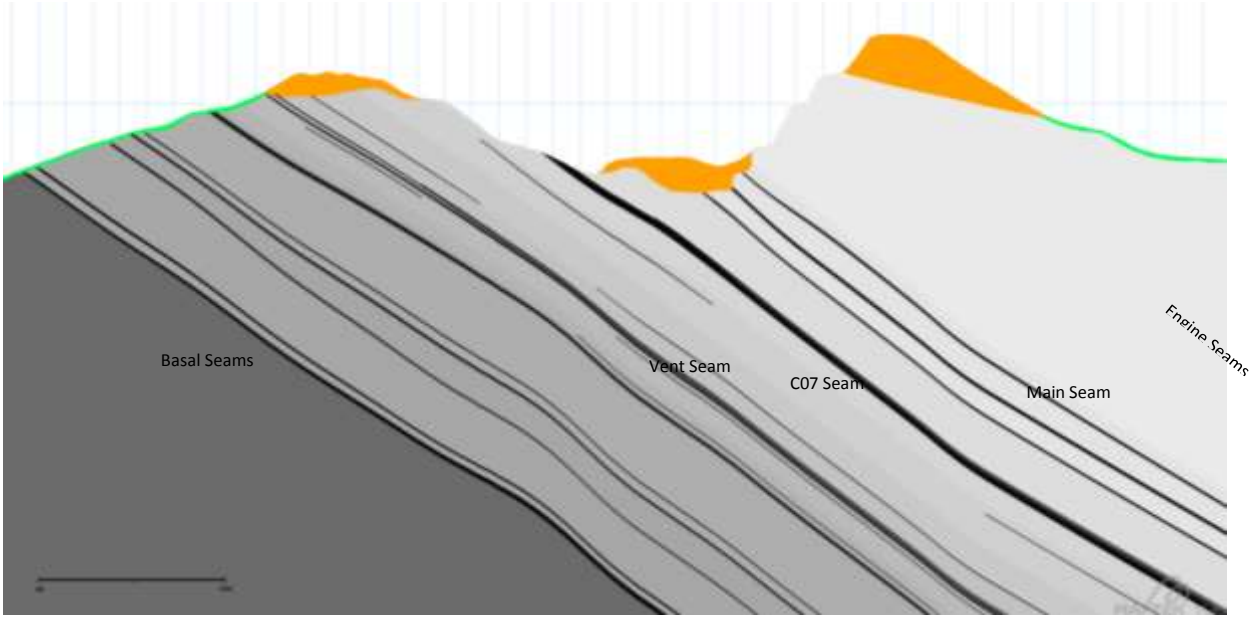


Figure 9 Section through the working pit at Canterbury Opencast Mine. Current mining is targeting the section between the Vent seam and Engine seams. As mining progresses North stratigraphically lower seams will be targeted in addition to these seams.

JORC Code, 2012 Edition – Table 1 report template for Rotowaro 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Multiple campaigns of data acquisition have been carried out in the Waikato over the past century. • Core sampling for coal quality sampling in undertaken using HQ (63.5mm) coring methods. Coal core samples are assigned unique ID's and dispatched to the laboratory with chain of custody tracked using paper, email and/or AcQuire software. Core recovery recorded in the field is validated and adjusted if required using geophysics during core logging and sampling. Composite samples are generated from individual plies that are thickness weighted. • A suite of geophysical logs, including Density, Natural Gamma, Calliper, Sonic, Dipmeter, Acoustic Scanner, and Verticality was typically run in all holes since 1989. All tools are calibrated on a regular and systematic basis. All geophysical logging work conducted by reputable contractor. • All analytical data has been assessed and verified before inclusion into the resource model.
Drilling techniques	• Tungsten drag bits are used to excavate open holes (and open hole sections) and triple tube core barrels are used to recover coal core to established industry standards. Core diameters are HQ (63mm). No core is orientated. • A number of historic drillholes are included in the database for the areas being modelled. Drillholes that have no verifiable location, lithology log or survey, or contradict adjacent reliable data, are considered unreliable and are excluded from the resource modelling datasets.
Drill sample recovery	• Standard industry techniques are employed for recovering core samples from drillholes. In open holes and open hole sections, cuttings are sampled at five metre intervals or change in lithology and logged. Core is obtained by HQ (63mm) diameter coring techniques, using triple tube operations, providing good core recovery, averaging 96%. On average recovery of target seams is 90%.
Logging	• All diamond core samples are logged in a high level of detail down to a centimetre scale. Quantitative logging for lithology, stratigraphy, texture, hardness, RQD and defects is conducted using defined material code types based on characterisation studies and mineralogical assessments. Colour and any other additional qualitative comments are also recorded. • In conjunction, most holes are geophysically logged with a suite of tools being used (as described above). Geophysical logs are analysed extensively and used to confirm and correct geological logs. Validation and, if required, correction of the geological logs against geophysics is undertaken to ensure accuracy and consistency. Verticality, calliper, density and natural gamma tools are checked regularly with standard calibration assemblies. The density calibrations are performed routinely - with blocks of known densities (aluminium and/or water). A quality report is generated by logging technician for each drillhole. • Down hole geophysical logs were used to aid core logging. Down hole geophysics were used to correlate coal seams, to confirm depths and thickness of coal seams and to validate drillers' logs. Geophysics is also used to accurately calculate recovery rates of coal. • Core photography is undertaken on all core samples.
Sub-sampling techniques and sample preparation	• No splitting of core is undertaken in the field or during sampling. Typically recovery from triple tube coring is > 90%. Sample interval and recovery recorded in the field by drillers is validated and adjusted if required using geophysics during core logging and sampling. • Sample selection is determined in-house and is documented in a detailed core sampling procedure. Clean coal core has been sampled in 0.5m plies, depending also on core loss intervals and lithological variations. A maximum ash cut off of 20% has been applied to all seams. • Sampling and sample preparation are consistent with international coal sampling methodology. • Associated high ash coal intervals and partings were sampled separately to assess

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>potential dilution effects where they are <0.5m thick. Composite horizons were determined by the ash yield of the plies. Plies with ash yield >20% were excluded.
• Ply thickness weighted compositing is conducted by SGS
• Samples are placed into labelled bags to ensure proper Chain of Custody, and then transported to the laboratory for testing. The laboratory continues with the Chain of Custody requirements. Sample preparation is undertaken according to Industry Standards.
• HQ core diameter is considered to provide a sample of sufficient volume to be representative of the in situ material and provides adequate sample mass to undertake the variety of raw coal tests together with composite testing when required. Where the testing regime requires additional sample volume PQ core size is employed.
• For surface trenches coal samples of 2kg are obtained for each 0.5m ply interval approximately equivalent weight of 0.5m of HQ core. Trenches were sampled by hand ensuring to exclude all highly weathered and contaminated material.</td></tr>
<tr><td>Quality of assay data and laboratory tests</td><td>• SGS and CRL (ACIRL Australia and Newman Energy subcontracted for specific tests) laboratories are used to undertake physical and chemical testing and use Industry Standards for all coal tests and systematic QA/QC procedures for all work. Both Laboratories hold accreditation by International Accreditation New Zealand (IANZ). The processes employed are considered to be appropriate for coal sample analysis. Results are reviewed in-house to ensure the accuracy of the data by a Senior Geologist. The laboratory has been inspected by the Company's personnel. Tests includes:
<table>
<tr><th>Test Work</th><th>Standard Followed</th></tr>
<tr><td>Chemical</td><td></td></tr>
<tr><td>Loss on air drying</td><td>(ISO 13909-4)</td></tr>
<tr><td>Inherent Moisture</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Ash</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Volatile Matter</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Fixed Carbon</td><td>by difference</td></tr>
<tr><td>Sulphur</td><td>(ASTM D 4239)</td></tr>
<tr><td>Swelling Index</td><td>(ISO 501)</td></tr>
<tr><td>Calorific Value</td><td>(ISO 1928)</td></tr>
<tr><td>Mean Maximum Reflectance All Vitrinite (RoMax)</td><td>Laboratory Standard</td></tr>
<tr><td>Chlorine in Coal</td><td>(ASTM D4208)</td></tr>
<tr><td>Gieseler plastometer</td><td>(ASTM D 2639)</td></tr>
<tr><td>Forms of sulphur</td><td>(AS 1038 Part 11)</td></tr>
<tr><td>Ash fusion temperatures</td><td>(ISO 540)</td></tr>
<tr><td>Ash constituents (xrf)</td><td>(ASTM D 4326)</td></tr>
<tr><td>Ultimate Analysis</td><td>(ASTM D3176-09)</td></tr>
<tr><td>Rheological and Physical</td><td></td></tr>
<tr><td>Hardgrove Grindability Index</td><td>(ISO 5074, ASTM D409-02),</td></tr>
<tr><td>Relative Density</td><td>(AS 10382111-1994)</td></tr>
</table>
• All analysis was undertaken and reported on an air dried basis unless stated otherwise.</td></tr>
<tr><td>Verification of sampling and assaying</td><td>• Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the Waikato Coalfield.
• All holes are geophysically logged, and verification of seam details is made through analysis of the geophysics. Assessments of coal intersections are undertaken by internal or contract geologist, and by a Senior Geologist. Geophysics allows confirmation of the presence (or absence) of coal seams, accurate determination of contacts to coal seams, density measurements are used to guide sampling and identify high ash bands.
• All diamond core samples are checked, measured and marked up before logged in a high level of detail down.
• Every discrepancy between the measured length of the core and the driller's length marked on the core blocks is investigated. Discrepancies are resolved by Rotowaro geologists prior to sampling using geophysical logs.
• Quantitative logging for lithology, stratigraphy, texture, hardness, RQD and defects is</td></tr>
</table>

Criteria	Commentary
	conducted using defined material code types based on characterisation studies and mineralogical assessments to the nearest centimetre. Colour and any other additional qualitative comments are also recorded. • Raw logs and sample dispatch notes are logged on paper and then transferred to the AcQuire database subsequently. • Geophysical logs (dual density and gamma) are analysed extensively and used to validate and, if required, correct geological and sample interval logs to ensure accuracy and consistency. • All core is photographed with corrected depth measurements before sampling. • Sample sheets are developed in-house and receive a final check by the laboratory, prior to testing. • All data is provided by the coal laboratory and reviewed internally. No adjustments are made to any coal quality data. In instances where results are significantly different from what was observed in geophysical logs or outside of local or regional ranges defined by previous testing, sample results are queried and/ or retested. Since 2006 all Coal quality data has been directly submitted and stored in electronic format using AcQuire database software. Historic data is stored electronically either in excel spread sheets or scanned documents. It is intended to validate and transfer all coal quality data into the AcQuire database, this process has commenced and is on-going. • Twin holes have not been used.
Location of data points	• Rotowaro data is presented in Mt Eden 1949 grid coordinate system in New Zealand with mean sea level datum (MSL). All drillholes post 1997 are surveyed using GPS technology and are located within +/- 40mm in three dimensions. Older drillhole collars were surveyed using conventional methods with an unknown precision. • Historical underground workings plans are based off historic hand drawn plans that have been geo-rectified (in 2D only) by converting from cadastral links to the Mt Eden 1949 geodetic grid. • Topographic dataset consists of 5x5m as-cut and as-built digital terrain models constructed from a combination of airborne LiDAR (accurate to within +/- 0.2m) collected for the whole of the Rotowaro site in December 2011, conventionally surveyed historical plans (unknown accuracy) and GPS survey data (+/- 40mm). • Drillholes with down-hole geophysics are surveyed for deviation with verticality tool (+/- 15° azimuth and +/- 0.5° inclination).
Data spacing and distribution	• Drillholes are variably spaced (<75m to 300m) depending on target seam depth, geological structure, topographic constraints, down-hole conditions due to underground workings, and degree of existing data density in immediate surrounds. • Resource estimation is based on the following drill hole spacing: <150m = measured 150-300m = indicated 300-450m = inferred Resources are downgraded from measured to indicated in areas that are indicated on historic plans to have had pillar extraction. • A thickness weighted sample composition is run in Vulcan software prior to running the coal quality model.
Orientation of data in relation to geological structure	• Orientation/spacing/ density of drillholes is driven by both coal quality and geological structure. Historically geological structure was the main factor determining drill hole spacing and orientation. The focus since 2012 has been to delineate areas of elevated sulphur and ash and decrease sample spacing for coal quality. • Drillhole spacing is bias by design, aiming to delineate areas of elevated and low sulphur and ash as well as high structural complexity throughout the mining areas.
Sample security	• Core is removed from the borehole and put into core splits. Core is wrapped in clear-wrap to retain natural moisture and put into core boxes. • Core is transported to core shed, unwrapped, logged, sampled and then re-wrapped. • Chip samples are put into bags with marked intervals by drillers and transported to core shed for logging. Chip samples are disposed of once logged. • Logged core is stored at the Rotowaro core logging facility on Rotowaro Road under lock and key, accessed only by registered personnel. Drill core is stored according to 'EXDP-N-

Criteria	Commentary
	27 Drill Core Storage'. • Samples are bagged and labeled as outlined in 'EXDP-N-24 Coal Quality Sampling and Analysis' • All analysis results are approved for input directly into AcQuire database by Resource Geologist • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core.
Audits or reviews	• Integrity of all data (drillhole, geological, survey, geophysical and CQ) is reviewed by resource Geologist before being incorporated into the database system. • An internal audit has been conducted in the past, verifying that core is being logged in a manner consistent with companywide procedures. • Palaris completed an external review of this estimation in May 2016 as part of Solid Energy's Vendor Due Diligence process. No substantial issues were raised

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The Rotowaro Resource area includes a mixture of Crown and privately owned coal. • BT Mining Limted is a joint-venture between Bathurst Resources Limited (65%) and Talley's Energy Limited (35%). • On 1st of September 2017 BT Mining Limited took control of Solid Energy assets including two operating mines Rotowaro and Maramarua) in the Waikato region of the North Island and the Stockton mine on the West Coast of the South Island. • Rotowaro CML37155 is a coal mining license of 2423.8 hectares approx., which is due to expire on the 1st of April 2027. All operations at Rotowaro including the Rotowaro4 pits are currently undertaken within this CML. BT Mining Ltd. have sole ownership of the operation. BT Mining holds long term leases over the land underlying the operations. • BT Mining holds EP56220 which is Crown-owned coal and it straddles the western side of the CML. • There are two coal owners accounting for coal reserves in the Rotowaro resource area. These are the Crown in the north of Rotowaro and the Ralph Estate. The Royalty Mortgage 17836 is a lease arrangement between the Crown and the Ralph Estate, whereby BT Mining Limited pays the Crown the Crown royalty for opencast coal ($0.50/tonne) and the Crown, subsequently pays the Ralph Estate. The Ralph Estate (WJ and SM Ralph) owns the balance by way of Coal Leases 4092 and 199268.
Exploration done by other parties	• The previous owner (Solid Energy) and its predecessors have undertaken all exploration in the area since 1986. However, there have been earlier periods of work that have contributed to the understanding of the Resource. • Early data collection is based on drill hole logs recorded by drillers. From the 1970's drill holes were also logged by geologists who had the effect of increasing the accuracy, the amount of detail and ultimately the reliability of exploration data. The addition of geophysical logging in the late 1980's further added to the reliability.
Geology	• The Rotowaro deposit trends N-S north of 618250mN and NW-SE south of 618250mN. The dip is to the NW at the northern end of the deposit and to the SW along the western margin. There are a series of NW-SE trending anticlines and synclines in the central and east of the deposit. Rotowaro is bounded to the SW by the Mangakotukutuku Monocline, with a net throw of 90m down to SW, and to the NE by the extension of the Waipuna Fault scarp. There are only minor faults identified within the deposit, with throws less than 10m. These faults are either recorded on old underground mine plans or interpreted from structure contour plans derived from drillholes. • The area is underlain by indurated siltstones, with common sandstones, of the Mesozoic Newcastle Group, weathered to a depth of 5-30m. This unit is referred to as "Basement", and has no economic significance. • The Waikato Coal Measures ("WCM") lie unconformably on the basement and form the lower part of the Te Kuiti Group. The WCM consist mainly of mudstones and siltstones, often referred to collectively as "fireclay", with common siderite concretions, referred to as "hardbars". There are three major coal seam groups within the WCM: Renown, Kupakupa and Taupiri. The Taupiri seams are only represented in the Callaghan's sector of the Rotowaro Coalfield, where they are confined to the structural trough between the Mangokotuku Monocline and the Waipuna Fault scarp.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
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Thickness patterns of seams lying close to basement are influenced by the paleo-relief developed on the basement contact, thickening and thinning over basement valleys and ridges respectively.
The upper part of the Te Kuiti Group consists of marine to marginal marine claystones, mudstones, sandstones and siltstones which are conformably overly the WCM. There is a regional unconformity at the top of the Te Kuiti Group, above which lie the Quaternary deposits of the Tauranga Group, consisting of interlayered alluvial clays, muds and highly weathered volcanic ashes of the Hamilton formation.

</td></tr>
<tr><td>Drill hole Information</td><td>

In summary, 1994 drillholes are located across the Rotowaro prospect. Only 1811 of the drillholes have been used for modeling and resource estimation. 183 were not used as they were considered unreliable, the list is included as an accompanying document (DH_out.SEL).

<table>
<tr><th>Drill hole Type:</th><th>Number of Holes / Sites</th><th>Number of Meters</th><th>Geophysically logged (Number of drill holes)</th></tr>
<tr><td>Wash Drill</td><td>1227</td><td>93026</td><td>2</td></tr>
<tr><td>Partially Cored Drilling</td><td>761</td><td>60571</td><td>84</td></tr>
<tr><td>Fully Cored Drilling</td><td>4</td><td>98</td><td>0</td></tr>
<tr><td>Other</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Total</td><td>1992</td><td>153697</td><td>86</td></tr>
</table>
</td></tr>
<tr><td>Data aggregation methods</td><td>

Coal quality ply results are composited using a thickness weighted average to give an average Assay for the entire thickness of a coal seam.
A minimum reported coal thickness of 0.5m has been used as a lower limit.

</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>

Due to the stratigraphic nature of coal measures, the coal seams generally lie in a horizontal or sub-horizontal plane. The resource discussed throughout this report has a dip to the NW at the northern end of the deposit and to the SW along the western margin. Folding and faulting through the coal seams create localized dips approaching 80 degrees.
A large majority of the surface drill holes were drilled vertically. A small number of inclined holes were drilled to target the Mangokotoku fault zone.
Drillholes tend to deviate from the vertical. This deviation is measured during down hole logging using the verticality tool.

