



Australian Pacific Coal

ASX Announcement

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EPC1827 “Cooroorah” Resource Estimate Update

- **Coal resource increased to 124.9 Mt of raw coal resource**
 - **69.6 Mt Indicated**
 - **55.3Mt Inferred**

- **PCI coal with potential for a coking coal fraction.**

Australian Pacific Coal Limited is pleased to announce an updated resource estimate for the company's Cooroorah project.

The company engaged HDR|Salva to update the existing resource model to include the latest 2012/2013 exploration data, coal quality analysis and to estimate and report coal resources in accordance with the guidelines contained within the JORC Code (2012).

The Cooroorah project is 100% owned by Australian Pacific Coal. The tenement covers an area of approximately 1,666 hectares approximately 20 km North of Blackwater in Queensland's Bowen Basin. The current resource is situated west of the Jellinbah fault at a depth of between 240m and 530m below surface. The project is surrounded by producing coal mines owned and operated by major mining companies. The region has well developed infrastructure with links to major rail and port facilities.

On 1 August 2013 Mineral Development Licence No. 453 was granted overlapping and superseding EPC 1827. The grant of the MDL enables the company to proceed to the development stage for the project. Next steps for the project include securing a suitable joint venture development partner to advance the project through to feasibility study. Potential exists for development in conjunction with neighbouring coal projects.

Paul Byrne
Managing Director/CEO

Summary

HDR|SALVA (Salva) has updated the Cooroorah project geological model, incorporating all drillhole data acquired from the drilling programs to date. The model has been interrogated and Indicated and Inferred Coal Resources have been estimated, classified and reported according to the guidelines contained within the JORC Code (2012):

- The Cooroorah Project's resources are within Australian Pacific Coal subsidiary, Area Coal Pty Ltd's EPC 1827
- The resource estimate follows earlier estimates by Minserve in November 2010, and Salva Resources in December 2012 and builds on that work.
- The target mineralisation is Late Permian Rangel Coal Measures coal within the Bowen Basin.
- While coal is found in several seams within the Rangel Coal Measures, the project is targeting coal from the Aries, Castor, Pollux and Pisces seams.
- Three 2D seismic lines were performed by Velseis in August 2011, providing additional structural data.
- Coal quality data has been obtained from historical GSQ and Arrow/BOW holes, along with the new holes recently completed by APC (see table below)

Cooroorah (EPC 1827) - Drilling

Bore Hole Series	Bore Hole drilled by	No of Holes	Bore Holes within the tenement	Bore Holes outside the tenement	Geophysical Logging	Coal Quality
BL	GSQ	4	0	4	0	2
HU	GSQ	10	2	8	1	5
BW/BWP	Arrow/Bow	6	4	2	6	1
DDH	APC	5	5	0	5	5

- As at July 2013, the Cooroorah project is estimated to contain 124.9Mt of raw coal resource, of which 69.6Mt is Indicated, and 55.3Mt is Inferred (see table below).
- As the coal quality results were reported on an air dried basis, this basis has been retained for reporting of coal resource tonnes. No conversion to in-situ density has been made due to the lack of information regarding in-situ moisture.

