# **stanmore**coal



## ASX announcement

7 July 2015

# Clifford Thermal Coal Project – Maiden JORC Resource & Exploration Update

### **Highlights**

- Maiden JORC Resource<sup>1</sup> estimate of 370Mt across two areas of the Clifford Project (80Mt Indicated and 290Mt Inferred)
- Coal quality results from the latest exploration program confirm a high energy content (>5,900 kcal/kg NAR) with favourable environmental and boiler operating characteristics
- Laboratory yields of approximately 82% with potential for bypass coal in certain low-ash coal plies
- Initial insitu strip ratio of 6:1 for Grange and 7:1 for Liberty areas
- Third farmin period underway with support of joint venture partner JOGMEC

Stanmore Coal Limited ("Stanmore" or "the Company") has completed the exploration program for the second farmin period within the Clifford Project area under Joint Exploration Agreement ("JEA") with the Japan Oil, Gas and Metals National Corporation ("JOGMEC").

The Clifford project is located in the northern Surat Basin, proximal to Stanmore's The Range
Project, a 5Mtpa advanced thermal coal project and directly north of Glencore's Wandoan
Mining Lease complex & New Hope Corporation's Elimatta Mining Lease Application. It is also close to
the Taroom and Collingwood projects recently acquired by New Hope Corporation.

The Surat Basin contains large quantities of high quality, low emission export thermal coal product potential, which is well suited to the growing Asian power markets. The Surat Basin coal's unique environmental features provide long term certainty around coal quality and emission controls.

1 ASX code: SMR

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<sup>&</sup>lt;sup>1</sup> Refer Competent Person Statement Note 1



Exploration for the farmin period was targeted toward the Grange and Liberty areas of the Clifford Project.

CLIFFORD PROJECT

THOOODIN

LEGEND

Area of Interest

Stammore Coal EPC

Glencore Wandoan Mining Lease
New Hope Corporation Mining Lease
New Hope Corporation Mining Lease
New Hope Corporation Mining Lease
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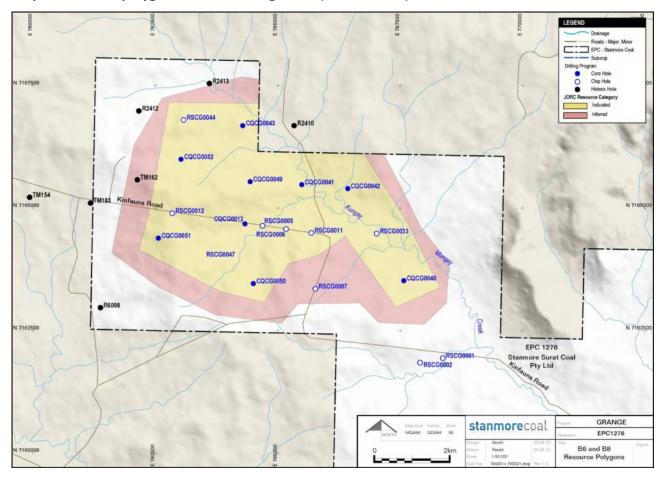
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**Map 1: Overview of the Clifford Project** 

### **Grange Area**

A total of 19 holes (11 rotary, 8 cored) were drilled within the Grange area in the latest exploration period. The geological model for Grange contains 28 holes and based on the results obtained from the most recent exploration contains an estimated maiden JORC Resource of 270 million tonnes. Of this, 80 million tonnes is categorised at Indicated with 190 million tonnes as Inferred.

Cumulative coal thicknesses at Grange reach a maximum of approximately 16m, and average approximately 9m. The cumulative insitu strip ratio (bcm/t) ranges commences at 6:1 and the JORC Resource is calculated to a cut-off depth of 150m. The depth of weathering ranges from 7-25m, averaging 14m. Within the Grange area, plies within the, Auburn, Bulwer and Condamine seams of the Taroom Coal Measures have been assigned.



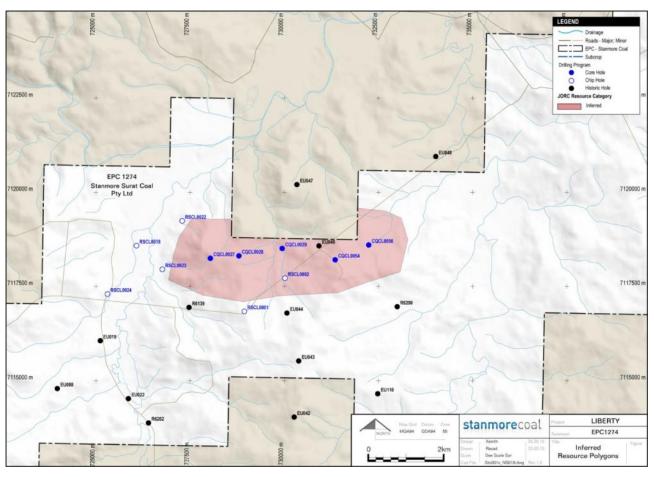
Map 2: Resource polygon extent of Grange area (B6-B8 seams)

### **Liberty Area**

A total of 14 holes (9 rotary, 5 cored) were drilled within the Liberty area in the latest exploration period. The geological model for Liberty contains 24 holes and based on the results obtained from the most recent exploration contains an estimated a maiden JORC Inferred Resource of 100 million tonnes.

Cumulative coal thicknesses at Liberty reach a maximum of approximately 11m, and averages approximately 8.5m. The cumulative insitu strip ratio (BCM/t) starts at 7:1 and the JORC Resource is cut-off at a depth of 150m. The depth of weathering ranges from 10-22m, averaging 13m. Within the Liberty area, plies within the Argyle, Auburn, Bulwer and Condamine seams of the Taroom Coal Measures have been assigned.





Map 3: Resource polygon extent of Liberty area (all seams)

#### **Coal Quality Results**

Overall the Clifford product coal is expected to have the typical Surat advantages of good ignition, high burnout, benign slagging and fouling characteristics and low emissions profile. Surat Basin thermal coal typically exhibit superior environmental features when compared with existing and forecast global supply alternatives, containing less SO<sub>2</sub>, NO<sub>x</sub> and CO<sub>2</sub> than almost all other coals in the export market<sup>2</sup>.

All cored holes were sampled and analysed through raw, float sink, and clean coal composite procedures. The average raw ash of coal plies (defined as sub 50% ash) was 19.3% for Grange and 19.5% for Liberty.

<sup>&</sup>lt;sup>2</sup> "Advantages of using Surat Basin thermal coals in utility boilers", Lindsay Juniper 2013



A number of plies delivered low raw ash values below 10% and may therefore not require processing through a traditional washing circuit in order to meet end user specifications. The "bypass" coal within low-ash Liberty plies amounted to approximately 15% of coal by mass, with an average ash content of 8%. For Grange these low-ash plies amounted to approximately 22% of coal by mass, with an average ash of 7.8%.

Cumulative float yields at 1.60 density were targeted in order to deliver clean coal composites averaging 10% ash or lower. Using this density the average laboratory yield for the Liberty area was 81.6%, achieving 10.1% ash. The average laboratory yield for the Grange area was 82.6%, achieving 9.7% ash.

All results were audited and verified by independent mining consultants, Minserve. The product coal specification sheet below has been completed based on the results of all recent testing.