</td></tr>
<tr><td>Diagrams</td><td>

The appendix is included with this report, it diagrams coverings for the tenement include: location maps, plans showing all boreholes, resource areas, seam structure floor contours, individual seam thickness, overburden depth and where appropriate coal quality as well as cross sections.

</td></tr>
<tr><td>Balanced reporting</td><td>

No exploration results are being presented in this report, rather this report is focused on advanced projects that have been defined by geological models with associated resource estimates completed.
The exclusion of this information from this report is considered to not be material to the understanding of the deposit

</td></tr>
<tr><td>Other substantive exploration data</td><td>

Groundwater has been encountered in most drill holes. A total of, 418 piezometers have been installed at various depths in 256 different drill holes in order to monitor changes in ground water levels for geotechnical purposes. Currently there are 51 piezometers being monitored in 27 different drill holes.
Bulk density of the coal is estimated based on ash versus density relationship
The different stratigraphic units and rock defects have been assigned various strength parameters based on a mixture of recent and historic laboratory test data (UCS, shear box and ring shears), empirical classifications (RMR, GSI and Hoek Brown) and back

</td></tr>
</table>

Criteria	Commentary
	analysis of existing cut slopes. Downhole insitu geophysical measurements have been undertaken to compare the strength variability with actual laboratory test data.
Further work	• Undertake studies on: insitu moisture moisture density and spatial variability (variography) • Drilling programs are planned within EP56220 and the western part of the Rotowaro Coal Mining License. This drilling will be incorporated into a future resource estimates.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly validated against original logs and results tables. Where reliability of the data is poor the data is excluded from the modelling process. • Data recorded in the field is input into field books and later transcribed into electronic databases using standard software. All core logging data is recorded on paper than transferred directly into a central database using AcQuire software. This software is designed to ensure data is entered and stored in a consistent and accurate manner by using dropdown menus of standard logging codes to prompt and constrain inputs. The database highlights out of range coal quality values, does not allow overlapping intervals nor logs extending beyond total hole depth. Any and all changes to the database are tracked and archived. Data correction and validation checks are undertaken internally before the data is used for modelling purposes. • BRL utilizes an AcQuire database to store and maintain its geological exploration dataset. • The AcQuire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values, standardized look-up tables for logging codes. • Validation of historic wash drilled drillholes has been carried out by comparing coal seam depths and thicknesses with those of adjacent more reliable cored drillholes in cross-section. Coal quality data and geophysical logs have been used to validate more recent (post 1977) drillholes, to provide confidence in coal seam depths and thickesses
Site visits	• Hamish McLauchlan (the competent person) visits the project area on a regular basis.
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification. • Confidence in interpretation of geological stratigraphy, structure and seam correlation/continuity is variable across the Rotowaro area. Seam correlation are difficult to interpret in some areas due to the discontinuous nature, and rapid variation in thickness of the coal. • Variations in geological confidence are reflected representatively in the reported resource classifications. In the areas of poor geological confidence these resource have been reported internally as exploration targets. • Residual uncertainty exists concerning geological structure along the Mangokotuku fault zone. All of the past interpretations of this zone involving highly complex faulting have been proven inaccurate as the geology is exposed through mining. Currently it is modeled as a large near vertical monocline. • The data used in the geological interpretation included field mapping, LiDAR, drillhole data, core logging data, geophysical logs, sampling, coal quality laboratory testing and assessments. • Coal seam ash content can vary locally due to the occurrence of siderite concretions and calcite vaining in the coal seams. The resource model does not predict these occurrences well which leads to localized increases in ash. • Other factors affecting continuity of geology are basement ridges/ thin coal and faulting. The Taupiri Lower seam can terminate against basement highs and ridges due to peat “onlap” during deposition. It can be difficult to predict whether the Taupiri Lower seam is merged with the Taupiri Main seam over basement highs, as is sometimes the case, or whether it terminates against the basement. This can lead to a want zone where the coal seam is absent. Where this has happened in the past it has been found that the increased thickness of the Taupiri Lower seam around the want zone balances out the losses of the want zone.

Criteria	Commentary
Dimensions	• The Rotowaro resource area covers approximately 11.5km². • Within this area all seams are exposed in the operating mine. Pre-mining the Renown Seam roof was as close as 6m to the surface and the floor of the Taupiri Bottom seam is as deep as 290m (-200m RL) below the surface. • Coal thickness varies considerably throughout the Rotowaro area, from 28m down to <0.5m.

Estimation and modelling techniques	• Modeling has been undertaken using Maptek's Vulcan software by geologists and mining engineers trained and experienced in its use.
	• The Tauranga Group (Quaternary sediments and soils) structural floor is modeled using a stacking algorithm with a pre-mining topographical surface as a reference.
	• Structural surfaces for coal seams, Whaingaroa, Glen Massey, and Mangakotuku Formation's roof and floor are modeled using a triangulation algorithm to produce grids on a 15x15m basis in order to best define the structure in the project area.
	• Structural surfaces are cropped using an as-cut topography to remove material that has been mined, and an as-built topographical surface is then overlaid to create a structural roof of fill surface.
	• Coal quality data is modelled using inverse distance algorithm with a trend order of zero (linear interpolation) and maximum smoothing (9 passes). This method searches concentrically about each grid node for a minimum number of points to use to interpolate the grid node value. A maximum of 10 points were used with no maximum distance due to low data density over some of the project area. Seam, parting and coal quality grids produced as part of modelling workflows are reviewed to ensure no anomalies exist and that original data is honoured.
	• From these grid models a 15x15m block model is produced. Values assigned to blocks are determined from single grid node values.
	• The Rotowaro resource was underground mined from 1919 to 1986. The Rotowaro No's.1, 3, 5, and 6, Callaghans, and Mahons all operated within the Rotowaro Coal Mining License. The Rotowaro West exploration permit has been underground mined by Awaroa No. 4, and Summit. Underground Mining studies for the site have been conducted with historic plans digitized and void size estimated based on mining techniques. From this the resource and reserves are depleted based on estimated recoveries as detailed below under mining factors or assumptions.
	• The Rotowaro resource has also been mined by numerous open cast mines. Rotowaro 1,2, and 3, Maori Farm 1, 2, and 3, Waipuna, Callaghans, Boundary, and the only currently operating mine Rotowaro have all operated in the Rotowaro Coal Mining License.
	• Regarding geological interpretation - no significant faults (other than the Boundary Faults) have been modeled.
	• The only material that could be considered by-product that is recovered from the Rotowaro resource is contaminated coal. This comes from collapsed underground workings and roof and floor cleanings. It is "washed" at the washery at an estimated 70% product yield.
	• Mining has been occurring continuously at Rotowaro since 1919 with no record of acid mine drainage.
	• Validation of data during modelling occurs at three different stages:
	  ○ Firstly when importing drillhole data from the master AcQuire database to ensure that the original dataset is in order.
	  ○ Once structural grids have been produced from drillhole data, the slice viewer tool is used to run sections through the grids both across and along dip to check for any anomalies.
	  ○ Finally once structural and CQ grids have been produced from drillhole data the data posting tool is used to ensure grid nodes honour drillhole data. Contour plans are also produced to ensure modelled values represent original data
	These three validation steps are conducted for thickness and each coal quality variable for all target seams.

Moisture	• Testing work has been undertaken to determine moisture levels from all core with Inherent Moisture being measured and in the 8000, 15000, and 17000 series drill holes Total Moisture is also measured.
Cut-off	• A minimum seam thickness cut off for all modelled seams is 0.50m. As this is what is considered to be mineable using current methods.

Criteria	Commentary
parameters	• The coal has been classified as high volatile sub-bituminous B rank and is likely to be marketed thermal coal. • A maximum ash cut-off of 20% has been applied to all seams.
Mining factors or assumptions	• This declaration reports on a long term operating site. • Selected mining method chosen from long term experience of local conditions. • Geotechnical parameters for cut slope design were developed based on historical cut slope performance, slope back analysis and laboratory testing of material strength parameters. Slopes are designed to comply with a Factor of Safety that exceeds 1.2 and within BRL risk volume criteria which is a function of the probability of failure and potential failure dimensions. • Mining recoveries. Minimum recoverable coal thickness 0.5m. Unworked coal seam recovery 97%, first worked coal recovery 94% and pillared coal recovery 34%; - all include wash recovery.
Metallurgical factors or assumptions	• Although not included in the resource model, studies have been conducted on the properties of the coal pertaining to combustion potential, Ash fusion temperatures and Hardgrove Grindability Index.
Environmental factors or assumptions	• There are a number of Resource Consents regarding land use, air, and water quality that must be strictly adhered to for the Rotowaro site. • Rotowaro mine site has no rock types that are capable of generating acid rock drainage. • Suspended solids is treated through a series of drains and sumps that collect dirty water which is pumped through the central water treatment where dosing with flocculants can occur if necessary before being discharged into the Rotowaro stream. • Waste material is rehabilitated using soils recovered before overburden removal. The soil is spread to a thickness of 0.4m, and then sown in grass seed before being planted in pine trees. • The Rotowaro site has resource consent to use bio-solids as a soil conditioner to help with reestablishing vegetation as part of the rehabilitation of the site.
Bulk density	• Bulk density is assumed the same as relative density, • Density is estimated using an ash-density relationship formula
Classification	• Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction and proximity to faults and unconformities. The result reflects the Competent Person's view of the deposit. • Closely spaced drilling with valid samples increases the confidence for each seam in resource assessments.
Audits or reviews	• Palaris completed an external review of this estimation in May 2016 as part of Solid Energy's Vendor Due Diligence process. No substantial issues were raised • Several internal reviews have been completed during the various project stages and during purchase due diligenceNo audits or reviews have been undertaken on this resource estimation.
Discussion of relative accuracy/ confidence	• Based on the data available, the degree of accuracy of this statement is considered high for the Rotowaro resource. The process for calculation has used: Standards, Guidelines and the JORC Code along with best practice where available to define the Resource estimates provided to confirm search estimation ranges and drill hole spacing for each resource classification • Resource declared as potentially mineable resources. This is based on a Whittle pit-optimization run using a $125 maximum revenue pit shell. • Although no geostatistical data is available for the deposit resources reconcile well with production data. When all mining factors are taken into account and reserves calculated, the long-term performance of the model verses actual coal production. This shows approximately 5% higher coal production than Reserved.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
	• Reserve calculated from measured & indicated resource areas that have been determined from drillhole spacing and presence of underground workings. See

Criteria	Commentary
	sections above. • Resources are reported inclusive of the reserve.
Site visits	• Site based engineer reporting on established operating site, daily pit visits.
Study status	Rotowaro is an operating mine project. The reportable Ore Reserve is based on the life of mine (LOM) plan and has determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered.
Cut-off parameters	• Pit optimisation runs were completed to determine economic pit limits. • Thin seam cut-off limit determined from long term site experience and quality info related to sales product requirements.
Mining factors or assumptions	• Pit shell determined initially determined by strip ratio cut offs subsequently modified after slope stability analyses. • Minimum mining thickness, seam compositing factors, losses associated with u/g mining washery yield. • T&S determined to be most cost effective mining method given the multiple and steeply dipping nature of coal seams as well as the requirement for large quantity of ex pit dumping initially required. Proven mining method in terms of past and present operations at site. • Geotechnical parameters for cut slope design were developed based on historical cut slope performance, slope back analysis and laboratory testing of material strength parameters. Basic highwall design criteria include slopes in Waikato Coal Measures (fireclay & coal) and 'softs' (marine sediments, quaternary clays and old backfill) Slopes are designed to comply with a Factor of Safety that exceeds 1.2 and within BRL's risk volume criteria which is a function of the probability of failure and potential failure dimensions. Consideration of underground workings intersecting highwalls also considered • Resource model used was the R29 model. • Mining dilution factors are minimum mining tk 0.5m, parting 0.1m, coal:waste 10:1, roof/floor losses 0.15m (combined) per recoverable seam . • CQ values adjusted for product specs by adding 0.55% to ash, nil to S and fixed C, 4.08% to inherent moisture and specific energy utilizes an empirical ash (ar) and total moisture relationship. Default assays used where thin IB is included in the mining horizon and where no data exists. • A 'mining_recovery' variable is calculated in the reserve model to account for roof & floor losses. Roof/floor losses 150mm, Calc is (rom_thk – 0.15) / rom_thk and Ranges from 0.7 (0.5m mining horizon) to ~0.985 (10m mining horizon) • Mining recoveries based on historic recoveries. KK seam fw 30%, pillared 1.5m 55%, pillared 5.0m 65% and 8.0m 60%. TP seam: First worked 40% Pillared 1.5m 55% Pillared 5.0m 60% TM seam First worked 20%, Pillared 1.5m 55%, Pillared 5.0m, 65%, Pillared 8.0m, 60%, Pillared 10.0m, 55% TL seam First worked 15% • Proportion of coal to wash plant Unworked 10%, First Worked 20%, Pillared 50%
Metallurgical factors or assumptions	• Product coal specifications include ash, sulphur, moisture and calorific value. • Product specifications are adequate to meet contractual sales requirements.
Environmental	• All regulatory consents required for an operating mine are current. • Waste rock characterisation results show that the material is non-acid or metal producing, as such it does not require special placement requirements or procedures in the dumps
Infrastructure	• All necessary infrastructure is in place and operational for the current operation.
Costs	• Rotowaro is an existing operating mine and as such all infrastructure is in place at Rotowaro. The primary ongoing capital requirements are for equipment replacement and this is included in the economic model. • All operating costs were based on the 3 year budget estimates and include allowances for royalties, commissions, mining costs, train loading and administration. • Product specifications and penalties for failure to meet specification are included

Criteria	Commentary
Revenue factors	• Long term sales contracts in place.
Market assessment	• Rotowaro opencast Feasibility Study PAG5 July2004. • Long term sales contracts in place.
Economic	• Rotowaro opencast Feasibility Study PAG5 July2004. Economic Assessment • No NPV analysis was completed as it is an operating mine. For JORC Reserves reporting purposes, detailed mine design and schedules are generated. This work includes identifying the mining sequence and equipment requirements. • BRL generates detailed cash flow schedules and identifies incremental and sustaining capital • Long term sales contracts in place.
Social	• All regulatory consents required for an operating mine are current. • Updating of approvals is an ongoing process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Other	• All regulatory consents required for an operating mine are current.
Classification	• Confidence based on resource model assessment. • Results fairly reflect CP's understanding of the deposit. • Classification of Ore Reserves has been derived by considering the Measured and Indicated Resources and the level of mine planning. • For the Rotowaro operation, Measured Coal Resources are classified as Proved Coal Reserves and Indicated Resources classified as Probable Coal Reserves, as the mine is currently operating and the level of mine planning adequate. • The Inferred Coal Resources have been excluded from the Reserve estimates.
Audits or reviews	• Palaris completed an external review of this estimation in May 2016 as part of Solid Energy's Vendor Due Diligence process. No substantial issues were raised. • Several internal reviews have been completed during the various project stages and during purchase due diligence.
Discussion of relative accuracy/ confidence	• Confidence in the result is reinforced by reviewing the long term performance of the model's history verses actual coal production. This shows approximately 5% higher coal production than modeled. • Reserves are only stated for the current pit and do not include areas currently being investigated for probable further pit expansion to the east. • Because of the longer term results showing good correlation between actual tonnes sold and the model it is thought the current modifying factors are performing adequately.

Appendix

Maps and plans discussed within Table 1 are reported below.

