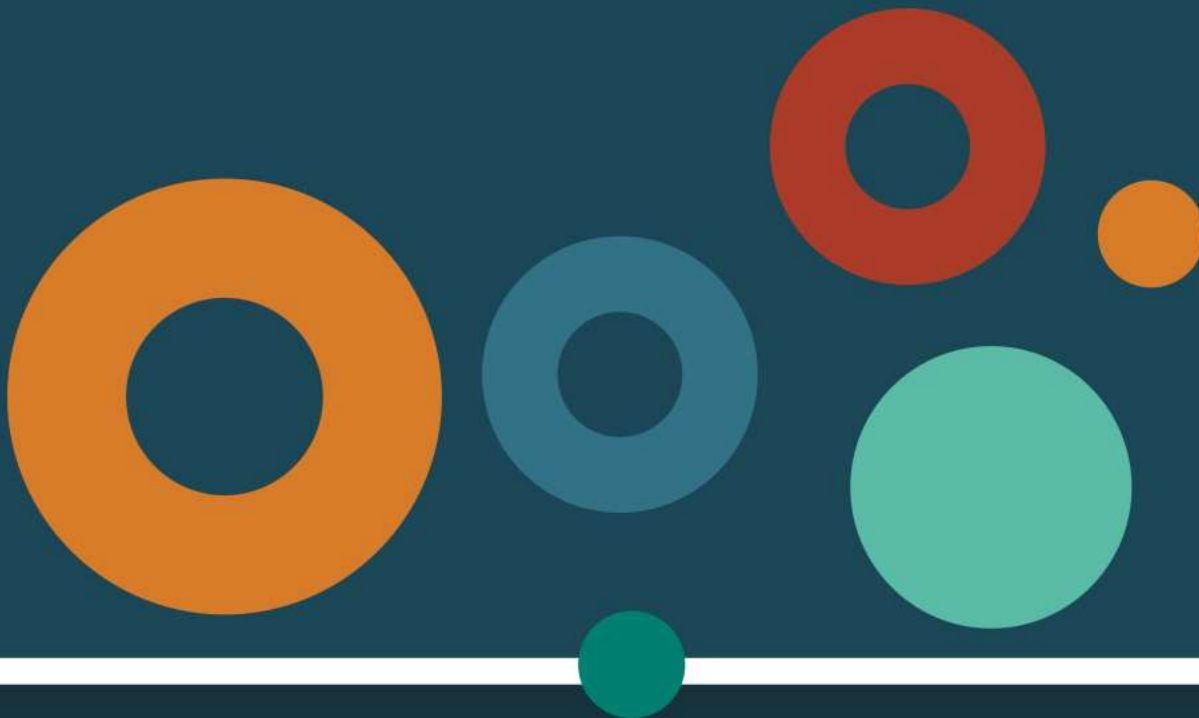


Queensland Coal

Presented by Peter Donaghy
Director of Coal
GEOresources



Know Your Coal



Queensland's Coal

- There are approximately 53 operating Coal mines in Queensland.
- 34 mines produce a metallurgical (met) coal from the Bowen Basin, i.e. 65%
- >71% of Qld's coal exports are met coal (~ 145 Mt in 2018)
- Queensland has some of the highest quality met coal in the world and supplies >50% of global exports.



Value to Queensland

Direct benefits in 2017-18:

- \$3.0 billion paid in wages
- >36,701 full time employees
- \$4.8 billion paid in royalties for 2018-2019

Indirect benefits:

- supports over 178,955 indirect full time jobs
- contributes \$43.4 billion to gross regional product
- underwrites Queensland's port and rail networks



Queensland Coal Mining Industry



We describe our mining industry by province or basin.

- There are 3 main coal basins in Queensland:
 - Bowen Basin
 - Surat Basin
 - Galilee Basin
- There are ~30 advanced coal projects in Queensland:
 - 20 Greenfields or new projects;
 - 10 Brownfields extensions, expansions or 2nd stages;
 - Of these most are in the Bowen Basin ~25.

Mining Lease Approvals

Granted

Ironbark No. 1

Fitzroy CQ

Underground

Metallurgical

Employment:
construction ~160;
operational 350

Production: 2.6 Mtpa
ROM

Grevillea (Saraji) (Extension)

BHP Coal

Open cut

Metallurgical

Continued employment
of approximately 500

Production:
Continuation of: 55
Mtpa ROM (Whole of
Project)

Isaac Plains (Extension)

Stanmore Coal

Open cut

Pulverized Coal
Injection (PCI)

Capital Expenditure
~\$100 m

Employment:
construction <100;
operational 118

Production: 1.4 Mtpa
ROM; 1.2 Mtpa
Saleable

Dysart

Bengal Coal

Underground

Coking

Proposed 1st Coal 2019

Employment:
Construction 200
Operational 180

Production: 2.0 Mtpa
ROM

Cameby Downs (Extension)

Syntech Resources

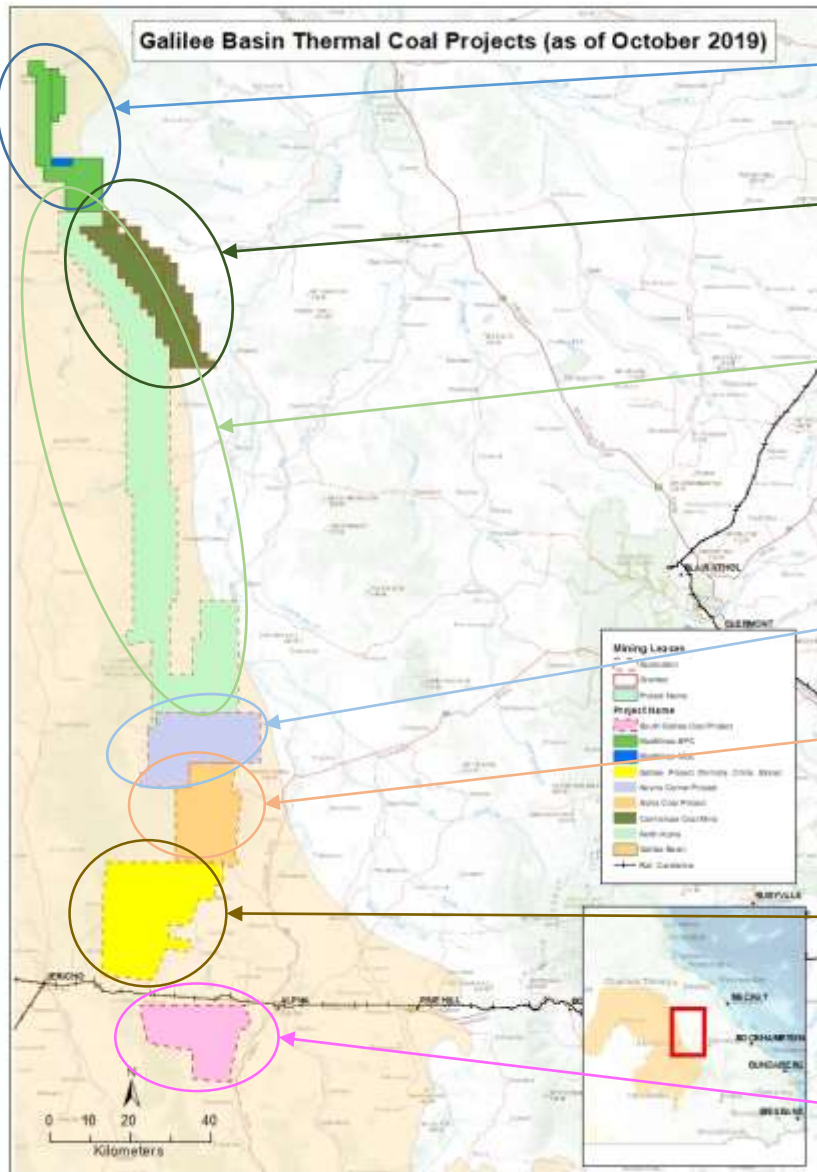
Open Cut

Thermal

Continued employment
of 140

Currently 2.8 Mtpa, will
increase to 3.5 Mtpa
once in full production

Galilee Basin



Project: China Stone Coal Project
Type: OC and UG
Company: MacMines Austasia Pty Ltd
Status: EPC & MDL's – CG's EIS completed

Project: Carmichael Coal Mine
Type: OC and UG
Company: Adani Mining Ltd
Status: In construction
Proposed Commencement of Construction: June 2019
Proposed First Coal: 2019/2020