Table 1: Product coal specifications – Grange and Liberty

Parameter	Unit <sup>3</sup>	Basis <sup>4</sup>	Liberty	Grange
Proximate analysis				
Ash	%	ad	9.9	9.3
Volatile Matter	%	ad	42.6	42.7
Fixed Carbon	%	ad	41.4	40.9
Fuel Ratio			0.97	0.96
Sulphur	%	ad	0.47	0.42
Gross Calorific Value	kcal/kg	nar	5,933	5,920
Hardgrove grindability index		Ad	34	33
(HGI)				
Abrasion index		ad	<10	<10
Ash fusion temperature				
Deformation	С		1,540	1,520
Petrographics				
R max	%		0.51	0.48
Total vitrinite	vol %		66.9	70.8

The Liberty and Grange coals are quite similar in almost all aspects, exhibiting high energy levels which are close to the Newcastle benchmark standard. The HGI measure of 33-34 is typical for Surat basin coals with ash levels under 10%. Both Liberty and Grange have excellent Initial Deformation Temperatures (IDT) of 1520 and 1540 degrees centigrade. Sulphur levels are low to moderate.

<sup>&</sup>lt;sup>3</sup> "C" represents "centigrade"; "kcal/kg" represents "kilocalories per kilogram"

<sup>&</sup>lt;sup>4</sup> "ad" represents "air dried"; "ar" represents "as received"; "nar" represents "net as received"; "daf" represents "dry ash free"



#### Commencement of third farmin period exploration program

The Company, in conjunction with funding partner JOGMEC, has planned a further drilling program this year which involves drilling of up to 27 open holes and up to 13 cored holes. These holes are located within the Grange and Liberty areas with the objectives of upgrading their respective JORC resource estimates confidence, expanding the resource tonnages and identifying potential sub-cropping of the coal seams. The third next survey will commence shortly and is anticipated to be completed in the second quarter of 2016 with the majority of field activity carried out in this calendar year.

\* \* \*

Nick Jorss, Stanmore's Managing Director said, "The maiden JORC Resource at both the Grange and Liberty areas of the Clifford Project is the result of diligent greenfield exploration by the Company supported by our Japanese Government funding partners at JOGMEC. The coal quality results are very encouraging with all of the usual benefits of Surat coals including strong environmental and operating characteristics. In addition the energy levels achieved are very close to the Newcastle benchmark and materially higher than typical Surat coals."

"We now have proved up over 650Mt of high quality, low emission thermal coal in the Northern Surat Basin between Clifford and The Range projects. We believe Surat Basin coals are increasingly well positioned as other supplies of coal deplete over time and Asian countries continue to build out high efficiency coal fired power stations to satisfy increasing energy demand. This year's JOGMEC sponsored drilling program at Clifford coupled with The Range places the Company in a strong position to deliver high quality, cleaner coal to match the long term demand profile from the neighbouring Asian region. We note that much of the recent coal story has focused on China but the emergence of South East Asian nations as well as India as material importers of coal bodes well for the future for high quality exports from the Surat Basin.

"Once again we would like to thank JOGMEC for their strong support of the Project and we look forward to achieving further key milestones in the next survey period."



On behalf of the Board

Thomas

Andrew Roach

Company Secretary

#### For further information, please contact:

Mr Nick Jorss Managing Director 07 3238 1000 Mr Andrew Roach Company Secretary 07 3238 1000

#### **Note 1 Competent Persons Statement**

The information in this report relating to the Clifford Project exploration results and coal resources is based on information compiled by Mr Troy Turner who is a member of the Australian Institute of Mining and Metallurgy and is a full time employee of Xenith Consulting Pty Ltd. Mr Turner is a qualified geologist and 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 Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Turner consents to the inclusion in the report of the matters based on the information, in the form and context in which it appears.

#### **About The Clifford Thermal Coal Project**

The Clifford Project (EPC 1274 and 1276) covers a combined area of 1,125km<sup>2</sup>, and are located adjacent to GlencoreXstrata's 4.5 billion tonne Wandoan coal project and near the Elimatta, Collingwood and Taroom deposits. EPC 1276 is located 15 kilometres from the proposed Surat Basin Rail (SBR) line and approximately 35 kilometres from Stanmore Coal's The Range project.

Under the terms of a Joint Exploration Agreement ("JEA") announced in December 2013 between Stanmore Coal Limited ("Stanmore Coal") and the Japan Oil, Gas and Metals National Corporation ("JOGMEC"), a Japanese Government owned corporation. JOGMEC will earn up to a 40% economic interest in the Clifford Project and has the right to assign that interest to a Japanese nominee company in the future, in order to progress the project to development.

#### About Stanmore Coal Limited (ASX code: SMR)

Stanmore Coal is a growth focused pure play coal exploration and development company with a number of prospective coal projects and exploration areas within Queensland's Bowen and Surat Basins. Stanmore Coal is focused on the creation of shareholder value via the identification and development of coal deposits, with a focus on the prime coal bearing regions of the east coast of Australia.

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# **Appendix A: Table 1 – Xenith Consulting Pty Ltd**



## **JORC CODE, 2012 EDITION – TABLE 1 REPORT**

This Appendix details sections 1, 2 and 3 of the JORC Code 2012 Edition Table 1. Sections 4 'Estimation and Reporting of Ore Reserves' and 5 Estimation and Report of Diamonds and Other Gemstones' have been excluded as they are not applicable to this deposit and estimation.

### **SECTION 1 SAMPLING TECHNIQUES AND DATA**



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

Criteria	JORC Code Explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.  • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.  • Aspects of the determination of mineralisation that are Material to the Public Report.  In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	<ul> <li>Prior to the current exploration program (2014/15) only one borehole had been cored and sampled, being Stanmore 2013 exploration program hole CQCG0013.</li> <li>Further core holes have been completed during the Stanmore 2014/15 program, with completed holes by area as follows;         <ul> <li>Grange area: 8 core holes completed.</li> <li>Liberty area: 5 core holes completed.</li> </ul> </li> <li>In all core holes to date, all coal seams intersected greater than 0.10m have been sampled with a maximum single sample length of 2.00m of coal. Coal plies were sampled discretely on the basis of lithological characteristics and quality. All non-coal material and partings less than 0.10m have been included with the coal ply and noted in the lithological description. Non-coal inter-burden material greater than 0.10m and up to a maximum of 0.50m has sampled separately.</li> <li>Geophysical corrections are performed to confirm representative core recovery of the seam and samples. The qualified samples are then transported to the laboratory via courier.</li> <li>All Coal Quality samples from the Stanmore drilling programs have been sent to Bureau Veritas Laboratories, Brendale, Queensland.</li> </ul> <li>All coal quality samples are prepared and analysed using Australian Standard testing methodologies.         <ul> <li>All coal and roof and floor dilution samples re double bagged at site and marked with sample number, hole and project. The samples were then transported to laboratory via courier.</li> <li>All coal quality samples were prepared and analysed using Australian testing methodologies at the NATA accredited lab – Bureau Veritas at Brendale – Brisbane QLD.</li> </ul> </li>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, 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).	<ul> <li>Stanmore has conducted 3 drilling campaigns within the Clifford Project area, firstly during 2012/13, secondly during 2013/14 &amp; presently during 2014/15.         <ul> <li>1 x partial core coal quality hole (CQCG0013) was completed during the 2013/14 campaign using a 4C size core barrel producing a 100mm core diameter.</li> </ul> </li> <li>Stanmore's 2014/15 campaign was recently completed within the Clifford project, during which the following drilling has been completed to date:         <ul> <li>11 chip holes, and 8 core holes within the Grange sub-area,</li> <li>9 chip holes and 5 core holes within the Liberty sub-area.</li> <li>All chip holes are drilled using 120mm blade or PCD drill bits</li> <li>All cored holes are completed using HMLC size core barrel, producing 63mm size core</li> </ul> </li> <li>Additionally in the current exploration program, Stanmore completed exploration drilling</li> </ul>



Criteria	JORC Code Explanation	Commentary
		within 2 other sub-areas known as Horseshoe and Ye Olde.
		A full list of drill holes and drilling methods is available at the end of Table 1 in Appendix A –     Drill Hole Data.



