

## QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDING 30 JUNE 2019

### HIGHLIGHTS

- 2019 drilling program at Elan South commenced
- Approx. 10km of new access roads completed
- Road works and site geological surveys have identified additional thick coal seams and outcrops in the planned exploration areas of Elan South
- Full scope environmental baseline study for Elan South, including stakeholder engagement, commenced
- Elan South Scoping Study commenced; target completion 4Q 2019
- Detailed test results from 2018 core samples confirm Tier 1 hard coking coal quality of Elan South
- Isolation South drill permitting expected shortly
- Annual General Meeting held on 31 May 2019
- Major shareholder, Regal Funds, increases holding to 13.5%
- Appointment of Tony Mauro as Senior Director, Regulatory and Stakeholders

Atrum Coal Ltd ("Atrum" or the "Company") (ASX: ATU) is pleased to provide its Quarterly Activities Report for the period ending 30 June 2019.

Non-Executive Chairman, Mr. Charles Blixt, commented: "We are excited to have kicked off the 2019 exploration program as well as the full scope environmental baseline study at Elan South. We also expect to be on the ground at Isolation South in late July. This dual approach to the 2019 field program reflects the Company's strategy to advance multiple, large Tier 1 hard coking coal developments on the Elan Project.



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#### Board of Directors

Chairman (Non-Exec)  
Managing Director/CEO  
Non-Executive Director  
Non-Executive Director  
Non-Executive Director  
Company Secretary

C. Blixt  
M. Wang  
R. Barker  
G. Edwards  
C. Fear  
J. Stedwell

#### Key Projects

Elan	100%
Groundhog	100%
(incl Panorama North JV)	(65%)
Bowron River	100%

*"We look forward to providing progressive updates as the exploration program advances across Elan South, and concurrently at Isolation South, over the coming months. Associated coal quality testing and updated resource estimates will feed into the Elan South Scoping Study, targeted for completion in the final quarter of this year."*

## **Elan Hard Coking Coal Project**

### **Regulatory approvals granted and Elan South exploration commences**

Regulatory approvals for the planned 2019 drilling program at Elan South were received in late May. Construction of drill site access roads at Elan South started in early June and drilling at Elan South commenced at the end of June.

Approximately 10km of access roads have been constructed to access planned 2019 drilling sites. Road construction works have already exposed additional, thick, shallow coal seams. Our geological survey team has also identified a number of further outcropping coal sites around Elan South areas planned to be drilled in 2019. These findings provide additional confidence in the targeting of the 2019 exploration program at Elan South.



**Figure 1: Coal exposed at road cutting in Elan South, June 2019**

For full details on regulatory approvals and commencement of exploration at Elan South, see Atrum ASX releases dated 31 May 2019, *Regulatory Approvals for 2019 Elan South Drilling Program*, and 24 June 2019, *Elan South Exploration Commences*.

### **Environmental Baseline Study at Elan South**

The environmental baseline study for Elan South has been accelerated in order to rapidly advance the mine permitting process. Top tier consultants, all with direct experience in Alberta coal projects, and the majority involved in Riversdale's Grassy Mountain Project, have been engaged to start the full scope field data collection and impact assessment preparation.

As part of the environmental impact assessment (EIA), engagement with various stakeholders, including First Nations, government agencies, local municipalities and ranchers, also commenced during the quarter.

### **Elan South Scoping Study**

The Elan South Scoping Study process commenced during the quarter. Completion of this technical and financial evaluation is targeted for the December 2019 quarter.

### **Isolation South permitting**

Strong progress has been made with respect to the 2019 Isolation South drill permitting. At this stage, Atrum expects permitting to be completed and drill access road construction to commence at Isolation South from late July.

### **Accelerated 2019 field program**

The dual area field approach adopted for 2019 (Elan South and Isolation South) reflects the Company's strategy to advance multiple, large Tier 1 hard coking coal developments on the Elan Project. Atrum is targeting around 20,000m of drilling over the field season, split predominantly between these two key areas.

Extension drilling and infill drilling at Elan South will target both increases to the current resource base (97Mt total; 31Mt Indicated and 66Mt Inferred)<sup>1</sup> and, critically, upgraded classification of a significant part of the existing estimate into Measured and (additional) Indicated categorisation (for the purposes of targeted conversion to Ore Reserves as part of a subsequent Pre-Feasibility Study (PFS)).

Isolation South (part of the Elan North tenements) is a geologically and geometrically attractive deposit that, in Atrum's view, presents a walk-up proposition for rapid evaluation and feasibility work. Extension drilling is targeted to increase the currently delineated resource (120Mt total; 39Mt Indicated and 81Mt Inferred)<sup>1</sup>. Infill drilling is

also planned to upgrade a significant part of the existing resource into Measured and (additional) Indicated categorisation.

Other key objectives of the 2019 field program include advancing environmental monitoring and studies, conducting mining and infrastructure studies, and planning permitting preparations at Elan South. The environmental baseline studies expand the environmental monitoring which commenced in June 2018 to full-scope, comprehensive field data collection and analyses which will be required for the planned Environmental Impact Assessment (EIA) submission as part of the mine permitting process.