Project: North Alpha
Type: OC and UG
Company: Waratah Coal Pty Ltd
Status: Awaiting Waratah to lodge a Terms of Reference for their EIS
Proposed Commencement of Construction: tbc
Proposed First Coal: tbc

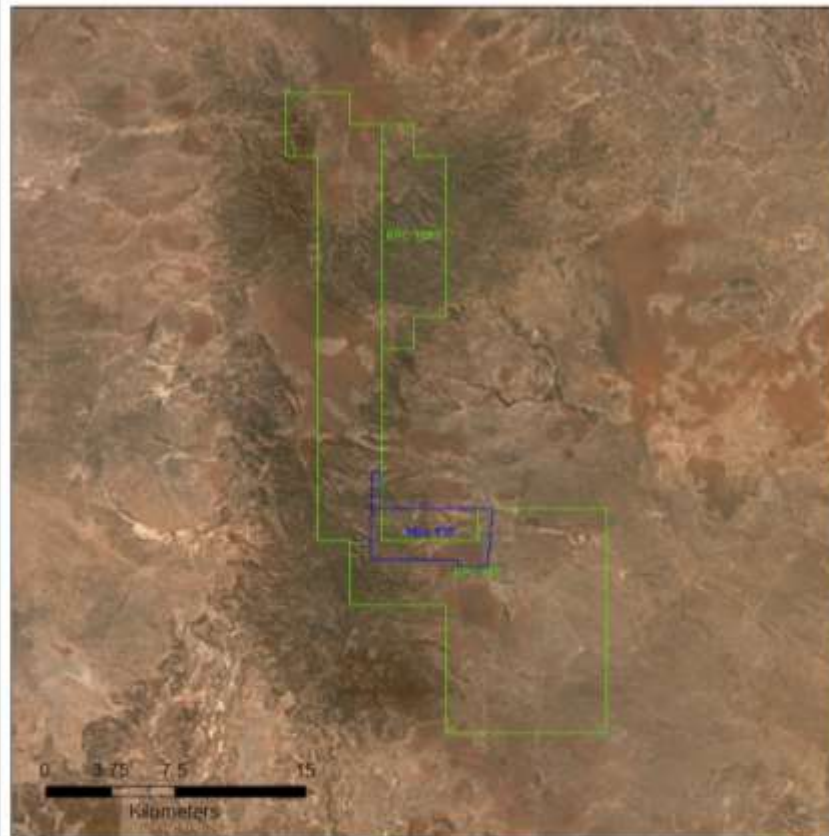
Project: Kevins Corner Project
Type: OC and UG
Company: Hancock Galilee Pty Ltd (GVK)
Status: EA issued
Proposed Commencement of Construction: tbc
Proposed First Coal: tbc

Project: Alpha Coal Project
Type: OC
Company: Hancock Coal Pty Ltd (GVK)
Status: EA issued
Proposed Commencement of Construction: tbc
Proposed First Coal: tbc

Project: Galilee Project (formerly China First)
Type: OC and UG
Company: Waratah Coal Pty Ltd
Status: ML in application
Proposed Commencement of Construction: tbc
Proposed First Coal: tbc

Project: South Galilee Coal Project (Stage 1 - Epsilon)
Type: OC and UG
Company: AMCI
Status: EA in application (EIS complete) ML in application
Proposed Commencement of Construction: tbc
Proposed First Coal: tbc

MacMines – China Stone



Company	Permit Title	Size (ha)	Lodged	Granted
MacMines Austasia Pty Ltd	EPC 987	35366	15/07/2005	2/08/2006
	EPC 1663	3821	3/12/2008	26/11/2010
	MDL 516	2039	4/10/2013	8/04/2015

Project Overview

- Potential open cut and underground longwall mining
- 7.7 billion tonnes of thermal coal JORC as at June 2015.
- 30+yr mine life based on total resources.
- 55Mtpa Run of Mine coal; equating to 38Mtpa saleable coal.
- Remotely located at the northern end of the Galilee Basin.
- Formerly proposed greenfield coal mine with associated infrastructure including an on-site power station and Port of Abbot Point.
- Requires a rail link into the Galilee to provide a transport corridor for the export coal.

Source: DNRME 2019 Qld Coal Projects report.



About MacMines – China Stone Project

- Project China Stone (PCS) is located in the remote northern Galilee Basin and EPC987 has been drilled by MacMines Austasia Pty Ltd.
- Situated at the western limit of the Isaac Regional Council Local Government Area.
- This is a potential \$6 B project.
- Employing 3900 during construction and 3400 persons when operating.
- The project is proposed to have five mining areas, a main industrial area with an accommodation village, an airstrip, coal processing facilities, train load-out and a power station.
- Proposed Port: Abbot Point.
- Federal Electorate: Capricornia.

MacMines AustAsia Pty. Ltd.

Legend

- MDL ——— Rail_Centreline — Towns
- EPC ——— Aus_Road_2.5M



MacMines Austasia Pty Ltd

Drawn By: Vitorbely J

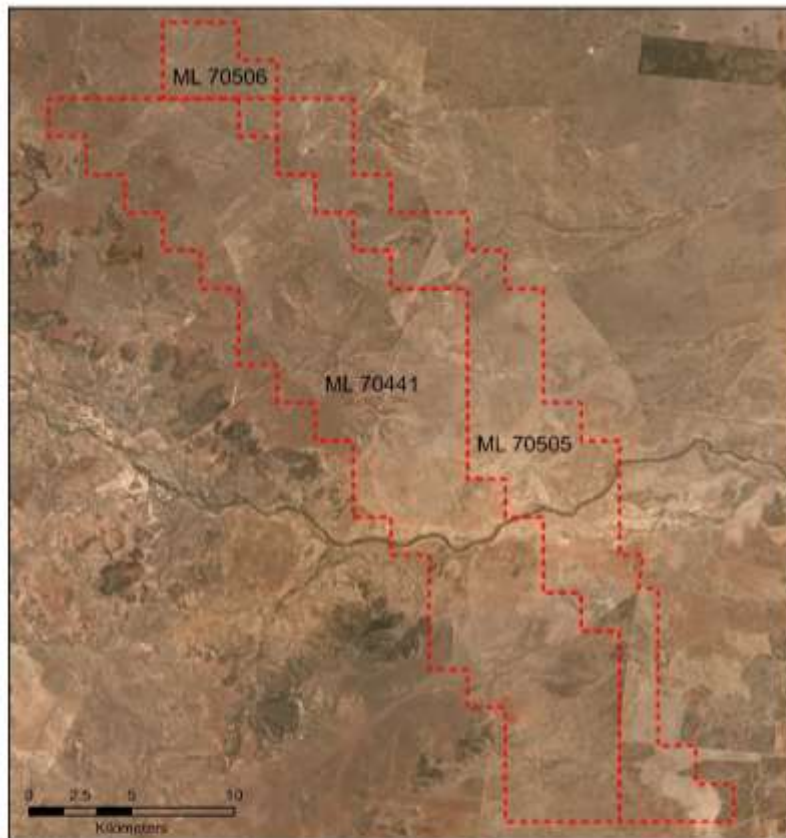
Version No:
Version 3

Checked By:

Date: 24/12/2019

Coal Assessment Hub

Adani – Carmichael Mine



Company	Permit Title	Size (ha)	Lodged	Granted
Adani Mining Pty Ltd	ML 70505	13,530	9/07/2013	3/04/2016
	ML 70441	26,030	8/11/2010	3/04/2016
	ML 70506	1,589	9/07/2013	3/04/2016

Project Overview

- Six open-cut pits and five underground mines
- Initial stage will produce 12 million tonnes of coal per annum ROM
- Coal handling and processing plant
- 189 km rail line connecting the mine to Hay Point and Abbot Point
- Term of 30 years, expiring 30 April 2046
- Off-site infrastructure includes workers' accommodation village and airport
- Up to 900 jobs to be created during construction and 700 during normal operation
- Located within both the Isaac Regional Council and Charters Towers regional Council
- Northern Galilee Basin, 160 km north-west of Clermont in central Queensland

Source: DSDMIP & Adani company website



About: Adani Mining Pty Ltd

- The railway line will connect Carmichael Coal Mine to Moranbah, where it will join the existing Goonyella rail system, connecting the mine to the port at Abbot Point.
- On the 3rd May 2018, the Coordinator-General fixed a new lapse date for the Coordinator-General's evaluation report for the project to 14 August 2019.
- In 2011, Adani was granted a 99 year lease at Abbot Point Port and purchased the operations lease in 2016.
- The coal mined from the Galilee Basin will be sent to countries in Asia, including Vietnam, India, China and Malaysia.
- The Groundwater Dependant Ecosystem Management Plan (GDEMP) and the Black Throated Finch Management Plan (BTFMP) were approved June 2019.