Criteria	JORC Code Explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip sample recoveries 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 preferential loss/gain of fine/coarse material.	An assessment of core recovery has been completed by comparing the recovered thickness measured during geological logging and by the driller, to geophysical picked thicknesses from the geophysical logs
Logging	Whether core and chip samples have been geologically and geotechnically 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.  The total length and percentage of the relevant intersections logged.	<ul> <li>All core has been geologically logged, marked and photographed before sampling. Geological and geotechnical features were identified and logged.</li> <li>All chip holes have been geologically logged.</li> <li>All drill holes from the 2012/13 Stanmore exploration campaign were geophysically logged by Coalseam Wireline Services. In addition to the tool suite (above) selected drill holes from this campaign also had full waveform sonic and electrical resistivity tools run.</li> <li>All drill holes from the 2013/14 Stanmore exploration campaign have been geophysically logged by Weatherford Wireline Services. The minimum tool suite consisted of calliper, short &amp; long space density, natural gamma &amp; verticality (deviation &amp; azimuth).</li> <li>Drill holes within the 2014/15 Stanmore exploration campaign are being geophysically logged by Weatherford Wireline Services. The minimum tool suite consisting of calliper, short &amp; long space density, natural gamma &amp; verticality (deviation &amp; azimuth).</li> <li>The calibration of the geophysical tools was conducted by the geophysical logging company.</li> <li>A full list of the suite of geophysical logs that have been run on each drill hole can be found in Appendix B – Drill Hole Data. The following descriptions relate to the tool codes as noted in the Geophysical Logs column of Appendix B:  <ul> <li>C, Caliper (borehole size)</li> <li>D, Density (short &amp; long space)</li> <li>L, Density (long space only)</li> <li>G, Natural gamma</li> <li>R, Electrical resistivity</li> <li>N, Neutron</li> <li>S, Full waveform sonic</li> <li>T, Formation temperature</li> <li>V, Borehole Verticality (deviation &amp; Azimuth)</li> </ul> </li> </ul>



Criteria	JORC Code Explanation	Commentary
Sub-sampling techniques and sample preparation	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, including for instance results for field duplicate/second-half sampling.  Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>All core samples to date have been double bagged on site and transported to the Bureau Veritas Laboratory in Brendale for testing.</li> <li>Bureau Veritas Laboratories comply with Australian Standards for sample preparation and sub sampling.</li> <li>The present Clifford Project coal quality testing program was developed by Mr. David Hornsby of DT Hornsby Consulting, part of the Minserve Group.</li> <li>Samples are crushed to 11.2mm.</li> <li>¼ of the total original sample mass is utilised for raw sample analysis which includes proximate, total sulphur, relative density, calorific value, chlorine, total moisture &amp; moisture holding capacity. Raw procedure keeps ½ of the raw sample as reserve.</li> <li>¾ of the total original sample mass is utilised for float-sink composite testing, with composites make-ups decided upon following review of raw results. Composites may be contiguous or non-contiguous and can include coal or coal and stone, depending on broad application of geological and mining considerations. Float-sink is conducted on 5 density cutpoints of 1.4, 1.5, 1.6, 1.7, 1.8, with mass and ash calculated on each fraction.</li> <li>Clean coal composite testing is applied on float-sink composite sections at selected a cut point (i.e. float 1.6). Standard clean coal composite testing includes proximate, ash analysis, total sulphur, carbonate carbon, HGI, ultimate analysis and ash fusion (reducing). Extended clean coal composite testing includes trace elements, abrasion index, petrographics and forms of sulphur (as required).</li> </ul>
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.  Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Bureau Veritas Laboratories comply with the Australian Standards for coal quality testing and are certified by the National Association of Testing Authorities Australia (NATA).</li> <li>The calibration of the geophysical tools was conducted by the geophysical logging company.</li> <li>The density measurement is calibrated to precise standards and where possible validated in a calibration hole.</li> </ul>
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data.	<ul> <li>Bureau Veritas Laboratories comply with the Australian Standards for coal quality testing and as such conduct the verifications for coal quality analysis outlined in the standards.</li> <li>Product Coal assessment was undertaken by M Resources Pty Ltd for the 2013 exploration program (borehole CQCG0013).</li> <li>Coal quality results for borehole CQCG0013 were verified by M Resources Pty Ltd.</li> <li>Product Coal assessment was undertaken by M Resources Pty Ltd for the 2014 exploration program (borehole CQCG0013).</li> <li>Coal quality results &amp; composite and product makeups and assessments for the 2014/15</li> </ul>



Criteria	JORC Code Explanation	Commentary
		were overseen and verified by Mr. David Hornsby.
		<ul> <li>Data queries are generated through verification software and standard checks. Any result that falls outside expected tolerances is highlighted to the laboratory for follow-up and secondary analysis if required.</li> </ul>
		No adjustments have been made to the coal quality data.



Criteria	JORC Code Explanation	Commentary
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  Specification of the grid system used.  Quality and adequacy of topographic control.	<ul> <li>Professional Survey of all Stanmore boreholes was completed; by T.R. Baillie Consulting Surveyors (2012/13), Murray &amp; Associates (2013/14) And REM (2014/15)</li> <li>Datum GDA 94 and projection MGAZ55 was used.</li> <li>The Topography surface used for comparison of historic borehole data was triangulated LIDAR (airborne laser) points at 25m x 25m spacing.</li> </ul>
Data spacing and distribution	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.	<ul> <li>All cored holes have had Individual samples over a seam have been composited to achieve full seam coal qualities. Composting of samples was undertaken for float-sink and product estimations.</li> <li>Current spacing of relevant completed drilling within the Grange area varies from between 300 metres to 1.5 kilometres. Upon completion of the present 2014/15 Stanmore drilling campaign, Stanmore has 8 completed partial core boreholes, with supplementary coal quality analysis, at suitable spacing to inform an initial resource estimation.</li> <li>Current spacing of relevant completed drilling within the Liberty area varies from between 700 metres to 1.5 kilometres. Upon completion of the present 2014/15 Stanmore drilling campaign, Stanmore has 5 completed partial core boreholes, with supplementary coal quality analysis, at suitable spacing to inform an initial resource estimation.</li> </ul>
Orientation of data in relation to geological structure	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.	<ul> <li>The region is known to be unremarkable in terms of structure, with little significant faulting known to exist.</li> <li>The deposit area (Grange) is known to sit within close proximity to the axis of a large regional syncline (the Mimosa Syncline). This syncline trends NNW to SSE and plunges SSE.</li> <li>No faults have been interpreted from the drilling data used to construct the model. However, this may change with further drilling as borehole spacing becomes closer allowing finer resolution of structure between drill holes.</li> <li>All drill holes are vertical to intersect the largely flat-lying coal bed stratigraphy.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Sample Security was ensured under a chain of custody between Stanmore Coal personnel on site and Bureau Veritas laboratory and East Coast Exploration (ECE) personnel on site and Bureau Veritas for the 2013/14 exploration program</li> <li>The above procedure continues to be observed within the 2014/15 exploration program by the successive exploration contractor International Mining Consultants (IMC), and Bureau Veritas laboratory.</li> </ul>



