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Greenvale Mining NL  
Suite 25, 145 Stirling Highway,  
Nedlands  
Western Australia 6009  
Attention : Board of Directors

**Re: letter of opinion regarding the Alpha oil shale project, Queensland, Australia**

Dear Sirs,

In response to a request from Greenvale Mining NL, this letter has been prepared as a formal 'Letter Of Opinion' (LOO), for the purpose of inclusion in documents for Greenvale Mining NL relating to the dual listing of the company on the London Stock Exchange AIM market in addition to the Australian Stock Exchange. This letter has been written in accordance with the requirements of the AIM Guidance Note for Mining, Oil and Gas Companies dated June, 2009 (AIM Guidance Note).

In accordance with the requirements of the AIM Guidance Note, we confirm that we;

- 1) are professionally qualified and a members in good standing of the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists
- 2) have more than 5 years relevant experience in the estimation, assessment and evaluation of oil shale and coal assets
- 3) are independent of the company, its directors, senior management and advisors
- 4) are remunerated according to the amount of time spent working on this letter which is in no way linked to the admission or value of the company or outcome of the study
- 5) are not a sole practitioner
- 6) have relevant qualifications, experience and technical knowledge to appraise technically and independently the Alpha oil shale project
- 7) consider the scope of this LOO is appropriate with regards to the Alpha oil shale project and discloses all the information required to be included therein and is prepared to the standard expected in accordance with the AIM Guidance Note
- 8) there has been no material change in the data and the information has been provided without prejudice herein

Nether Misteri Bay Exploration Pte Ltd (MBE) nor any of its director's, staff, consultants or subsidiary company employees, whom contributed to this document, has any interest in Greenvale Mining NL, or any of the advisors to the company; or Assets, or outcome of the Offer. There are no potential conflicts of interest for MBE preparing this letter.

The Joint Ore Reserve Committee of Australia (JORC 2012) guide lines have been used as a standard for compilation and preparation of this letter.

In this Letter of Opinion, the oil shale potential of the Alpha oil shale deposit has been evaluated according to the 2012, guidelines set by the Joint Ore Reserve Committee (JORC) of Australia, in an effort to assess the status of the project, identify gaps in the data and make recommendations for further work.

Alpha Resources Pty Ltd, which is 99.995% owned by Greenvale Mining NL, has a mineral development license (MDL 330) with a total area of 1,906.60ha, in Queensland, Australia. MDL 330 is surrounded by numerous coal mining lease areas. At this time the mining lease MDL330 expired on the 1<sup>st</sup> of February, 2012, and an application, lodged in July, 2011, is still in process. It is not known exactly when the lease renewal will be issued but it is anticipated to be within the coming weeks. Through its ownership of Alpha Resources Pty Ltd, Greenvale Mining NL has a 99.995% interest in MDL 330.

The area is located 62km south of Alpha, a small farming town, in Central Queensland. The location of the area is shown in Figure 1.