Carmichael Mine

- ML
- Coal Mine
- Towns



Adani Mining Pty Ltd

Drawn by: WinderupR

Version No.
Version 1

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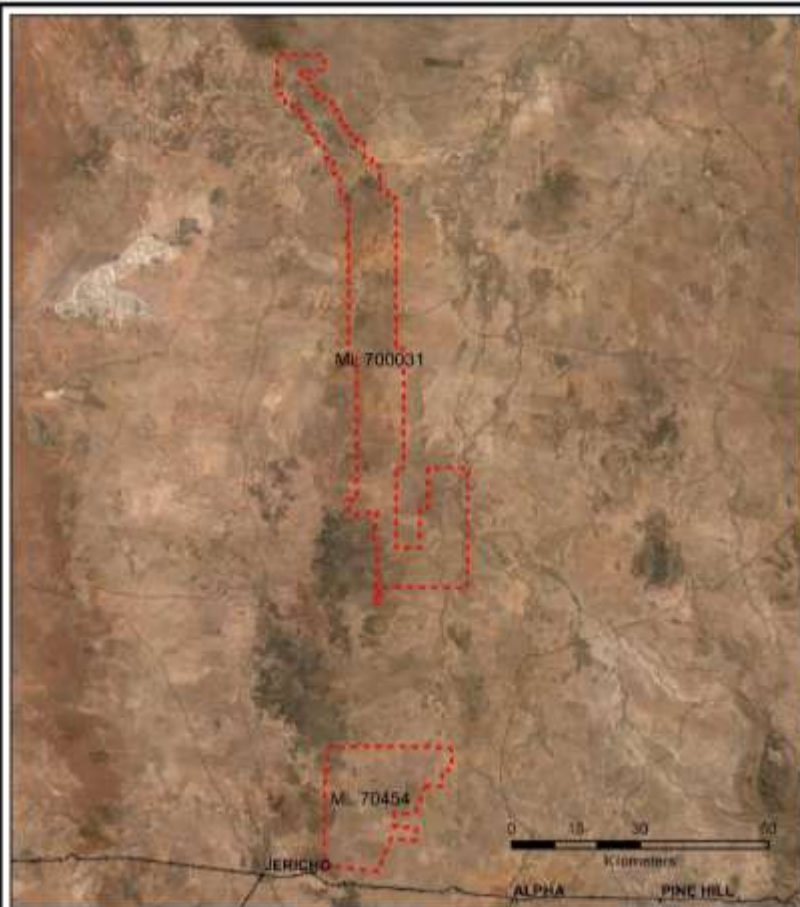
Date: 25/09/2019

Coal Assessment Hub

Adani – Carmichael Mine – Progress



Waratah Coal



Company	Permit Name	Permit Number	Size	Lodged	Granted
Waratah Coal Pty Ltd	North Alpha	MLA 700031	142,100 ha	15/05/2018	-
	Galilee Project	MLA 70454	75,658 ha	30/05/2009	-

Project Overview

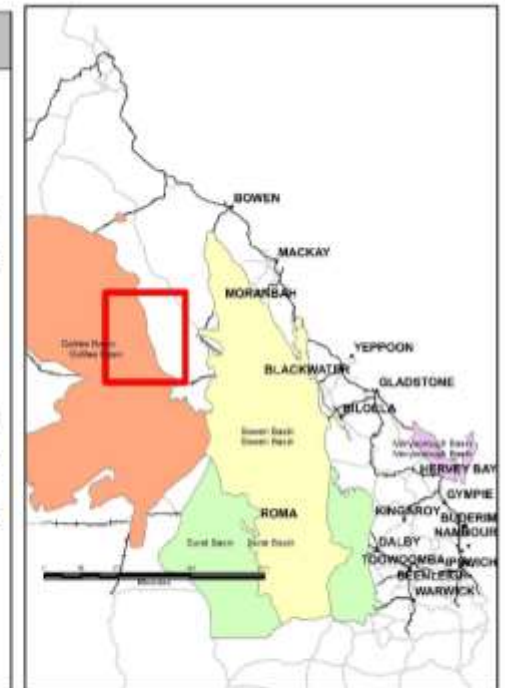
Galilee Project: (formerly China First) MLA 70454

- Proposed: Two open cut and four underground longwall mining operations.
- Reported JORC Resources of 3.6 Billion tonnes
- The project will initially commence operations with a 10 Mtpa open cut mine, eventually ramping up to 56 Mtpa several years later.
- Construction of two Coal Handling Preparation Plants and rail infrastructure

North Alpha: MLA 700031

- Proposed: Two open cut and four underground longwall mines.
- Reported JORC Coal Resources of 3.48 Billion tonnes
- The project will initially commence operations with a 10 Mtpa open cut mine, eventually ramping up to 56 Mtpa several years later.
- Construction of two Coal Handling Preparation Plants and rail infrastructure

Source: Company website



Waratah Coal Pty Ltd

- Waratah Coal Pty Ltd is a wholly owned subsidiary of Mineralogy Pty Ltd
- Waratah is the largest tenement holder within the Galilee Coal Basin and currently hold less than 10,000 km² of exploration tenements within the Galilee Basin including: 12 Exploration Permits for Coal (EPC), a Mineral Development License 455 and Mining Lease application 70454 and 700031.
- Within these tenements, Waratah has proven up JORC thermal coal resources of 7.2 Billion tonnes and JORC coal reserves of 1.1 Billion tonnes.
- Public notification for the MIA for the Galilee Project commenced 4 October 2019.
- On 3 July 2018, Waratah submitted an application to submit a voluntary EIS for North Alpha (MLA 700031), this was approved by DES, however to initiate the EIS process Waratah need to submit a draft Terms of Reference.

Waratah Coal Pty Ltd

Legend

- MLA
- Towns
- Coal Mine
- Rail



Version No.
Version 1

Waratah Coal Pty Ltd

Drawn By: J. Smith

Checked by:

Date: 28/10/2019

Coal Assessment Risk

GVK – Kevin's Corner



0 2.5 5 10
Kilometres

Company	Permit Title	Size (ha)	Lodged	Granted
Hancock Galilee Pty Ltd	ML 70425	37,380	8/12/2009	-

Project Overview

- Open cut and underground (long wall) with associated infrastructure.
- Proposed production 45 Mtpa ROM
- Kevin's Corner resource is 4.2 billion tonnes of JORC compliant thermal coal.
- 30+yr mine life with the possibility of extension.
- 2,500 construction jobs and 1,600 to 1,800 operational jobs
- FIFO workforce
- Construction of 500km of rail in GBSDA
- Port of Abbot Point
- Coal Assessment Hub is discussing an updated IDP with company

Source: The company website
gvkhancockcoal.com& DNRME 2019 Qld Coal Projects report.



About GVK - Kevin's Corner Project

- GVK's Kevin's Corner Project is located immediately to the north and adjacent to the Alpha Coal Project 50 kilometres north west of Alpha.
- Within the Barcaldine Regional Council and Maranoa Federal Electorate areas.
- In the Galilee Basin, targeting the Bandanna Formation.
- The Kevin's Corner Project is proposing to share some key infrastructure with GVK's Alpha Project (MLA70426) such as an accommodation village, airport, local improvement to road networks and regional construction of power and water to site and 500 kilometres of rail within the Galilee State Development Area.

Kevin's Corner

Legend

- ML Application
- Towns
- Aus_Road_2.5M
- Rail



Version No.
Version 2

GVK Hancock

Drawn By: jmcralappp

Checked by:

Date: 28/03/2019

Coal Assessment Hub

GVK – Alpha Project



Company	Permit Title	Size (ha)	Lodged	Granted
Hancock Coal Pty Ltd	ML 70426	32,423	18/12/2009	-

Project Overview

- 32 Mtpa open-cut coal mine, with the potential for the future development of underground (long wall) with associated infrastructure
- The Alpha Coal and Kevin's Corner combined resource is 7.9 billion tonnes of JORC compliant thermal coal.
- 30+yr mine life with the possibility of extension
- Coal seams dip gently to west varying from 5 metres to 8 metres
- Construction of 500km of rail in Galilee Basin State Development Area
- Test pit and bulk sample taken in 2011
- Port of Abbot Point

Source: The company website gvkhancockcoal.com & 2019 Qld Coal Projects Report



About GVK Hancock – Alpha Project

- The proposed Alpha Project will share some key infrastructure with GVK's Kevin's Corner Project (MLA 70425) such as an accommodation village, airport, local improvement to road networks and regional construction of power and water to site and 500 kilometres of rail within the Galilee State Development Area.
- Located 50 kilometres north west of the township of Alpha in the Barcaldine Regional Council and Maranoa Federal Electorate areas,
- Within the Galilee Basin targeting the Bandanna Formation.
- The Alpha Project is a joint venture of GVK and Hancock Prospecting.

