

## Expanded Elan Scoping Study For 1Q 2020

### HIGHLIGHTS

- **2019 drilling campaign update:**
  - Elan South: 119 RAB exploration holes (20,150 metres), 8 LD cored holes, 8 PQ cored holes and 10 HQ hydrogeology holes completed
  - Isolation South: 49 RAB exploration holes (7,850 metres) completed
- Drilling continued in both areas till last week; core drilling at Isolation South for coal quality testing and further RAB drilling at Elan South now expected to conclude in January 2020
- Coal quality drilling and testwork backlog see overall Elan South resource update, including maiden SE Corner estimate, now expected in 1Q 2020
- Isolation South 2019 drill results (shallow, thick) and resource outcomes (large-scale, potentially very low-strip) have significantly exceeded expectations
- Exceptionally thick seams encountered in recent Isolation South drilling (*cumulative apparent thicknesses exceeding 100 metres in multiple holes*) are yet to be incorporated in the current resource estimate, presenting further upside to next Isolation South resource update due 1Q 2020
- Given these outcomes, and the revised timing of the Elan South resource update, Atrum has elected to incorporate Isolation South into an expanded Elan Scoping Study; offers significant potential annual output and life extension upside
- Set to include mine designs and schedules for both Elan South and Isolation South, as well as fully integrated project infrastructure and transport logistics
- Elan Scoping Study completion now expected in 1Q 2020

Atrum Coal Ltd (**Atrum** or the **Company**) (ASX: ATU) is pleased to provide an update on its 100%-owned Elan Hard Coking Coal Project (**Elan Project**) in southern Alberta, Canada.



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**Key Projects**  
Elan 100%  
Groundhog 100%  
(incl Panorama North JV) (65%)

## Elan Project 2019 drilling campaign update

Drilling continued in both Elan South and Isolation South area till last week. Core drilling at Isolation South for coal quality testing and further RAB drilling at Elan South now expected to conclude in January 2020.

### *Elan South*

A total of 119 rotary air blast (RAB) exploration holes have been completed at Elan South in 2019 for a total of 20,150 metres of drilling (as at 16 December 2019). The main focus of drilling has been at South East Corner (65 RAB holes) and Fish Hook (39 RAB holes), with an additional 15 RAB holes completed at Oil Pad Ridge (Table 1).

At South East Corner, large diameter (LD) coring has been completed at 3 sites and PQ coring at 8 sites, with the coring undertaken at defined intervals based on the twinning of existing structure holes. Five LD cored holes have been completed at Fish Hook, and current drilling at Oil Pad Ridge has resulted in another three LD holes completed.

Core drilling at Elan South has been significantly slower than expected, particularly over recent weeks, due to mobilisation delays and equipment maintenance downtime. As a result, analytical testing of the core samples taken from Fish Hook, South East Corner and Oil Pad Ridge in 2019 is expected to be complete in mid/late 1Q 2020.

### *Isolation South*

A total of 49 RAB exploration holes have been completed at Isolation South for 7,850 metres of drilling. Eight holes have been completed in the southern area and 41 completed in the area north of the Oldman River on Cabin Ridge.

The RAB holes at Isolation South complement 19 historical HQ size fully cored holes drilled in the 1970's.

**Table 1: Summary of Elan Project exploration drilling completed to date in 2019**

Project Area	RAB Holes	LD Cored Holes	PQ Cored Holes	HQ Hydrogeology Holes
South East Corner	65	3	8	3
Fish Hook	39	5	-	2
Oil Pad Ridge	15	3	-	4
Isolation South	49	-	-	-
<b>TOTAL</b>	<b>168</b>	<b>11</b>	<b>8</b>	<b>9</b>

## Total Elan Project HCC resources

Following the recently announced increase to the Isolation South resource (see Atrum ASX release dated 2 December 2019, *97 Mt Increase in Isolation South Resource*), overall Elan Project resources currently stand at 395 Mt (110 Mt Indicated and 285 Mt Inferred), as summarised in Table 2 below.

**Table 2: Current Elan Project global resource estimate**

PROJECT	PROJECT AREA	INDICATED Mt	INFERRED Mt	TOTAL Mt	DATE OF ANNOUNCEMENT
ELAN SOUTH	ELAN SOUTH	31	66	97	8-Jan-19*
ELAN NORTH	ISOLATION SOUTH	79	138	217	2-Dec-19*
	ISOLATION	-	51	51	22-Jan-19*
	SAVANNA	-	30	30	22-Jan-19*
<b>TOTAL</b>		<b>110</b>	<b>285</b>	<b>395</b>	

As noted earlier, an update to the overall Elan South resource, incorporating all 2019 drilling in this area (and including a maiden resource estimate for South East Corner), is now expected in 1Q 2020.

As also previously flagged, exceptionally thick seams encountered in recent Isolation South drilling are not yet incorporated in the resource estimate. These results include intercepts of cumulative apparent thicknesses exceeding 100 metres in multiple holes (see Atrum ASX release dated 2 December 2019, *97 Mt Increase in Isolation South Resource*).