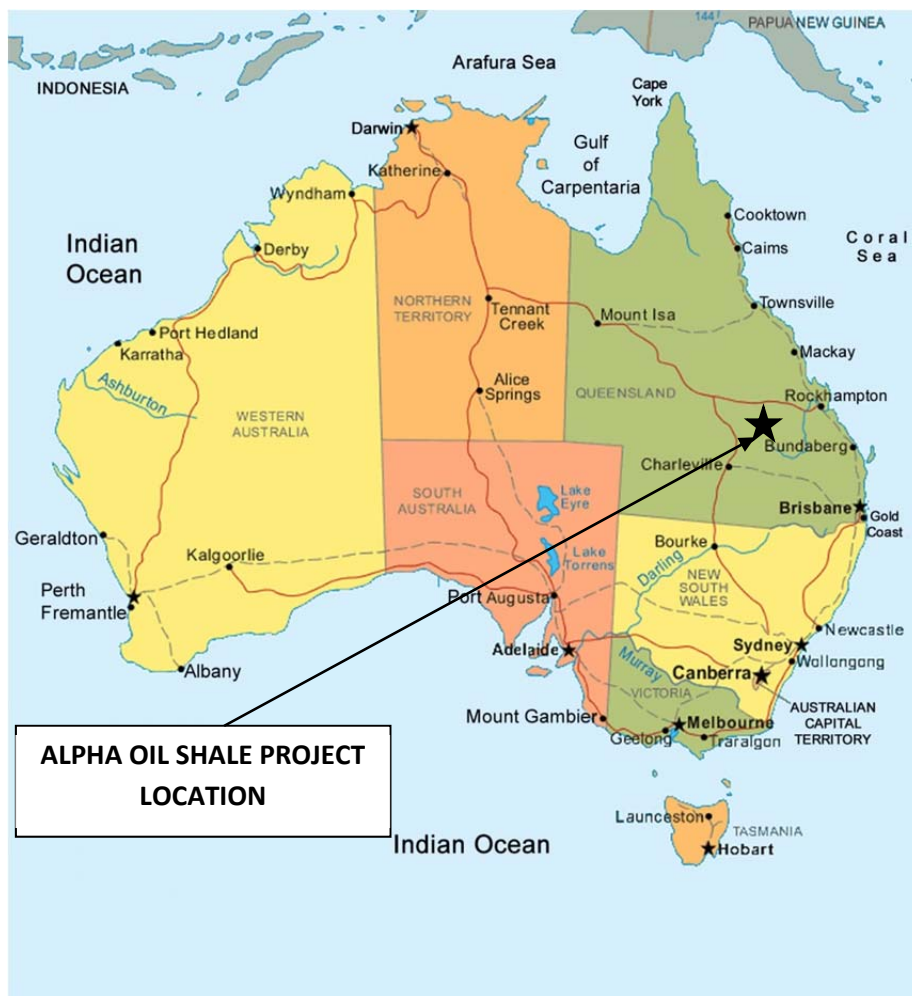


Figure 1 Alpha oil shale project location map

The Alpha oil shale deposit consists of two seams; an upper seam of cannel coal and a lower seam of torbanite and cannel coal. Torbanite is the richest variety of oil shale known (oil yields range from 200-600l/TOM) and deposits result from the accumulation of a single species of algal remains. Cannel coal is another type of oil shale (oil yields range from 90-200l/TOM) that is derived from the accumulation of plant remains and the source of the oil is from preserved spores, plant resin and cuticles.

The exploitation of torbanite in Australia began in 1860 and at least 16 deposits were mined in the Sydney Basin before the turn of the century. Torbanite was generally retorted on site to produce oil for kerosene, naphtha, paraffin wax, oils and grease. Torbanite was also transported to Sydney, Melbourne and exported overseas. Most of these early mining and retorting ventures were commercially viable. The Alpha torbanite deposit represents one of the few known deposits remaining with exploitation potential.

Over the last 75 years the Alpha oil shale project area has been explored by numerous parties. Table 1 summarizes the field exploration work at the Alpha oil shale project during this period.

**Table 1**  
**Exploration History at the Alpha oil shale deposit**

COMPANY	WORK	YEAR	REMARKS
LOCAL SYNDICATES	SHAFT	1939-45	PROSPECTING, NOT SYSTEMATIC & NOT RECORDED
QLD DEPT OF MINES	QDM DRILLING	1942-44	GOVT GEOLOGICAL SUPERVISION DRILLING 15 HOLES
INTERNATIONAL MINING CORPORATION	GA / RDH DRILLING	1979-81	McELROY BRYAN & ASSOCIATES SUPERVISION DRILLING 16 HOLES
JFH MURRAY & ASSOCIATES	SURVEY	1980	ESTABLISH BENCHMARKS & SURVEY DRILLING FOR IMC
GREENVALE EXPERANCE	GE 1-8	1980-84	RESOURCE DEFINITION DRILLING WITH GEOLOGICAL SUPERVISION
QUEENSLAND NICKEL	ANALYSES	1981	OIL SHALE AS CHEMICAL REDUCTANT IN Ni ORE PROCESSING
PETROBRAS BRASIL	ANALYSES	1981	RETORTING STUDIES ON 100KG SAMPLE
TOSCO USA	ANALYSES	1981	RETORTING STUDIES ON 100KG SAMPLE
BKS SURVEYS	SURVEY	1983	BENCHMARK SURVEY & DRILL COLLARS FOR ARL
RANKIN & HILL	RESOURCE ESTIMATE	1984	ENGINEERING STUDY
GREENVALE ESPERANCE	GE 9-38	1985-87	RESOURCE DEFINITION DRILLING WITH GEOLOGICAL SUPERVISION
???	GE 9-38	1987	DRILL COLLAR PICK UP SURVEY
COAL & CARBON INDUSTRIES MELBOURNE	ANALYSES	1987	RETORTING STUDIES PRODUCED GASOLENE, KEROCENE, DEISEL & APHALTINES
BITUMEN STUDY	MARKET STUDY	1987	USED FOR ROAD SURFACE, ALPHA COULD SUPPLY QLD REQUIREMENTS
CSIRO	ANALYSES	1988	BENCH SCALE RETORT TESTS
INLAND OIL REFINERIES	MICROSTILL	1989	MINI REFINING CONCEPT FOR REMOTE FUEL SUPPLY
D MADRE	OPEN PIT STUDY	1990	10 YEAR PRELIMINARY MINE PLAN TO PRODUCE 200,000BBL OIL/YEAR
NORTHLAKE INDUSTRIES INC	ANALYSES	1992	RETORTING TESTS
UNIVERSITY OF KENTUCKY	ANALYSES	1994	PRODUCTION POTENTIAL FOR ACTIVATED CARBON