Alpha Project

Legend

- ML Application
- Coal Mine
- Towns
- Aus_Road_2.5M
- Rail



GVK Hancock

Drawn By: marioleone

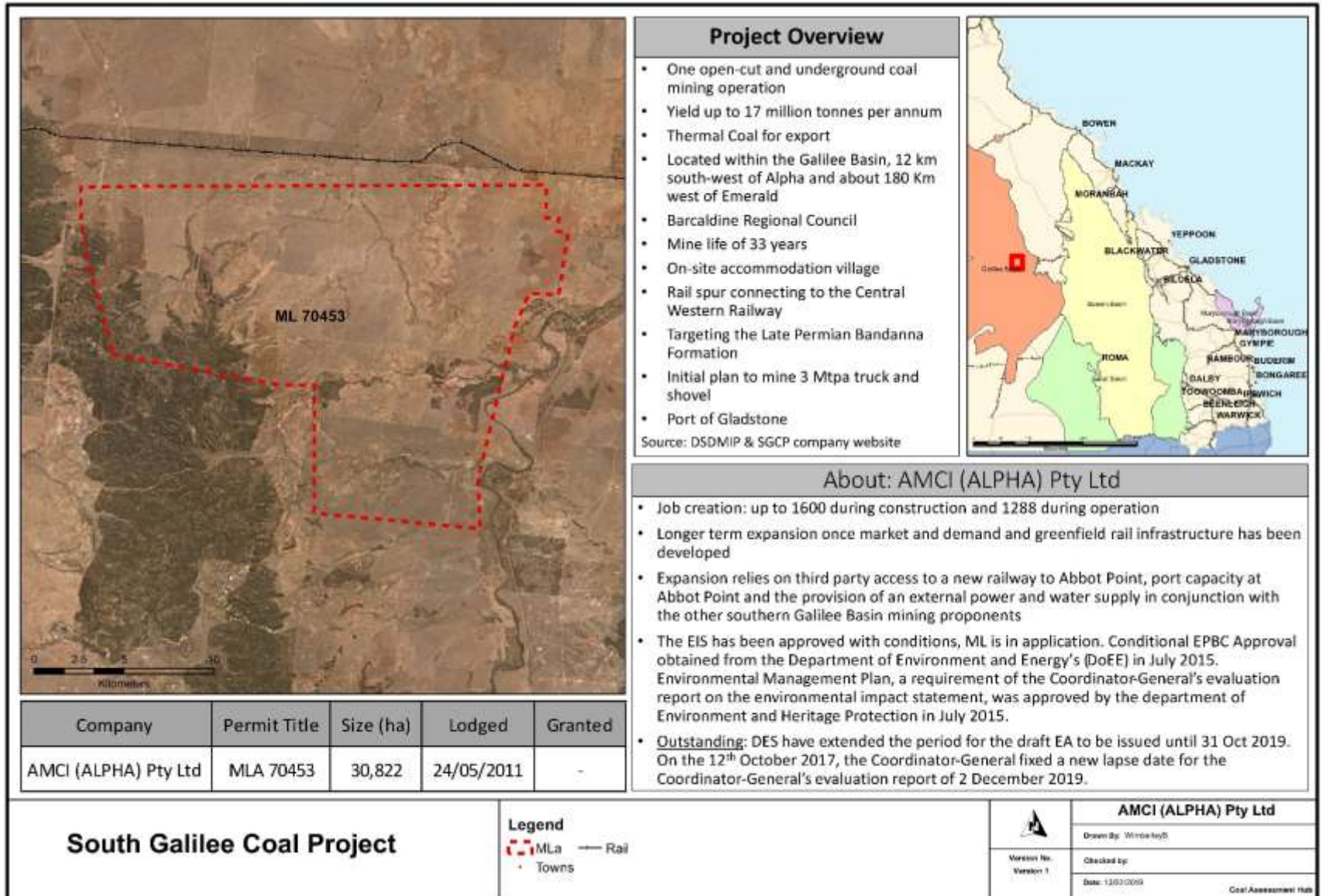
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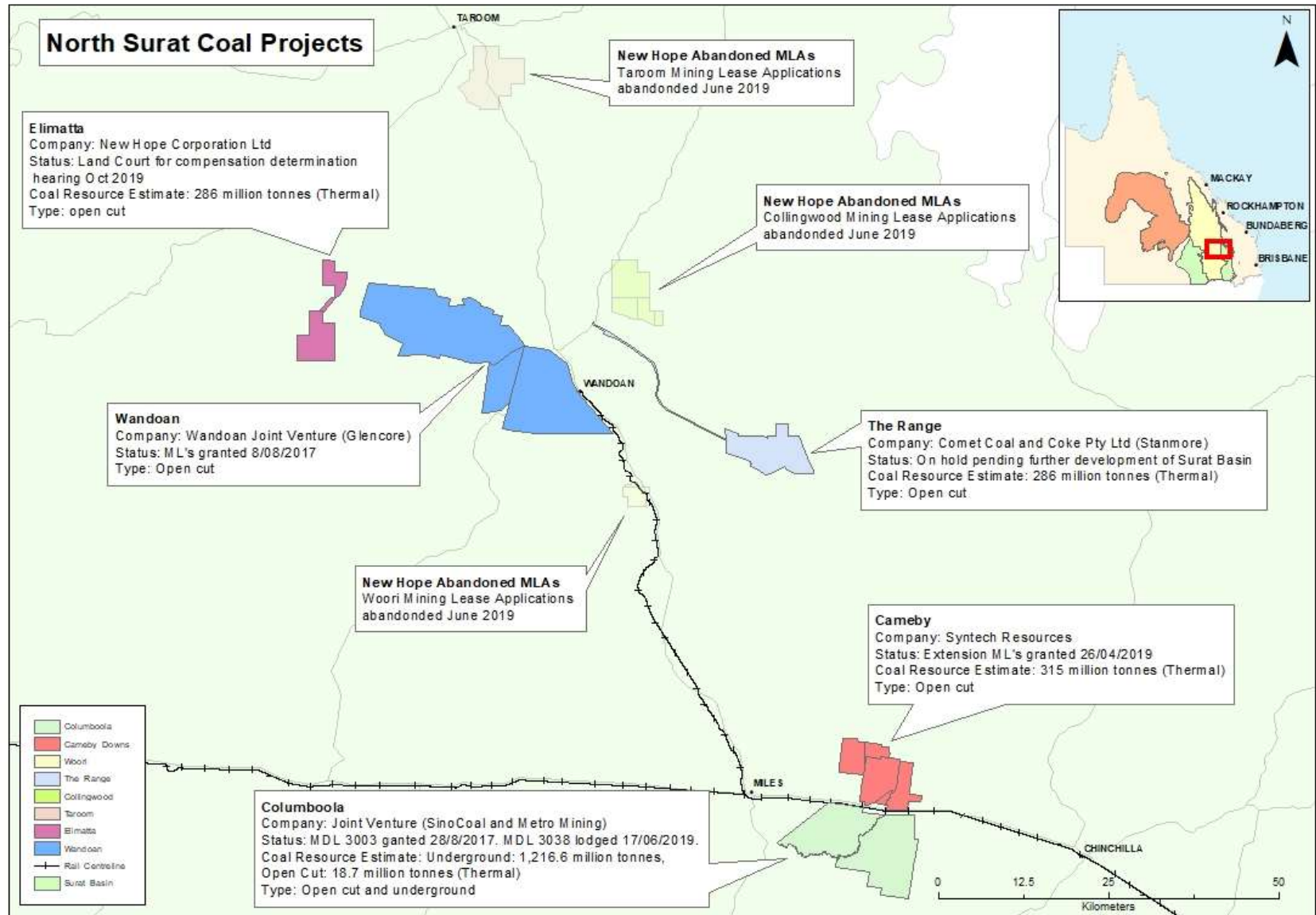
Date: 31/10/2010