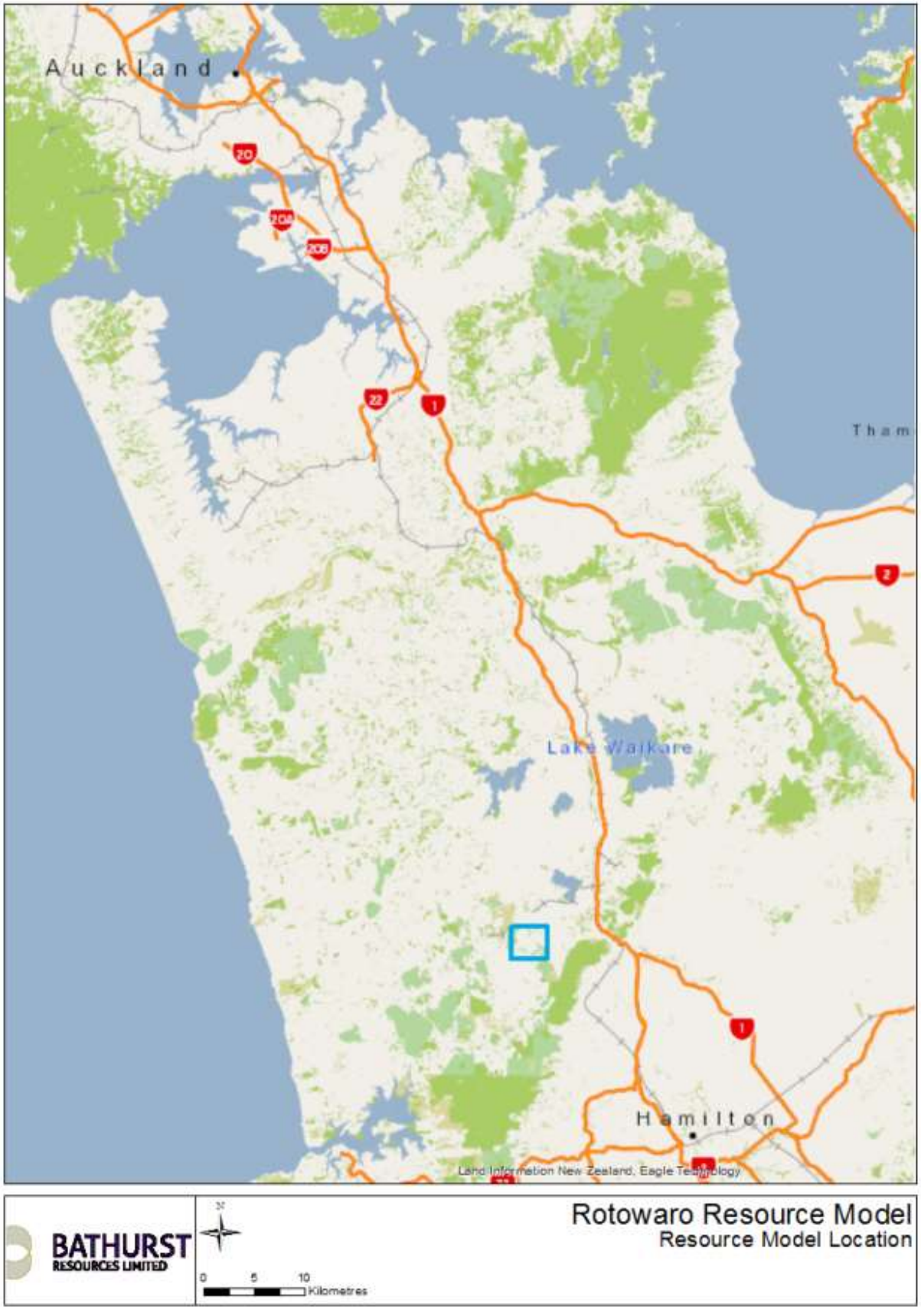

Figure 1 Location Plan

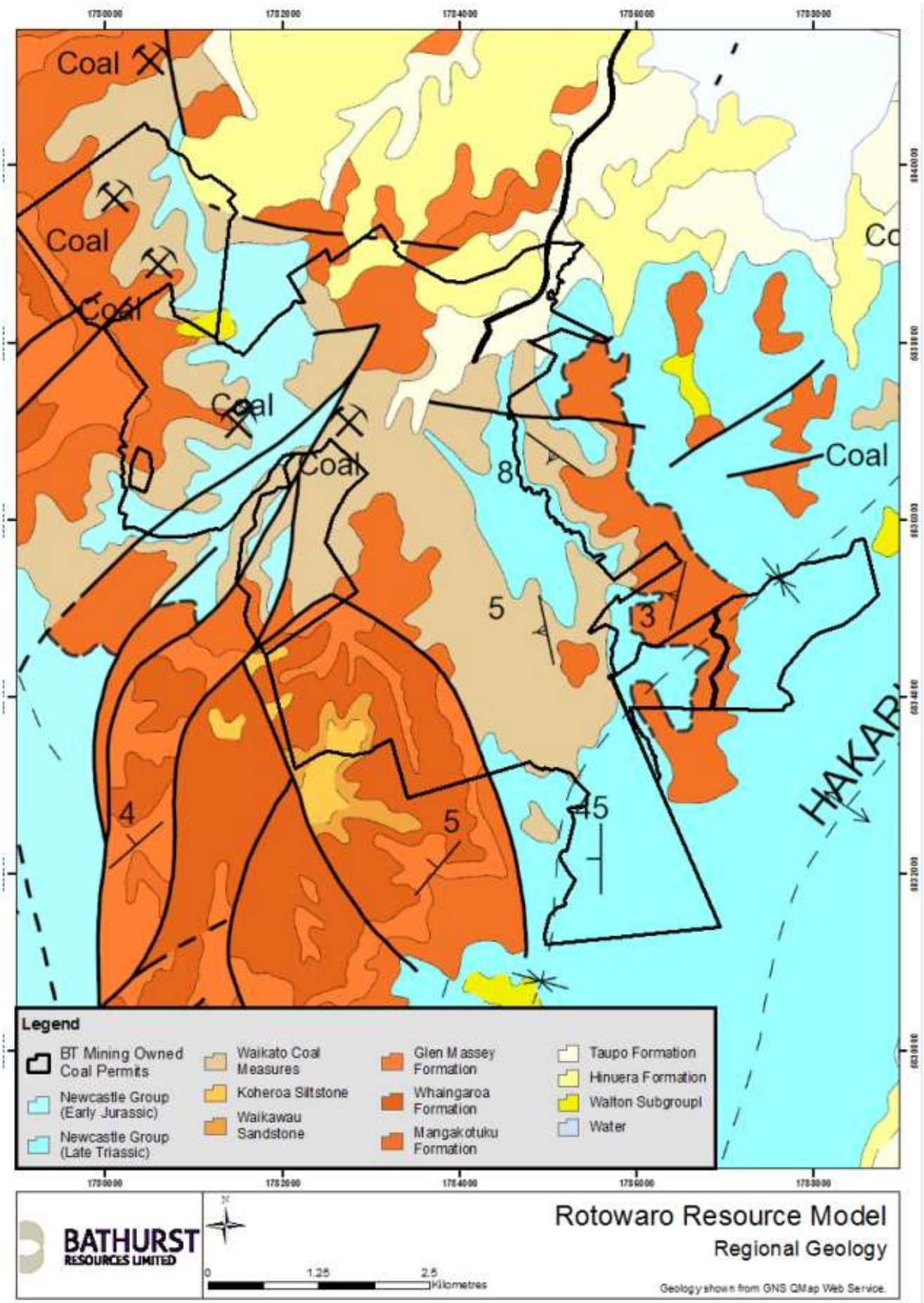

Figure 2 Regional Geology

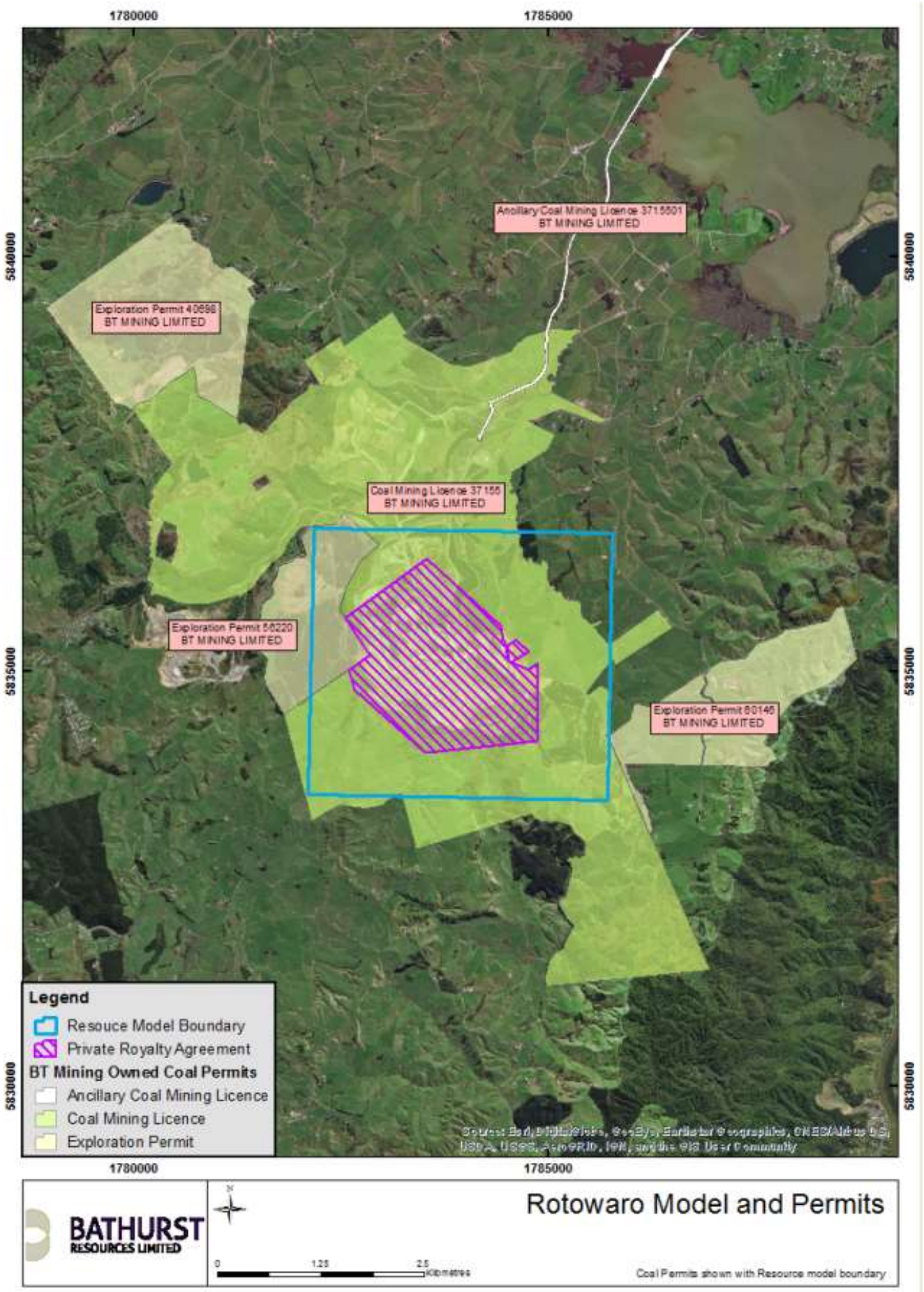

Figure 3 Rotowaro and the Coal Licenses and permits within the resource model area