Criteria	JORC Code Explanation	Commentary
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>2014 Sampling was undertaken by ECE personnel under the supervision of Xenith Consulting Pty Ltd.</li> <li>Within the 2014/15 exploration program, sampling is undertaken and supervised by IMC personnel.</li> <li>Bureau Veritas undertook internal audits and checks in line with the Australian standards and their NATA certification.</li> </ul>



### **SECTION 2 REPORTING OF EXPLORATION RESULTS**



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

Criteria	JORC Code explanation	Commentary							
Mineral tenement and land tenure status	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.	Currently two native title application exist in the region as follows:				vs: & 1274) 1274 only) trigger area. Str v as SCL. the Exploration eximately 49Ha.	n Permits. Within		
			enure Type	Tenure Number	Date Lodged	Date Granted	Date Expires	Principal Holder	Number of Sub blocks
		EPC	EPC	1276	08 Apr2008	10 Sep2008	09 Sep2018	Stanmore (Surat) Coal Pty Ltd	170
		• (	Overlapping tenements:						
			enure Type	Tenure Number	Date Lodged	Date Granted	Date Expires	Principal Holder	Number of Sub blocks
		E	EPC	1274	08 Apr2008	10 Sep2008	09 Sep2018	Stanmore (Surat) Coal Pty Ltd	193
		• (	Overla	o EF	ments: PP 592 – Austra PP 767 - BNG (Si PP 768 - BG Inte	urat) Pty Limite			



0	PL 200 – Australia Pacific LNG Pty Limited
0	PL 203 – Australia Pacific LNG Pty Limited
0	PL 268 – Australia Pacific LNG Pty Limited
0	PL 400A - Pure Energy Resources Pty Limited
O	PL 402A - Pure Energy Resources Pty Limited
O	PL417 – Australia Pacific LNG Pty Limited
0	PL419 – Australia Pacific LNG Pty Limited
O	PL 463A - BG International (AUS) Pty Limited
0	PL 507 - BG International (AUS) Pty Limited
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Geology	Deposit type, geological setting and style of mineralisation.	The tenements are situated in northern section of the Jurassic age Surat Basin, underlain by the southern part of the Permian-Triassic Bowen Basin. It lies within the Taroom Trough which is bounded to the west by the Comet Platform. The Surat Basin occupies an area of some 270,000 km2 with a length of 800km and a width of 450km and contains sediment sequences up to 2,500 metres thick. It lies west of the Clarence-Moreton Basin and extends from southern Queensland into northern New South Wales. It forms an eastern lobe of the Mesozoic Great Artesian Basin and consists of Jurassic clastic continental sediments and Early Cretaceous marine beds.  The stratigraphy of the project area (to the base formation of interest) is as follows:  Quaternary alluvial deposits; restricted to and associated with present and historic riverine activity. These sediments are comprised of sand, silt, muds and gravel.  Jurassic aged (lower) Juandah Coal Measures; consisting of lithic, labile sandstone, interbedded with siltstone, mudstone and coal, with coal deposition more frequent towards the top of formation.  Jurassic aged Tangalooma Sandstone; a sandstone dominated marker formation that separates the Juandah & Taroom Coal sequences  Jurassic aged Taroom Coal Measures; consisting of sub-labile, medium grained sandstone grading upwards to interbedded sandstone, siltstone, mudstone and coals.  Coal seams of economic potential significance occur within the geological formation described as the Walloon Coal Measures, which are Jurassic in age. The Walloon Coal Measures can be further sub divided into an upper unit (Juandah Coal Measures) & lower unit (Taroom Coal Measures). In this area the seams dip gently at approximately1 – 2 degrees. East of the Mimosa Syncline the general seam dip is to the south-west.  Regional seams found within the Juandah Coal Measures are as follows:  Kogan Seam  Nangram Seam  Nangram Seam  Nangram Seam  Nangram Seam  Naburr Seam  Regional seams found within the Taroom Coal Measures are as follows:
		<ul> <li>Condamine Seam</li> <li>Within EPC 1274, (Liberty area), plies within the Argyle, Auburn, Bulwer &amp; Condamine Seams have been assigned. Within EPC 1276, (Grange area), plies within the, Auburn, Bulwer &amp; Condamine Seams have been assigned.</li> </ul>



Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Exploration drilling completed within and in close proximity to the Grange (EPC 1276) &amp; Liberty (EPC 1274) areas have been reviewed as part of this report.</li> <li>Each borehole reviewed and utilised having at minimum a lithological log &amp; geophysical log (density, gamma, caliper).</li> <li>Specifically within the Grange area and within EPC 1276 itself, there are 11 historical boreholes that have been reviewed and considered relevant as follows:         <ul> <li>1 Xstrata Coal rotary chip borehole drilled in 2004 (R6098)</li> <li>4 Marathon Petroleum rotary chip boreholes drilled in 1983 (TM182, 188, 189 &amp; 190)</li> <li>3 Marathon Petroleum rotary chip boreholes drilled in 1982 (R2412 &amp; R2413)</li> <li>1 Marathon Petroleum rotary chip boreholes drilled in 1979 (TE025)</li> </ul> </li> <li>An further 9 historical boreholes, which exist outside of the EPC 1276 lease boundary were also reviewed as follows:         <ul> <li>1 Marathon Petroleum rotary chip borehole drilled in 1983 (TM83)</li> <li>1 Marathon Petroleum rotary chip borehole drilled in 1982 (R2410, 2411, 2414, 2415, 2416 &amp; 2417)</li> <li>6 Brigalow Mines rotary chip boreholes drilled in 1979 (TE024)</li> </ul> </li> <li>Specifically within the Liberty area and within EPC 1274 itself, there are 7 historical boreholes that have been reviewed and considered relevant as follows:         <ul> <li>1 Marathon Petroleum rotary chip borehole drilled in 1980 (EU19)</li> <li>4 Marathon Petroleum rotary chip boreholes drilled in 1980 (EU19)</li> <li>2 Marathon Petroleum rotary chip boreholes drilled in 1981 (EU23, 42, 44 &amp; 46)</li> <li>2 Xstrata Coal rotary chip boreholes drilled in 2005 (R6139 &amp; R6202)</li> </ul> </li></ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>A detailed list of the boreholes relevant to the Grange &amp; Liberty Projects can be found in Appendix A</li> <li>All drill holes have been considered vertical, hole deviation (from vertical).</li> <li>Incorporation of deviation data is not considered necessary, due to the benign geological nature of the area and shallow drilling methods resulting in insignificant deviation recorded in the exploration boreholes.</li> </ul>



Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	The analyses of core holes conducted by Stanmore consist of a raw, float-sink (washability) and clean coal composite analysis. Mass weighted Float Sink Composites are made up on the basis of possible mining sections through compilation of coal (and possibly stone) plies. These composites are not necessarily contiguous. Review of float-sink results is conducted prior to progressing to thermal clean coal composite analysis. At time of this announcement, only one borehole has progressed for thermal clean coal composite testing, which was conducted at a cut-point of floats 1.60.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>All drilling is conducted in vertical holes. All coal intersections and down-hole geophysics are vertical thickness, as the seam dips are sub-5 degrees this thickness is considered true thickness.</li> <li>Lateral coal seam continuity is demonstrated by seam intercepts within surrounding boreholes confirmed by geophysical logging.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	Appropriate Maps and diagrams are included in the report
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 practiced to avoid misleading reporting of Exploration Results.	<ul> <li>All available exploration data for the Clifford Project area prior to the 2014/15 exploration program currently underway, has been collated and reported.</li> <li>At the conclusion of the 2014/15 program, all data from all holes has been included in further reporting.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): 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.	• Nil
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>An upcoming exploration program is currently being designed, and the outcome of this resource estimate and corresponding geological models will be an important input</li> <li>A study on the possibility of using petrographic analysis as quality POBs is currently in progress.</li> </ul>



