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Atrum Coal
COAL FOR STEEL

ASX Release

17 April 2020

Updated Investor Presentation

Atrum Coal Ltd (ASX: ATU) has made minor updates to its Investor Presentation lodged with ASX on 16 April 2020 to include a streamlined statement on page 6 and to reference the sources of information for peer comparisons on pages 9, 13, 27 and 39.

Please see attached updated Investor Presentation.

Justyn Stedwell
Company Secretary

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Board of Directors

Chairman (Non-Exec)	C. Blixt
Managing Director/CEO	M. Wang
Non-Executive Director	R. Barker
Non-Executive Director	G. Edwards
Non-Executive Director	C. Fear
Non-Executive Director	B. Fleming
Company Secretary	J. Stedwell

Key Projects

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

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Elan Scoping Study

April 2020

Important notices

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Forward Looking Statements

This presentation includes various forward looking statements which are identified by the use of forward looking words such as “may”, “could”, “will”, “expect”, “believes”, “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. Statements other than statements of historical fact may be forward looking statements. Atrum believe that it has reasonable grounds for making all statements relating to future matters attributed to it in this presentation.

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. Investors should note that any reference to past performance is not intended to be, nor should it be, relied upon as a guide to any future performance.

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. Actual results, values, performance or achievements may differ materially from results, values, performance or achievements expressed or implied in any forward looking statement. None of Atrum, its officers or any of its advisors make any representation or warranty (express or implied) as to the accuracy or likelihood of fulfilment of any forward looking statement, or any results, values, performance or achievements expressed or implied in any forward looking statement except to the extent required by law.

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.

Competent Person Statement

Exploration Results and Coal Resources

The results of the Scoping Study and Coal Resources that underpin the production target are based on, and fairly represent, information and supporting documentation compiled by Mr Brad Willis, who is a Member of the Australasian Institute of Mining and Metallurgy (205328).

Brad Willis is Principal Geologist at Palaris Australia Pty Ltd (Palaris). He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Willis has 20 years’ experience in exploration and mining of coal deposits. Mr Willis consents to the inclusion of the Scoping Study results disclosed by the Company in the form in which it appears.

Neither Mr Willis nor Palaris have a direct or indirect financial interest in, or association with Atrum Coal, the properties and tenements reviewed in this statement, apart from standard contractual arrangements for the preparation of this report and other previous independent consulting work. In preparing this Annual Coal Resource and Reserve Statement, Palaris has been paid a fee for time expended on this report. The present and past arrangements for services rendered to Atrum Coal do not in any way compromise the independence of Palaris with respect to this estimate.

The Company confirms that it is not aware of any new information or data that materially affects the Previous Announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the Prior Announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the Prior Announcements

Mr. Willis consents to the inclusion in the report of the matters based on the information, in the form and context in which it appears.

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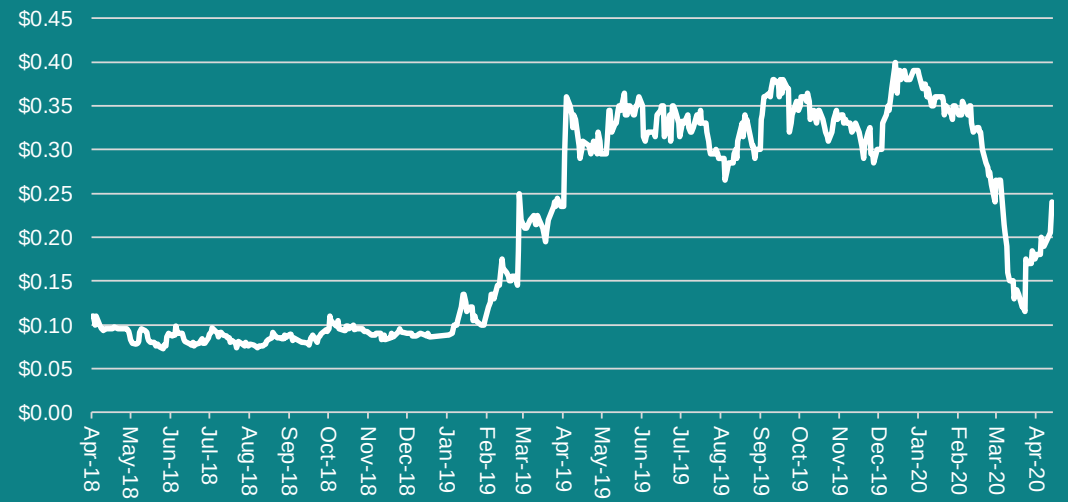
Atrum corporate snapshot

Capital structure	
ASX ticker	ATU
Share price (15 April 2020)	A$0.24
Shares on issue	477.4 M
Options and performance rights	144.5 M
Market capitalisation (undiluted)	A$115 M
Cash (31 December 2019)	A$10 M
Debt (31 December 2019)	Zero

Major shareholders	
Tim Roberts (Warburton Group)	16.7%
Nero Resource Fund	4.5%

Share price (A$ per share, 2 year basis)



Board of Directors	
Non-Executive Chairman	Charles (Chuck) Blixt
Managing Director and CEO	Max Wang
Non-Executive Director	Richard Barker
Non-Executive Director	George Edwards
Non-Executive Director	Charles Fear
Non-Executive Director	William (Bill) Fleming

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Elan presents a rare opportunity

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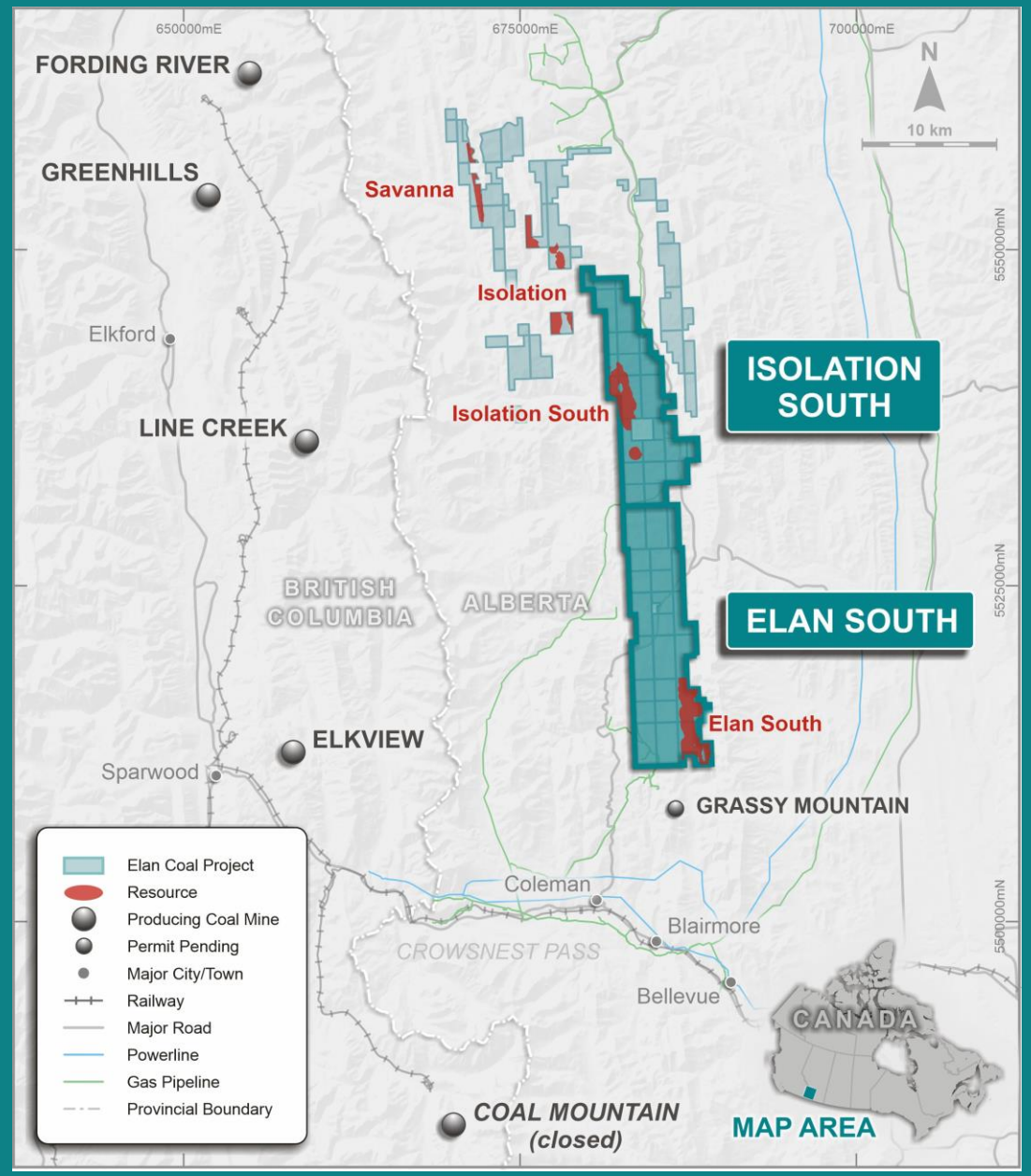
Clear scarcity value