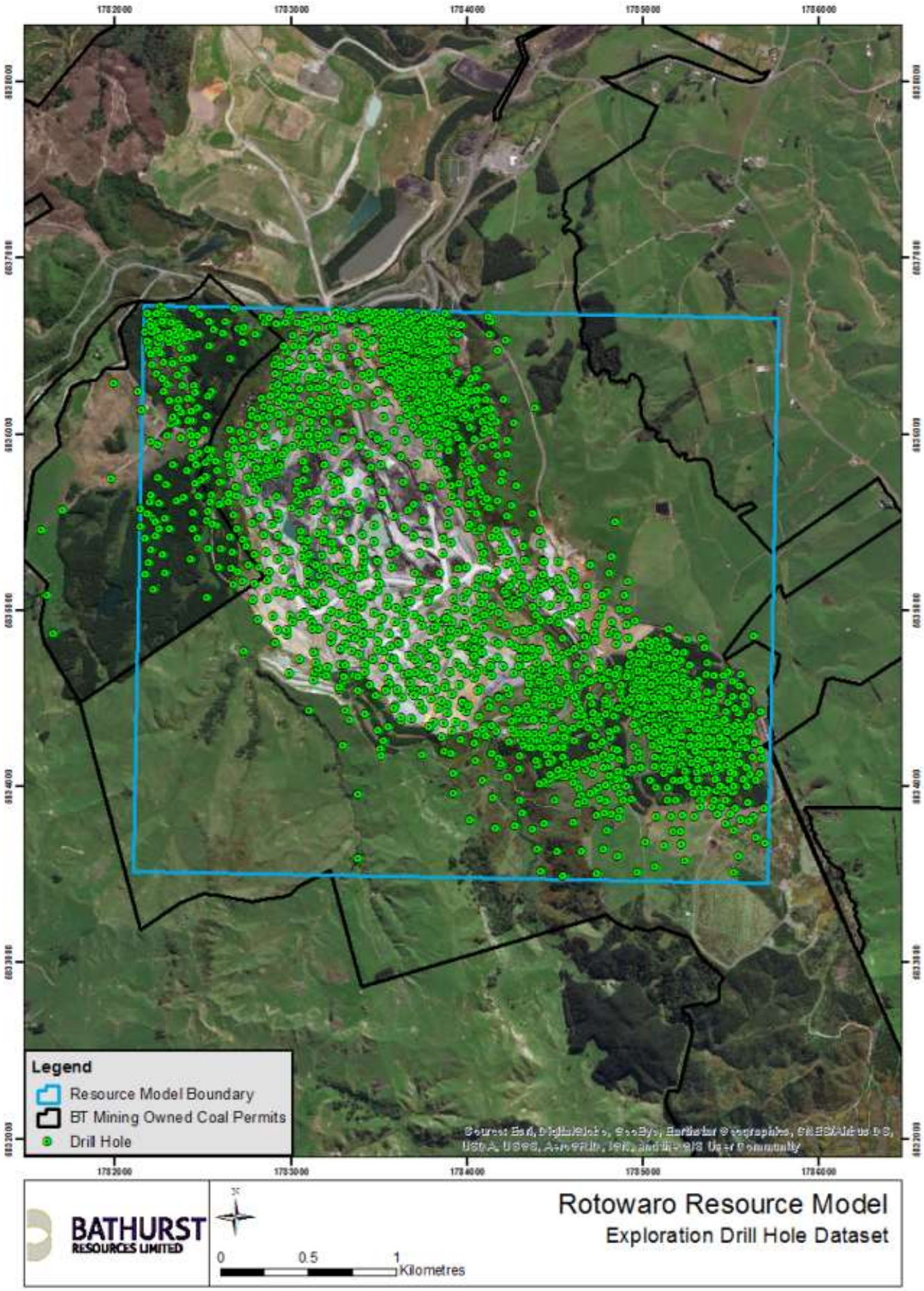

Figure 4 Plan showing the drilling dataset used to produce the resource model

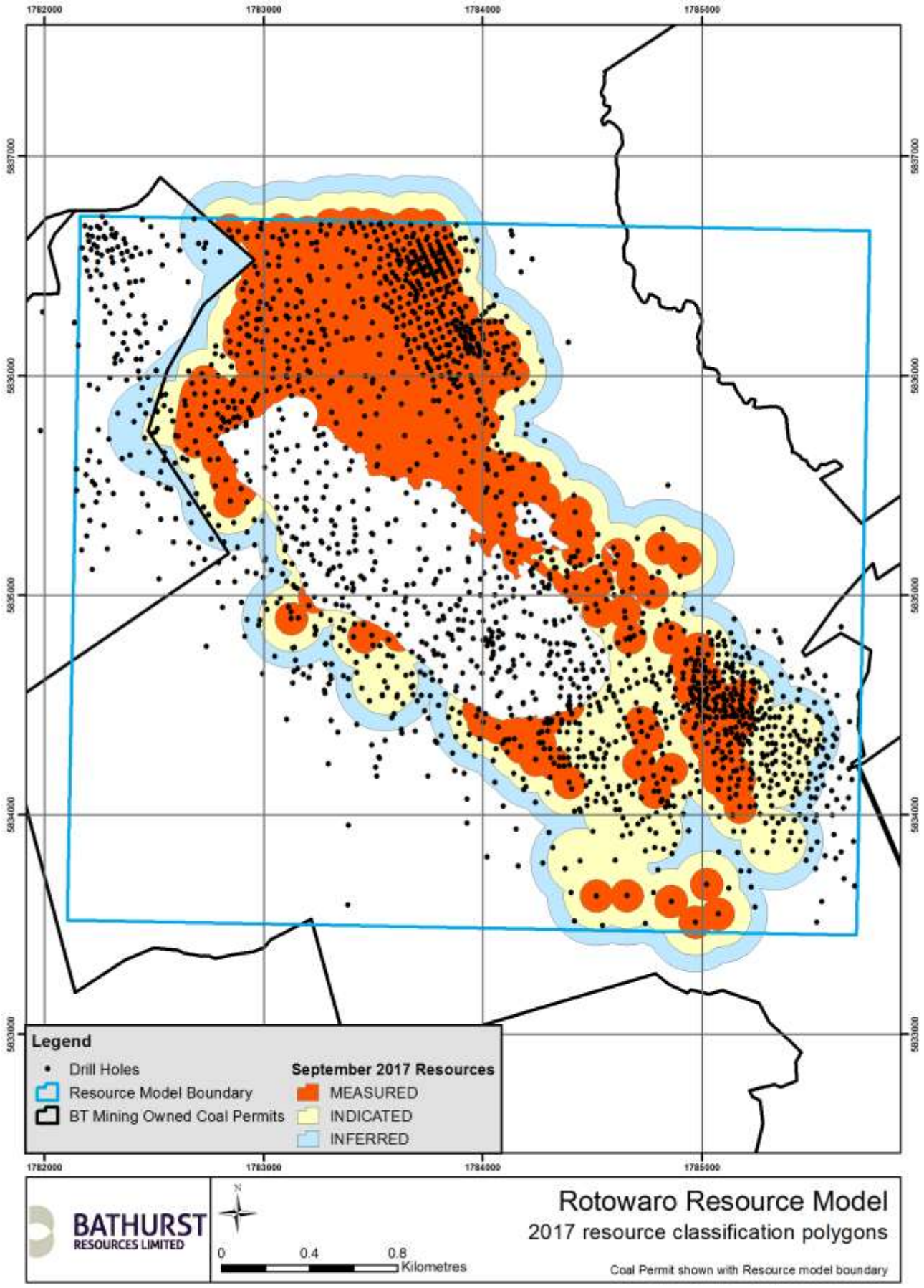

Figure 5 Plan showing the 2017 resource classification polygons

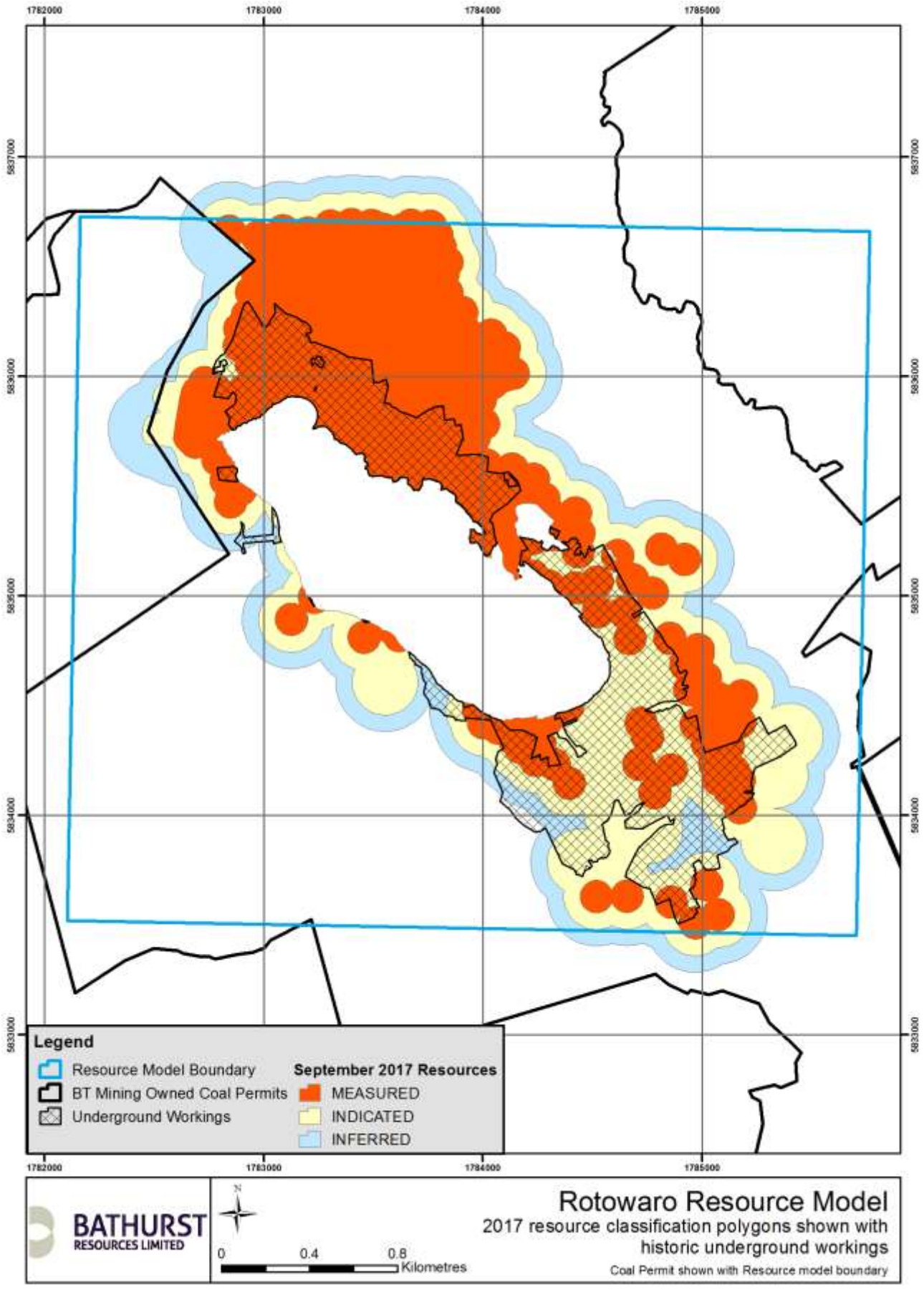

Figure 6 Extent of Underground Workings and 2017 resource classifications

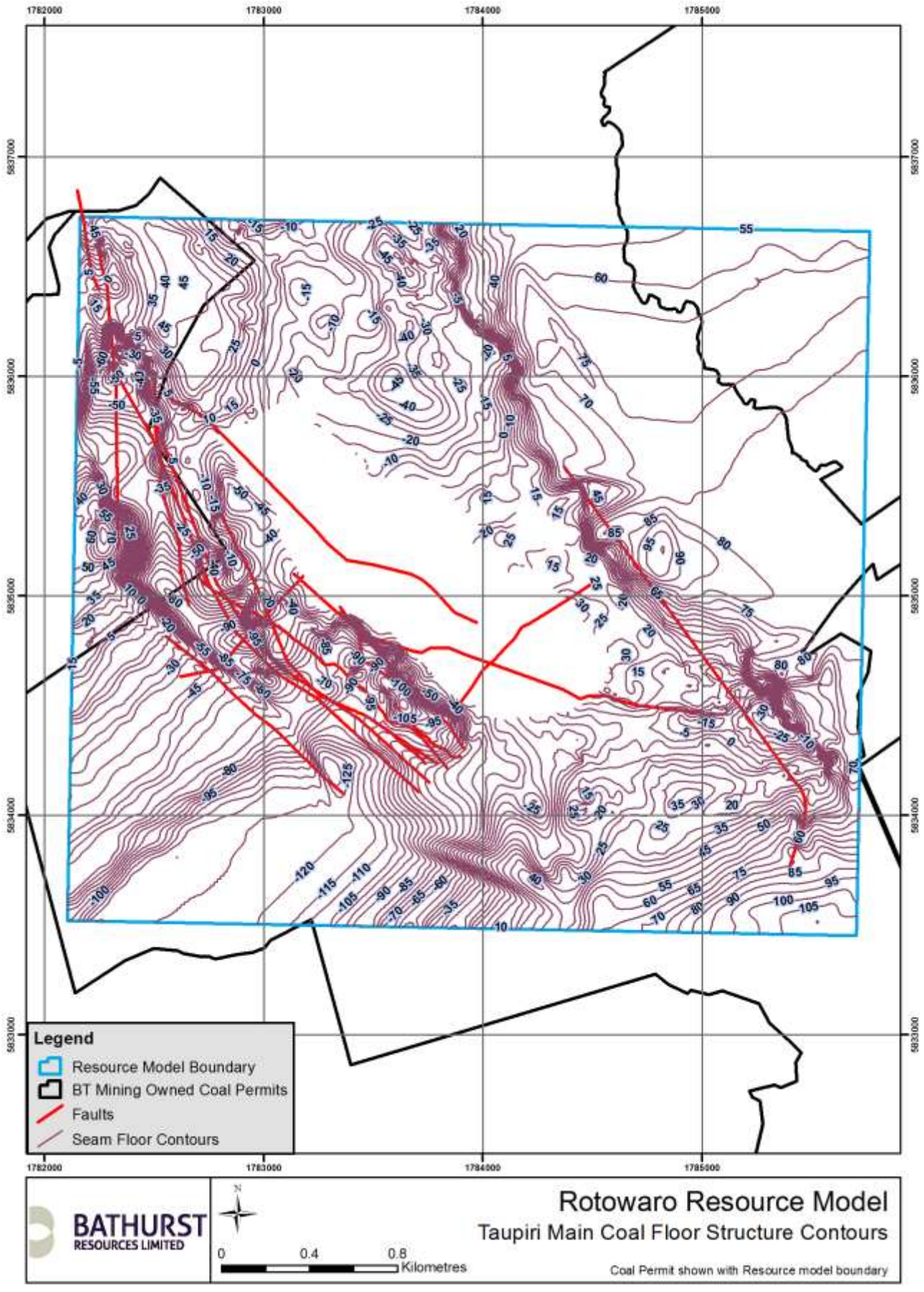

Figure 7 Plan showing the structure contours of coal seam floor

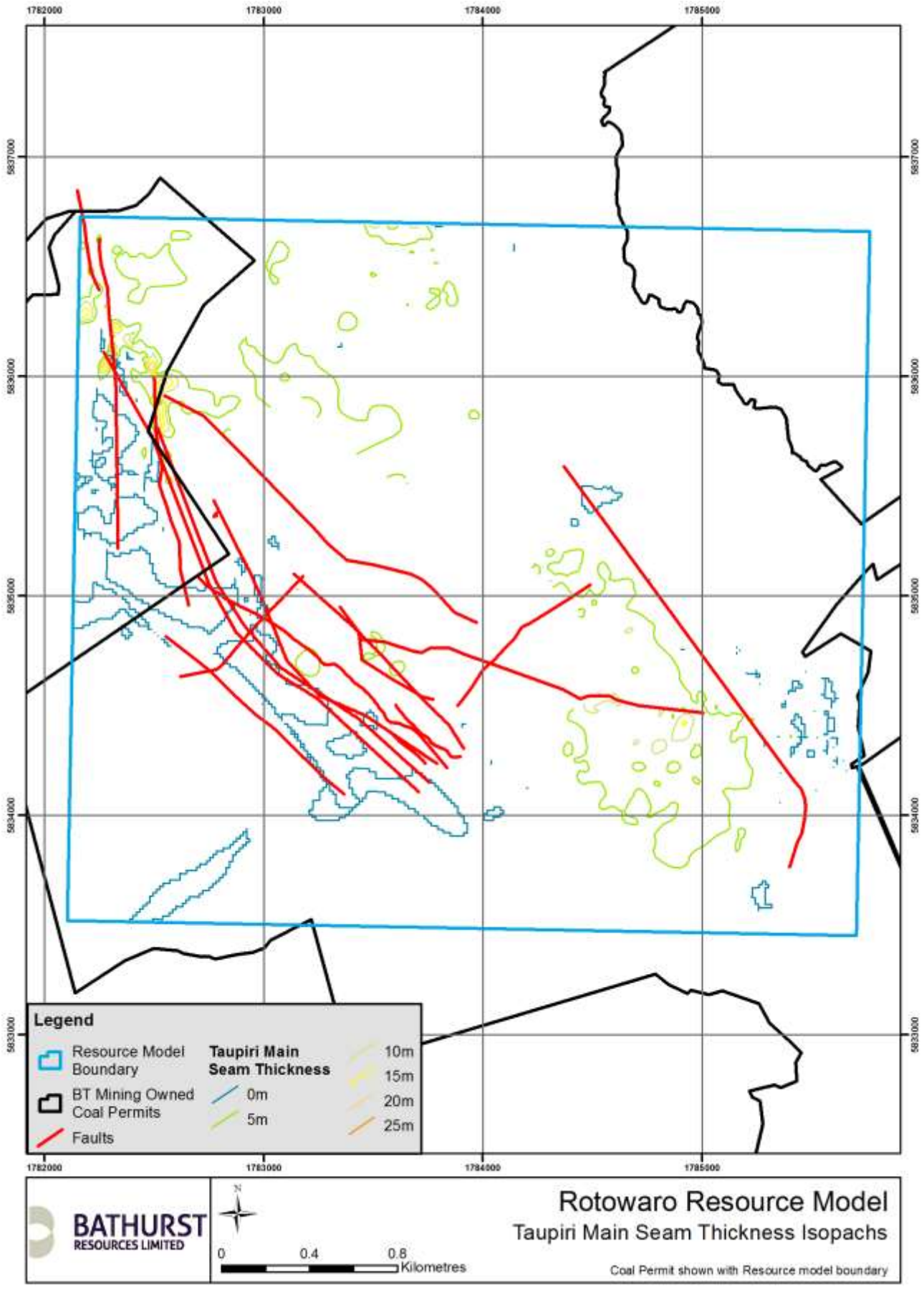

Figure 8 Plan showing full seam thickness contours over the model area

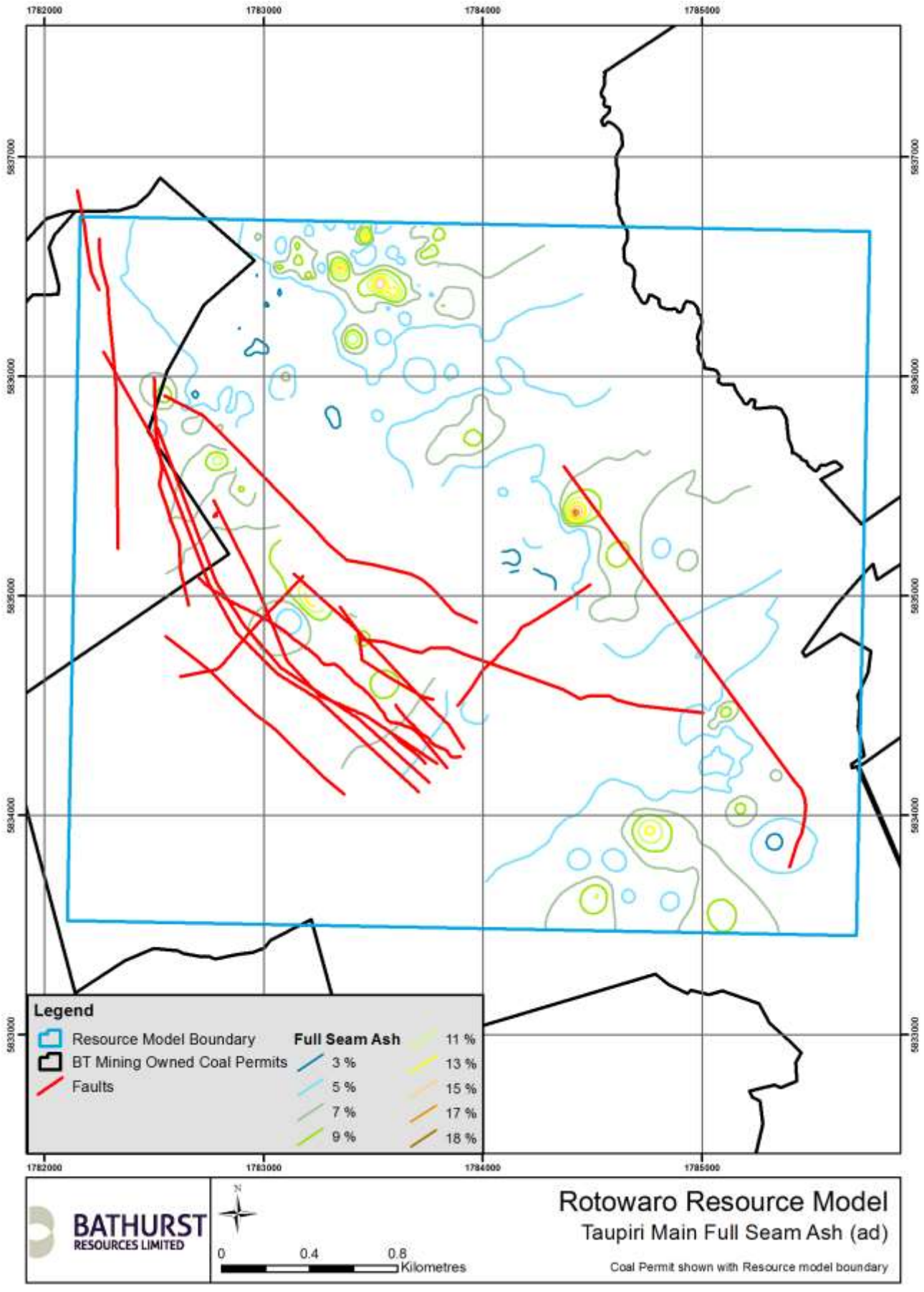

Figure 9 Plan showing in-situ full seam ash on an air dried basis as modelled over the deposit area

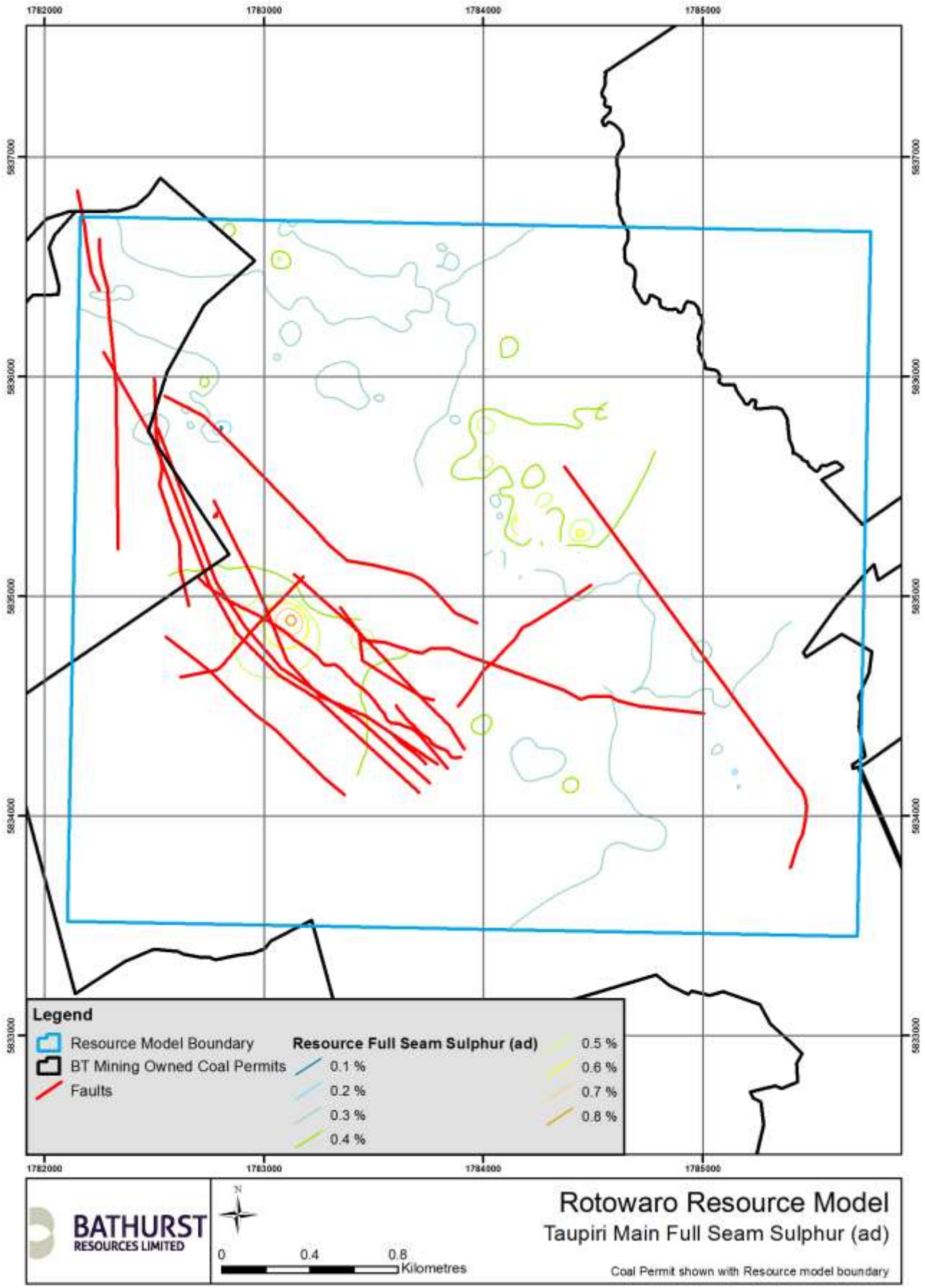

Figure 10 Plan showing full seam sulphur on an air dried basis across the resource area

