

# ATRUM COAL – SUCCESSFUL MAIDEN SHIP-LOADER TRIALS AT PORT OF STEWART

## HIGHLIGHTS

- First anthracite stockpiled at the Stewart Bulk Terminal, Port of Stewart
- Testing of ship-loader, coal handling and storage facilities

Atrum Coal NL (“**Atrum**” or the “**Company**”) (**ASX: ATU**) is pleased to announce it has successfully trialled the ship-loader at Stewart Bulk Terminal, 150km from the Company’s flagship Groundhog Anthracite Project.

VP Operations, Mr Ben Smith commented:

*“It has been two short years since Atrum was publicly listed and we are excited to report a successful trial of the ship-loader at the Stewart Bulk Terminal in the Port of Stewart. As the project starts to gather pace, this is a significant milestone in proving our logistics chain and we are looking forward to completing customer sample loads later this year.”*



Stewart Bulk Terminal at the Port of Stewart



**ASX:ATU - Share Information**  
Issued Shares: 161.5m

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Executive Director  
Executive Director  
Managing Director  
Non-Executive Director  
Company Secretary

J. Chisholm  
R. Moran  
G. D’Anna  
E. Lilford  
C. Vorias  
G. D’Anna

#### Key Projects

Groundhog	Ownership: 100%
Peace River	Ownership: 100%
Naskeena	Ownership: 100%
Bowron River	Ownership: 100%

## MAIDEN SHIP-LOADER TRIALS

The Company recently transported high grade anthracite to the Stewart Bulk Terminals (SBT) at the Port of Stewart for testing of storage, coal handling and loading facilities.



Testing the SBT unloading and storage facilities

High grade and ultra-high grade anthracite from the Company's Groundhog North operation has been stockpiled at SBT. Recent testing at the port showed that the existing equipment is capable of loading at least 1.5Mtpa of high grade and ultra-high grade anthracite. The Company also has an MOU in place for a further 5Mtpa at Stewart World Port (SWP) which is currently under construction.



Testing the ship-loader conveyor



Testing of loading hoppers



Testing of loading facilities using a trial barge

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### Forward Looking Statements

This release includes forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs. Forward looking statements in this release include, but are not limited to, the capital and operating cost estimates and economic analyses from the Study.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of resources or reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company’s business and operations in the future. The company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company’s control.

Although the company attempts to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be anticipated, estimated or intended, and many events are beyond the reasonable control of the company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements.

Forward looking statements in this release are given as at the date of issue only. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

**TABLE 1 - SAMPLING TECHNIQUES AND DATA**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>For the Atrum Coal 2013 exploration program all coal seams intersected were sampled. Coal plies were sampled discretely on the basis of lithological characteristics and quality. All non-coal material and partings were included with the lower coal ply and noted in the lithological description. Non-coal interburden was sampled separately.</li> <li>The immediate roof and floor samples were submitted for geotechnical testing.</li> <li>All coal and roof and floor dilution samples were double bagged at site and marked with sample number, date, hole and project. These were retained on site until geophysical corrections confirmed representative core recovery of the seam and samples. The qualified samples were then transported to the laboratory via courier.</li> <li>Coal Quality samples from the Atrum Coal Drilling program were sent to Loring Laboratories and ALS Laboratories in Calgary and Vancouver, respectively.</li> <li>All coal quality samples were prepared and analysed using Canadian and International Standard testing methodologies.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>All coal quality holes were cored (partially or fully) using a HQ size core barrel producing a 63.3 mm core diameter.</li> <li>Large diameter drill holes for bulk material extraction were cored using a PQ size core barrel producing an 83.1 mm core diameter.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>An assessment of core recovery was completed by comparing the recovered thickness measured during geological logging and by the driller, to geophysical picked thicknesses from the geophysical logs.</li> <li>Volumetric analysis of samples was conducted on the Atrum Coal exploration program</li> <li>The analysis was based on sample mass received versus expected sample mass derived from sample length by core diameter by apparent Relative Density</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>If sample mass was below 95% a separate exercise interrogating the linear recovery via photos and logs was undertaken to decide whether the sample could be included and not bias the results.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All core was geologically logged, marked and photographed before sampling. Geological and geotechnical features were identified and logged.</li> <li>All drill holes have been geophysical logged with a minimum density, calliper, gamma and verticality unless operational difficulties prevented full or partial logging of the drill hole.</li> <li>The calibration of the geophysical tools was conducted by the geophysical logging company. Century Wireline Services</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>All core samples were double bagged on site and transported to the Laboratory for testing.</li> <li>Loring Laboratories and ALS Laboratories comply with Canadian and International Standards for sample preparation and sub sampling.</li> <li>Large wash samples were pre-treated and dry sized and various sizes before sample splitting and analysis. Proximate analysis was completed on a portion of the original sample.</li> <li>Raw analysis procedure keeps ½ of the sample as reserve.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Loring Laboratories and ALS Laboratories comply with the Canadian and International Standards for coal quality testing and are certified.</li> <li>Geophysical tools were calibrated by the logging company Century Wireline Services.</li> <li>The density measurement is calibrated to precise standards and where possible validated in a calibration hole.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Loring Laboratories and ALS Laboratories comply with the Canadian and International Standards for coal quality testing and as such conduct the verifications for coal quality analysis outlined in the standards.</li> <li>Coal Quality results were verified by Xstract Mining Consultants Pty Ltd before inclusion into the geological model and resource estimate.</li> <li>No adjustments have been made to the Coal quality data.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Professional Survey of the coal quality boreholes for the Atrum Coal exploration program was completed by DMT Geosciences.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Data spacing sufficient to establish the degree of geological and grade continuity for inclusion as Inferred, Indicated and Measured Resource estimation procedures were employed.</li> <li>Multiple samples were obtained for some seams within the Groundhog Project area. As such, where appropriate, sample compositing has been completed. Samples were weighted against sample thickness and in situ RD.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>A combination of vertical and inclined drill holes were completed from the same drill pad to ensure that a suitable understanding of the geological structure and orientation of the geology was captured.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Sample Security was ensured under a chain of custody between Atrum Coal personnel on site and Loring and ALS laboratories.</li> </ul>