- Large-scale tenement holdings (230 km^2) in a major HCC basin
- Tier 1 hard coking coal quality
- 454 Mt total resources[1] and growing
- Shallow, thick seams; open pit focus
- Located in a proven low cost mining region
- Proximate rail access to key West Coast ports with surplus capacity
- **Clear potential for multiple, large Tier 1 HCC developments**
- Scoping Study now completed (April 2020)



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[1] See total Elan Project Coal Resource estimate disclosures in Appendix

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01 KEY SCOPING OUTCOMES

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Study objectives and team

First-class technical and commercial review

- Assessment of technical and commercial viability of development and operation of the Elan Project
- Forecast estimation accuracy of +/- 35 - 40%
- Leading coal technical consultant, Palaris Australia, was the Study Manager
- Hatch, Sedgman and WaterSmart other key contributors
- Geology model peer reviewed by Xenith Mining Consultants

KEY OUTCOME

The Scoping Study has demonstrated that development of the Elan Project can deliver a world-class HCC operation that is technically robust and highly economic.

For full details refer to Atrum ASX release dated 16 April 2020, "Elan Project Scoping Study". Atrum confirms that all material assumptions underpinning the production target and forecast financial information within the Scoping Study continue to apply and have not materially changed.

Scoping Study: Palaris Australia

- Overarching Scoping Study management and finalisation
- Geology and resource estimates
- Preliminary mining plan
- Overall project economics

Rail load-out and product transportation: Hatch

- Review rail load-out options
- Examine additional possibilities
- Evaluate different product transportation modes

CHPP: Sedgman

- Preliminary CHPP design
- Schematic process flowsheets and equipment sizing
- CHPP related infrastructure CAPEX and OPEX

Water Source: WaterSmart

- Water licences review for entire watershed
- Discussions with government for water licenses transfer and/or resource allocations

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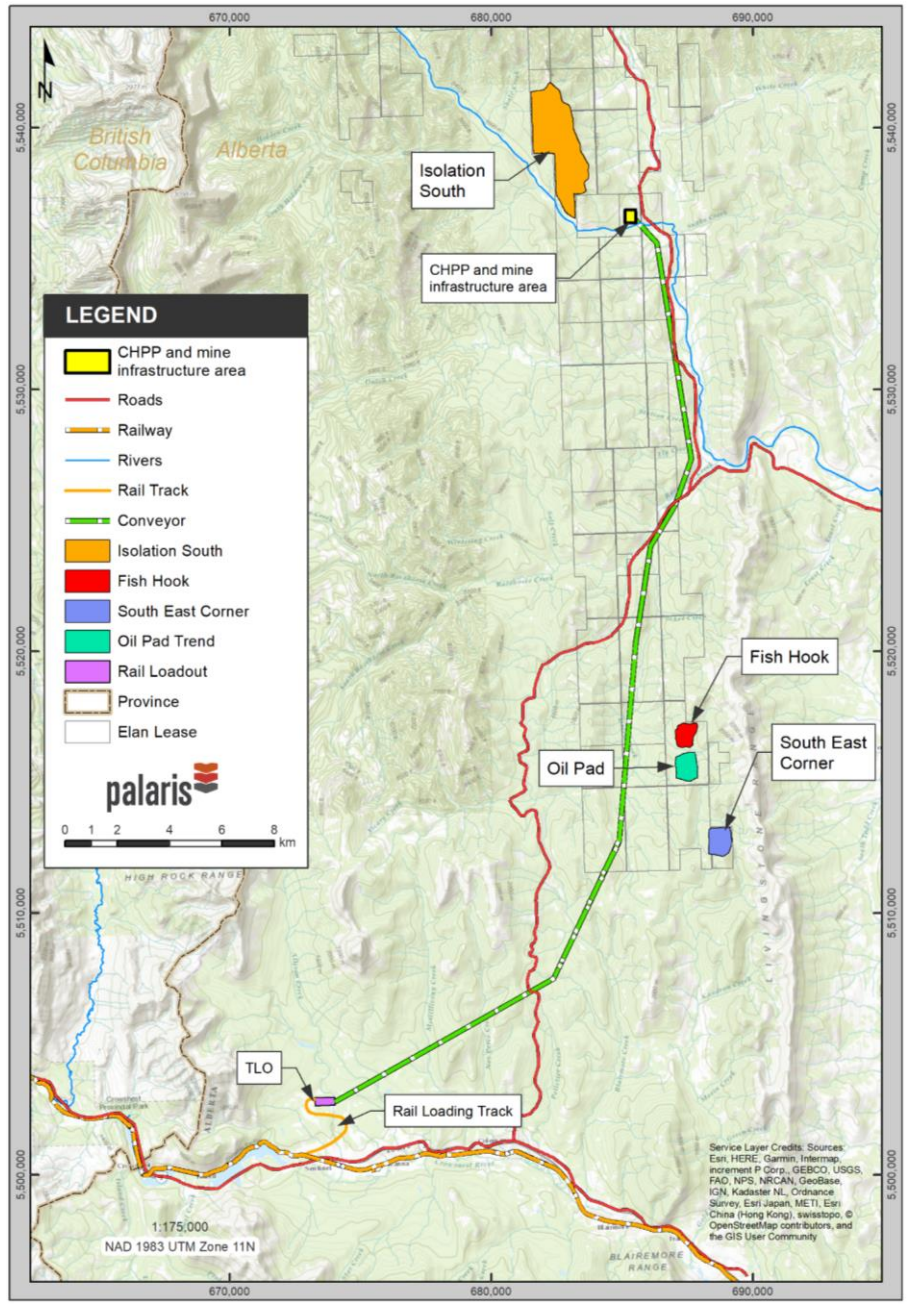
Project scope and design