A comprehensive coal sample extraction and testing program has also been planned for both Elan South and Isolation South in order to further validate Tier 1 hard coking coal quality across the wider Elan South and Isolation South areas, and to drive formulation of initial product specifications.

A Scoping Study on the Elan South development is expected to be completed in 4Q 2019. The results of this work are to feed into a PFS targeted to be completed in 2H 2020.

For further details of the planned 2019 field activities at Elan, see Atrum ASX release dated 1 April 2019, *Accelerated 2019 Field Program at Elan*.

<sup>1</sup> Atrum confirms that it is not aware of any new information or data that materially affects the information included in its ASX releases dated 6 January 2019 (*Elan South Hard Coking Coal Resource increased by 170% to 97Mt*) and 22 January 2019 (*Additional 201Mt JORC Resources defined for Elan Project*). All material assumptions and technical parameters underpinning the estimates in these releases continue to apply and have not materially changed.

### **Coal quality testwork results**

Final results of coal characterisation tests (including movable-wall oven coking testing) conducted on 2018 core samples by specialized laboratories in USA, Spain and Germany, confirmed Tier 1 hard coking coal quality at Elan South during the quarter.

These results indicated an average coke strength after reaction (CSR) of 71% and strong comparability with Teck's premium products (refer Table 1).



**Table 1. Elan South indicative coal specifications relative to major Canadian and Australian comparables**

Mine / Project	Operator/ Index	VM % ad	Ash % ad	TS % ad	CSN	RoMax %	Fluidity ddpmm	Phos % ad (5)	CSR	Reactives
Elan South	Atrum Coal	25.9	7	0.65	7.5	1.13	160	0.050	71	68
Teck Premium	Teck	25.5	9	0.50	7.5	1.14	350	0.090	72	71
Grassy Mountain	Riversdale	23.5	9	0.50	-	1.19	150	0.040	65	-
Peak Downs HCC benchmark	Platts	20.7	10.5	0.60	8.5	1.42	400	0.030	74	71
QLD Premium Low Vol	TSI / Platts	21.0	10	0.45	8	1.35	600	0.050	71	68
HCC 64 Mid Vol Benchmark	Platts	25.5	8	0.60	-	-	100	0.050	64	55
Moranbah North	AAMC	24.0	8.5	0.60	8	1.20	1200	0.040	65	60
Goonyella C	BMA	22.8	9	0.55	8	1.20	500	0.040	70	58
Hail Creek	Glencore	20.4	10	0.31	8	1.35	160	0.070	68	50
Illawarra	South 32	23.2	9.5	0.45	7.5	1.25	1200	0.060	73	53

Notes: (1) Elan South coal quality results are based on 2018 LDC samples from two locations at Elan South.  
(2) Grassy Mountain specification sourced from Nov 2015 company presentation.  
(3) Platts index specifications source from:  
[https://www.spglobal.com/platts/plattscontent/\\_assets/\\_files/en/our-methodology/methodology-specifications/metcoalmethod.pdf](https://www.spglobal.com/platts/plattscontent/_assets/_files/en/our-methodology/methodology-specifications/metcoalmethod.pdf)  
(4) Other comparable HCC specifications sourced from:  
<https://www.platts.com/im.platts.content/productservices/products/coaltraderintl.pdf>.  
(5) Tests on 2014 core samples further north of the 2018 exploration areas showed 0.01–0.02% phosphorous.

For full details on the coal quality results, see Atrum ASX releases dated 5 April 2019, *Coke Strength Tests Confirm Tier 1 Hard Coking Coal at Elan*, 25 February 2019, *Additional Clean Coal Quality Results at Elan South*, and 4 February 2019, *Coal Quality Results Confirm Premium Hard Coking Coal*.

## Panorama North JV

In early April 2019, Atrum announced a maiden Inferred Resource estimate of 174Mt for the Panorama North JV (Atrum 65%) in northern BC. Approximately 50% of the resource estimate is at less than 100m depth, with the remainder at less than 200m depth. Coal quality testing on the samples exhibited characteristics of a high-grade anthracite, consistent with previous testwork.

JOGMEC has now completed its earn-in to 35% of Panorama North via the sole-funding of C\$5M in exploration work on the project. The JV is now undertaking a high-level scoping study or mine development option assessment during the year.

For full details of the Panorama North resource estimate and JV arrangements, see Atrum ASX release dated 2 April 2019, *Initial High-Grade Anthracite Resource Defined at Panorama North*.

## Corporate

### 2019 Annual General Meeting (AGM)

The Atrum 2019 AGM was held on 31 May 2019 in Sydney.

For full details of the presentation delivered at the AGM and results from the meeting, see Atrum ASX releases dated 31 May 2019, *AGM Presentation and Results of Meeting*.

### Director retirement and major shareholder increases stake

Non-Executive Director, James Chisholm, retired from the Atrum Board in late June and divested the Atrum shares held by his associated entities.

Atrum understands that there was strong demand to acquire these shares, which were purchased by a range of new and existing institutional shareholders. In particular, Atrum's largest shareholder, Regal Funds Management, increased its stake in the Company to 13.5%.