From the exploration already completed, data that can be used to define the resource potential at the Alpha oil shale project, is summarized as follows;

- 2 test pits
- 68 drill holes with total cumulative depth of 3,251.9m
- down-hole geophysical logging in 40% of the holes
- topographic mapping from air photos & drill collar ground survey
- 192 oil shale sample analyses
- bulk sample retort and other testing

Using this data previous resource estimates have also been made and these are summarized in Table 2.

**Table 2**  
**Previous Resource Estimates**

Source	Date	OIL SHALE RESOURCES (million tonnes)				SHALE OIL RESOURCES (million barrels)				Comment
		Measured	Indicated	Inferred	TOTAL	Measured	Indicated	Inferred	Total	
CONNAH	1964			3.3	3.30			4.5	4.50	NON JORC
RANKIN & HILL	1984		7.09		7.09		10.8		10.84	mineable NON JORC
HUTTON	1987	21.81			21.81	30.6			30.60	in situ (JORC)
MADRE	1990	7.43			7.43	10.3			10.30	mineable NON JORC

The distribution of the drilling and the deposit outline is shown in Figure 2.

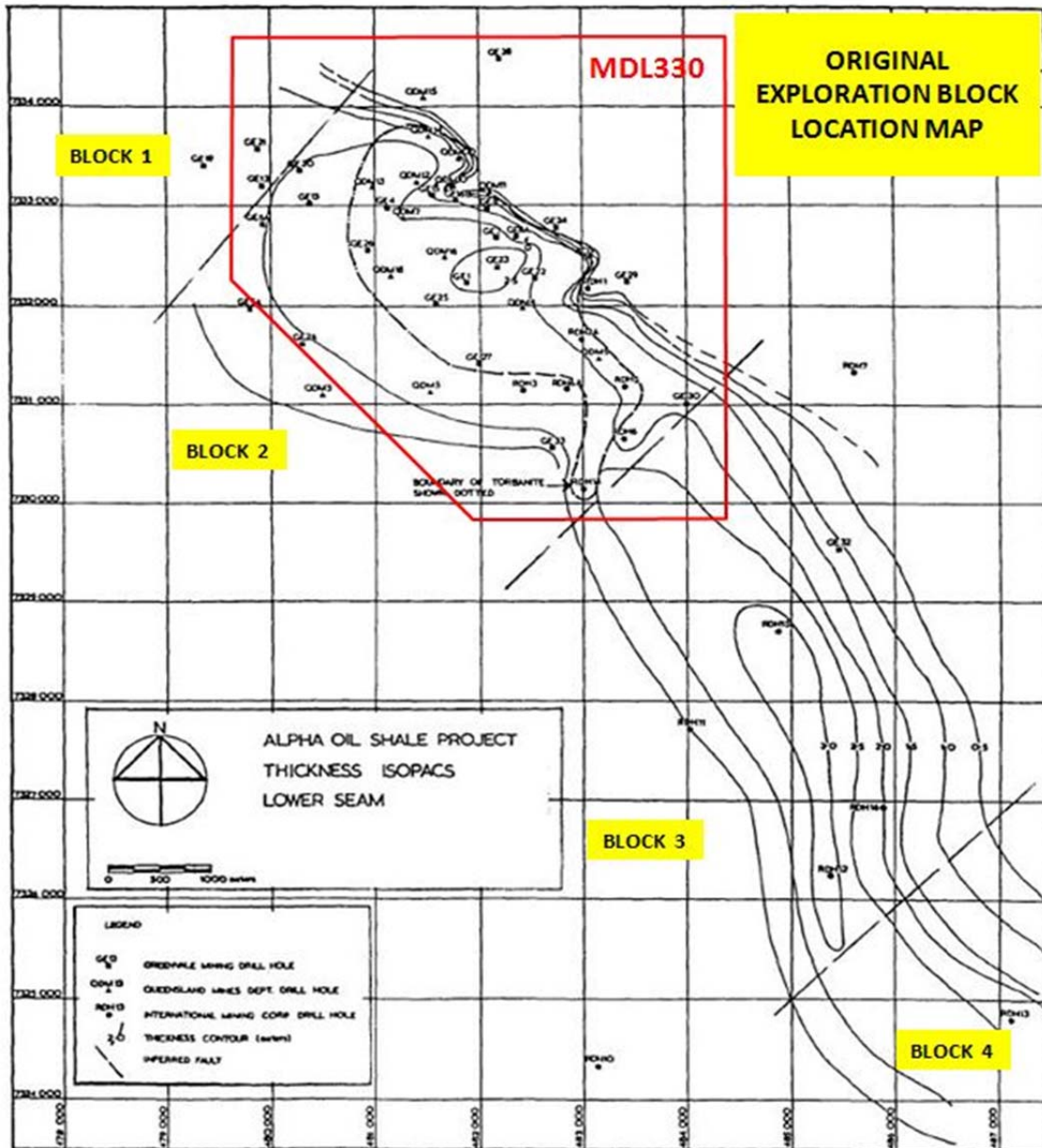


Figure 2 drill hole location map and oil shale thickness contours (Madre, 1985)

A diagrammatic cross-section through the deposit is shown in Figure 3.

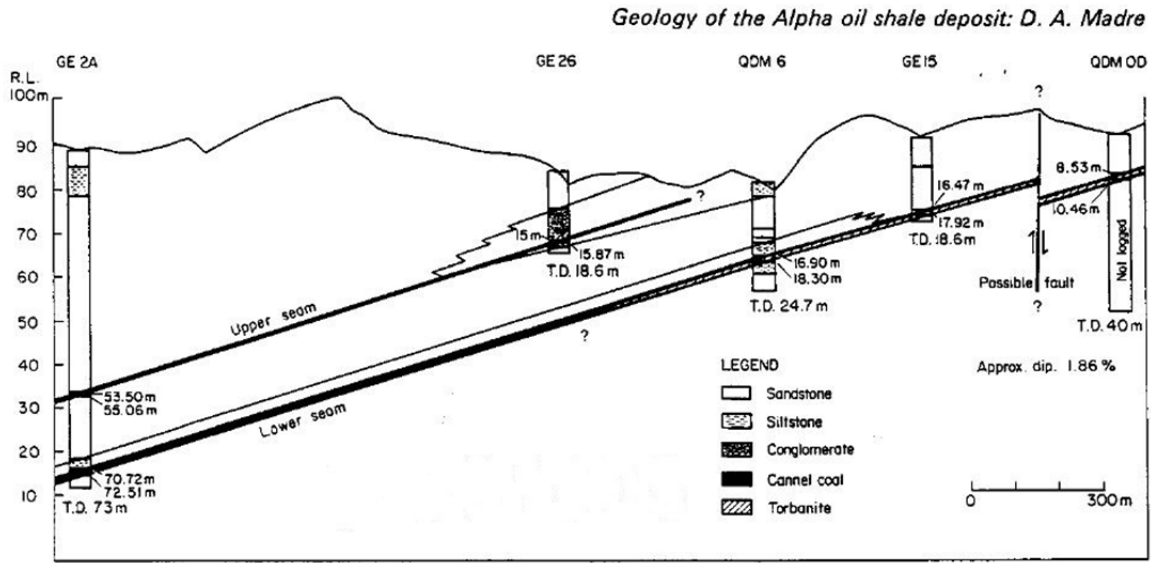


Figure 3 diagrammatic cross-section (Madre, 1985)

The geological structure of the deposit is relatively simple and the oil shale seam dip is at approximately 4 degrees. Seam thickness information is summarized in Figure 4.