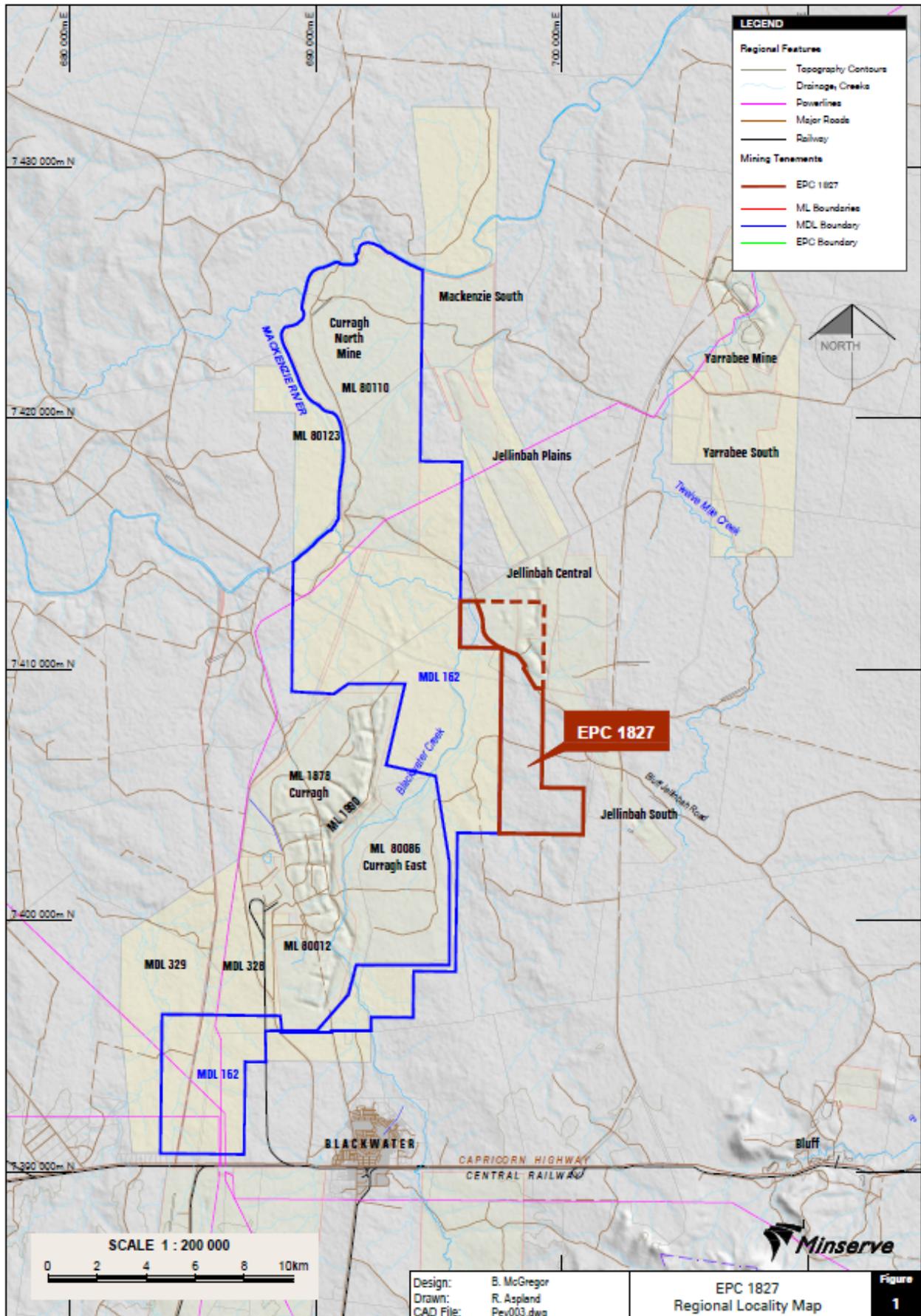
Cooroorah EPC 1827 – Raw Coal Resources (adb) as at July 2013

Seam	Resource Category (Mt)			
	Measured	Indicated	Inferred	Total
Aries	-	0.6	7.0	7.6
Castor	-	27.2	7.9	35.1
Pollux	-	17.5	10.4	27.9
Pisces	-	24.3	30.0	54.3
All seams total	-	69.6	55.3	124.9