Coal Assessment Hub

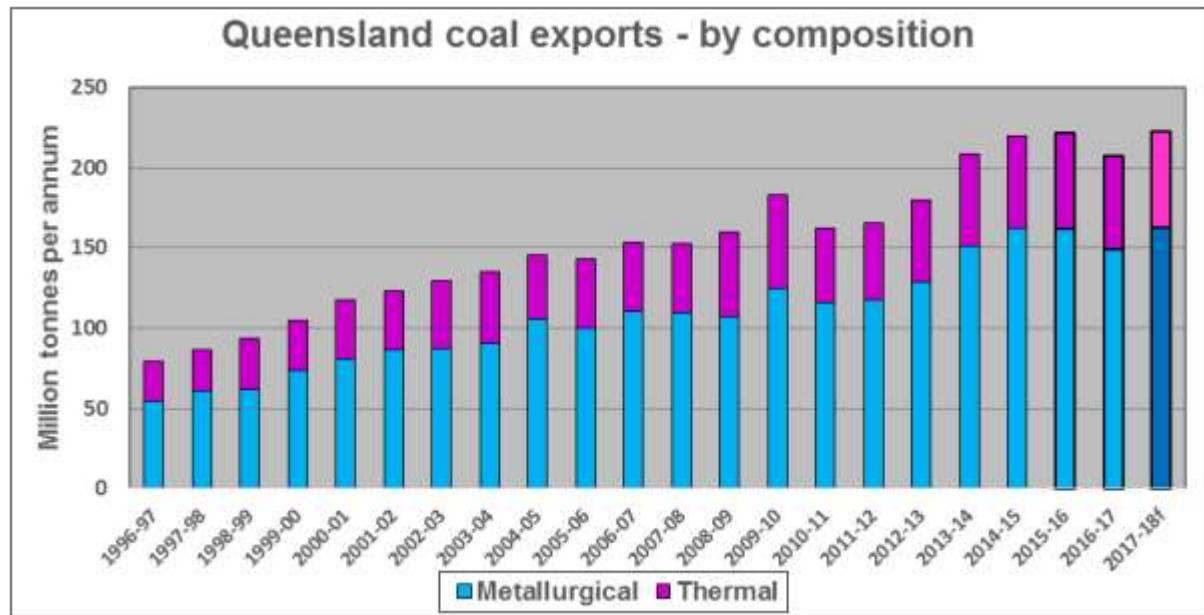
AMCI – South Galilee Coal



Surat Basin



Coal Recovery



Granted: Coal Mining Leases

2016	2017	2018	2019 (@ 30 June)
13	18	10	5

Queensland Coal Terminal Throughput – 3rd Quarter 2018-2019

Terminal	Throughput Jan-Mar 2019 (Mt)	Change on Previous Quarter	Change on Previous Corresponding Quarter	Throughput Year to 31 Mar (Mt)	Change on Previous Corresponding Period
Abbot Point	6.02	-19.3%	-13.6%	21.48	4.0%
Dalrymple Bay	16.36	-11.8%	-9.0%	52.33	-4.9%
Hay Point	11.56	-0.63%	-6.3%	35.4	4.1%
RG Tanna	15.22	-2.6%	25.0%	45.40	6.3%
Wiggins Island	2.46	-24.3%	3.5%	8.39	16.1%
Brisbane	1.54	-18.1%	-12.3%	4.99	-10.7%
Totals	53.15	-8.97%	-0.79%	167.99	-0.08%

Applications Lodged for: Coal Mining Leases

2016	2017	2018	2019 (@ 30 June)
7	4	19	7

Central Queensland Coal



Company	Permit Title	Size (ha)	Lodged	Granted
Central Queensland Coal	ML 80187	2266	15/06/2012	-
Central Queensland Coal	ML 700022	745.3	23/05/2017	-

Project Overview

- Two open-cut mine pits producing up to 10 Mtpa of product coal
- Two coal handling and preparation plants
- Three waste rock stockpiles
- Two ROM stockpile areas and product stockpile pads
- A water management system including four on-site water storage dams, two mine industrial area process water dams, and six environmental dams
- Fuel, oil, explosives storage facilities
- Haulage roads and a conveyor system to transport coal to a new train load-out facility
- A new train load-out facility to transport coal from the mine via the existing North Coast Rail Line to Dalrymple Bay Coal Terminal

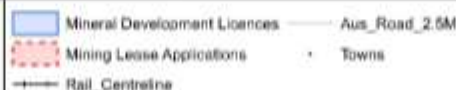
Source: Department of Environment and Science & 2017 Initial Development Plan



About: Central Queensland Coal Project (Styx Project)

- MLA80187 and MLA700022 are jointly held by Central Queensland Coal Pty Ltd and Fairway Coal Pty Ltd, both wholly owned subsidiaries of Mineralogy Pty Ltd.
- The Central Queensland Coal Project is a greenfield open-cut coal mine with associated project infrastructure that would involve the extraction of up to ten million tonnes per annum of product thermal and coking coal for the export market over a life of 20 years.
- The proposed project would be located approximately 130 kilometres (km) northwest of Rockhampton and approximately 25km northwest of Marlborough within the Livingstone Shire Council area.
- The proposed project would employ up to 275 construction employees and up to 500 operational employees. The local towns of Marlborough, Ogmoo and St Lawrence would be used to accommodate drive-in drive-out workers. An accommodation camp may be developed outside the proposed project area and will be subject to local government assessment and approval independently of the EIS.

Central Queensland Coal Project (Previously known as the Styx Coal Project)