Robust technical parameters

- Two development areas: Isolation South and Elan South
- Open pit mining with single conventional coal handling and preparation plant (CHPP), located near Isolation South
- Two development scenarios evaluated:
  - Case 1: 10 Mtpa ROM (for 6 Mtpa product HCC)
  - Case 2: 7.5 Mtpa ROM (for 4.5 Mtpa product HCC)
- Single large pit at Isolation South and three discrete pits at Elan South (South East Corner, Oil Pad and Fish Hook)
- Product HCC transported 36km across dedicated covered conveyor from CHPP to new train loadout area located close to CPR's Crowsnest subdivision mainline
- Railed approx. 1,100 km via existing tracks operated by CPR and CN to preferred export terminal of Westshore in Vancouver



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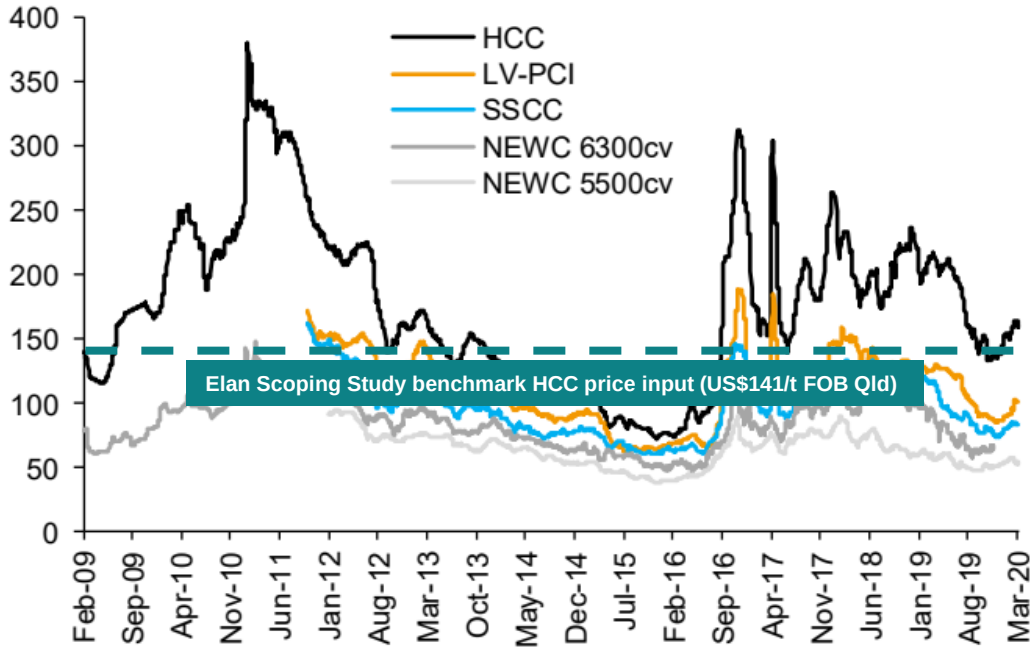
Key inputs

Appropriate commercial assumptions

- Benchmark HCC price of US$141/t FOB Queensland (compares with average quarterly price of nearly US$180/t over the past decade)
- Forecast 2% discount for Elan medium-to-low vol HCC products = realised Elan price of US$138/t FOB Vancouver
- C$/US$ exchange rate of 0.79 (current spot is 0.71)
- Owner operator basis, with mining fleet equipment leased

The Atrum Board considers the Scoping Study to be a conservative representation of the long-term development potential of the Elan Project

Global coal indices price history (US$/t)



Source: Platts, Macquarie Commodities Strategy, March 2020

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Physical outcomes

Strong operational base

15 – 19 years
Initial mine life

7.5 – 10 Mtpa
Nameplate ROM capacity

4.3 : 1
ROM strip ratio (bcm:t)

60%
Processing yield

4.5 – 6.0 Mtpa
Nameplate HCC capacity

76 Mt
Total HCC product

Key Physical Parameters	Unit	10Mtpa ROM	7.5Mtpa ROM
Operational capacity			
Nameplate mining and processing rate	Mtpa ROM	10.0	7.5
Initial mine life	years	15	19
Mining - Isolation South			
Total ROM coal mined	Mt	79.5	79.5
Mining rate (steady state)	Mtpa ROM	6.0	4.5
Total waste mined	Mbcm	262	262
Strip ratio (ROM)	bcm/t	3.3	3.3
Mining - Elan South			
Total ROM coal mined	Mt	46.7	46.7
Mining rate (steady state)	Mtpa ROM	4.0	3.0
Total waste mined	Mbcm	279	279
Strip ratio (ROM)	bcm/t	6.0	6.0
Mining - total			
Total ROM coal mined	Mt	126.2	126.2
Total waste mined	Mbcm	541.4	541.4
Strip ratio (ROM)	bcm/t	4.3	4.3
Product output			
Processing yield	%	60	60
HCC production	Mtpa saleable	6.0	4.5
Total product coal	Mt	76	76

- Elan Project ***product*** LOM strip ratio is 7.2 bcm / tonne HCC
- Compares with Teck's Elk Valley at 11.4 (2019 average)[1] and Riversdale's Grassy Mountain at 9.2 (LOM forecast)[2]
- Isolation South product strip ratio particularly low at 5.5

1 Teck Resources Q4 2019 Financial Report (pg46), 20 February 2020.
2 Riversdale Resources Targets Statement, Grassy Mountain Technical Report by RPM Global (pg8), 28 March, 2019.

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The Scoping Study mine schedule and production target contain approximately 70% Indicated Resources and 30% Inferred Resources. There is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Resources or that the production target itself will be realised. Atrum confirms that the financial viability of the Elan Project is not dependent on the inclusion of Inferred Resources in the mine schedule.

Financial outcomes

Excellent projected economic returns

US$138/t
Realised HCC price (FOB Vancouver)

US$790 – 860M
Post-tax $NPV_{9\%}$

US$81 – 84/t
Cash opex (FOB Vanc.)

3.9 – 4.4 yrs
Payback (post-tax)

US$587 – 683M
Pre-production capex

25 – 26%
Post-tax IRR

Key financial outcomes	Unit	10Mtpa ROM	7.5Mtpa ROM
Price inputs (LOM average)			
C$/US$ (long term forecast)	USc	0.79	0.79
HCC price (Platts Premium LV FOB Queensland)	US$/t	141	141
HCC price (Elan MV HCC FOB Vancouver)	US$/t	138	138
NPV, returns and key metrics			
$NPV_{9\%}$ (post-tax, real basis, ungeared, Y-1 basis)	US$M	860	790
$NPV_{9\%}$ (pre-tax, real basis, ungeared, Y-1 basis)	US$M	1,180	1,070
IRR (post-tax, real basis, ungeared, Y-1 basis)	%	25	26
IRR (pre-tax, real basis, ungeared, Y-1 basis)	%	29	30
Payback period (post-tax, from first production)	years	4.4	3.9
Payback period (pre-tax, from first production)	years	4.0	3.6
Capital efficiency (post-tax NPV / PP capex)	x	1.3	1.3
Pre-production capital expenditure	US$M	683	587
LOM sustaining capital expenditure	US$ / ROM t	1.7	1.7
Project net cashflow (post-tax)	US$M	2,610	2,580
Project net cashflow (pre-tax)	US$M	3,400	3,340
Unit cash operating costs			
Mining	US$/t ROM	23	24
Processing	US$/t ROM	4	4
Free on Rail (FOR) cash cost	US$/t ROM US$/t saleable	27 44	28 46
Rail transport and port	US$/t saleable	29	29
Marketing, commissions and corporate	US$/t saleable	2	2
Royalties	US$/t saleable	6	6
Total cash operating cost - Free on Board (FOB)	US$/t saleable	81	84