- Limiting Criteria applied in defining resources are the classification distances applied (See JORC Table 1 below) from which areas of seam below 1m thick have been excised. Seams with an average raw ash% of >40% have also been excluded from the resource.
- The four coal seams are located at a depth of between 240m and 530m, with no subcrops within the tenement.
- All seams exhibit a low to moderate raw ash, with a generally high primary product yields (theoretical f.1.45 yields range between 73% and 83% on average for an 8-10% ash product). Raw sulphur ranges between 0.02% and 0.07%, with raw Phosphorus between 0.04% and 0.19%. Raw ash ranges between 9% and 39% and raw volatile matter between 13% and 22%. Raw specific energy falls between 24 and 32 MJ/kg. While the raw CSN values are moderate to low, between 1 and 4, reaching up to 8 within the Aires seam in places.
- Data from the BOW coal seam gas holes has demonstrated that gas drainage would be required prior to mining of the coal.

This resource estimate agrees with the previous resource estimate report that stated that the coal should readily produce a PCI product, with potential for a coking coal fraction from the target seams in places.

General Location Plan



Competent Persons and Experts Statement

The information in the report, to which this statement is attached, that relates to the Coal Resources of Cooroorah coal deposit (“EPC1827”) is based on information compiled and reviewed by Mr Craig Williams, who is a Member of the Australian Institute of Mining & Metallurgy and works full time for HDR | Salva Pty Ltd (Salva).

Mr Williams, Principal Geologist and a fulltime employee of Salva, has sufficient experience that is relevant to the style of mineralisation 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” (the JORC Code). Mr Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

JORC Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

	Criteria	Explanation	Comment
1.1	Sampling techniques	Nature and quality of sampling (eg. Cut channels, random chips etc.) and measures taken to ensure sample representivity.	63mm (HQ) or 61mm (HQ3) coring for coal quality sampling
1.2	Drilling techniques	Drill type (eg. Core, reverse circulation, open hole hammer, rotary air blast, auger, Bangka, etc.) and details (eg. Core diameter, triple or standard tube, depth of diamond tails, face sampling bit or other type, whether core is oriented and if so, by what method, etc.)	Rotary percussion open hole drilling and rotary coring (63mm)
1.3	Drill sample recovery	<ul style="list-style-type: none"> Whether core and chip sample recoveries have been properly recorded and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to 	Core loss has been documented in the lithology field during logging and sampling of the core. Calculations have been performed to accumulate total core loss over the modelled interval. The core recovery from all the AQC drillhole seam intersections is >90% except the Aries (87.1%) and Pisces (85.3%) in the hole DDH012. Core recovery from

		preferential loss/gain of fine/coarse material	historical GSQ and BOW holes is not known.
1.4	Logging	<ul style="list-style-type: none"> • Whether core and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography. 	Detailed logging of chips and core. Core photographs taken.
1.5	Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected. • Whether sample sizes are appropriate to the grainsize of the material being sampled. 	No sub-sampling of the core. BOW energy core sampled was the remaining ½ of the original core.
1.6	Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • Nature of quality control procedures adopted (eg. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. lack of bias) and precision have been established 	Coal quality Laboratory adheres to internal QAQC and inter-laboratory QAQC checks. All determinations performed adhere to Australian Standards guidelines.
1.7	Verification of sampling and assaying	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. 	Not done
1.8	Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and 	BOW and AQC drillholes used in the resource model have been surveyed using differential GPS. Historical (GSQ) drillholes used in the model

		<p>other locations used in Mineral Resource estimation.</p> <ul style="list-style-type: none"> Quality and adequacy of topographic control. 	were converted to GDA94 coordinate system.
1.9	Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	Data spacing sufficient to establish continuity in both thickness and coal quality as confirmed by variography. Full seam/ working section composites of coal quality used in the estimate
1.10	Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	Full seam composites used therefore orientation of sampling not seen to introduce bias as all drilling is sub-vertical and seams mostly gently dipping.
1.11	Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Recognised contract geologist service providers used to supervise/conduct drilling/sampling.

Section 2 Reporting of Exploration Results

(Criteria in the preceding section also apply to this section.)