This further demonstrates the growing market support for Atrum and the multiple Tier 1 hard coking coal developments it is advancing on the Elan Project.

### Appointment of Tony Mauro (Senior Director, Regulatory and Stakeholders)

Atrum announced the appointment of Mr Tony Mauro as Senior Director, Regulatory and Stakeholders, during the quarter. A geophysist by training, Tony brings over 25 years of experience in resource project permitting, stakeholder engagement, regulatory affairs and business development, including permitting of a greenfield metallurgical coal mine and several large energy and power projects in Alberta. Among his past executive roles, Tony was the Vice President of Corporate Development at Maxim Power Ltd, and subsequently Inter Pipeline Ltd, both located in Alberta, Canada.

### Tenement Relinquishment

Atrum relinquished a number of non-core tenements in the Groundhog and Panorama project areas during the quarter.

## Cash and debt position

Atrum held A\$20.7 million cash at 30 June 2019. The Company has no debt, excluding usual creditors balances.

## For further information, contact:

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## Appendix 1: TENEMENTS LIST

Tenure Number	Owner	Tenure Sub Type	Map Number	Area (Ha)	Good to Date
394847	Atrum Coal Groundhog Inc.	Licence	104A089	259	31-May-2019
417080	Atrum Coal Groundhog Inc.	Licence	104A089	565	31-May-2019
417081	Atrum Coal Groundhog Inc.	Licence	104A099	636	31-May-2019
417082	Atrum Coal Groundhog Inc.	Licence	104A099	212	31-May-2019
417084	Atrum Coal Panorama Inc.	Licence	104A088	708	31-May-2019
417085	Atrum Coal Groundhog Inc.	Licence	104A089	1,031	31-May-2019
417086	Atrum Coal Panorama Inc.	Licence	104A088	142	31-May-2019
417088	Atrum Coal Groundhog Inc.	Licence	104A089	777	31-May-2019
417089	Atrum Coal Groundhog Inc.	Licence	104A099	142	31-May-2019
417094	Atrum Coal Groundhog Inc.	Licence	104A089	71	31-May-2019
417095	Atrum Coal Groundhog Inc.	Licence	104A089	425	31-May-2019
417096	Atrum Coal Groundhog Inc.	Licence	104A089	71	31-May-2019
417292	Atrum Coal Panorama Inc.	Licence	104A087	279	31-May-2019
417296	Atrum Coal Panorama Inc.	Licence	104A088	71	31-May-2019
417297	Atrum Coal Groundhog Inc.	Licence	104A089	918	31-May-2019
417298	Atrum Coal Groundhog Inc.	Licence	104A098	1,059	31-May-2019
417299	Atrum Coal Panorama Inc.	Licence	104A087	779	31-May-2019
417520	Atrum Coal Groundhog Inc.	Licence	104A089	212	31-May-2019
417521	Atrum Coal Groundhog Inc.	Licence	104A089	142	31-May-2019
417525	Atrum Coal Panorama Inc.	Licence	104A088	425	31-May-2019
417526	Atrum Coal Panorama Inc.	Licence	104A088	707	31-May-2019
417527	Atrum Coal Panorama Inc.	Licence	104A087	71	31-May-2019
417528	Atrum Coal Groundhog Inc.	Licence	104A089	142	31-May-2019
418587	Atrum Coal Groundhog Inc.	Licence	104A099	1,411	31-May-2019
418588	Atrum Coal Groundhog Inc.	Licence	104A099	1,412	31-May-2019
418589	Atrum Coal Groundhog Inc.	Licence	104A089	1,273	31-May-2019
418926	Atrum Coal Groundhog Inc.	Licence	104A088	1,280	08-Sep-2019
418932	Atrum Coal Groundhog Inc.	Licence	104A078	1,421	08-Sep-2019
418941	Atrum Coal Groundhog Inc.	Licence	104A080	1,418	12-Sep-2019
418942	Atrum Coal Groundhog Inc.	Licence	104A090	1,417	12-Sep-2019
418944	Atrum Coal Groundhog Inc.	Licence	104A090	1,416	12-Sep-2019
418950	Atrum Coal Groundhog Inc.	Licence	104A078	1,418	12-Sep-2019
418951	Atrum Coal Groundhog Inc.	Licence	104A078	1,418	12-Sep-2019
418952	Atrum Coal Groundhog Inc.	Licence	104A088	1,417	12-Sep-2019
418953	Atrum Coal Panorama Inc.	Licence	104A088	1,346	12-Sep-2019
418955	Atrum Coal Groundhog Inc.	Licence	104A089	1,265	12-Sep-2019
418957	Atrum Coal Panorama Inc.	Licence	104A088	1,415	12-Sep-2019
418958	Atrum Coal Panorama Inc.	Licence	104A088	1,345	12-Sep-2019
418961	Atrum Coal Panorama Inc.	Licence	104A088	71	12-Sep-2019
418962	Atrum Coal Groundhog Inc.	Licence	104A078	1,136	12-Sep-2019
				<b>31,723</b>	