- Attractive ***upfront capital intensity*** of US$114 – 130 per tonne of annual HCC capacity
- Cash operating cost estimates place Elan in the lower second quartile of the global export coking coal cash cost curve

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Social licence to operate

Early, proactive engagement with all stakeholders

- Commitment to a best-in-class development and operating philosophy
- Adopted learnings from permitting of adjacent Grassy Mountain HCC Project (Riversdale Resources), which has similar or identical settings
- Early engagement with First Nations, government, communities and other relevant stakeholders
- Ownership of all regulatory applications and early, proactive engagement of federal and provincial regulators
- Comprehensive environmental study program commenced in 2019; will form foundation for mine planning and impact assessment
- Development of Elan set to create several hundred full-time local jobs
- Significant direct economic contribution to Alberta, with expected provincial royalties of approx. US$450M to paid over the LOM
- Indirect contributions to local, provincial and federal economies and taxes to be multiples of this provincial royalty total

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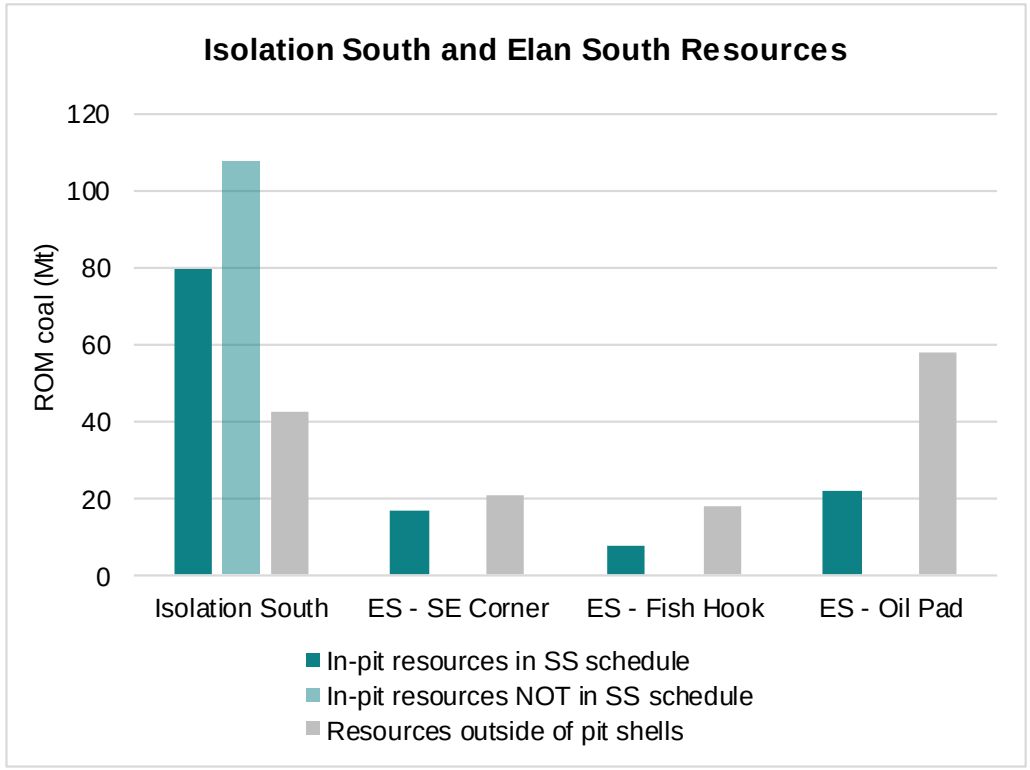
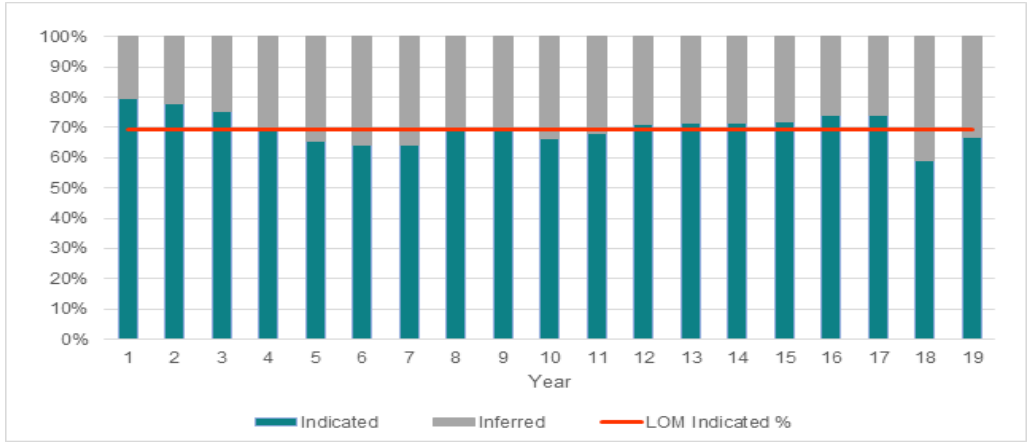
Key upside scenarios

1 Isolation South pit expansion

- Pit optimisation and mine planning activities saw a practical pit shell at Isolation South containing 188 Mt ROM
- Approx. 108 Mt ROM coal of in-pit Inferred resources were then excluded from the mine schedule (leaving 80 Mt; 74% of which is Indicated), in-line with ASIC/ASX regulatory framework
- **Incorporation of these excluded in-pit Inferred resources**, via targeted upgrade into Measured and/or Indicated classification, offers substantial potential upside through:
  - **Mine life extension**
  - **Lower average strip ratio and operating costs**
  - **Future output expansion**
- Further opportunity to defer commencement of Elan South; **sole sourcing from Isolation South in early years** allows:
  - Greater development and operating simplicity
  - Lower pre-production capital
  - Lower strip ratios (and operating costs) in early years