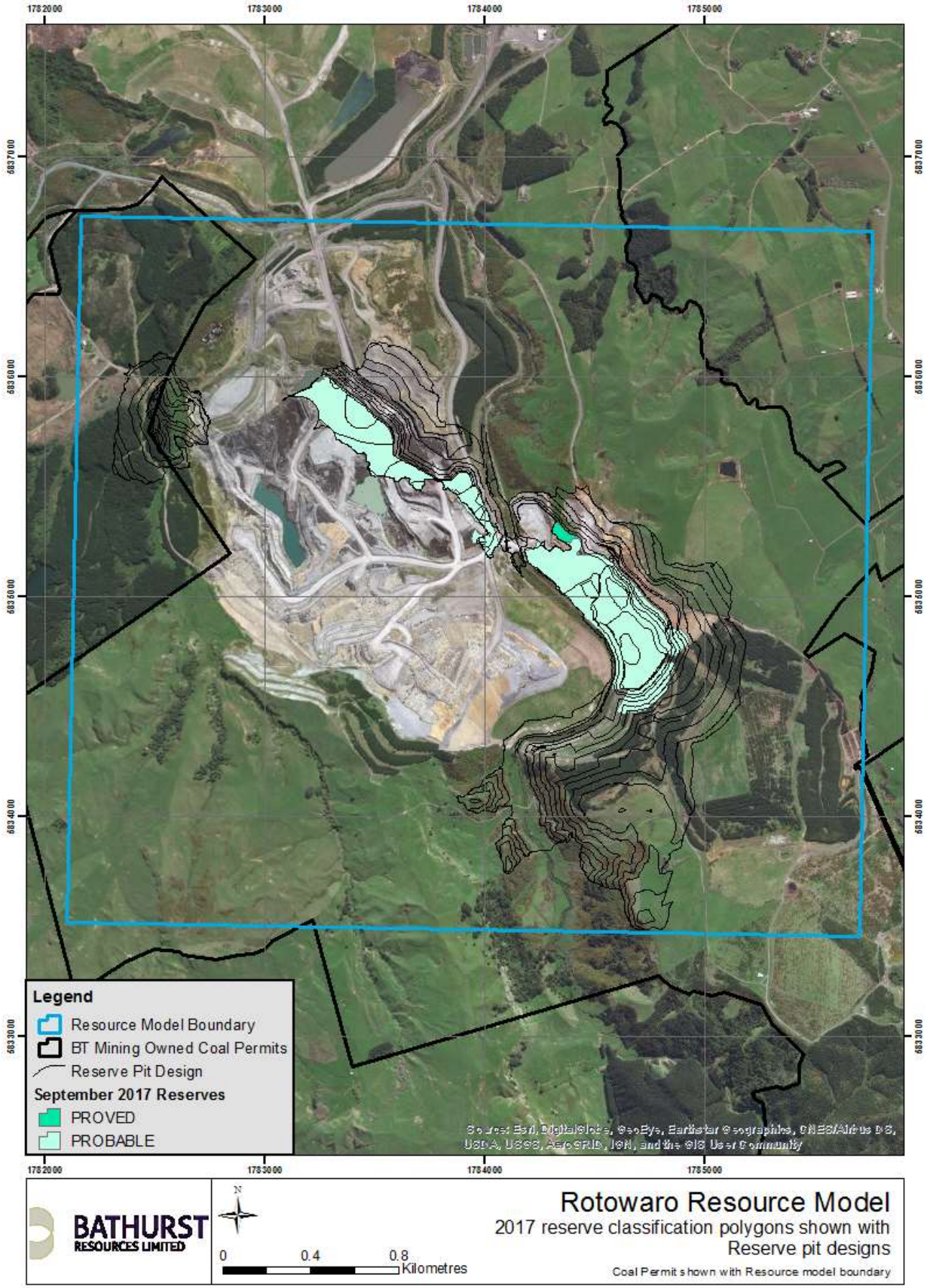

Figure 11 Rotowaro reserve pit shells

JORC Code, 2012 Edition – Table 1 report for Maramarua 2017

Section 1 Sampling Techniques and Data

Criteria	Commentary

Sampling techniques	• Multiple campaigns of data acquisition have been carried in the Waikato Coalfield over the past century
	• The drillhole database for the resource model area comprises 666 drillholes.
	  ○ 432 of these drillholes were drilled between 1945 and 1960, and were wash drilled with chip samples being logged by the driller.
	  ○ Since 1977, the majority of drillholes have had coal seams cored; with overburden and interburden typically wash drilled. Coal core has been logged by geologists.
	  ○ Sampling of coal core for coal quality testing has been carried out since 1977, typically using HQ (63.5mm diameter) coring techniques.
	• Coal core samples are assigned unique IDs and sent to the laboratory with a chain-of-custody tracked using paper, email and AcQuire software. Core recovery recorded in the field is validated and adjusted if required using geophysical density logs during core logging and sampling. Composite samples are produced from individual plies that are thickness weighted.
	• A suite of geophysical logs including density, natural gamma, calliper, sonic, dipmeter, acoustic scanner and verticality have been run in most holes since the late 1970s. All tools are calibrated on a regular and systematic basis. All geophysical logging work has been conducted by a contractor (Weatherford and its predecessors).
	• Ply samples were generally taken over intervals no greater than 0.5m.
	• All analytical data has been assessed and verified before inclusion into the resource model.

Drilling techniques	• Open hole (wash) drilling, with a 4” or 6” tungsten drag bit was typically used to drill through overburden, and triple tube core barrels were used to recover HQ sized (63.5mm diameter) coal core, • The 1950s (pre-opencast) drillholes were entirely wash drilled. • Core is not oriented; downhole strata orientations are taken from geophysical logs. • A number of historic drillholes are in the database for the areas being modelled. Drillholes that have no verifiable location, lithology log or survey, or contradict adjacent reliable data, are considered unreliable and are excluded from the resource modelling datasets.
Drill sample recovery	• Core recovery was measured by the logging geologist for each drillers’ run (usually 1.5m) in each drill hole • In open holes and open hole sections, cuttings are sampled typically at 5 m intervals, or when there is a change in lithology noted by the driller. Cuttings are logged, and stratigraphic logs for these intervals are corrected using geophysical logs. • Core was obtained by HQ (63.5 mm) diameter coring techniques, using triple tube operations, providing good core recovery (averaging approximately 90%). • Recovery standards for target horizons are generally high, at typically greater than 90%. Re-drills are required if there is less than 90% recovery in the coal seam.
Logging	• All diamond core samples are logged in a high level of detail, down to a centimetre scale. Quantitative logging for lithology, stratigraphy, texture, hardness, RQD and defects is conducted using defined material code types based on characterisation studies and mineralogical assessments. Colour and any other qualitative comments are also recorded. Core photography is undertaken on all core samples. • Wash drill samples are washed in a sieve to leave rock chips, which are quantitatively logged by assessing lithology. Samples were photographed. • Where holes were geophysically logged, the logs were used to confirm and correct

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>geological logs. Validation and, if required, correction of geological logs against geophysics is undertaken to ensure accuracy and consistency. Verticality, calliper, density and natural gamma tools are checked regularly with standard calibration assemblies. The density calibrations are performed routinely with blocks of known densities (aluminium and/or water). A geophysical log quality report is generated by the logging technician for each drillhole.</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>• Sampling and sample preparation were consistent with international coal sampling methodology.
• No splitting of core is undertaken in the field or during sampling. Typically recovery from triple tube coring is greater than 90%. Sample interval and recovery recorded in the field by drillers is validated and adjusted if required using geophysics during core logging and sampling. Bagged wash drill samples are washed in a sieve to remove drilling mud, leaving rock chips for logging. Wash drill samples are not sent to the laboratory for coal quality analysis.
• Sample selection is determined in-house and is documented in a core sampling procedure. Clean coal has generally been sampled in 0.5m plies (some thicker plies for older drillholes), depending also on core loss intervals and lithological variations.
• Where potentially high ash coal intervals and partings are noted in core or in geophysical logs, these were sampled separately. Composite intervals were determined by the ash yield of the plies. Plies with an expected ash of greater than 20% were excluded. Ply thickness weighted compositing is conducted by SGS Laboratory.
• Samples are placed into labelled bags to ensure proper chain of custody, and then transported to the laboratory for testing. The laboratory continues with the chain of custody requirements. Sample preparation is undertaken according to industry standards.
• HQ core diameter is considered to provide a sample of sufficient volume to be representative of the in situ material and provides adequate sample mass to undertake the variety of raw coal tests together with composite testing when required.</td></tr>
<tr><td>Quality of assay data and laboratory tests</td><td>• SGS and CRL (ACIRL Australia, Newman Energy and Eurofin ELS Ltd subcontracted for specific tests) laboratories are used to undertake physical and chemical testing and use Industry Standards for all coal tests and systematic QA/QC procedures for all work. Both laboratories hold accreditation by International Accreditation New Zealand (IANZ). The processes employed are considered to be appropriate for coal sample analysis. Results are reviewed in-house to ensure the accuracy of the data by the Project Geologist. The laboratories have been inspected by the Company's personnel. Tests include:
• Chemical
<table>
<tr><th>Test Work</th><th>Standard Followed</th></tr>
<tr><td>Chemical</td><td></td></tr>
<tr><td>Loss on air drying</td><td>(ISO 13909-4)</td></tr>
<tr><td>Inherent Moisture</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Ash</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Volatile Matter</td><td>(ASTM D 7582 mod)</td></tr>
<tr><td>Fixed Carbon</td><td>by difference</td></tr>
<tr><td>Sulphur</td><td>(ASTM D 4239)</td></tr>
<tr><td>Swelling Index</td><td>(ISO 501)</td></tr>
<tr><td>Calorific Value</td><td>(ISO 1928)</td></tr>
<tr><td>Mean Maximum Reflectance All Vitrinite</td><td>Laboratory Standard</td></tr>
</table></td></tr>
</table>

Criteria	Commentary

(RoMax)	
Chlorine in Coal	(ASTM D4208)
Gieseler plastometer	(ASTM D 2639)
Forms of sulphur	(AS 1038 Part 11)
Ash fusion temperatures	(ISO 540)
Ash constituents (xrf)	(ASTM D 4326)
Ultimate Analysis	(ASTM D3176-09)
Rheological and Physical	
Hardgrove Grindability Index	**(ISO 5074, ASTM D409-02),**
Relative Density	(AS 10382111-1994)

- All samples for CV, sulphur and proximate analysis are split into two samples to provide a duplicate sample. The duplicates are tested with a repeatability level in accordance with the standard method. Reference standards are used to confirm the calibration of each test. The reference standards are plotted daily by the laboratory to correct and biases or trends. The laboratory also participates in external quality control auditing on a regular basis. The results of these audits are shared with the Company.

Verification of sampling and assaying

- Sample assay results have been cross referenced and compared against lithology logs and downhole geophysics data. Results are also inspected by experienced geologists and compared with expected values utilising known coal quality relationships for the Waikato Coalfield.
- Anomalous assay results were investigated and, where necessary, the laboratory was contacted and a retest undertaken from sample residue.
- Where holes were geophysically logged, verification of seam details is made through analysis of the geophysics. Otherwise this is done by physical assessment of the core and/or other drillhole samples. Assessments of coal intersections are undertaken by an internal or contract geologist, and by a senior geologist. Geophysics allows confirmation of the presence (or absence) of coal seams and accurate determination of contacts to coal seams. Density measurements are used to guide sampling and identify high ash bands.
- All diamond core samples are checked, measured and marked up before being logged in a high level of detail.
- Every discrepancy between the measured length of core and the driller's length marked on the core blocks is investigated and corrected prior to sampling, if necessary.
- Quantitative logging for lithology, stratigraphy, texture, hardness, RQD and defects is conducted using defined material code types based on characterisation studies and mineralogical assessments to the nearest centimetre. Colour and other additional qualitative comments are also recorded.
- Raw logs, as well as sample dispatch details, are logged onto paper then transferred into the AcQuire database, in accordance with the Solid Energy Rotowaro Technical Standard 'Processing of Drill Chips and Core and Geologic Logging'.
- Geophysical logs (dual density and gamma) are analysed and used to validate and, if required, correct geological and sample interval logs to ensure accuracy and consistency.
- Sample sheets are developed in-house and receive a final check by the laboratory prior to testing. The North Island Coal Quality Manager and Technical Marketing Manager provide guidance on the specific testing regime to be undertaken on both

Criteria	Commentary
	ply and composite samples. • All data provided by the coal laboratory is reviewed internally. No adjustments are made to any coal quality data. In instances where results are significantly different from what was observed in geophysical logs, or outside of local or regional ranges defined by previous testing, sample results are queried and/or retested. Since 2006 all coal quality data has been directly submitted and stored in electronic format using AcQuire database software. Historic data is stored electronically either in Excel spreadsheets or scanned documents. All coal quality data has been validated and transferred into the AcQuire database. • Twin holes have not been used.
Location of data points	• All drillholes have been surveyed by Company qualified professional surveyors. Drillholes prior to 1997 were surveyed using conventional survey methods with unknown precision. Since 1997, drillhole collars have been surveyed using GPS technology and are located within +/- 40mm in three dimensions. • All Maramarua drillhole collars are surveyed in Mt Eden 1949 coordinate system, with mean sea level datum (MSL). • The topographic dataset consists of a digital terrain model (DTM) constructed from an airborne LiDAR survey (accurate to +/- 0.2m) collected for the whole of the Maramarua site in May 2012. The DTM has been supplemented by GPS survey data (+/- 40mm accuracy). • Surveyed elevations of drill hole collars are validated against the LiDAR topography and ortho-corrected aerial photography. • Drillholes with downhole geophysics are surveyed for deviation with the verticality tool (+/- 15^{o} azimuth and +/- 0.5^{o} inclination).

Data spacing and distribution	• Drillholes are variably spaced (less than 75m to greater than 300m) depending on target seam depth, geological structure, topographical constraints and the degree of existing data density in the immediate surrounds.
	• In areas of prospective mining, the average drillhole spacing is 75m or less. Resource estimation is based on the following drillhole spacing:
	  ○ Less than 240m = measured
	  ○ 240m – 350m = indicated
	  ○ 350m – 600m = inferred
	• The current drill hole spacing is deemed sufficient for coal seam correlation purposes
	• A thickness weighted sample composition is run in Vulcan software prior to building the coal quality model.

Orientation of data in relation to geological structure	• In the Maramarua area the strata dips approximately 10^{o} to 15^{o}, although this can increase in localised area, particularly adjacent to faults. All drillholes are designed to intercept the target coal seams or some other key geological structure (i.e. faults). Several inclined drillholes have been undertaken to intercept normal faults in the area. Targeted infill drilling is utilised in areas of prospective mining to decrease coal quality sample spacing. • The low angle of strata dips means vertical drillholes are the most successful in achieving desired high angle intercepts of the coal seams. • The modelling of the deposit uses holes both with and without reliable verticality data. Drillholes without verticality data are considered to be vertical. • Vertical drilling is considered to be the most suitable drilling method of assessing the coal resource at Maramarua.
Sample security	• Core is removed from the borehole and put into core splits. Core is wrapped in clear-wrap to retain natural moisture and put into core boxes. Additionally, coal core is wrapped in cling film before placing in clear-wrap to assist moisture retention. • Core is removed from the clear-wrap at the core logging facility where it is photographed, logged, sampled and then re-wrapped. Sampling was conducted in accordance with the Solid Energy Rotowaro Standard 'Coal Quality Sampling and Analysis'. This includes placing samples into labelled bags that are transported directly to the laboratory accompanied by soft and hard copies of the sample

Criteria	Commentary
	submission, to insure proper chain of custody. • Chip samples are put into bags labelled with drilling intervals by the driller, and transported to the core logging facility for logging. Chip samples are disposed of once logged. • It is not considered likely that individual coal samples face a risk of theft or sabotage as coal is a bulk commodity with little value for small volumes of coal from drill core. • All analysis results are input directly from the laboratory into the AcQuire database by the project geologist.
Audits or reviews	• BRL has reviewed the geological data available and considers the data used to produce the resource model is reliable and suitable for the purposes of generating a reliable resource estimate. • Integrity of all data (drillhole, geological, survey, geophysical and laboratory information) is reviewed by the resource geologist before being incorporated into the Company's centralised database system. • Internal audits are regularly conducted (e.g. at the start of drilling campaigns or when new logging geologists are employed) to verify that samples are being logged and sampled in accordance with Company standards and procedures. No formal auditing / review procedure is currently in place. • All corrections and changes made to the database are recorded.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The Maramarua Resource area includes a mixture of Crown and privately owned coal . • Coal Mining Permit CMP41821 held by BT Mining Limited (BT Mining) in the Maramarua Coalfield at Kopako comprises 274.3 hectares, and was granted on 21 February 2005. It is due to expire 31 March 2037. BT Mining is 65% owned by BRL Historic Solid Energy mining operations such as the K1 and K2 opencast pits are located within this CMP. The minerals underlying CMP41821 are owned by the Crown, and BT Mining owns or has has access to the majority of the land. • BT Mining currently leases land adjacent to CMP41821 from Glencoal Energy Ltd.
Exploration done by other parties	• The previous owner (Solid Energy NZ Limited) and its predecessors has undertaken all exploration in the area since 1986. However, there have been earlier periods of work that have contributed to the understanding of the Resource. These exploration programmes include an extensive wash drilling programme undertaken between 1952 and 1957 prior to the commencement of opencast mining. • The New Zealand Coal Resources Survey drilled 122 holes in the Maramarua Coalfield between 1977 and 1980. The majority of the Coal Resources Survey holes were geophysically logged. The campaign also included two seismic reflection programmes.
Geology	• The stratigraphy of the Maramarua Coalfield is similar to that of other northern Waikato coalfields, being dominated by thick, Cenozoic, Te Kuiti Group sediments which unconformably overlie Mesozoic basement rock of the Newcastle Group. The Waikato Coal measures and later Te Kuiti Group sediments were deposited in a broad north to north-north west trending elongated trough, which appears to have been controlled by structural trends within the underlying Newcastle Group basement rock. The Waikato Coal Measures are present over the entire coalfield with a thickness of up to 134 m. • The Kupakupa main seam (KK) is located near the base of the coal measures, and is the most widespread and thickest seam, ranging from less than 1 m to 15 m thick. The Kupakupa seam has up to four lower seams (KL1, KL2, KL3, KL4) located 1 m to 3 m below the main KK seam. These lower seams are discontinuous and generally less than a metre thick. The Kupakupa seam is overlain by carbonaceous shales, siltstones and claystones of the upper Te Kuiti Group. • The generalised structure of the Coalfield dips at 15 degrees north-northwest, flattening out towards the Miranda Fault, due to fault drag effects on the hanging wall. Two major faults dominate the two permits. The Foote Fault zone is interpreted to be a large displacement fault striking north-northeast that is downthrown to the southeast

Criteria	Commentary
	with an estimated throw of 150 m. The Miranda Fault is a northeast striking fault, with displacements of up to 60 m to the southeast. • Several other smaller displacement (less than 10 m) faults are interpreted to exist throughout the Coalfield, which generally strike parallel to the two major faults. Fault dips have been interpreted to be 65 degrees, based on fault zone intercepts in drillholes. • The main Kupakupa (KK) seam is low ash, low fixed carbon and very low sulphur coal. There is some evidence of higher phosphorous coal (greater than 0.06% phosphorous in coal) at the base of the KK seam. The coal resource is sub-bituminous C rank.
Drill hole Information	• In summary, 724 drillholes are located within the geological model area .Only 666 of the drillholes have been used for modelling and resource estimation. The remaining 58 drillholes were not used as they were considered unreliable.