### **SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES**

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

Criteria	JORC Code explanation	CP Comments
Database integrity	<ul> <li>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.</li> <li>Data validation procedures used.</li> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Stanmore personnel have validated the data submitted from the field geologists.</li> <li>Data is also validated by Xenith with checks run in Ventyx Minescape software, version 5.7</li> <li>The Geovia Minex Geological Database has been used for validation of seam picks and correlations.</li> <li>No representatives from Xenith have made a site visit to the Clifford project to date. However, several field trips have been made to the Surat Basin in general including site visits to Stanmore's "The Range Coal Project" (Taroom Coal Measures) in 2010 and 2012. A review was conducted on the field procedures and sampling practices, as</li> </ul>
Site visits		<ul> <li>informed by Stanmore, and they were deemed to be of an acceptable industry standard.</li> <li>Given the geological nature of the deposit and the similarity to other deposits like "the Range", the Competent Persons' existing knowledge of the area is deemed sufficient.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul> <li>The drillhole density in the Clifford project allows good to moderate level of confidence in the nature of seam thickness and quality consistency and interpreted locations of faults.</li> <li>The effect of alternative interpretations in seam correlations would be a relatively unchanged total tonnage, but the effect on resource categorisation/domaining could be a reduction in Indicated resource.</li> </ul>
	<ul> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>Factors affecting continuity in quality and geology would likely be syn-depositional variations such as changes in energy, as well as erosional features, channels etc.</li> </ul>
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.	<ul> <li>At Grange the resource area extends approximately 5km along strike and approximately 5km perpendicular to strike, with an approximate average thickness of 10m.</li> <li>At Liberty the resource area extends approximately 7km along strike and approximately 1.5km perpendicular to strike, with an approximate average thickness of 8.5m.</li> </ul>



Criteria	JORC Code explanation	CP Comments
		The depth of the seam intersected in boreholes ranges from less than 10m to 150m (limit of resource).
Estimation and Modeling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>The geological model and resource estimate were constructed using Ventyx Minescape software (version 5.7), using the Finite Element Method (FEM) interpolator with (1, 0) parameters for surface and trend respectively. The thickness interpolators are Inverse Distance Squared at Liberty and Height at Grange. No maximum extrapolation distance was used.</li> <li>Limits were placed on the Resource Estimate in line with the 0.1m thickness cut-off applied to all coal seams.</li> <li>The models have been validated by checking cross sections, surface and thickness contours, and comparison with drillhole postings.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>The insitu moisture of all samples has been estimated at 12%.</li> <li>This estimate was derived from a review of analysed moisture data (Total Moisture, Moisture Holding Capacity).</li> </ul>



Criteria	JORC Code explanation	CP Comments
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	A 50 % raw ash cut-off has been applied to the resource estimate
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions.</li> </ul>	<ul> <li>Xenith have applied a minimum thickness appropriate to the potential mining method (0.1m), see 'Estimation and Modelling Techniques' and deem the coal resource has reasonable prospects of economic extraction by open cut methods most likely thin seam mining.</li> <li>A maximum depth of 150m from topography has been applied to the resource estimate.</li> <li>Some seams have been excluded from resource estimation due to limited borehole intersections or low confidence in seam continuity.</li> </ul>
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Stanmore commissioned M Resources Pty Ltd, to undertake an initial coal quality assessment in 2013, based on samples from one drillhole (CQCG0013).</li> <li>The 2014/15 campaign was overseen by Minserve Group. Washability simulations were performed on float sink results by Minserve to determine the optimal strategy for Clean Coal Composite analysis. Washability curves were generated for each composite and then summed on a mass weighted basis to determine a total feed scenario on a borehole basis. Composites were advanced on a target density basis. Following review and assessment of washability data it was decided that composites would be progressed on the basis of a target relative density cut-point of 1.6, for both the Liberty &amp; Grange project areas.</li> </ul>
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	Xenith is unaware of any limiting environmental factors at this stage of the project development.



Criteria	JORC Code explanation	CP Comments					
	<ul> <li>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.</li> </ul>	<ul> <li>Insitu Relative Density Estimation – The insitu density of the coal seams has been estimated using the Preston Sanders insitu relative density estimation equation.</li> <li>Insitu moisture has been fixed to 12% to moisture correct laboratory derived air dried relative density values.</li> </ul>					
Bulk density	<ul> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</li> </ul>						
	<ul> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>						
	The basis for the classification of the Mineral Resources into varying confidence categories.	Indicated and Inferred resource categories have been classified in the Clifford project depending on the level of confidence in the seam structure and continuity plus the level					
Classification	<ul> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>	of variability in the coal quality data. No maximum distances between points of observation (POB) have been prescribed for the resource categories. Instead each seam's quality and quantity and variability thereof have been assessed and domains of similar attributes (thickness, seam signature, quality) have been identified.					
Classification  Audits or reviews	Whether the result appropriately reflects the Competent Person's view of the deposit.						
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.						
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level 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 that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> </ul>	<ul> <li>No geostatistical analyses have been undertaken at the Clifford project. Such studies will possibly be of value in the future when a wider range of borehole distances are available. However, seams characteristics can be unchanged for extensive distances, but rapidly change over a very short distance, which could make the use of geostatistical methods unsuitable for determination of confidence levels, particularly for relatively small datasets.</li> <li>Factors that could affect accuracy include unknown fault structures between completed boreholes, seam washouts in roof or inseam stone bands developing.</li> </ul>					
	These statements of relative accuracy and confidence of the estimate						



Criteria	JORC Code explanation	CP Comments
	should be compared with production data, where available.	