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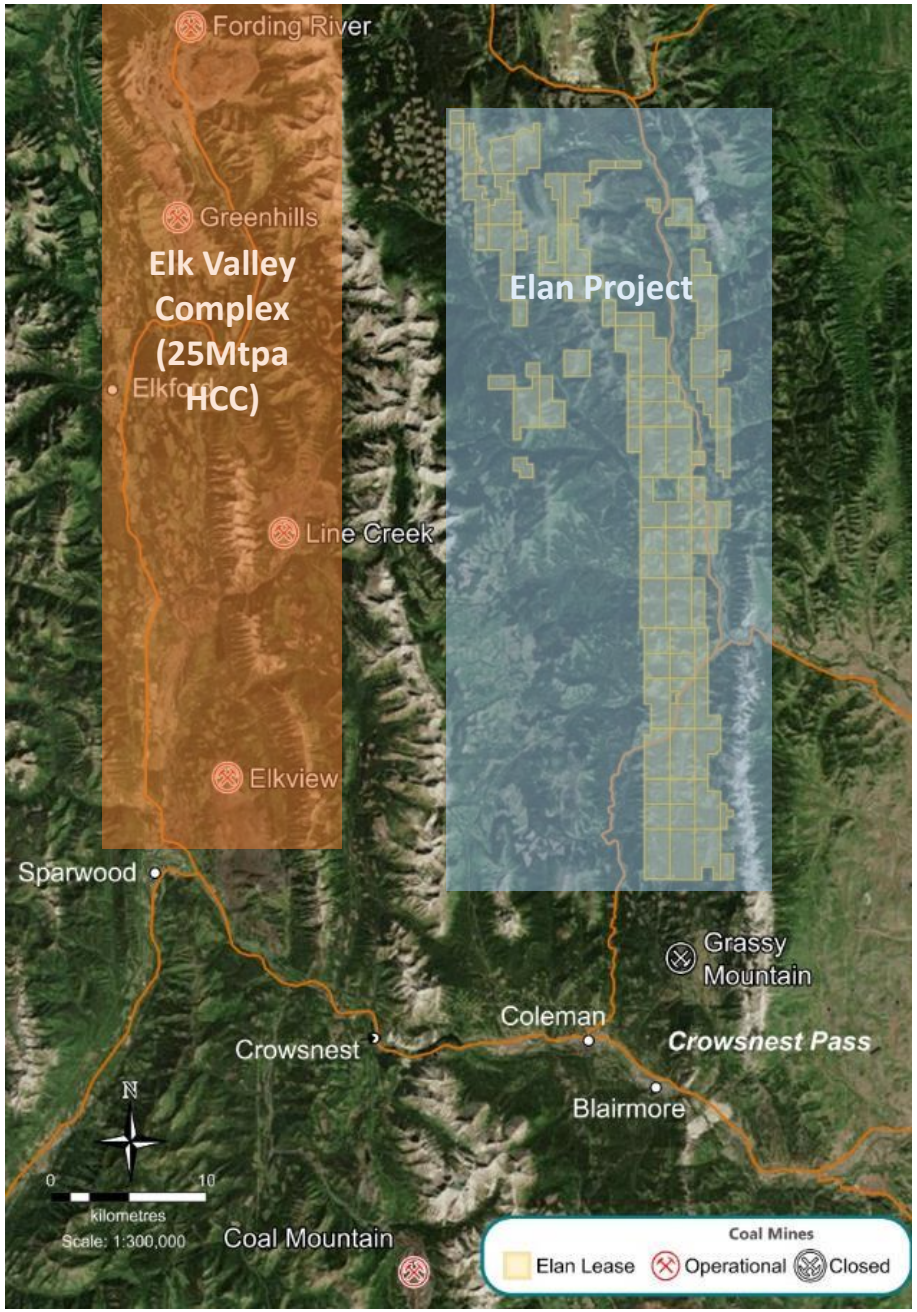
Key upside scenarios

2 Further exploration and resource growth

- Substantial resource upside across the entire Elan tenement base, including at Isolation South and Elan South
- Over 40km of delineated coal strike extent
- Significant swathes of the Elan tenure that are undrilled or under-drilled; mapped coal extents stretch well beyond resource envelopes
- Total areal footprint of the Elan tenement base, combined with its thick, shallow and high-quality coal seam depositions, evidences clear potential to host multiple, large Tier 1 hard coking coal developments
- **Teck Resources' proximate Elk Valley complex produces over 25Mtpa premium HCC from four operating mines[1]**



1 Teck Resources Q4 2019 Financial Report (p46), 20 February 2020.

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Key upside scenarios

3 BOOT financing

- Development has been modelled on an owner-operated basis with equipment leasing of mining fleet
- Clear potential to finance the CHPP, and product conveyor transport and rail loadout/loop systems, via Build-Own-Operate-Transfer (BOOT) contract
- By utilising BOOT arrangements (alongside fleet equipment leasing), total pre-production capital could be reduced by approx. US$430 - 530M
- **Reduces total pre-production capital to US$140 – 150M (for both the 10 Mtpa and 7.5 Mtpa cases)**
- **Drives projected economic returns to:**
  - **Post-tax $NPV_{9\%}$ = US$910 – 1,020M**
  - **Post-tax IRR = 52 – 54%**

Parameter	Unit	10 Mtpa ROM	7.5 Mtpa ROM
$NPV_{9\%}$ real post-tax	US$M	1,020	910
IRR real post-tax	%	52	54
Pre-production CAPEX	US$M	147	142
FOB cash cost	US$/t saleable	89	90
BOOT – finance charge	%	7	7
BOOT – payment term	years	15	15

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Key upside scenarios

4 Higher processing yield

- Teck Resources' Elk Valley mines, with a similar raw coal ash content range, have processing yields typically ranging from 60 to 70%
- Compares with the 60% yield assumption in the Scoping Study
- Higher yield naturally also reduces product unit operating costs
- **Yield sensitivity analysis highlights that +1% yield equates to the addition of ~US$40M NPV**
- More detailed Isolation South washability testwork results are expected in the next few months
- Additional sampling, testing and production yield modelling are also planned for the PFS phase

Average process yield	Post-tax NPV (US$M)
57%	743
58%	772
59%	813
60%	**860**
61%	897
62%	938
63%	980
64%	1,022
65%	1,045
66%	1,086
67%	1,127

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Key upside scenarios

5 Conservative HCC and C$/US$ inputs

- HCC benchmark price forecast of US$141/t (FOB Queensland) based on long-term real HCC price forecast provided by Consensus Economics (Feb 2020)
- Compares with:
  - Low-vol HCC spot price of approx. US$150 - 165/t during the second half of March 2020
  - Quarterly average HCC benchmark price of nearly US$180/t over the past decade
- **+10% HCC price input = + ~US$300M NPV**
- Long-term C$/US$ exchange rate forecast of 0.79 also adopted from Consensus Economics
- Drives all US$ cost assumptions that are denominated in C$ (much of the forecast Elan operating cost base)
- Current spot C$/US$ exchange rate is 0.71
- **-10% C$/US$ input = + ~US$200M NPV**

Post-tax NPV sensitivity analysis (10 Mtpa ROM case)

Post-tax NPV		C/US$ rate				
(US$M)		**0.95**	**0.87**	**0.79**	**0.71**	**0.63**
HCC price (US$/t)		*20%*	*10%*	*0%*	*-10%*	*-20%*
113	*-20%*	-226	27	257	462	670
127	*-10%*	132	351	558	763	972
141	*0%*	442	653	**860**	1,062	1,264
155	*10%*	736	947	1,153	1,376	1,572
169	*20%*	1,040	1,243	1,466	1,661	1,881
183	*30%*	1,334	1,557	1,750	1,969	2,189