Version No.
Version 1

Central Queensland Coal Pty Ltd

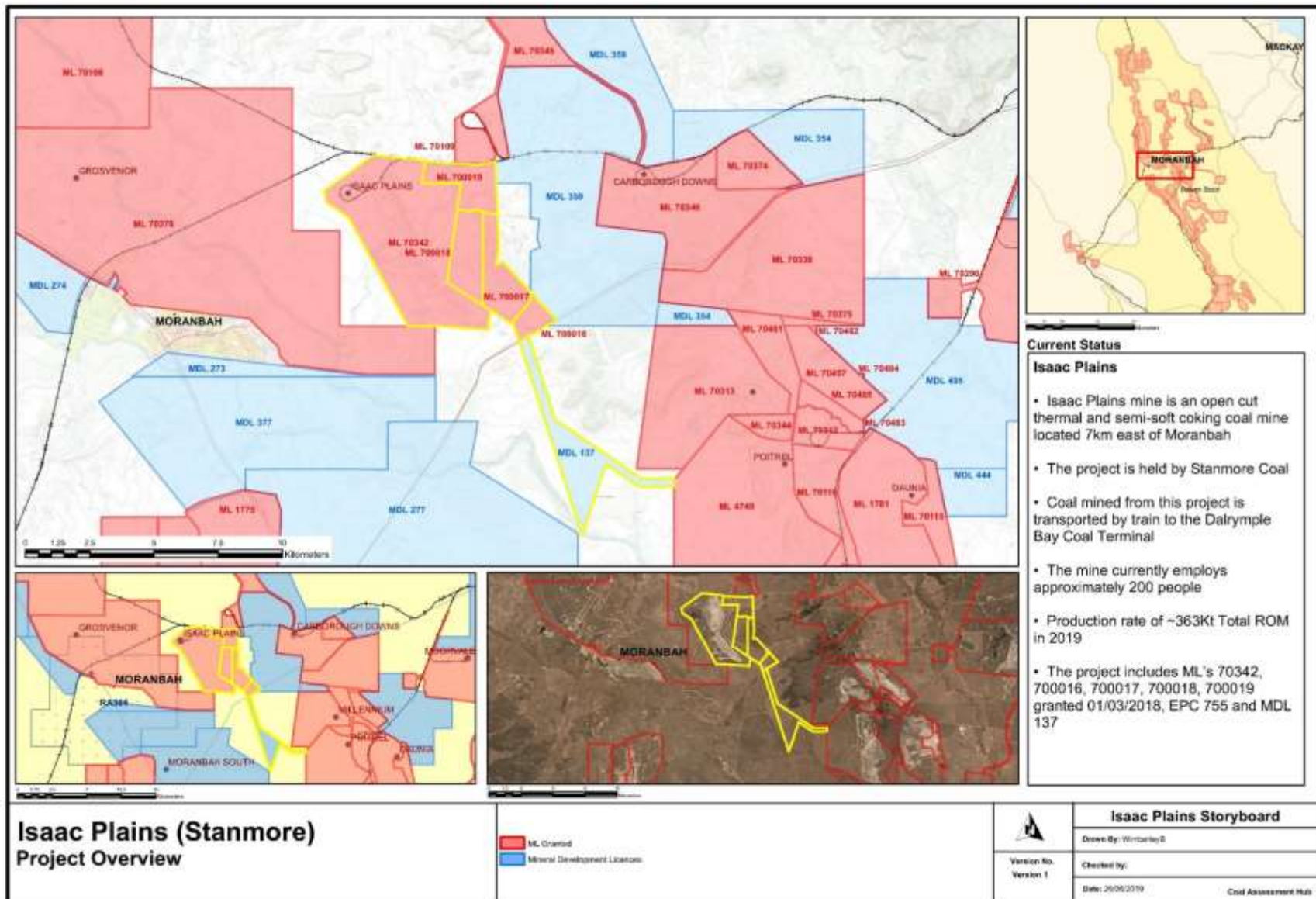
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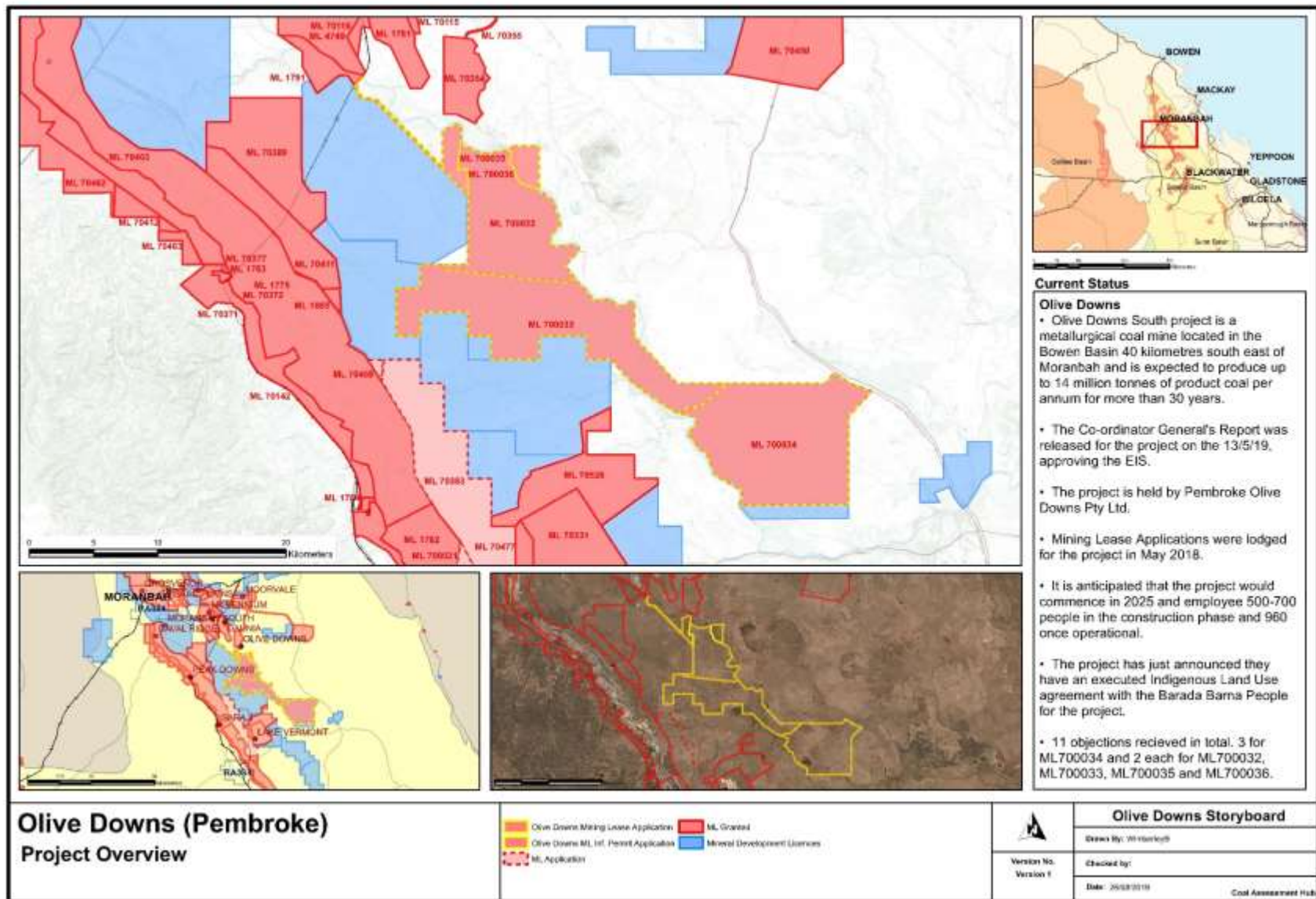
Date: 20/08/2018