# Appendix A. DRILL HOLE TABLES



Hole Name	Lease Domain	Project Area	Hole Type	Quality	Lithology	Geophysical Logs	Used in Model	JORC PoB	Bit Size (mm)	Core Diameter (mm)	Geophysical Tools Run	Date Drilled	Datum	Projection	Easting (m)	Northing (m)	RL (m)	TD (m)
G=Gamma, I	D=Density,	C=Calipe	r, V=Sonic, Z	=Vertica	lity, N=Neu	tron, S=Scann	er, R=Re		•	oustic Scani	•	eous Potentia	l, E=Elec	ctric Survey,	, M=Micro Inv	rerse, H=Photo D	Density Sonde,	T=DTCM,
								E=P	EDN, L=PDL, W	/=WSS, B=P	S-BEF							
CQCG0013	EPC 1276	GRANGE	Partial Core	N/A	YES	YES	YES	NO	140	100	C,D,G,V	2014	GDA94	MGAZ55	764,329.85	7,164,680.11	242.88	156.00
CQCG0040		GRANGE		YES		YES	YES	YES		63	C,D,G,V	2014		MGAZ55	767,572.50	7,163,518.08	226.58	150.00
CQCG0041		GRANGE		YES		YES	YES	YES		63	C,D,G,V	2014		MGAZ55	765,489.83	7,165,478.47	230.29	156.00
CQCG0042		GRANGE		YES		YES	YES	YES		63	C,D,G,V	2014		MGAZ55	766,428.73	7,165,399.52	229.43	156.40
CQCG0043		GRANGE		YES		YES	YES	YES		63	C,D,G,V	2014		MGAZ55	764,284.45	7,166,681.17	245.35	156.00
CQCG0049		GRANGE		YES		YES	YES	YES		63	C,D,G,V	2014		MGAZ55	764,434.97		250.63	156.00
CQCG0050		GRANGE	_	YES	-	YES	YES	YES		63	C,D,G,V	2014	-	MGAZ55	764,500.49	7,163,458.24	256.86	147.28
CQCG0051		GRANGE		YES	YES	YES	YES	YES	98	63	C,D,G,V	2014		MGAZ55	762,561.78		263.95	161.13
CQCG0052		GRANGE		YES	YES	YES	YES	YES	98	63	C,D,G,V	2014	GDA94	MGAZ55	763,023.41	7,165,996.83	260.08	159.95
RSCG0001		GRANGE		N/A		YES	YES	NO	145	-	C,D,G,R,S,T,V	2012		MGAZ55	768,369.19		217.54	173.00
RSCG0002		GRANGE		N/A	YES	YES	YES	NO	145	-	C,D,G,N,R,T,V	2012		MGAZ55	767,905.92	7,161,845.05	226.81	155.00
RSCG0003		GRANGE		N/A		YES	YES	NO	145	-	C,D,G,N,R,T,V	2012		MGAZ55	769,178.14	7,158,730.25	233.92	157.25
RSCG0004		GRANGE		N/A	YES	YES	YES	NO	145	-	C,D,G,N,R,T,V	2012		MGAZ55	768,265.96	7,160,017.05	241.22	155.20
RSCG0005	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	145	-	C,D,G,R,S,T,V	2012	GDA94	MGAZ55	764,690.01	7,164,636.87	237.31	161.00
RSCG0006	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	121	-	C,D,G,N,R,T,V	2012	GDA94	MGAZ55	765,170.55	7,164,572.60	239.45	161.00
RSCG0007	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	121	-	C,D,G,N,R,T,V	2012	GDA94	MGAZ55	765,767.31	7,163,350.38	252.43	161.00
RSCG0010		GRANGE		N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	764,347.64	7,164,679.56	242.52	242.52
RSCG0011		GRANGE		N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014		MGAZ55	765,684.25		237.87	158.00
RSCG0012	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	762,846.11	7,164,892.54	263.82	158.00
RSCG0033	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	767,020.80	7,164,477.69	222.94	150.00
RSCG0034	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	767,576.34	7,163,520.00	226.54	150.00
RSCG0036	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	765,485.69	7,165,477.87	230.40	150.00
RSCG0037	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	764,284.58	7,166,677.44	245.31	150.00
RSCG0038	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014		MGAZ55	766,427.86	7,165,392.88	229.32	150.00
RSCG0039	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	764,423.77	7,165,538.59	250.64	150.00
RSCG0044	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014		MGAZ55	763,074.22		263.47	263.47
RSCG0045		GRANGE		N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014		MGAZ55	763,028.16		259.88	259.88
RSCG0047	EPC 1276	GRANGE	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	763,477.08	7,164,001.68	261.78	261.78
RSCG0048		GRANGE		N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	764,510.98	7,163,473.04	256.04	256.04
TE024		GRANGE		N/A	YES	YES	NO	NO	114.3	-	C,D,G,R,N	1979	GDA94	MGAZ55	762,350.00	7,161,800.00	241.00	132.00
TE025		GRANGE		N/A	YES	YES	NO	NO	114.3	-	C,D,G,R,N	1979		MGAZ55	766,925.00	7,164,842.00	228.00	82.00
TM154	EPC 1275	GRANGE	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	759,932.00	7,165,219.00	258.00	138.00
TM162	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	762,131.00	7,165,578.00	261.80	120.00
TM174	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	765,718.88	7,162,998.54	252.00	138.00
TM175	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	763,374.89	7,164,877.53	266.00	138.00
TM177	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	770,323.00	7,159,640.00	220.00	150.00
TM178	EPC 1276	GRANGE	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	760,752.90	7,164,223.54	249.00	132.00
TM182		GRANGE		N/A		YES	NO	NO	120	-	C,D,G,R	1983		MGAZ55	762,313.89	7,164,962.53	260.00	120.00
TM183		GRANGE		N/A		YES	NO	NO	120	-	C,D,G,R	1983		MGAZ55	761,173.90	7,165,102.53	252.00	108.00
TM188		GRANGE		N/A		YES	NO	NO	120	-	C,D,G,R	1983		MGAZ55	763,626.39	7,166,158.26	260.00	120.00
TM189		GRANGE		N/A	YES	YES	NO	NO	120	-	C,D,G,R	1983		MGAZ55	765,123.88	7,166,022.53	235.00	90.00
TM190		GRANGE		N/A	YES	YES	NO	NO	120	-	C,D,G,R	1983		MGAZ55	766,362.88		230.00	90.00