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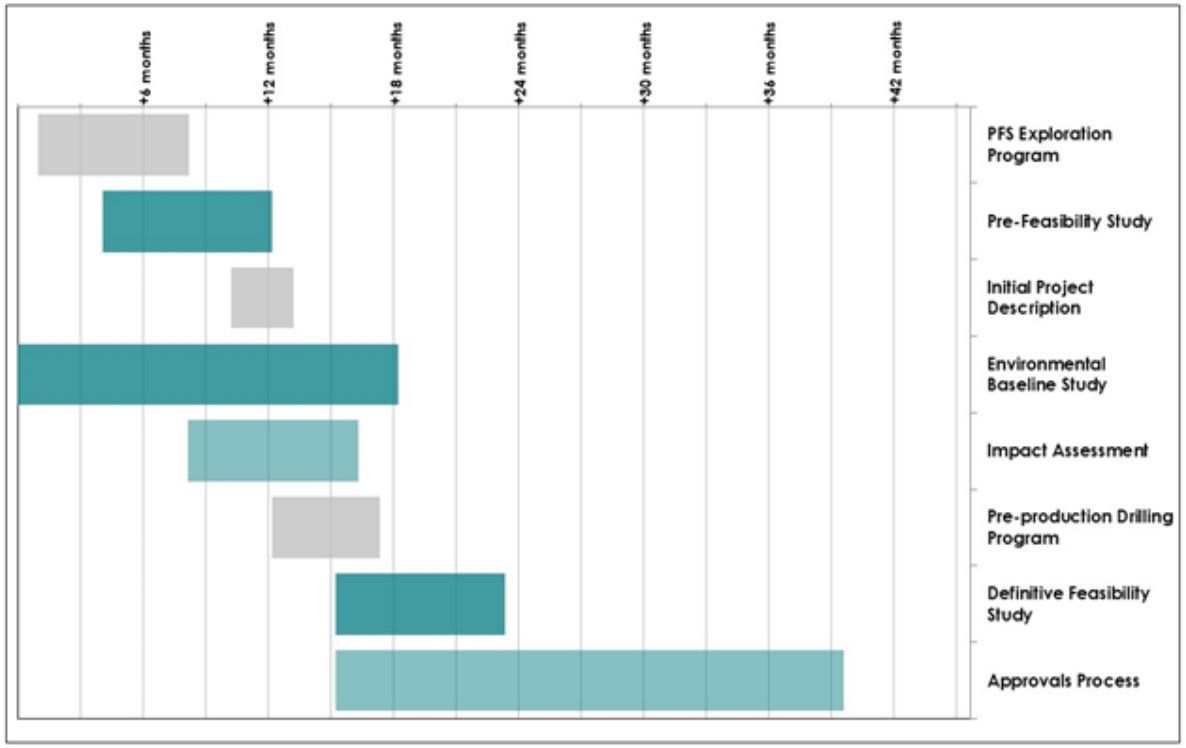
Next steps

The path to development

- Elan Project now set for transition into Pre-Feasibility Study (PFS); to be undertaken in parallel with targeted exploration to further upgrade resource classification
- Full commencement of these activities paused due to COVID-19 related constraints
- Regular reassessment of this status as local and global conditions evolve over coming months
- Beyond this period, Atrum's focus remains rapid progression of Elan through key evaluation phases (PFS and DFS) and into development
- Approx. 3 to 4 months post completion of PFS, targeting submission of Project Description and then Impact Assessment (IA) to regulators
- Estimated approvals timeframe of approx. 24 months sees grant of mining permit and all approvals targeted for approx. 40 months after start of PFS exploration



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02 MINING AND PROCESSING

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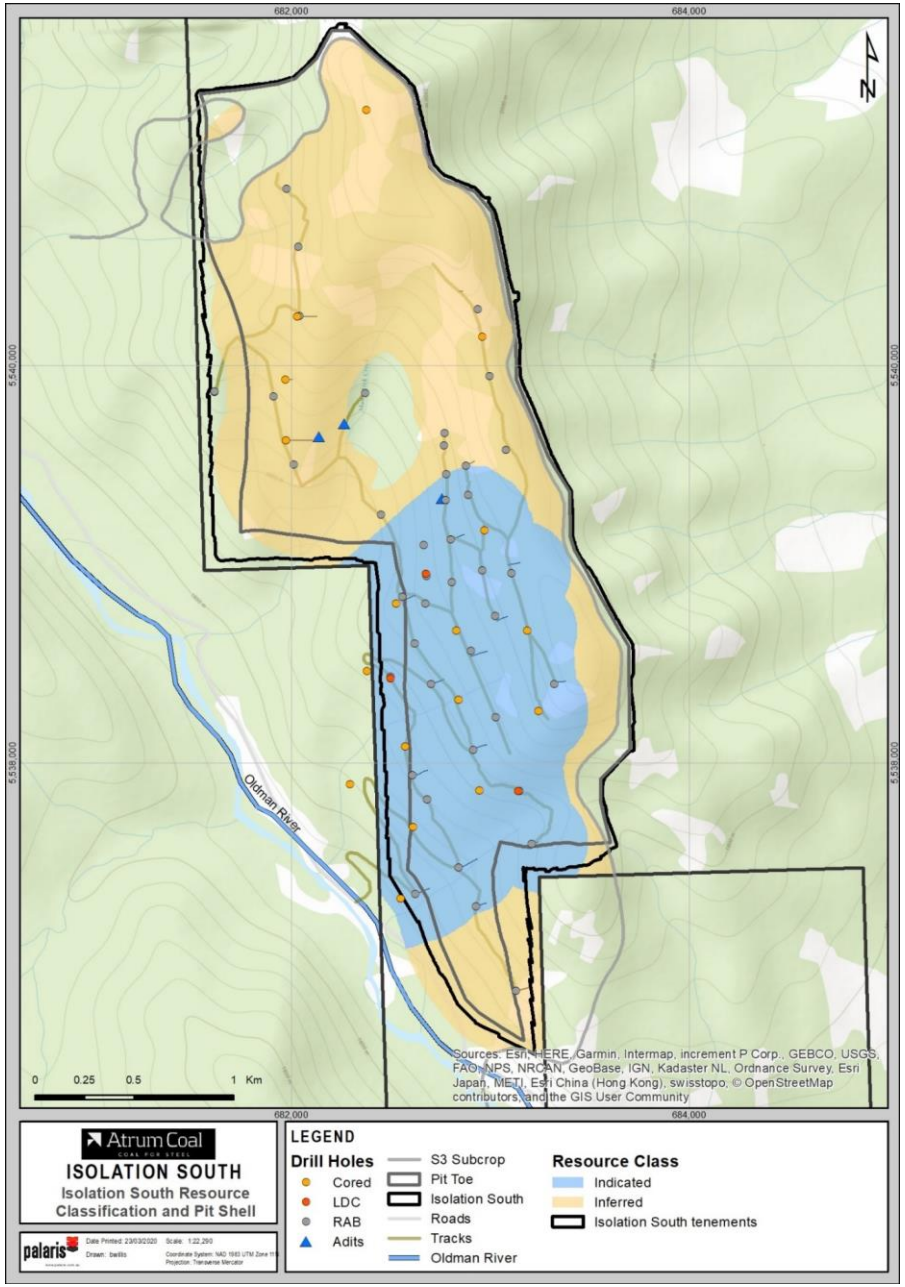
Large resource base

Isolation South and Elan South resources total 373 Mt[1]

Project Area	Seam Group	Indicated (Mt)	Inferred (Mt)	Total (Mt)
Isolation South	Seam 1	13.8	23	37
	Seam 2	10.6	25	36
	Seam 3	57.2	79	136
	Seam 4	-	21	21
Isolation South Total		**82**	**148**	**230**
South East Corner	Seam 1	3.2	3	7
	Seam 2	5.4	9	15
	Seam 4	7	9	16
Fish Hook	Seam 1	1.3	1	3
	Seam 2	9.6	4	13
	Seam 4	4.3	6	10
Oil Pad	Seam 1	18.4	23	41
	Seam 2	9.9	19	29
	Seam 4	1	9	10
Elan South Total		**60**	**83**	**143**
GRAND TOTAL		**142**	**231**	**373**