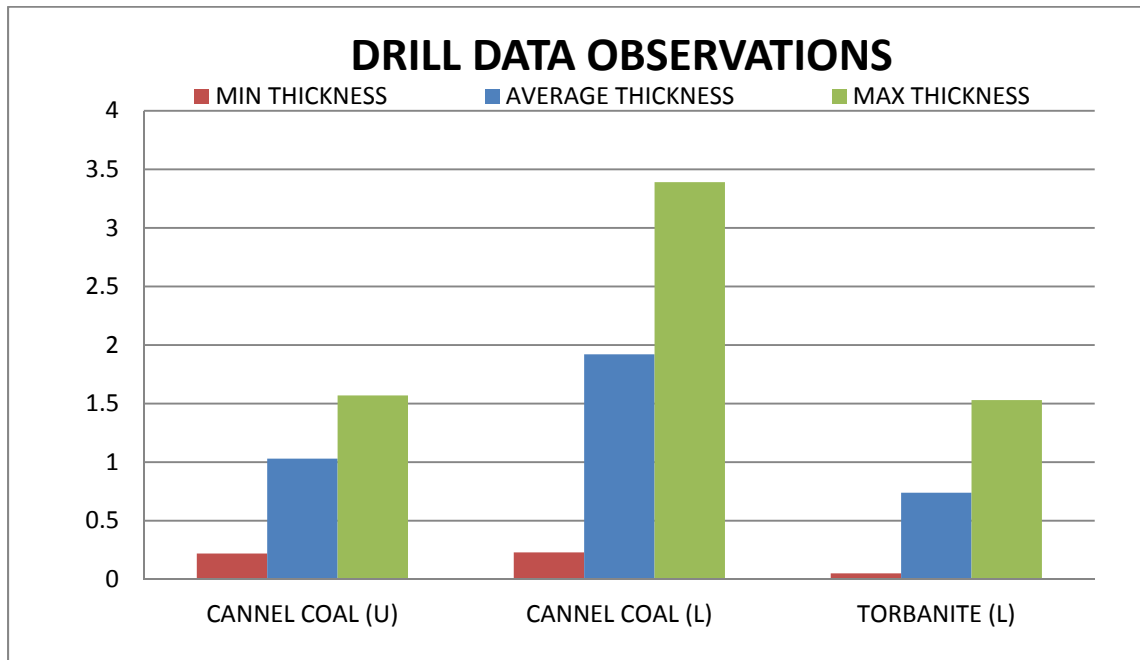


Figure 4 currently known oil shale thickness (U = upper seam and L = lower seam)

Some of the raw data such as drill logs, analysis results certificates and survey information is not complete and further searches of the company technical files and the Queensland Mines department

files are required to verify whether missing data can be located. The recovery and catalogue of this historic data is essential to maximize this exploration data and to comply with the requirements of the JORC code 2012.

The data relating to the exploration results is also a mix of exploration and analytical techniques. For the oldest information, the data will have to be converted from imperial measurements such as feet and inches, for the drilling details, and gallons per imperial ton for the oil yields. Before 1980, oil yields were estimated by destructive distillation techniques and not by Modified Fischer Assay as in the later exploration programs so oil shale grades are established using a mix of analysis techniques as well. Some of the drilling work appears to have focused on coal exploration and sample analyses did not include oil yield measurements. Oil shale seam core recoveries also appear to have not been properly recorded in the drilling programs. As a result the representativeness of the samples analyzed is not ideal and some bias in sampling is possible. Unless additional supporting data, relating to the historic work can be found, verification will be required by drilling before Resources can be estimated with confidence.