Range of Collar ID	Drillhole Range	No. of Holes	Data acquisition		Wash (W) Core (C)	Reliability
			Wash Drilled Only	Coal Quality		
1945-60	1735-5405	432	432	0	W	Low - Mod
1977-80	8105; 9000-9124	95	38	51	W/C	Mod - High
1982-1984	9131-9160	7	2	5	W/C	Mod - High
1986-1987	9162-9214	51	28	15	W/C	High
1993-1994	9215-9248	30	14	26	W/C	High
1996	9249-9252	3	1	0	C	High
1996	9278-9290	13	1	11	W/C	Moderate
2002	9257-9264	3	2	0	W/C	Moderate
2005-2006	9265-9268; 9272-9277; 9291-9298	14	2	7	W/C	High
2007 and 2012	9299-9316; 9317; 9320-9328	17	0	17	W/C	High
2008 and 2011	9321-9322; 9303; 9323-9324	5	4	0	W/C	Mod - High
2014	9329	1	0	1	W/C	High

Data aggregation methods	• Coal quality ply results are composited using a thickness weighted average to give an average assay for the entire thickness of a coal seam. • No seam thickness cut-offs have been applied, as the reported coal seam does not thin below the minimum thickness cut-off which is generally acceptable for opencast mining (typically less than 0.5m thickness).
Relationship between mineralisa	• Due to the stratigraphic nature of coal measures the coal seams generally lie in a horizontal or sub horizontal plane. The Maramarua resource has a dip of 10^{o} to 15^{o} to the north-northwest. Drillholes are generally oriented vertically (90^{o}), and are designed to intercept target seams at as high angle as possible in order for drilled seam

Criteria	Commentary
tion widths and intercept lengths	thickness to represent true seam thickness as closely as possible. A number of holes have been inclined to target the major fault zones. • Drillholes can deviate from the vertical. Drillhole deviation is measured during downhole geophysical logging using the verticality tool, and incorporated into modelling workflows.
Diagrams	• A range of isopach and other plots are shown in the appendix.
Balanced reporting	• No exploration results are being presented in this report, rather this report is focused on advanced projects that have been defined by geological models with associated resource estimates completed. • The exclusion of this information from this report is considered to not be material to the understanding of the deposit
Other substantive exploration data	• The resources reported in this report relate to the area in and around and existing operating coal mine. • Groundwater has been encountered in most drillholes. Piezometers have been installed in 39 drillholes in order to monitor changes in groundwater levels. • Relative density of coal has been determined for 435 samples from the modelled area. This has allowed estimation of coal relative density for the resource of 1.34 t/m^3. • Geotechnical and rock characteristics of the overburden units have been calculated using laboratory test data to determine strength parameters (such as UCS, shear box and ring shear tests) and empirical classifications (RMR, GSI and Hoek-Brown) and back analysis of existing cut slopes.
Further work	• Future exploration drilling is proposed to infill spatial gaps in coal quality data and further delineate fault locations and displacements within the proposed mining areas.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• All historic and legacy datasets have been thoroughly validated against original logs and results tables. Where reliability of the data is poor the data is excluded from the modelling process. • Data recorded in the field is input into field books and later transcribed into electronic databases using standard software. All core logging data is recorded on paper than transferred directly into a central database using AcQuire software. This software is designed to ensure data is entered and stored in a consistent and accurate manner by using dropdown menus of standard logging codes to prompt and constrain inputs. The database highlights out of range coal quality values, does not allow overlapping intervals nor logs extending beyond total hole depth. Any and all changes to the database are tracked and archived. Data correction and validation checks are undertaken internally before the data is used for modelling purposes. • BRL utilizes an AcQuire database to store and maintain its geological exploration dataset. • The AcQuire database places explicit controls on certain data fields as they are entered or imported into the database such as overlapping intervals, coincident samples, illegal sample values, standardized look-up tables for logging codes. • Validation of historic wash drilled drillholes has been carried out by comparing coal seam depths and thicknesses with those of adjacent more reliable cored drillholes in cross-section. Coal quality data and geophysical logs have been used to validate more recent (post 1977) drillholes, to provide confidence in coal seam depths and thickesses.
Site visits	• Hamish McLauchlan (the Competent Person) is an employee of BRL and visits the project area on a regular basis.
Geological interpretation	• BRL has confidence in the geological model and the interpretation of the available data. Confidence varies for different areas and this is reflected by the resource classification.

Criteria	Commentary
	• Confidence in interpretation of geological stratigraphy, structure and seam correlation/continuity is variable across the permit area, and differing seam correlation interpretations exist in some areas. This is typically a result of the complex structural environment, rather than the presence of numerous seam splits and discontinuous seams. • BRL considers the amount of geological data sufficient to estimate the resource • In areas where data density and quality is sufficient and geological investigations have shown geology to be well constrained, confidence ranges from moderate to high, outside of these areas geological confidence is considered low. Areas of greater geological complexity require greater data densities in order to improve confidence levels. Variations in geological confidence are reflected representatively in the reported resource classifications • Geological confidence has improved as drillholes have become increasingly close spaced. However, residual uncertainty exists concerning geological structure, particularly regarding geomorphology of coal seams adjacent to and within fault zones. This may be improved by further exploration work but will likely have to be managed at an operational level. • The data used the geological interpretation included field mapping, LiDAR, drillhole data, core logging data, geophysical logs, sampling, coal quality laboratory testing and assessments. • Coal rank is continuous throughout the deposit. The lower part of the KK seam can be characterised by slightly higher ash and higher phosphorous. • All known faults have been modelled in three dimensions. Faults are modelled dipping at 65^{o} and are normal faults, consistent with previous seismic reflection surveys and drillhole intercepts of faults.
Dimensions	• The Maramarua resources area is approximately 3.1 km in length and 1.5 km in width, covering approximately 250 hectares. Within this area there are two main areas of focus for future mining – the K1 area and the KCQ and K4 area. As discussed above, coal seam are generally laterally continuous, however thickness can vary over short lateral distances, due to the highly faulted nature of the deposit. • The main Kupakupa (KK) seam is the target in this area. Seam thickness ranges from 3 m to 18 m. Depth of the seam ranges from 7 m to 71 m. The KK seam outcrops in the walls of the historic K1 opencast pit and dips at 10^{o} – 15^{o} NNW.
Estimation and modelling techniques	• Modelling has been undertaken using Maptek's Vulcan software by geologists and mining engineers trained and experienced in its use. • Structural surfaces for coal seams, Te Kuiti Group rocks (Pukemiro Sandstone, Glen Afton Claystone, Mangakotuku Siltstone and Whaingaroa Siltstone) and the Waitemata Group roof and floor are modelled using a triangulation algorithm to produce grids on a 20 m by 20 m basis, in order to best define the structure in the project area. • Structural surfaces are cropped using a 'mined out' surface to remove material that has been mined. • Coal quality data is modelled using inverse distance algorithm with a trend order of zero (linear interpolation) and maximum smoothing (9 passes). This method searches concentrically about each grid node for a minimum number of points to use to interpolate the grid node value. A maximum of 10 points were used, with a 500 m search radius. Seam and coal quality grids produced as part of modelling workflows are reviewed by a Senior Geologist to ensure no anomalies exist and that original data is honoured. • From these grid models, a 20 m by 20 m HARP block model is produced. Values assigned to blocks are determined from single grid node values. • Historic coal winning limits produced following mining of the K1 and K2 and KCQ pits are available, and these have been taken into account when modelling resource areas. • Geological interpretation, including the modelling of both major and minor faulting in the area has been considered when building structural surfaces. Allowances are made in the surfaces for coal loss through fault zones, with the volume of coal loss dependent on the dip and displacement of the fault. It is expected other, currently unmapped, minor faults will be discovered during mining, however their expected

Criteria	Commentary
	small displacements will result in minimal change to the resource estimation. • No deleterious elements with economic significance have been identified in Maramarua coal. Sulphur levels are not sufficient to generate acid mine drainage. • It is expected that thermal coal will be produced from Maramarua. No other by-products have been considered at this stage. • Validation of data during modelling occurs at three different stages: • Firstly when importing drillhole data from the master AcQuire database, to ensure that the original dataset is in order. • Structural grids are checked in cross section both along strike and down dip to check the grids are honouring drillhole data. • Once structural and coal quality grids have been produced from drillhole data, the coal quality grid nodes are exported and analysed to ensure they honour drillhole data. Contour plans are also produced to ensure modelled values represent original data. • Various methods have been used to check the validity of the block estimation. This includes manual inspection of the model, QQ plots of block model qualities vs the coal quality database and other comparison tools.
Moisture	• Testing work has been undertaken to determine moisture levels in drillhole core with total moisture and inherent moisture typically being measured. Tonnages are reported on an air-dried basis (inherent moisture).
Cut-off parameters	• The coal has been classified as sub-bituminous C rank, and will be marketed as thermal coal. A maximum ash cut-off of (20% air-dried basis) has been applied to all seams.
Mining factors or assumptions	• The target (KK) seam is considered suitable for opencast operations due to seam depth, thickness and dip. The selected mining method has been chosen based on long term experience of opencast mining the KK seam. Roof and floor losses are not built into the resource estimate. • Only coal that falls within an optimized pit shell with revenue factor 1.25 is reported as resources. Costs and revenue parameters used in the pit optimization are based on the 2017 Maramaua budget and include allowances for royalties, commissions, mining costs, coal processing and administration, and basic mining and processing losses.
Metallurgical factors or assumptions	• The KK seam at Maramarua will provide thermal coal. This has been determined by past performance of coal from the area for thermal purposes, and by average coal quality values. • Studies have been carried out in the past to analyse combustion potential, ash fusion temperatures and Hardgrove Grindability Index, to confirm the suitability of the coal for thermal uses. • Currently no wash plant is used at the Maramaua operation. The ROM coal produced is processed through a crushing/screening plant where losses are minimal.
Environmental factors or assumptions	• At Maramarua, it is planned that production will occur as an opencast operation. Waste will be transported and stored in an engineered land fill to backfill a historic opencast pit. The low sulphur levels in the coal will mean acid mine drainage will not occur. • BRL (through BT Mining) hold resource consents regarding land use, air and water quality for the current operations. It is reasonably expected that any modifications to existing agreements or additional agreements required to operate in this area can be obtained in a timely manner.
Bulk density	• In estimating the coal resources, bulk density has been assumed to be equal to relative density (air dried) determined from laboratory testing. A total of 452 relative density measurements on coal throughout the Maramarua deposit have been used to derive an ash-density relationship and assign density values to the KK seam based on ash values. The average relative density of the KK seam is 1.34 t/m^3. • The bulk density of overburden materials is not included in the resource model.
Classification	• Coal resources have been classified on the basis of geological and grade continuity balanced by relative uncertainties surrounding historic underground extraction and proximity to faults and unconformities. The result reflects the Competent Person's view of the deposit. • Closely spaced drilling with valid samples increases the confidence for each seam in

Criteria	Commentary
	resource assessments.
Audits or reviews	• Palaris completed an external review of this estimation in May 2016 as part of Solid Energy's Vendor Due Diligence process. No substantial issues were raised • Several internal reviews have been completed during the various project stages and during purchase due diligence,
Discussion of relative accuracy/ confidence	• Based on the data available, the degree of accuracy of this statement is considered high for the Maramarua resource. The process for calculation has used: Standards, Guidelines and the JORC Code, geostatistics and variography, along with best practice where available, to define the Resource estimates provided to confirm search estimation ranges and drillhole spacing for each resource classification. • Classical geostatistics were used to understand the available data prior to modelling. This allowed an assessment of the variability of both coal seam thickness and quality parameters. Thickness, ash and sulphur variograms were created to determine any spatial variation present in the data, and to provide suitable confidence categories for the coal resource estimate. The confidence categories are taken from the thickness variogram range values. • The Resource is declared as coal in-ground and potentially mineable resources. Pre-feasibility and resource model reports supporting the technical and economic evaluation are available to support resources declared. • The current resource model has not been compared with production data to date, as the site has been in production for less than 12 months with limited production data is available.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• A 3D Resource Block model of topography, structure and quality are used for in situ Resource definition. • Mineral Resources are inclusive of Ore Reserve.
Site visits	• Terry Moynihan (the Competent Person) is an employee of BRL and visits the project area on a regular basis.
Study status	• Maramaua is an operating mine project. The reportable Ore Reserve is based on the life of mine (LOM) plan and has determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered. • The Reserves declared for the K1 part of the deposit are based on feasibility study completed in 2012. This Study declared a Reserve of 1.3Mt. Some modifications to the pit design were made in 2013 which resulted in a slightly smaller pit design at a more favourable strip ratio. The same parameters were used in the revised design. • The Reserves declared for the K4 part of the deposit are based on a feasibility study.
Cut-off parameters	• No additional quality cut-offs have been used in the determination of Reserves in addition to what has been used in the declaration of Resources. • Pit optimisation runs were completed to determine economic pit limits • Only the main Kupakupa (kk) seam is reported. Coal of a potentially mineable thickness is present in lower seams but the quality is not well understood and it may not be marketable. This coal has not been considered in the Reserves determination process and is not reported as Reserves.
Mining factors or assumptions	• Pit limits have been determined using pit optimization techniques, with restrictions for current land and mineral access. Pit optimisations used current cost and revenue assumptions. • All mining is via open cut methods. Mining equipment is hydraulic backhoes and mechanical drive rigid body trucks. • Pit slopes for the K1 and KCQ1 designs have been geotechnically assessed and found to be in accordance with BRL stability criteria. The pit design for KCQ2 has not been specifically geotechnically assessed but does use site-specific generic design criteria for each rock unit.

Criteria	Commentary
	• Aside from in-fill holes required to raise the confidence in the underlying Resource to be all Measured, no additional grade control drilling is planned. Coal is present in a thick seam and is easily distinguishable from the surrounding waste rock. Coal quality has been shown to be consistent both laterally and within the seam. • No waste dilution has been used in the determination of the Reserves. • Coal recovery estimates consist of two parts: • Minimum recoverable in-situ thickness is 0.5m • 75mm of coal is lost from both the roof and the floor (150mm in total) during mining to ensure no waste dilution within the coal. • Minimum mining widths are to suit 90t capacity trucks and are typically >50m. • Inferred Resources have not been used in the determination of the Reserves. • The selected mining method only requires simple infrastructure for mobile opencut equipment (i.e. workshop, fuel farm, smoko room, wash pad)
Metallurgical factors or assumptions	• The ROM coal produced at Maramarua is crushed and screened on site. A process recovery of 95% is used based on a processing reconciliation study. • Product coal specifications include ash, sulphur, moisture and calorific value. • Some parts of the Reserve show the base of the seam with elevated phosphorous levels. This can be effectively blended out within the entire seam thickness, however care will need to be taken not to mine the seam floor as a discrete entity.
Environmental	• The current planned and operating pits are fully consented. • All water related consents are in place. • Updating of approvals is an ongoing process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Infrastructure	• All necessary infrastructure is in place and operational for the current operation.
Costs	• All infrastructure is in place at Maramarua. The primary ongoing capital requirements are for equipment replacement and this is included in the economic model. • All operating costs were based on the 5 year budget estimates provided by BRL and include allowances for royalties, commissions, mining costs, road haulage loading and administration. • Contracted product specifications and penalties for failure to meet specification are included in the cost model.Levies and royalties have been applied as per the appropriate NZ legislation (Crown AVR/APR royalty, Mines Rescue Levy and Energy and Resources Levy)
Revenue factors	• Revenues are as per the current sales contracts. • Revenues are based on the as-received calorific value which is in turn determined by the dry-basis calorific value of the coal and the total moisture as delivered to the customer. • Resource model estimates are used to determine the dry calorific value estimates, and actual production data from the 2011 KCQ bulk sample deliveries to customers.
Market assessment	• Annual sales volumes are per internal market forecasts and within the quantities allowed in long term sales contracts.
Economic	• To demonstrate the Reserve as economic it has been evaluated through a standard financial model. All capital, operating and closure costs as well as current sales contract revenue factors were included in the financial model. This model has shown that the Maramarua Reserve has a positive NPV.
Social	• As part of the resource consenting process and general site operations, regular communication and consultation has taken place with the local communities including the local Iwi.
Other	• All mining projects operate in an environment of geological uncertainty. • Updating of approvals is an ongoing annual process and it is reasonably expected that any modifications to existing agreements or additional agreements that may be required can be obtained in a timely manner.
Classification	• The Reserve coal within the K1 and KCQ pits has been categorized based on the underlying Resource categories, where Measured Resources have mapped to Proven Reserves and Indicated Resources to Probable Reserves. Most of the coal within these pits is categorised as Measured Resources.

Criteria	Commentary
	• These categorizations reflect the Competent Persons view of the deposit.
Audits or reviews	• Palaris completed an external review of this estimation in May 2016 as part of Solid Energy's Vendor Due Diligence process. No substantial issues were raised. • Several internal reviews have been completed during the various project stages and during purchase due diligence,

Discussion of relative accuracy/ confidence	• The accuracy of the Coal Reserve estimate is primarily dependent on the accuracy of the Coal Resource model, the ability to sell the coal at the estimated prices and the site operating costs.
	• In the opinion of the Competent Person, the modifying factors and long term cost and revenue assumptions used in the Coal Reserve are reasonable. Some risk is associated with:
	  ○ Obtaining Resource Consents that are currently under application (KCQ1 pit);
	  ○ Long term market demand for this coal;
	  ○ Obtaining Resource Consents that are yet to be applied for (KCQ2 pit); and
	• The site is in operation but has limited production history and therefore has little current reconciliation data. The KCQ bulk sample pit completed in 2011 mined 68,000t of coal vs. an estimated 78,000t at the expected coal quality. This reconciliation was adversely affected by unexpected minor faults within the coal and this has been taken into account with the new resource model used in determined these Coal Reserves.

Appendix

Maps and plans discussed within Table 1 are reported below.