[1] See total Elan Project Coal Resource estimate disclosures in Appendix



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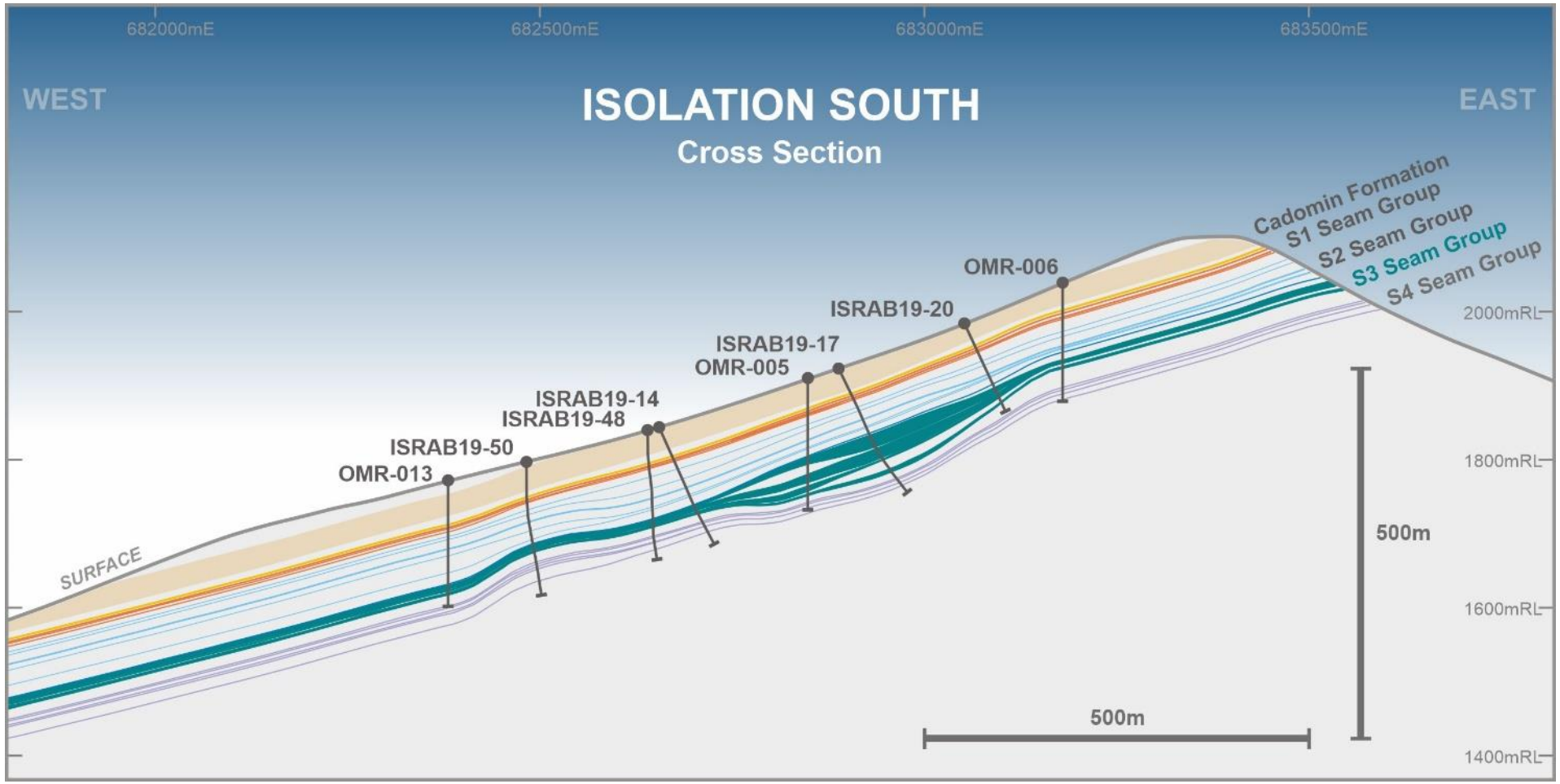
Attractive geology

Thick, shallow coal seams



5 – 50m
Coal starting depth

+100m
Max. total thickness

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Mine design and fleet

A conventional operation

- Geotechnical design parameters based on consultant advice and Feasibility Study on the neighbouring Grassy Mountain Project
  - Overall highwall batter angle of 45 degrees
  - Highwalls based on 70-degree individual faces and 10m wide benches
  - Maximum unbenched height of 25m
- Hydraulic backhoe excavators and 220 tonne trucks chosen as preferred mining fleet
  - Suitable match with total production profile
  - Suitability to range of pit sizes
  - Flexibility to allow movement between areas
  - Efficient alignment of truck/excavator capacity

Type	Example Make	Example Model	Maximum Units Required
Production Equipment			
Excavator	Hitachi	EX5600	3
Excavator	Hitachi	EX3600	4
Excavator	Hitachi	EX2600	1
Mining Trucks	Caterpillar	793	33
Ancillary Equipment			
Track dozer	Caterpillar	D11T	14
Rubber tyred dozer	Caterpillar	854K	1
Drill	Caterpillar	MD6250	5
Grader	Caterpillar	16M	4