From the currently available data oil shale Targets to a depth of 100 meters are identified as follows;

<b>TORBANITE + CANNEL COAL</b>			
<b>Depth Range</b>	<b>Oil Shale (Mt)</b>	<b>Oil Yield (Lt/t)</b>	<b>Shale Oil (Mb)</b>
0-25m	8.02 - 14.26	174	9.32 - 15.57
25-50m	12.39 - 18.26	153	12.25 - 17.61
50-75m	5.15 - 9.50	139	4.43 - 8.30
75-100m	0.37 - 3.03	127	0.24 - 2.42
<b>TOTAL</b>	<b>25.92 - 45.04</b>	<b>155</b>	<b>26.24 - 43.90</b>

Alpha oil shale has the potential to be used in diverse applications such as;

- a chemical reductant in nickel processing
- a source of bitumen
- a source of activated carbon
- a source of oil

Recommendations for further work are as follows;

- a) search and catalogue all the technical data in the company files to locate the missing drill logs, down-hole geophysics, drill collar survey information and detailed results of analyses and retort testing

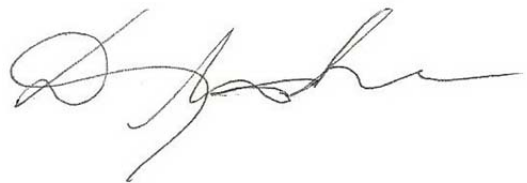
- b) if the missing data is located, up-grade the oil shale targets to an Inferred Resource in compliance with the JORC code (2012)
- c) investigate potential development strategies to find the optimum utilization for the Alpha oil shale
- d) systematic drilling of the deposit to define the exact extent, thickness, depth and quality of the torbanite lens and associated cannel coal
- e) surrounding region, along strike from the currently know deposit is relatively unexplored and more torbanite and cannel coal could be found with further exploration in the area

The Alpha oil shale project is the highest grade, undeveloped oil shale deposit in Australia. Historic exploration work has delineated a relatively small but rare type of oil shale that has utilization potential not only as a rich source of oil, bitumen and activated carbon but as a direct chemical additive in its natural form in some industrial processes such as nickel smelting. Exploration to date has been relatively focused and concentrated in the shallow area surrounding where an oil shale was found outcropping in Tommy Staines gully more than 80 years ago. Modern systematic exploration of the surrounding area could identify additional similar deposits in the area.

Daniel Madre has over 34 years of experience in exploration of coal and oil shale in Australia and Indonesia. He has a Master of Science degree (Coal Geology) with a final thesis entitled "Torbanite Deposits of the World". Mr Madre was member of the joint venture technical committee (representing the Greenvale Mining and Esperance Minerals) during the exploration of Nagoorin and Lowmead as well as project manager of the Alpha oil shale project from 1980-1988. Since then Dan has worked in Indonesia where his exploration contracting company, PT Danmar Explorindo has over 100 employees. Dan is supported by a staff and associates of more than 30 geologists and geoscientists.

Daniel Madre has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Daniel Madre consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Yours Sincerely,



Daniel Madre, MSc, MAusIMM, MAIG  
1st October, 2014

## LIST OF ABBREVIATIONS

adb	air dried basis
MAIG	member of the Australian Institute of Geoscientists
ar	as received
ASTM	American Society for Testing Materials
AtoP	authority to prospect
MAusIMM	member of the Australasian Institute of Mining and Metallurgy
bcm	bank cubic meters
Btu	British thermal unit (unit of energy)
CCS	combination coal sond (down-hole geophysical logging tool)
CV	calorific value measured in kilocalories/kilogram
DEX	PT Danmar Explorindo
fc	fixed carbon
GAR	gross as received
m <sup>3</sup>	meters cubed
hr	hours
IDW <sup>2</sup>	inverse distance weighted squared
JORC	Joint Ore Reserve Committee of AusIMM
Kcal/kg	kilocalories/kilogram unit of energy
kg	kilogram
km	kilometre
im	inherent moisture
l	litre
LAS	log ASCII standard
lbs	imperial unit of weight measurement
lcm	loose cubic meter
LOM	life of mine
LTOM	litres per tonne zero moisture
m	metre
MBE	Misteri Bay Exploration Pte Ltd
MDL	mineral development license
mt	million tonne
MSc	Master of Science degree
mtpa	million tonnes per annum
NAR	net as received
NPV	net present value
RD	relative density
RL	relative level
ROM	run of mine
SE	specific energy
sg	specific gravity
SR	strip ratio (BCM waste: tonnes of coal)
t	tonne
tm	total moisture
ts	total sulphur
vm	volatile matter