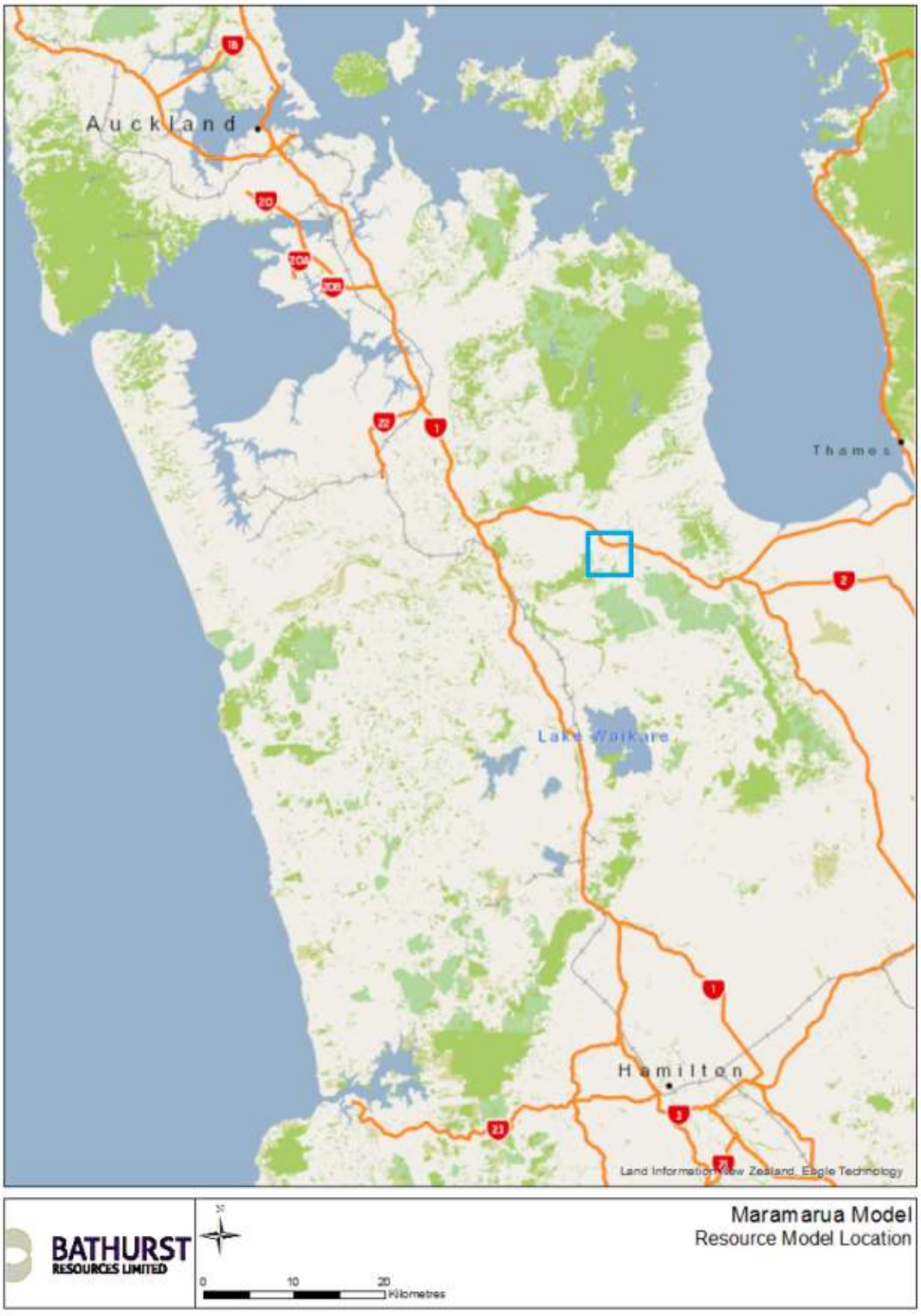

Figure 1 Location Plan

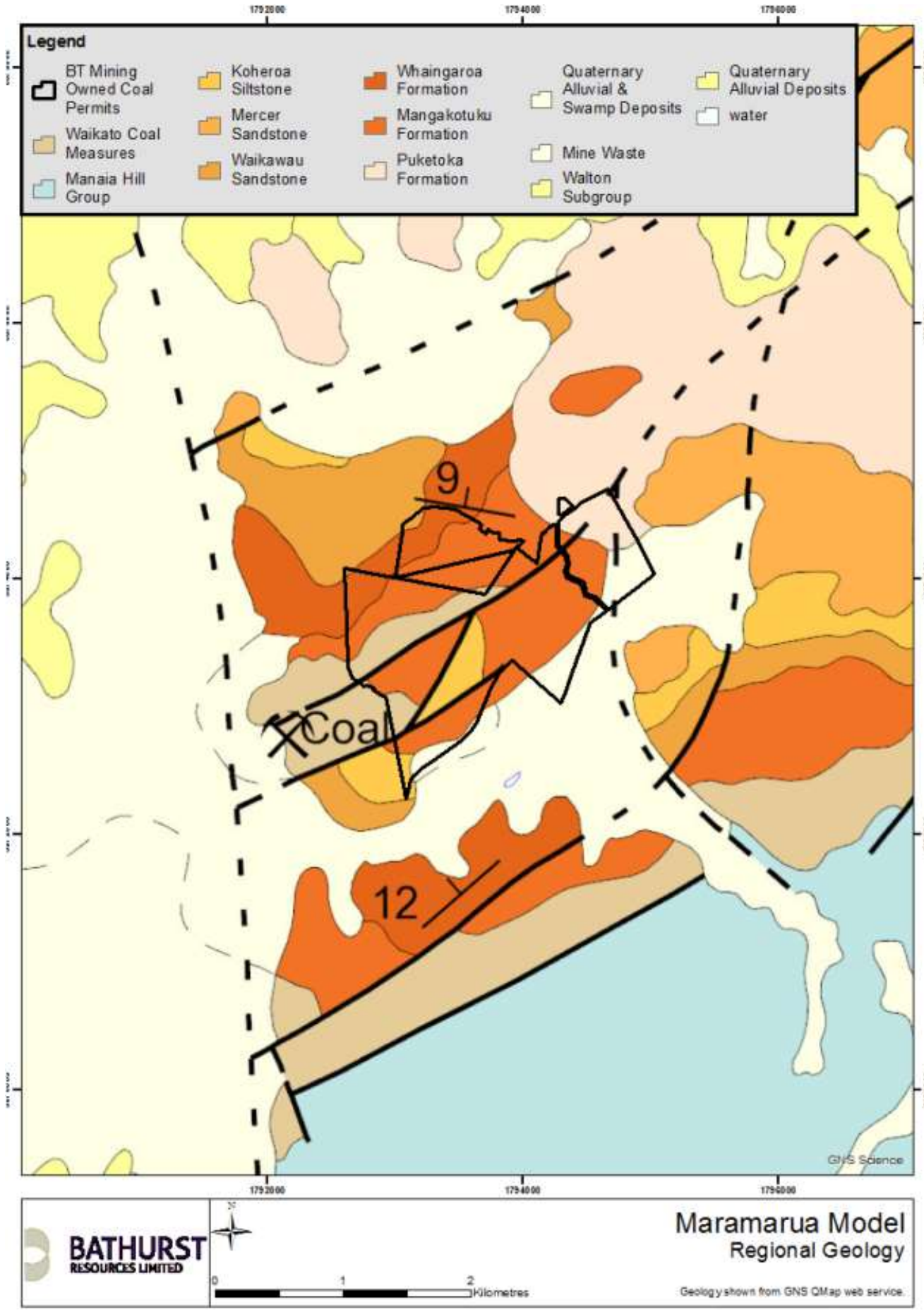

Figure 2 Regional Geology

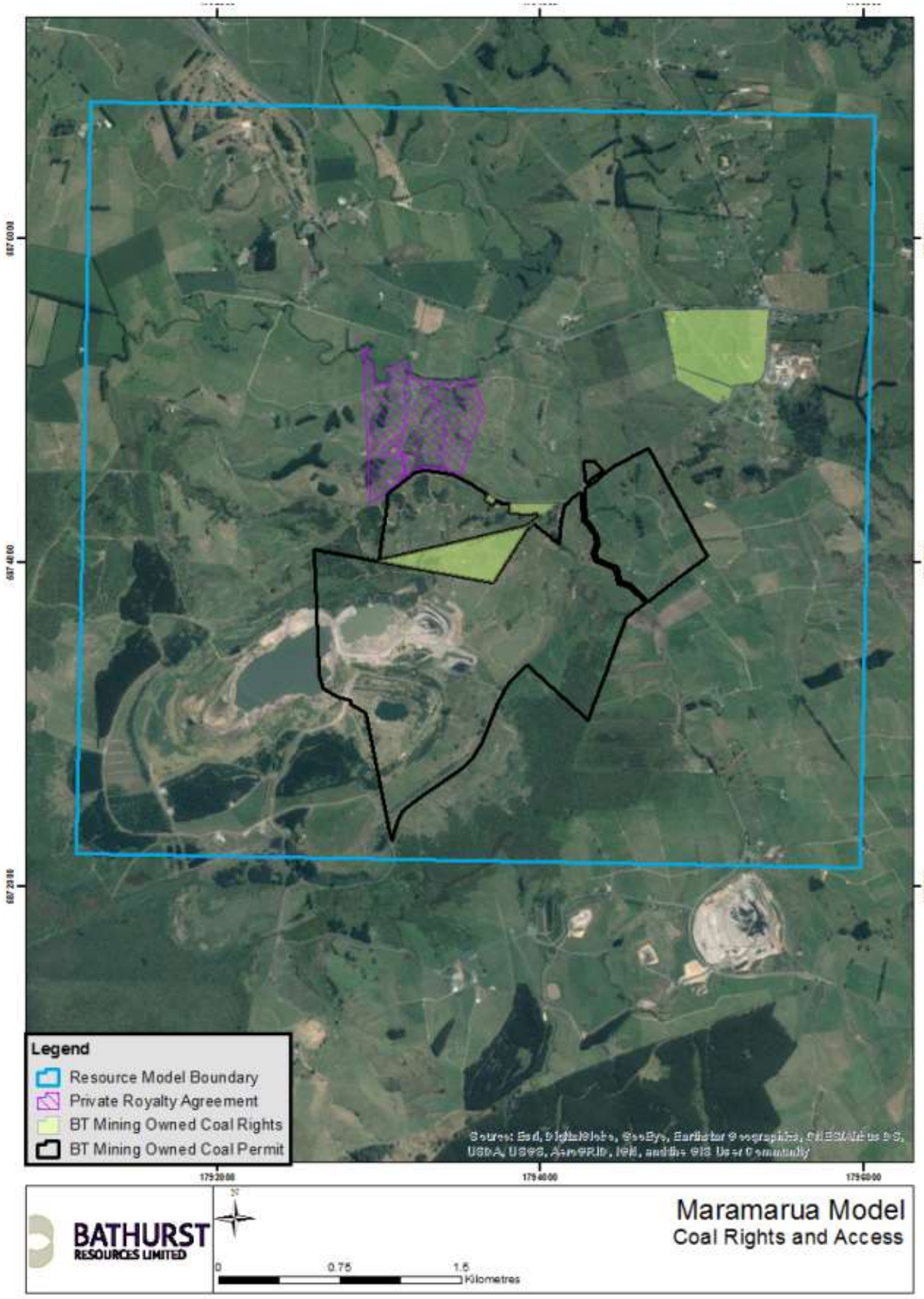

Figure 3 Maramarua and the coal permits within the resource area

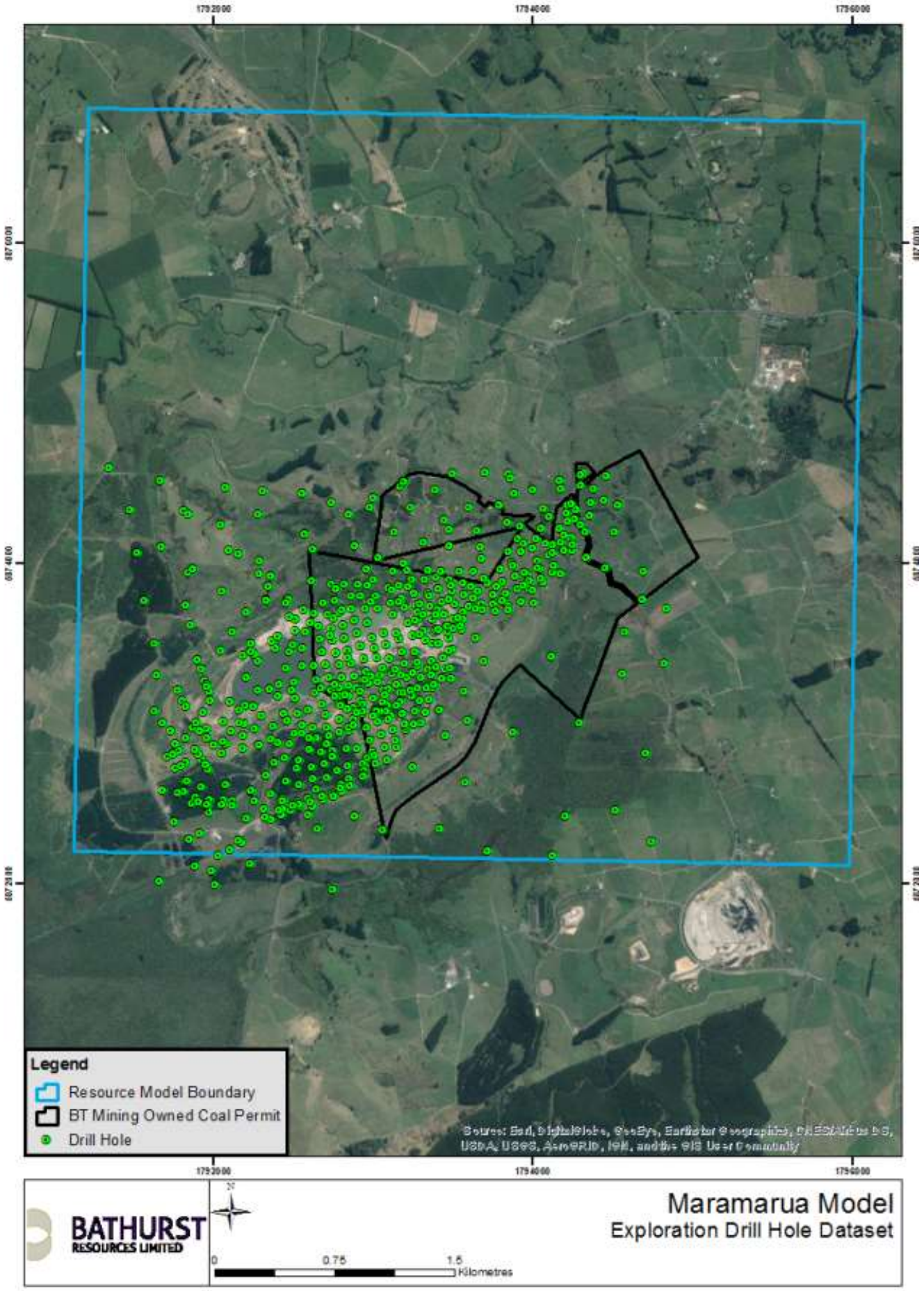

Figure 4 Plan showing the drilling dataset used to produce the resource model

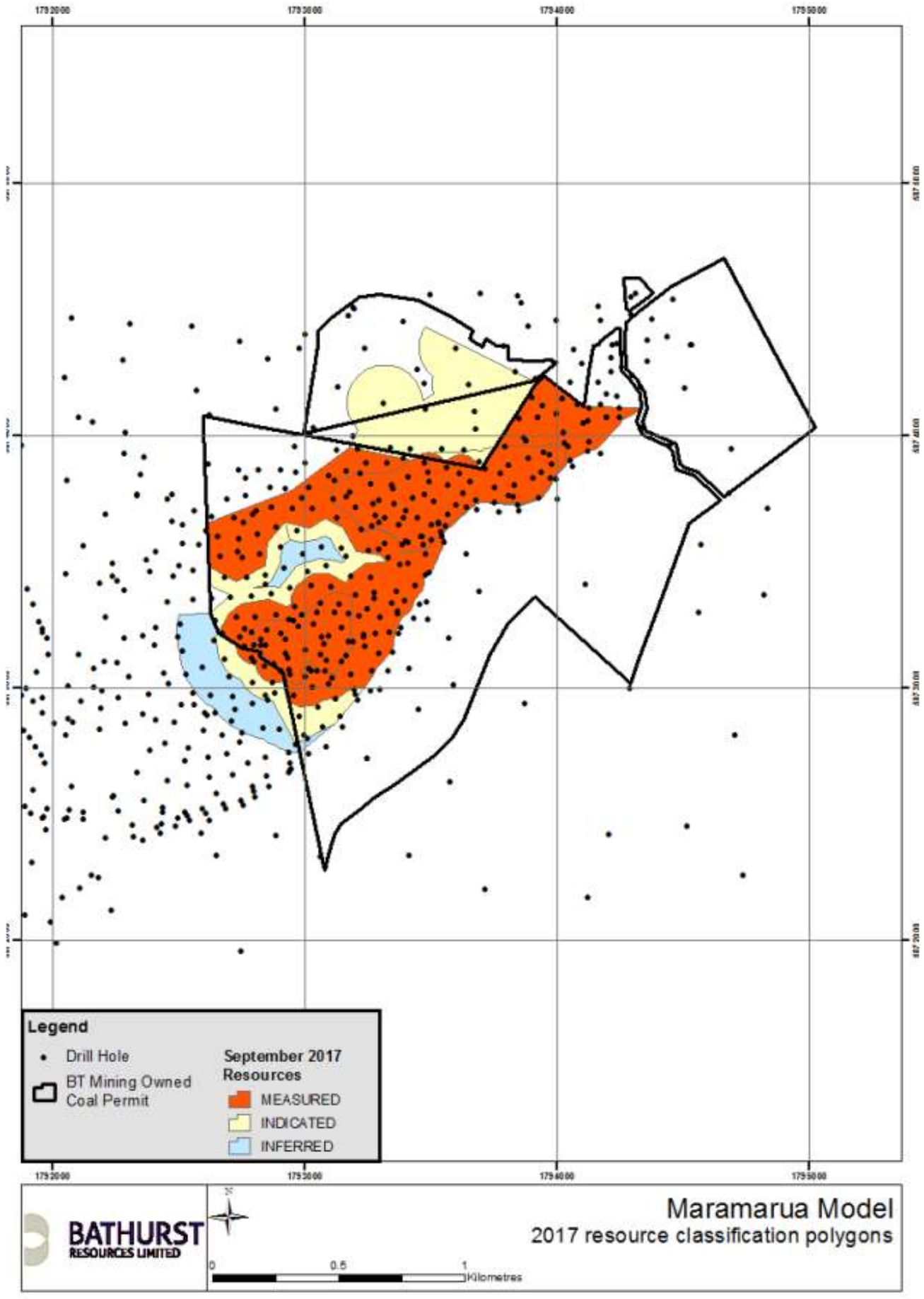

Figure 5 Plan showing the 2017 resource classification polygons

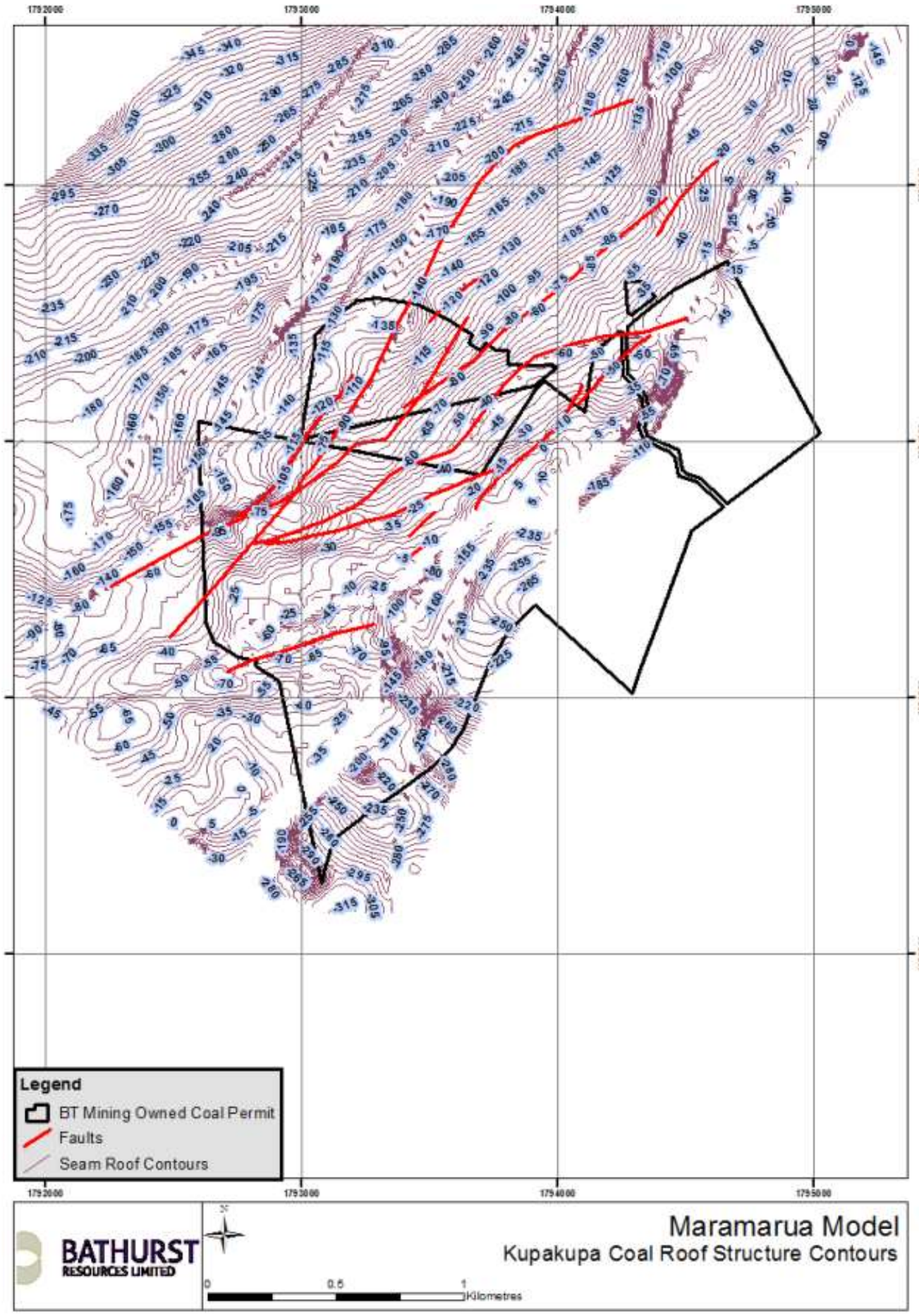