Coal Assessment File

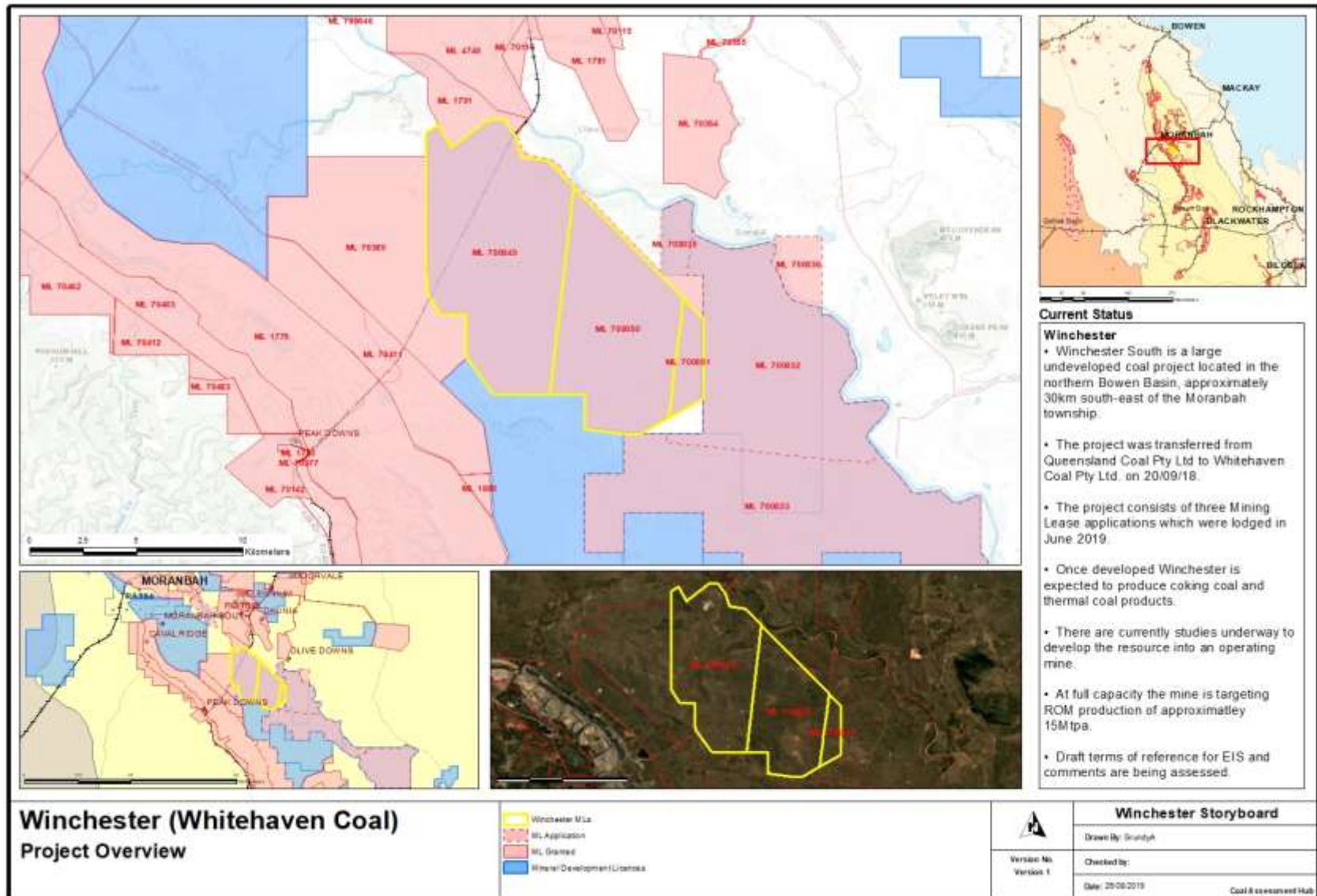
Isaac Plains



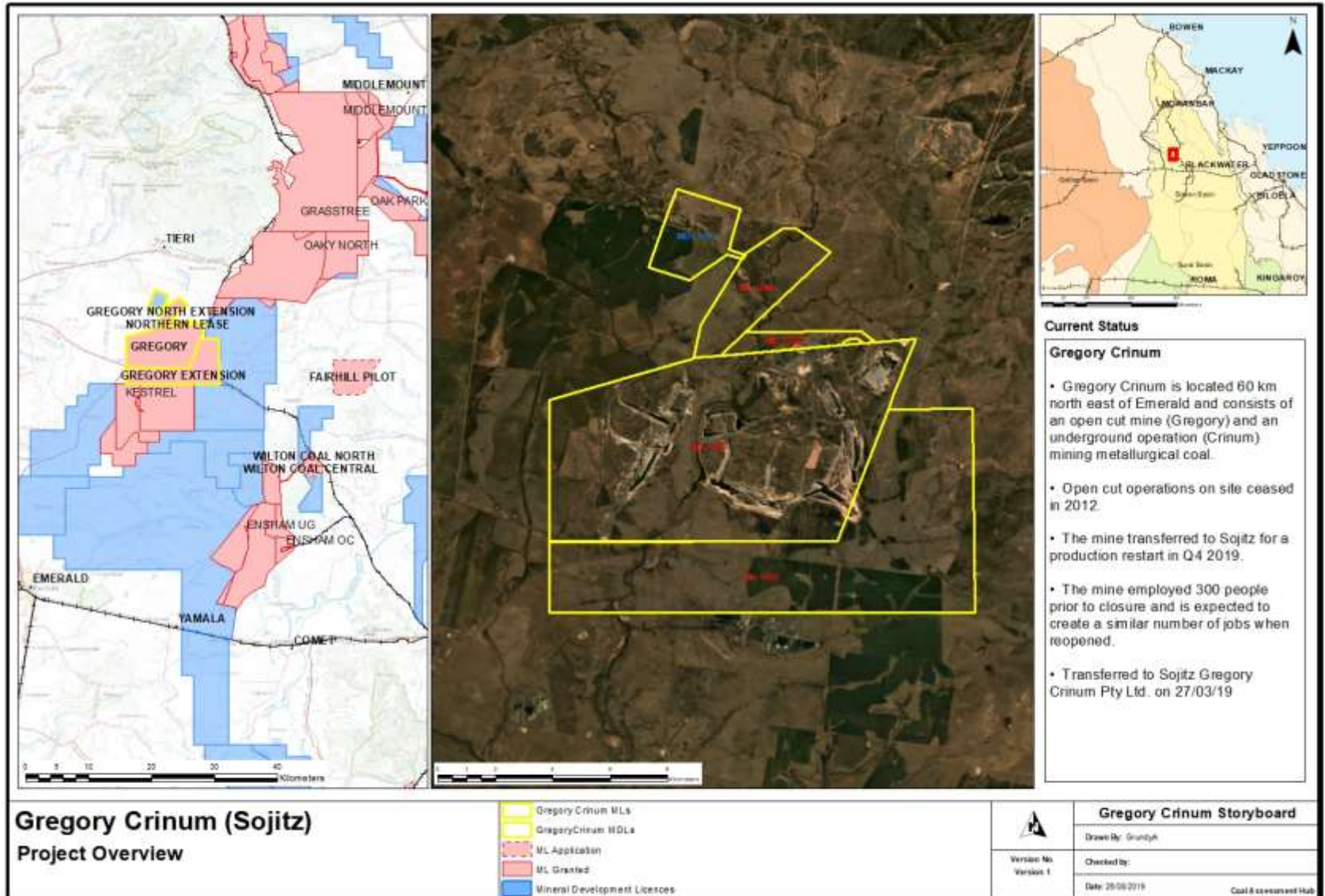
Olive Downs



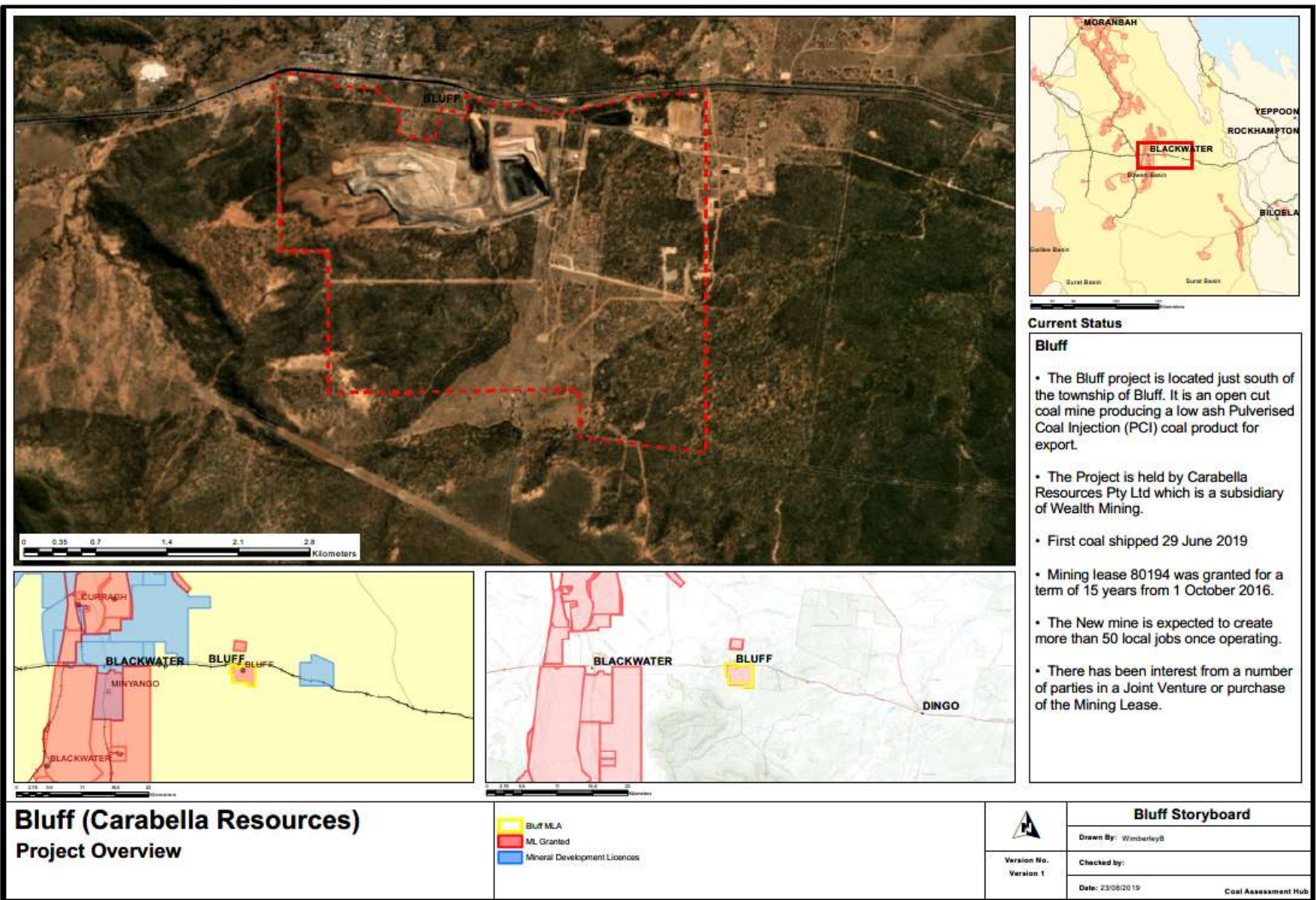
Winchester



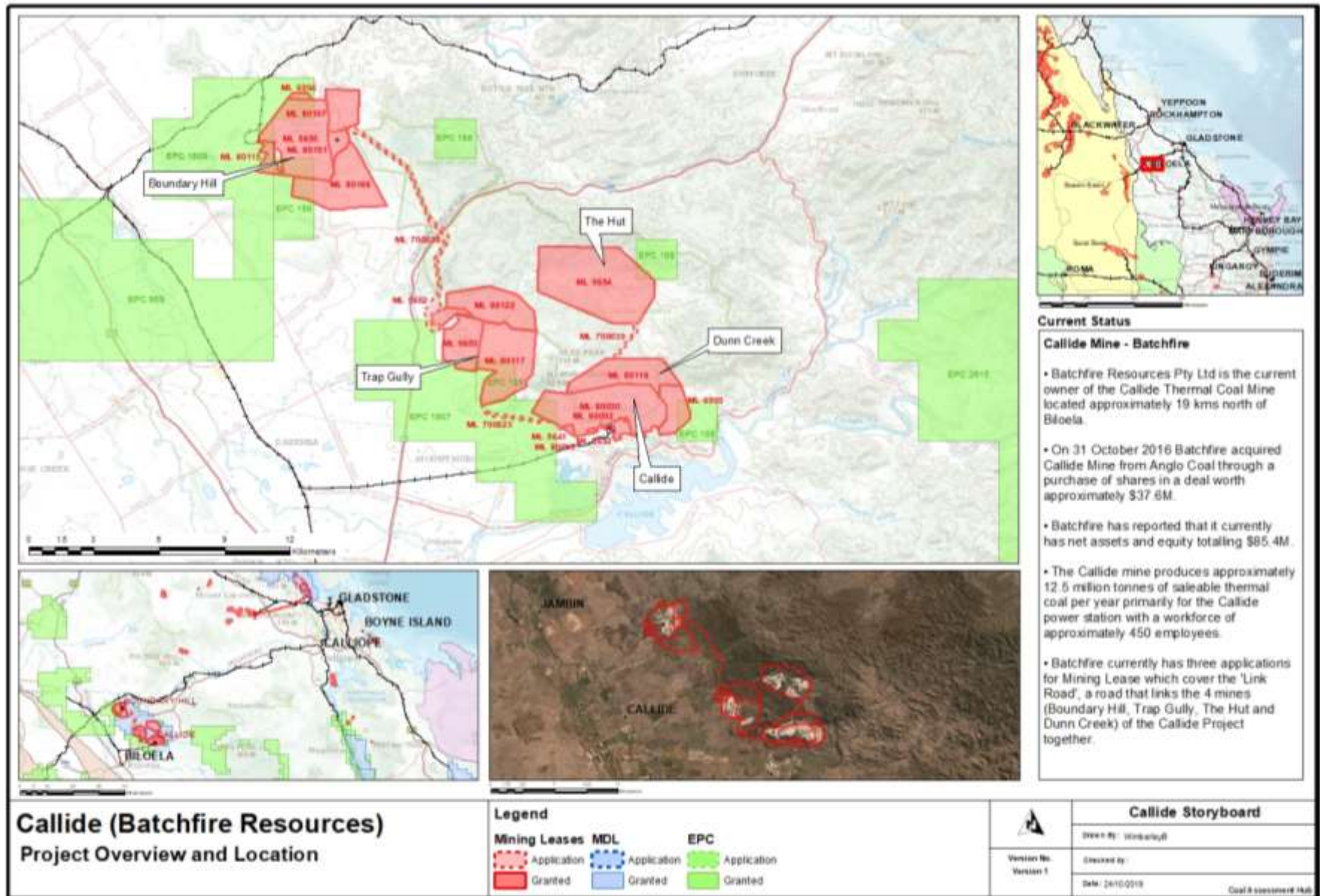
Gregory Crinum



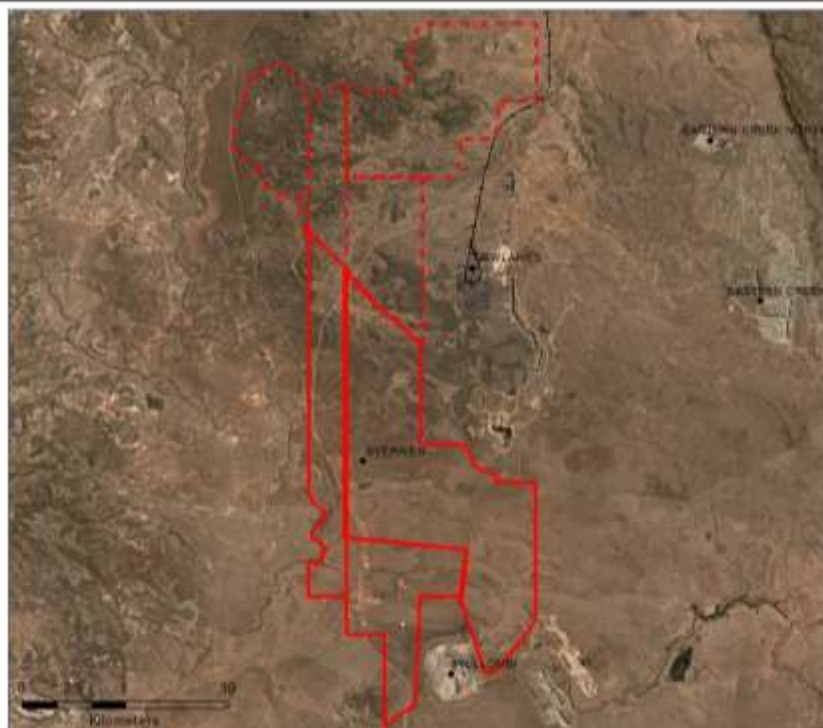
Bluff



Callide



Byerwen Coal



Project Overview

- Open cut and underground coal mine, coal handling and preparation plant, access and all associated infrastructure.
- 10 million tonnes per annum Run of Mine metallurgical coal (6.6 Mtpa saleable).
- Up to 350 employees during construction and up to 550 during operations.
- Mine accommodation at on-site Workers Camp.
- On-lease rail loop with coal to be railed to Abbot Point.
- First coal expected by the end of 2019.
- Status: Stage 1 operations.

Source: All numbers from QCoal's Project Website:
<https://www.qcoal.com.au/our-projects/byerwen-mine/>



About Byerwen Coal Project

- The Byerwen Coal Pty Ltd is a Joint Venture between QCoal and JFE Steel.
- The Byerwen Coal Project is located approximately 130 kilometres west of Mackay, 30 kilometres west of the town of Glenden and 80 kilometres south of Collinsville.
- The Byerwen Coal Project currently has 3 granted Mining Leases (ML) and 4 Mining Lease Applications
- Stage 1 of the project involves mining of up to 10 million tonnes per annum (Mtpa) of run of mine or 6.6 Mtpa saleable coal from three open cut pits. Further resources have been identified for future underground mining.
- A large amount of supporting infrastructure will be constructed for the project, including office and accommodation infrastructure, water infrastructure, coal handling and preparation infrastructure and electrical and rail infrastructure.