Criteria	JORC Code explanation	Commentary
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling was undertaken by Atrum Coal personnel. Loring and ALS undertook internal audits and checks in line with the Canadian and International standards</li> </ul>

**TABLE 2 - REPORTING OF EXPLORATION RESULTS**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Coal tenures relate to the Groundhog Anthracite project, which is 100% owned by Atrum Coal</li> <li>The project consists of 18 granted coal licences and 8 coal licence applications totalling 22,815 hectares</li> <li>Security of tenure is not compromised and there is no known impediments</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration drilling within and in close proximity to the Groundhog project has been reviewed and evaluated for data purposes</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Groundhog Project lies within the Bowser Basin.</li> <li>The Bowser Basin, which is the largest contiguous basin in the Canadian Cordillera, developed as a result of tectonic compression and uplift of the Coast Mountains during the Upper Jurassic.</li> <li>The dominant structural feature is the northwest-southeast trending Biernes Synclinorium. It resulted from northeast-southwest compression during the first phase of deformation ("F1"). Thrusting related to the F1 deformation is more intense in the southern part of the Groundhog Coalfield than in the northern part.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>The second, less intense, phase of deformation ("F2") resulted from northwest-southeast compression. The F2 deformation is superimposed on the broad, open type of F1 folding. The F2 imprint is visible in a series of plunge changes in the F1 folds in the order of up to 5°.</li> <li>F2 thrusts are generally flat lying and related to the hanging wall of drag folds. Displacement tends to be along bedding surfaces. The F2 fold structures superimposed on the major F1 synclorium vary in wave length from 100 m to 700 m and vary in amplitude up to 100 m.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>All drill holes have been modelled from vertical, although hole deviation (from vertical) has been recorded for all drill holes.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All seams where multiple coal quality samples were taken were given a composite coal quality value. This composite value was generated within the Minescape software and was weighted on thickness and in situ RD. In situ RD was only weighted against thickness.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>The inclusion of boreholes from neighbouring areas has given the model a reasonable amount of lateral continuity in all directions.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Point of observation spacing has been extrapolated in a maximum of a 2,000 m radius from the drill hole.</li> <li>Seam thicknesses have been corrected to geophysics to ensure accuracy</li> </ul>
Diagrams	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All appropriate diagrams are contained within the main body of the report</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All available exploration data for the Groundhog Project area have been collated and reported.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No further exploration data were gathered and or utilised.</li> </ul>
Further work	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Further work consisting of additional drilling and seismic activity is being evaluated.</li> </ul>