Figure 6 Plan showing the structure contours of the coal seam roof

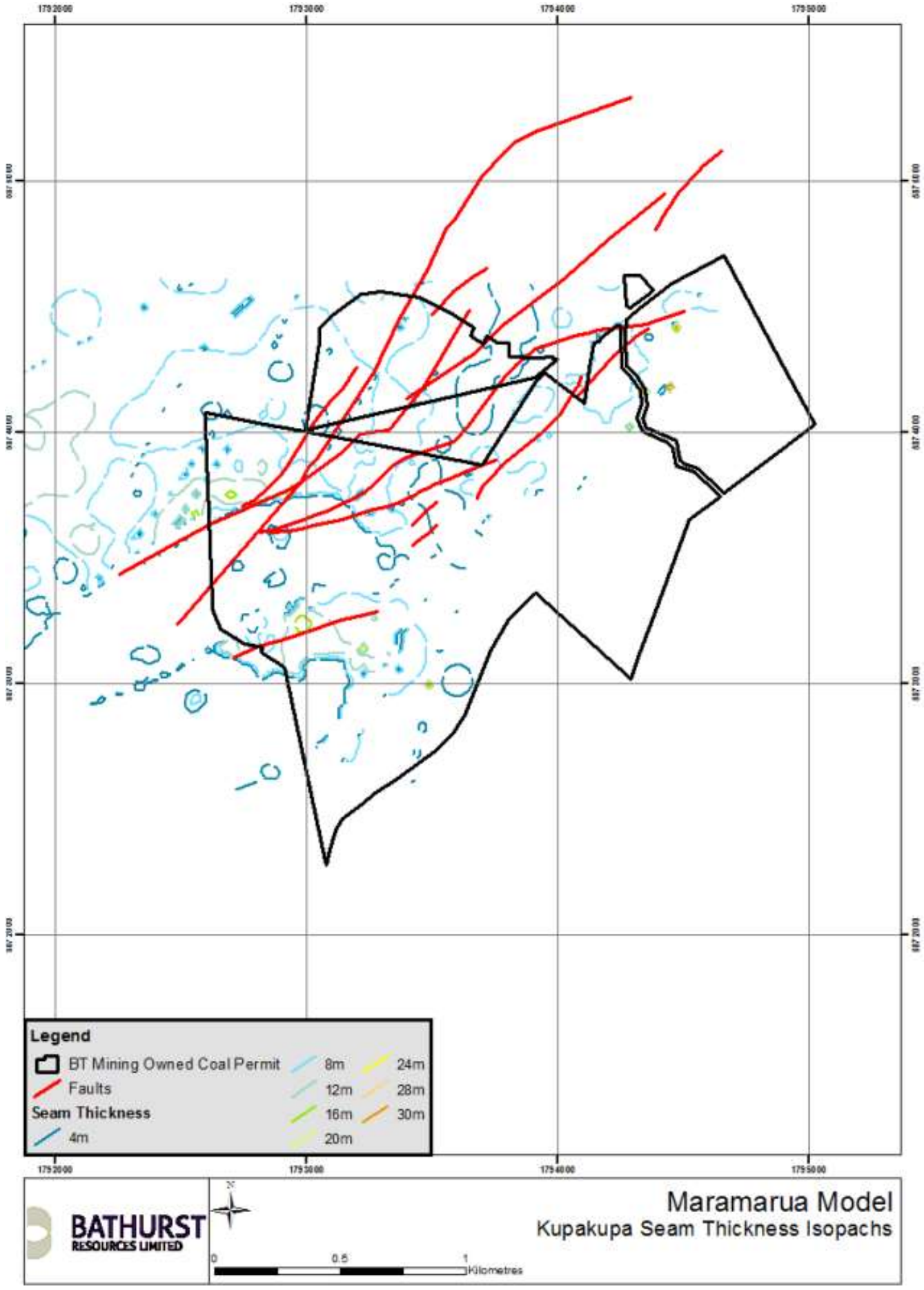

Figure 7 Plan showing full seam thickness contours over the model area

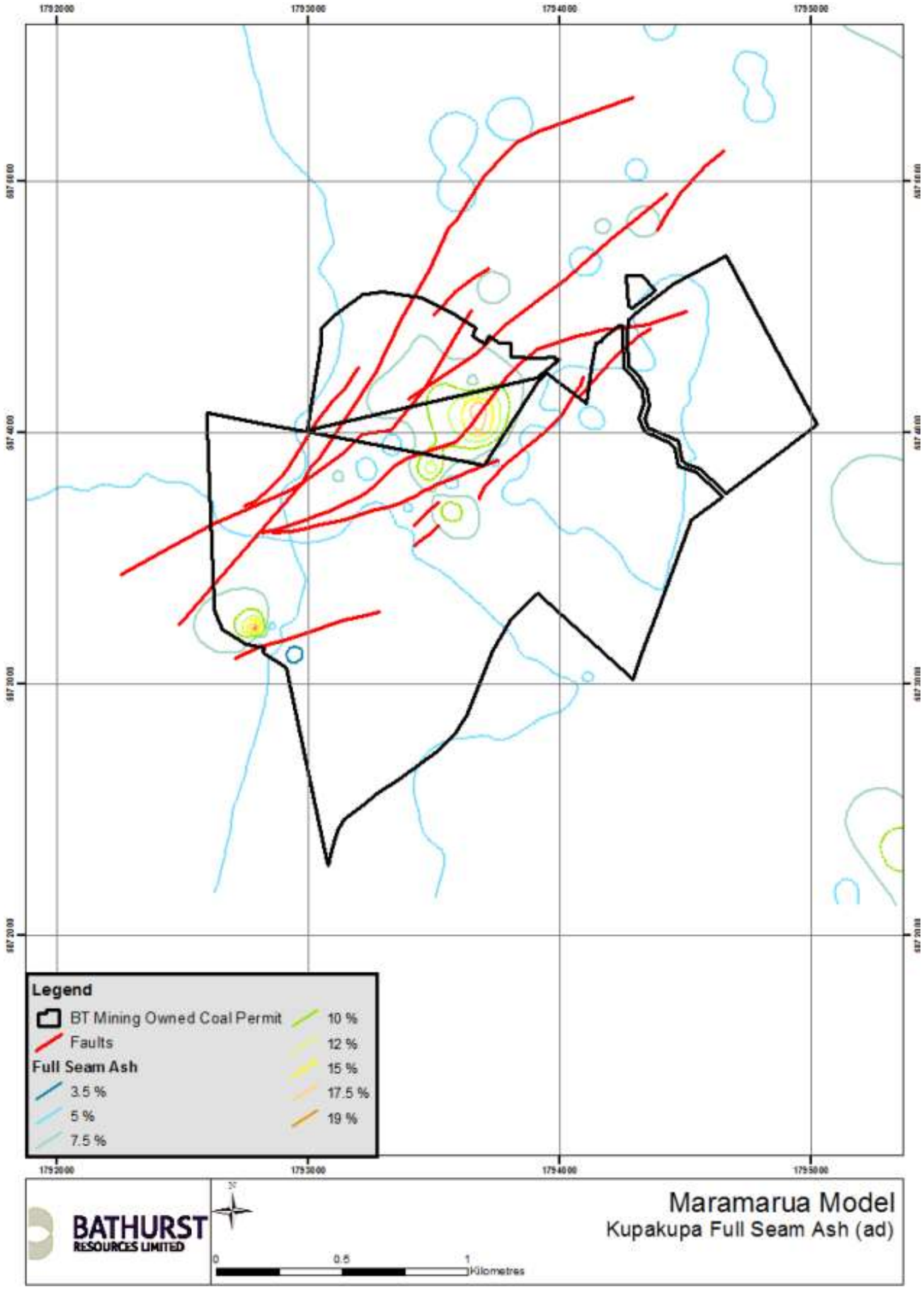

Figure 8 Plan showing in-situ full seam ash on an air dried basis as modelled over the deposit area.

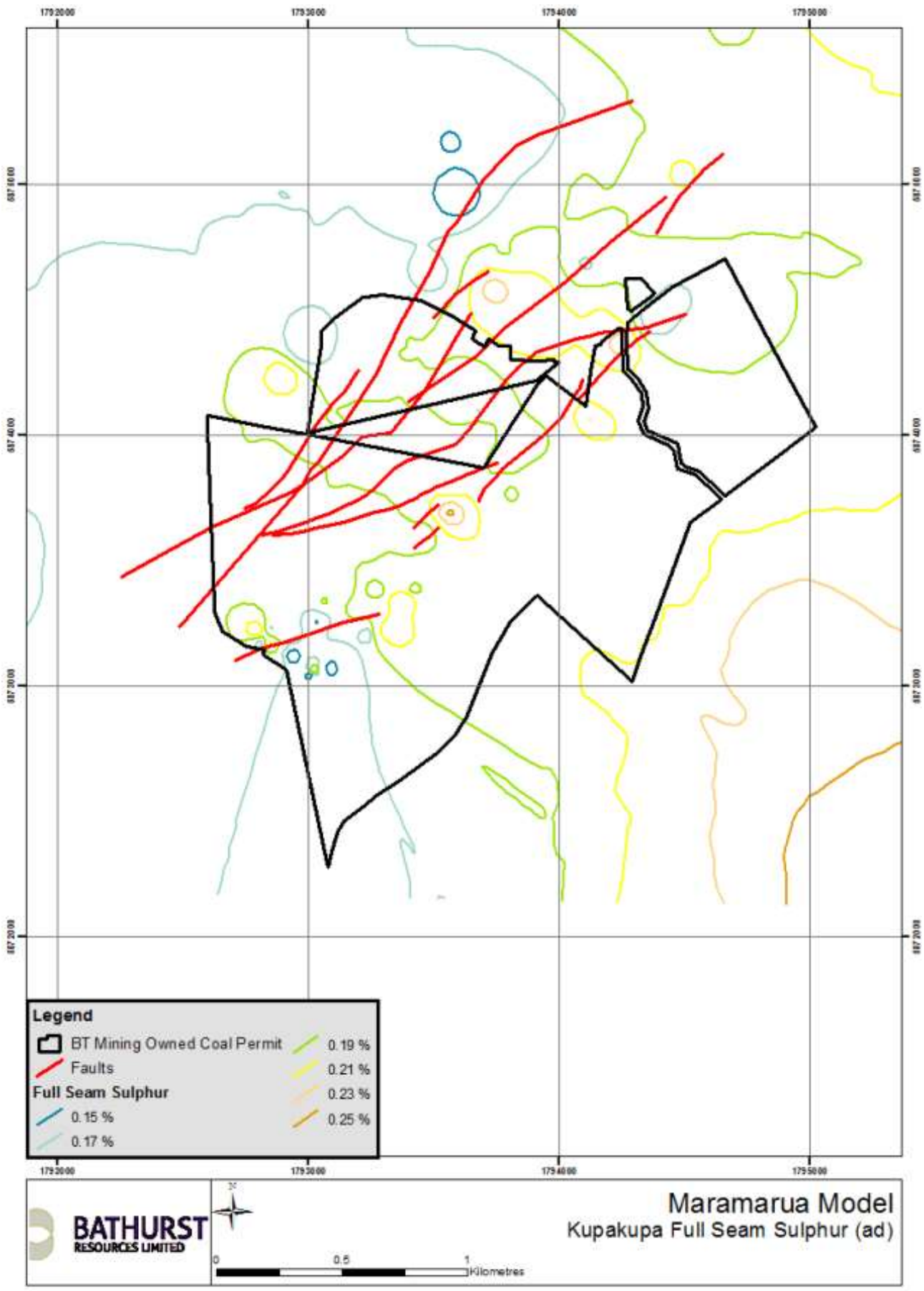

Figure 9 Plan showing full seam sulphur on an air dried basis across the resource area.

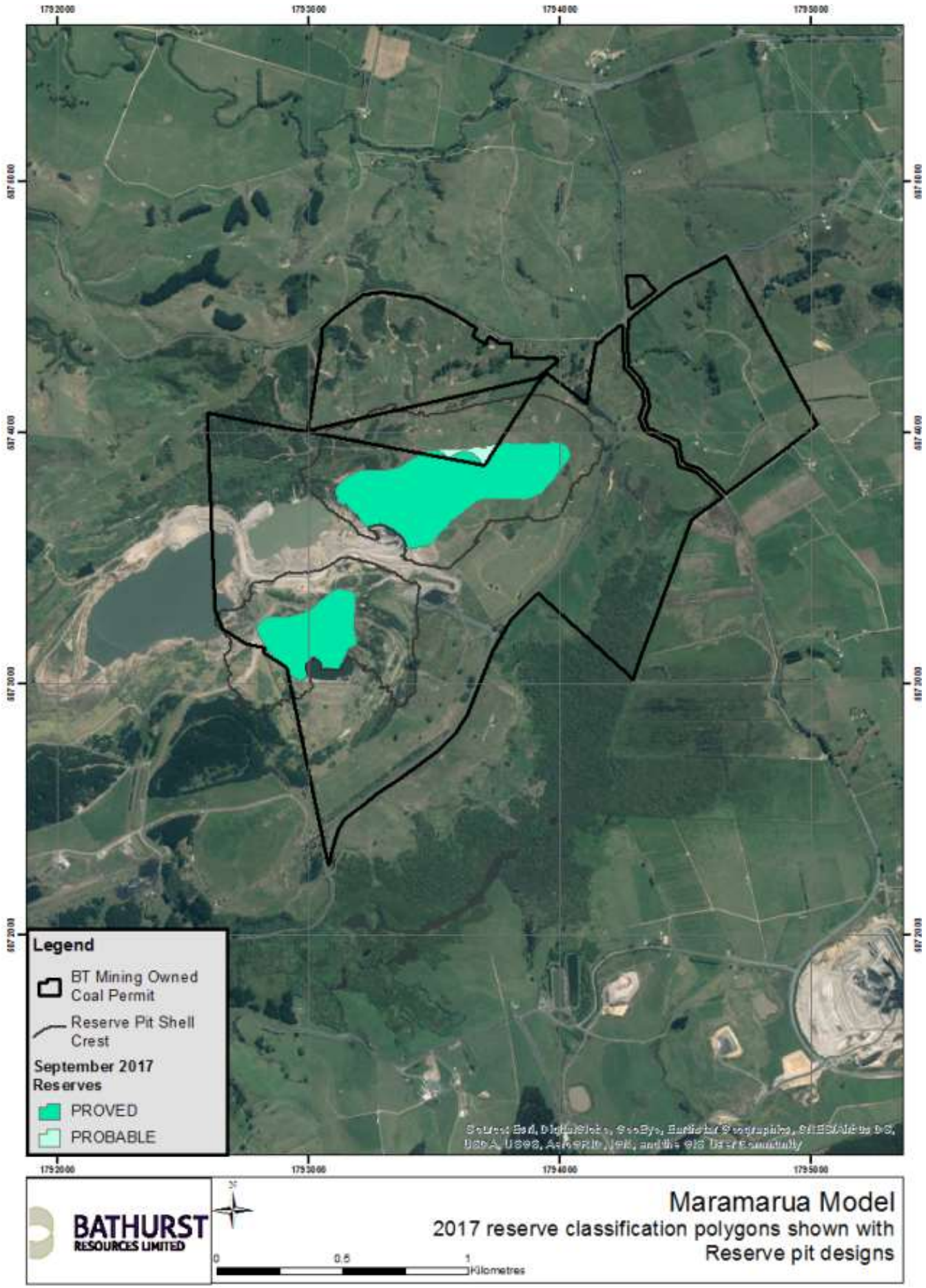

Figure 10 Maramarua domestic reserves pit shells