- Mining operations began in August 2017 with first coal production in December 2017.

Company	Permit Title	Size	Lodged	Granted
Byerwen Coal Pty Ltd	ML 10355	4457.26 Ha	29/06/2010	-
	ML 10356	2202.59 Ha	29/06/2010	-
	ML 10357	1332.46 Ha	29/06/2010	-
	ML 10374	1690.14 Ha	20/11/2013	-
	ML 70436	2709.36 Ha	30/06/2010	27/04/2017
	ML 70434	7617.00 Ha	30/06/2010	27/04/2017
	ML 70435	2562.00 Ha	30/06/2010	16/04/2015

Byerwen Coal Project Project Overview and Location

Legend

- Granted
- Application
- Coal Mine
- Towns
- Rail



Byerwen Coal Pty Ltd

Drawn By: Wimbereji

Version No:
Version 1

Checked By:

Date: 24/10/2018

Coal Assessment Hub

Useful online information:

Queensland Coal Projects Table

- Email: CoalHub@dnrme.qld.gov.au

Search for resource authorities

- <https://www.business.qld.gov.au/industries/mining-energy-water/resources/online-services/searches>

Coal industry statistical tables

- <https://data.qld.gov.au/dataset/coal-industry-review-statistical-tables>

Mine worker numbers

- <https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/mining/accidents-incidents/safety-performance>

Coal resources

- <https://www.business.qld.gov.au/industries/invest/mining/resources-potential/mineral-resources/coal-resources>

Spatial data

- <http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

GeoResGlobe

- <https://georesglobe.information.qld.gov.au/>

Queensland globe

- http://qldspatial.information.qld.gov.au/catalogue/custom/search.page?q=%22Queensland+Globe%22&fq%5B%5D=id.table_s:table.docindex