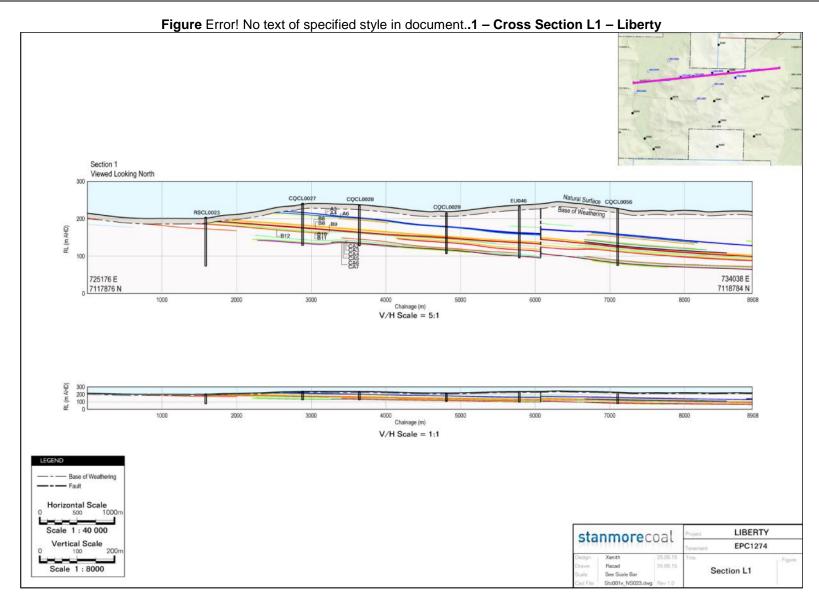
Hole Name	Lease Domain	Project Area	Hole Type	Quality	Lithology	Geophysical Logs	Used in Model	JORC PoB	Bit Size (mm)	Core Diameter (mm)	Geophysical Tools Run	Date Drilled	Datum	Projection	Easting (m)	Northing (m)	RL (m)	TD (m)
G=Gamma, E	D=Density,	C=Calipe	r, V=Sonic, Z	=Vertica	lity, N=Neu	tron, S=Scann	er, R=Re	•	Dipmeter, A=Ac EDN, L=PDL, W			eous Potentia	l, E=Elec	ctric Survey,	M=Micro Inv	erse, H=Photo D	ensity Sonde,	T=DTCM,
CQCL0027	EPC 1274	LIBERTY	CORE	YES	YES	YES	YES	YES	98	63	C,D,G,V	2014	GDA94	MGAZ55	728,038.20	7,118,244.04	280.82	112.30
CQCL0028	EPC 1274	LIBERTY	CORE	YES	YES	YES	YES	YES	98	63	C,D,G,V	2014	GDA94	MGAZ55	728,795.11	7,118,309.92	274.29	106.90
CQCL0029	EPC 1274	LIBERTY	CORE	YES	YES	YES	YES	YES	98	63	C,D,G,V	2014	GDA94	MGAZ55	729,947.34	7,118,503.73	255.20	108.00
CQCL0054	EPC 1274	LIBERTY	CORE	YES	YES	YES	YES	YES	98	63	C,D,G,V	2014	GDA94	MGAZ55	731,352.47	7,118,203.68	286.07	150.26
CQCL0056	EPC 1274	LIBERTY	CORE	YES	YES	YES	YES	YES	98	63	C,D,G,V	2014	GDA94	MGAZ55	732,244.47	7,118,598.32	266.18	151.50
R2410	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	765,334.00	7,166,683.00	227.00	120.00
R2411	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	765,004.00	7,169,623.00	290.00	115.00
R2412	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	762,163.89	7,166,982.52	258.00	130.00
R2413	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	763,603.88	7,167,542.53	248.00	130.00
R2414	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	763,954.00	7,169,433.00	277.00	120.00
R2415	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	761,544.00	7,169,483.00	265.00	110.00
R2416	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	758,464.00	7,167,403.00	285.00	100.00
R2417	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,D,G,R	1982	GDA94	MGAZ55	760,214.00	7,169,203.00	281.00	110.00
R6098	EPC 1276	LIBERTY	CHIP	N/A	YES	YES	YES	NO	110	-	C,D,G,R	2004	GDA94	MGAZ55	761,378.35	7,162,965.02	230.00	102.00
R6139	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,D,G,R,N,S	2005	GDA94	MGAZ55	727,473.65	7,116,941.52	256.30	123.00
R6200	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,D,G,R,N,S		GDA94	MGAZ55	732,998.69	7,116,961.11	262.60	123.00
R6202	EPC 1274		CHIP	N/A	YES	YES	YES	NO	114.3	-	C,D,G,R,N,S	2005	GDA94	MGAZ55	726,395.74	7,113,880.55	246.79	201.00
RSCL0001	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	161	-	C,D,G,V,N,R,T	2013	GDA94	MGAZ55	728,942.61	7,116,836.39	295.02	161.00
RSCL0002	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	161	-	C,D,G,V,N,R,T		GDA94	MGAZ55	730,019.33	7,117,717.47	265.97	161.00
RSCL0018	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	726,077.28	7,118,579.32	238.21	126.00
RSCL0019	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	729,936.65	7,118,502.57	254.96	150.00
RSCL0020	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	728,798.53	7,118,309.79	274.23	150.00
RSCL0021	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	NO	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	728,039.92	7,118,242.80	280.82	150.00
RSCL0022	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	727,290.16	7,119,236.77	242.54	114.00
RSCL0023	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	726,762.24	7,117,951.63	241.07	120.00
RSCL0024	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	119	-	C,D,G,V	2014	GDA94	MGAZ55	725,308.50	7,117,295.66	241.86	108.00
RSCL0053	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,L,G,R		GDA94	MGAZ55	731,353.08	7,118,209.38	285.79	150.00
RSCL0055	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	NO	NO	120	-	C,L,G,R		GDA94	MGAZ55	732,236.26	7,118,584.06	266.20	150.00
EU019	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,L,G,R	1980	GDA94	MGAZ55	725,116.57	7,116,057.84	241.00	141.00
EU022	EPC 1274	LIBERTY	CHIP	N/A	YES	YES	YES	NO	120	-	C,L,G,R	1981	GDA94	MGAZ55	725,863.86	7,114,522.41	245.00	132.00
EU042	EPC 1274		CHIP	N/A	YES	YES	YES	NO	120	-	C,L,G,R	1981	GDA94	MGAZ55	730,383.86	7,115,522.43	310.00	138.00
EU043	EPC 1274			N/A	YES	YES	YES	NO	120	-	C,L,G,R	1981	_	MGAZ55	730,073.87	7,116,792.44	286.00	138.00
EU044	EPC 1274			N/A	YES	YES	YES	NO	120	-	C,L,G,R	1981	GDA94	MGAZ55	730,923.88	7,118,572.45	273.00	138.00
EU046	EPC 1282		CHIP	N/A	YES	YES		NO		-	C,L,G,R		_	MGAZ55	730,923.88	7,118,572.45	273.00	138.00
EU047	EPC 1283	_	CHIP	N/A	YES	YES	YES	NO	120	-	C,L,G,R		_	MGAZ55	730,336.89	7,120,202.46	266.41	138.00
EU048	EPC 1284		CHIP	N/A	YES	YES	YES	NO	120	-	C,L,G,R			MGAZ55	734,022.89	7,120,947.48	246.00	135.00
EU088	EPC 1285		CHIP	N/A	YES	YES	YES	NO	120	-	C,L,G,R		_	MGAZ55	723,977.24	7,114,790.30	280.00	120.00
EU110	EPC 1286		-	N/A	YES	YES	YES	NO	120	-	C,L,G,R			MGAZ55	· ·	7,114,652.44	282.00	120.00