This area of structural thickening presents further significant resource upside potential at Isolation South. This upside potential is to be complemented and validated by planned drilling of cores for coal quality testing being undertaken at Isolation South in January 2020.

\* Other than 2019 drilling results not yet incorporated into Elan Project resource estimates, Atrum confirms that it is not aware of any new information or data that materially affects the information included in ASX releases dated 2 December 2019 (*97 Mt Increase in Isolation South Resource*) relating to the Isolation South resource, 22 January 2019 (*Additional 201 Mt JORC Resources Defined for Elan Project*) relating to Isolation and Savanna resources, and 8 January 2019 (*Elan South Hard Coking Coal Resource Increased by 170% to 97 Mt*) relating to the Elan South resource. All material assumptions and technical parameters underpinning the estimates in these releases continue to apply and have not materially changed.

## Expanded Elan Scoping Study

The total areal footprint of the Elan Project, combined with its thick, shallow and high-quality coal seam development, evidences clear potential for a multi-mine hard coking coal province. The decision to concurrently progress evaluation of Isolation South this year, alongside acceleration of exploration at Elan South, reflected Atrum's strategy to rapidly advance multiple, large Tier 1 hard coking coal developments across the Elan Project.

The Isolation South drilling results during 2019 have, as previously reported, consistently returned shallow, thick cumulative coal intercepts. The recent interim resource update for Isolation South also saw a substantial 97 Mt increase to 217 Mt\*. The relatively shallow depth (120 Mt of resource at less than 100 metres depth) and moderate dip angles seen at Isolation South also mean that a large proportion of this enlarged resource is potentially very low strip ratio tonnage. In aggregate, drilling results and resource estimate outcomes at Isolation South this year have significantly exceeded Atrum's expectations.

Given the considerable project upside potential that Isolation South offers, and the delay to the Elan South resource update into 1Q 2020, Atrum has elected to incorporate Isolation South into an expanded Elan Scoping Study. The enlarged Elan Scoping Study will incorporate mine designs and production schedules for both Elan South and Isolation South, as well as project infrastructure and transport logistics solutions that are fully integrated for a dual development. Targeted completion of the expanded Elan Scoping Study is now scheduled for 1Q 2020.

\* Please refer to the ASX release dated 2 December 2019 (97 Mt Increase in Isolation South Resource).

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## About Atrum Coal

Atrum Coal (ASX: ATU) is a metallurgical coal developer. The Company's flagship asset is the 100%-owned Elan Hard Coking Coal Project in southern Alberta, Canada. Elan hosts large-scale, shallow, thick, hard coking coal (HCC) deposits with a current JORC Resource Estimate of 395 Mt (110 Mt Indicated and 285 Mt Inferred).<sup>1</sup> Comprehensive quality testing of Elan South coal on samples from the 2018 exploration program, combined with review of substantial historical testwork data for the broader Elan Project, has confirmed Tier 1 HCC quality.

The Elan South area is located approximately 13 km from an existing rail line with significant excess capacity, providing direct rail access to export terminals in Vancouver and Prince Rupert. Elan South shares its southern boundary with Riversdale Resources' Grassy Mountain Project, which is in the final permitting stage for a 4.5 Mtpa open-cut HCC operation. Around 30 km to the west, Teck Resources operates five mines (the Elk Valley complex) producing approximately 25 Mtpa of premium HCC for the seaborne market.

A Scoping Study to evaluate development of the Elan Project, incorporating mining of both the Elan South and Isolation South areas, is targeted for completion in 1Q 2020. This work will feed into a Pre-Feasibility Study (PFS) which is planned to be completed in 2H 2020.

<sup>1</sup> Other than 2019 drilling results not yet incorporated into Elan Project resource estimates, Atrum confirms that it is not aware of any new information or data that materially affects the information included in ASX releases dated 2 December 2019 (*97 Mt Increase in Isolation South Resource*) relating to the Isolation South resource, 22 January 2019 (*Additional 201 Mt JORC Resources Defined for Elan Project*) relating to Isolation and Savanna resources, and 8 January 2019 (*Elan South Hard Coking Coal Resource Increased by 170% to 97 Mt*) relating to the Elan South resource. All material assumptions and technical parameters underpinning the estimates in these releases continue to apply and have not materially changed.

## Competent Persons Statement

### *Isolation South and Elan South Resource Estimates*

The information in this document that relates to reporting of Mineral Resources for the Isolation South and Elan South project areas is based on, and fairly represents, information and supporting documentation prepared by Mr Brad Willis, who is a Member of the Australasian Institute of Mining and Metallurgy (#205328) and is a full-time employee of Palaris Australia Pty Ltd.

Mr Willis has read and understands the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). Mr. Willis is a Competent Person as defined by the JORC Code, 2012 Edition, having twenty years' experience that is relevant to the style of mineralisation and type of deposit described in this document.

Neither Mr. Willis nor Palaris Australia Pty Ltd has any material interest or entitlement, direct or indirect, in the securities of Atrum or any companies associated with Atrum. Fees for the preparation of this report are on a time and materials basis. Mr. Willis has visited the Elan project site with Atrum coal personnel during the exploration programs in 2018 and 2019.

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