	Criteria	Explanation	Comment
2.1	Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	All tenure secure and current

2.2	Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Geological Survey of Queensland and BOW Energy.
2.3	Geology	Deposit type, geological setting and style of mineralisation.	Coal, Bowen Basin Late Permian Rangal Coal Measures, sedimentary type deposit.
2.4	Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	Length together with and in some cases density weighting used to derive full seam/working section composites.
2.5	Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (eg. 'downhole length, true width not known'). 	Full seam composites used therefore orientation of sampling not seen to introduce bias as all drilling is sub-vertical and seams mostly gently dipping.
2.6	Diagrams	Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.	See figures in report and Appendices.
2.7	Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised to avoid misleading reporting of Exploration Results.	No reporting of exploration results
2.8	Other substantive	Other exploration data, if meaningful and material, should be reported including (but not limited to):	2D seismic data available

	exploration data	geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
2.9	Further work	The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Not known

Section 3 Estimation and Reporting of Mineral Resources

(Criteria in section 1, and where relevant in section 2, also apply to this section.)

	Criteria	Explanation	Comment
3.1	Database integrity	<ul style="list-style-type: none"> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	Use of relational database (GDB) during acquisition of drilling data. Logcheck used to do depth corrections and GDB updated with corrected seam/lithology and sample information. GDB table data used to construct Minescape model. Checks against original down hole geophysics (las) files used to verify data during modelling.
3.2	Geological interpretation	<ul style="list-style-type: none"> Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	High degree of confidence in seam picks made using this down hole geophysical data. Historical holes with no geophysics have picks which are consistent with the overall structural model. Consistent smooth structural contours show no evidence of major faulting in the area however smaller faults (<5m) are probably not detectable with the current drill spacing and it is likely that as yet unknown faults will be found upon closer spaced drilling and/or 3D seismic work. Particularly the occurrence of unknown faults is likely to increase as the Jellinbah thrust fault zone is approached.
3.3	Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	See figures in report and Appendices.
3.4	Estimation and modelling techniques	<ul style="list-style-type: none"> The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of extrapolation from data points. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate 	FEM interpolator used for surface elevation, thickness and trend. Inverse distance squared used for coal quality throughout. Search radius of 2500 m used for full seam model structural parameters. A search radius of 2000 m used for all coal quality attributes. Grid cell size of 20 m for the topographic model, 20 m for the structural model and 20 m

		<p>takes appropriate account of such data.</p> <ul style="list-style-type: none"> • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available. 	for the coal quality model. Visual validation of all model grids performed.
3.5	Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All tonnages estimated on a dry basis.
3.6	Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied	<40% raw ash, >1 m seam thickness.
3.7	Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	N/A in situ air dried tonnes quoted
3.8	Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	N/A in situ air dried tonnes quoted.
3.9	Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	N/A in situ air dried tonnes quoted.

3.10	Classification	<ul style="list-style-type: none"> • The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors. i.e. relative confidence in tonnage/grade computations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. • Whether the result appropriately reflects the Competent Person(s)' view of the deposit 	<p>Variography performed on the coal quality attributes deemed most likely to influence project economics was used as the basis for classification distances for Indicated Resources. Standard Coal Guidelines spacings used for Measured and Inferred Resources. Classification radii for the three resource categories are:</p> <ul style="list-style-type: none"> • Full seam resource; • Measured 250m • Indicated 750m • Inferred 2000m
3.11	Audits or reviews	The results of any audits or reviews of Mineral Resource estimates	None
3.12	Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> • Where appropriate a statement of the relative accuracy and/or confidence in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages or volumes, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	<p>The degree of confidence in the continuity of coal quality attributes, as expressed by the variogram, has been used as a basis for classification of Indicated Resources. Standard Coal Guidelines spacings used for the other two resource categories. This approach has produced bore hole spacing ranges for the three resource categories which are considered to adequately reflect the degree of confidence in the underlying estimate.</p>