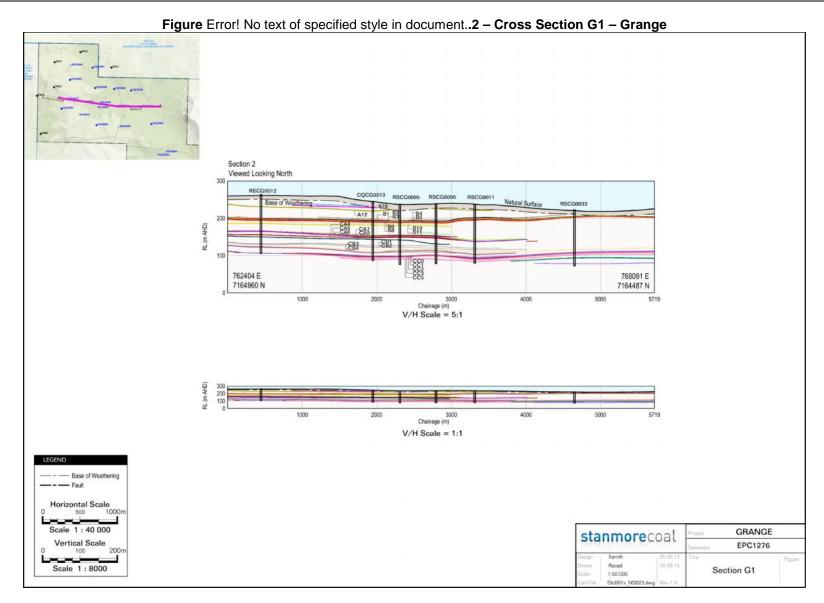


# Appendix B. ADDITIONAL MAPS

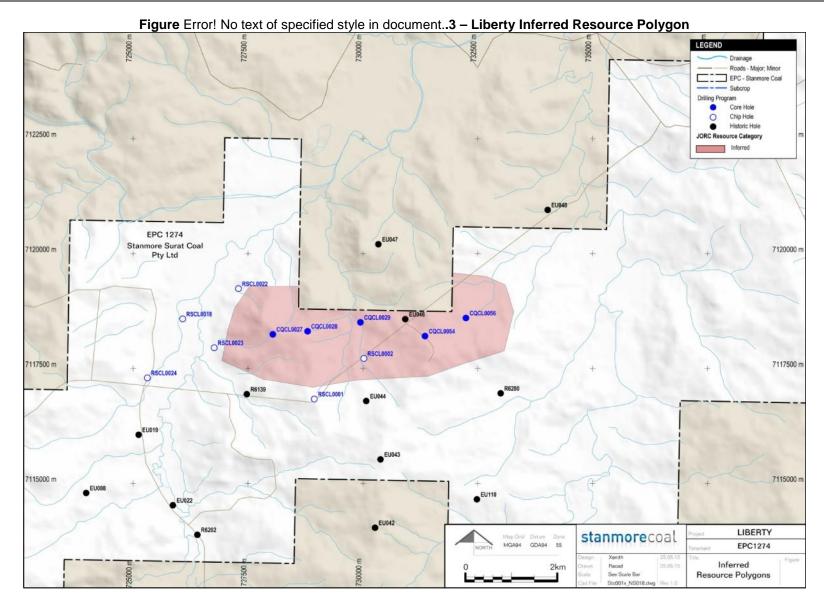




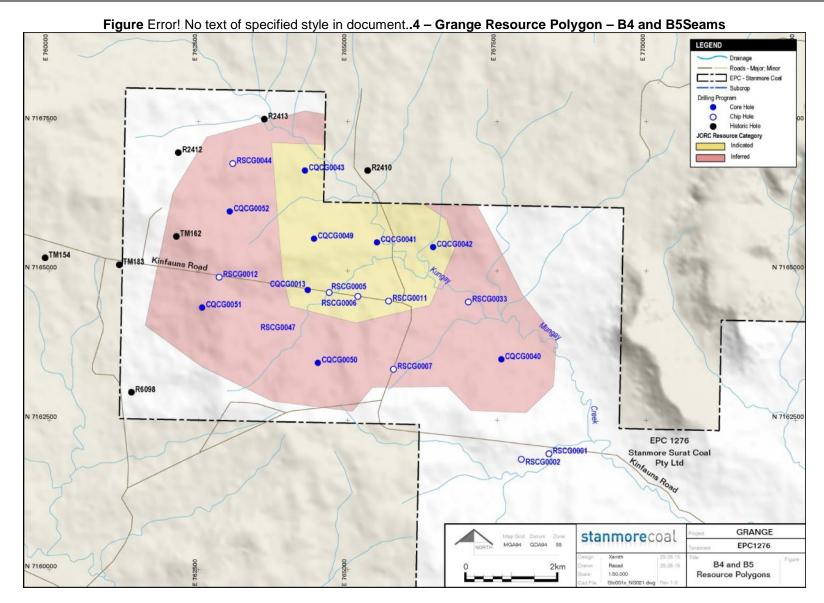




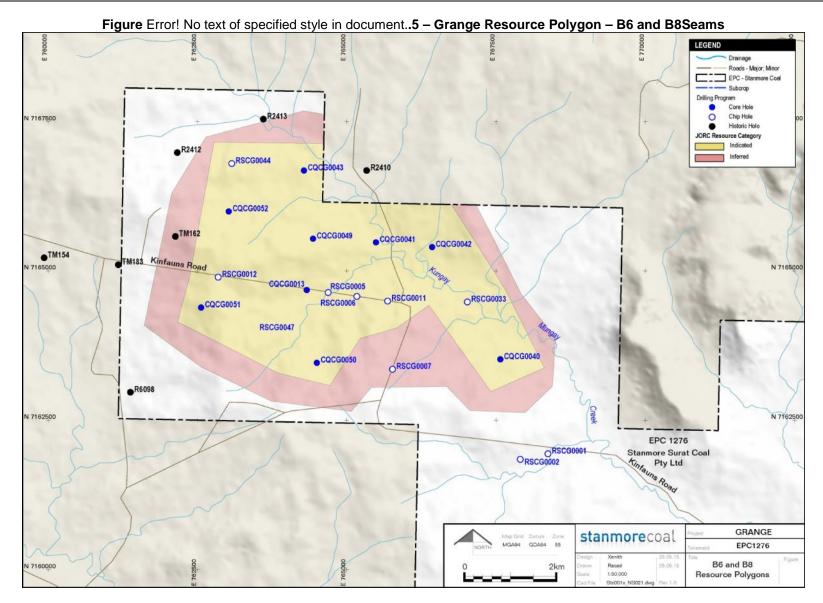




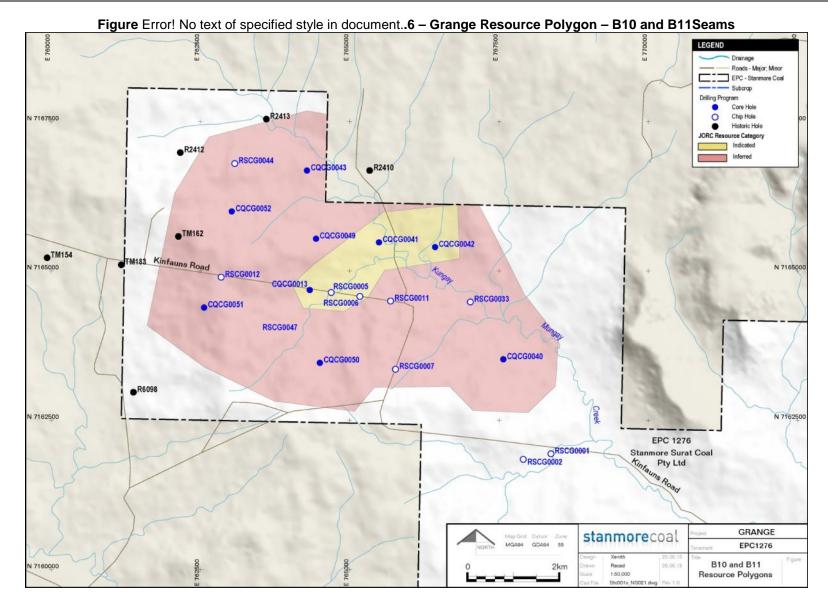




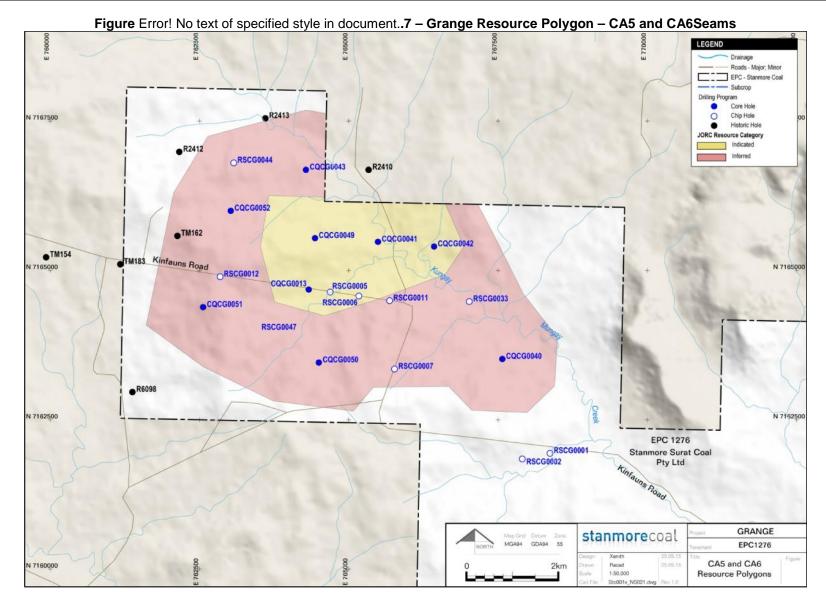














Page 39