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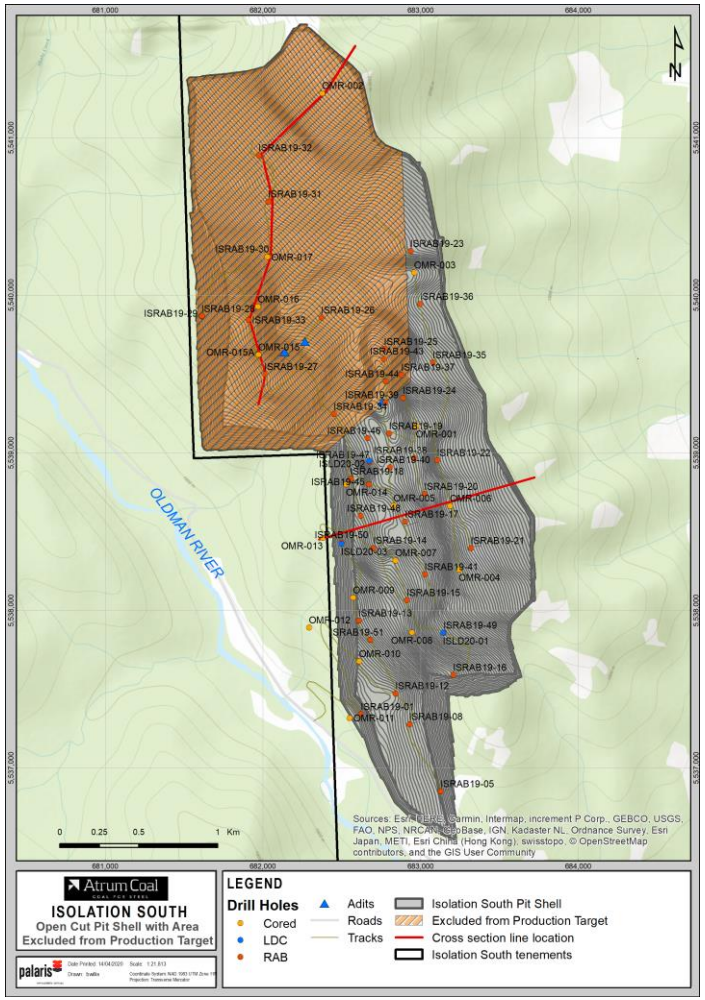
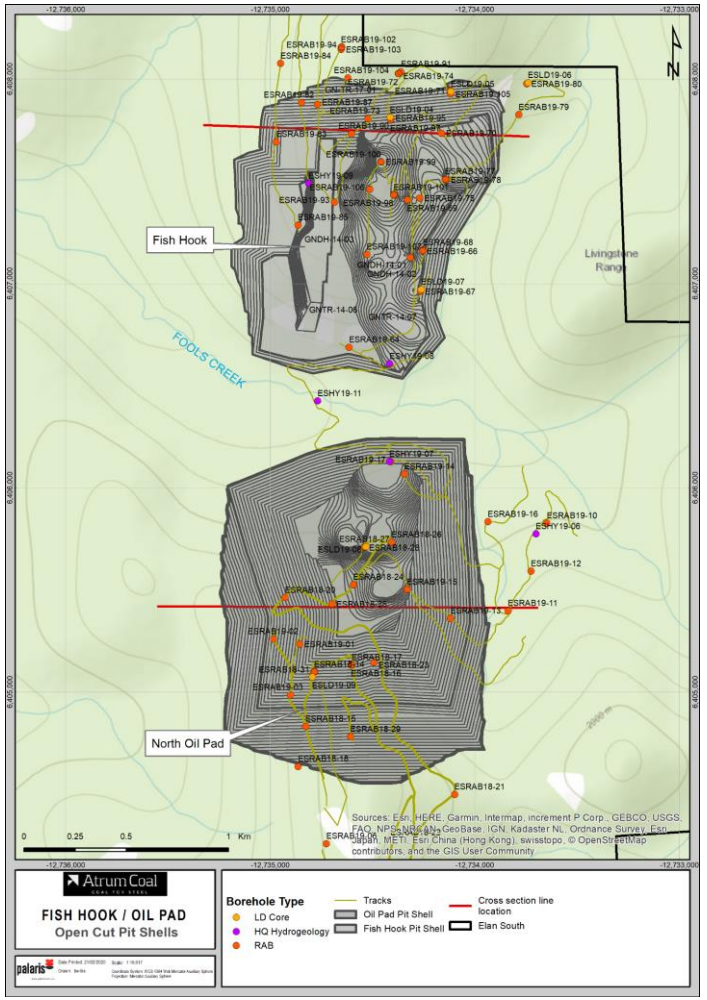
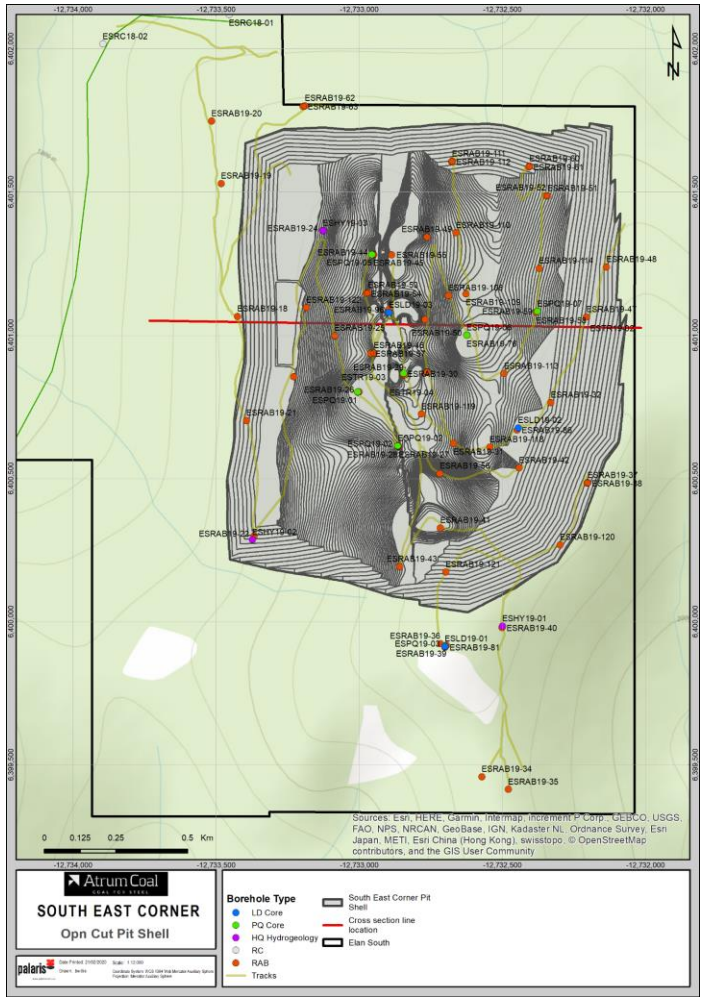
Pit designs

One large pit at Isolation South and three discrete satellites at Elan South







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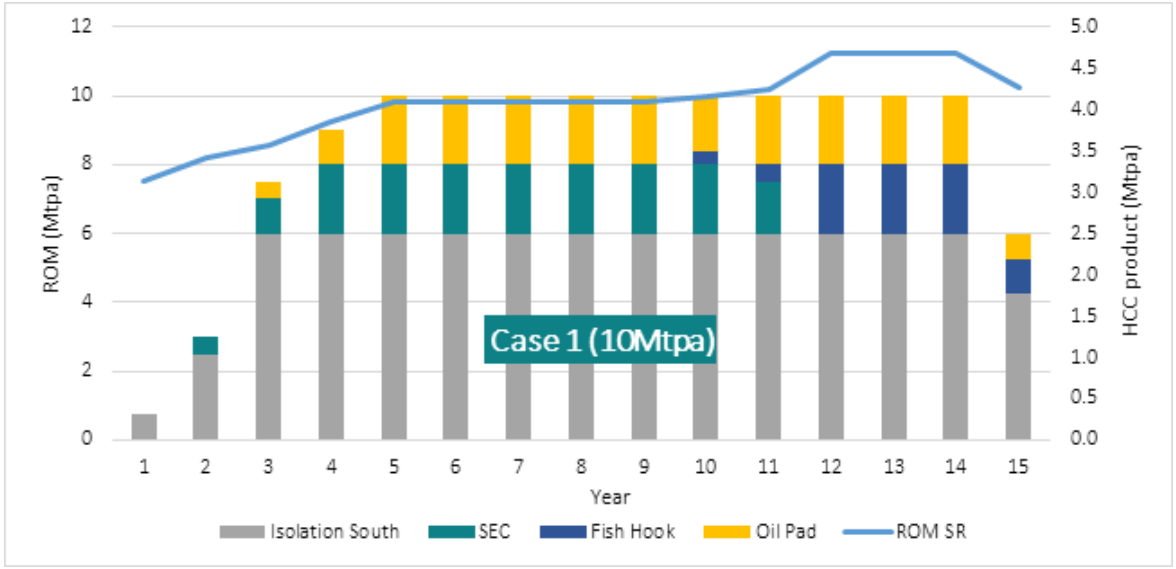
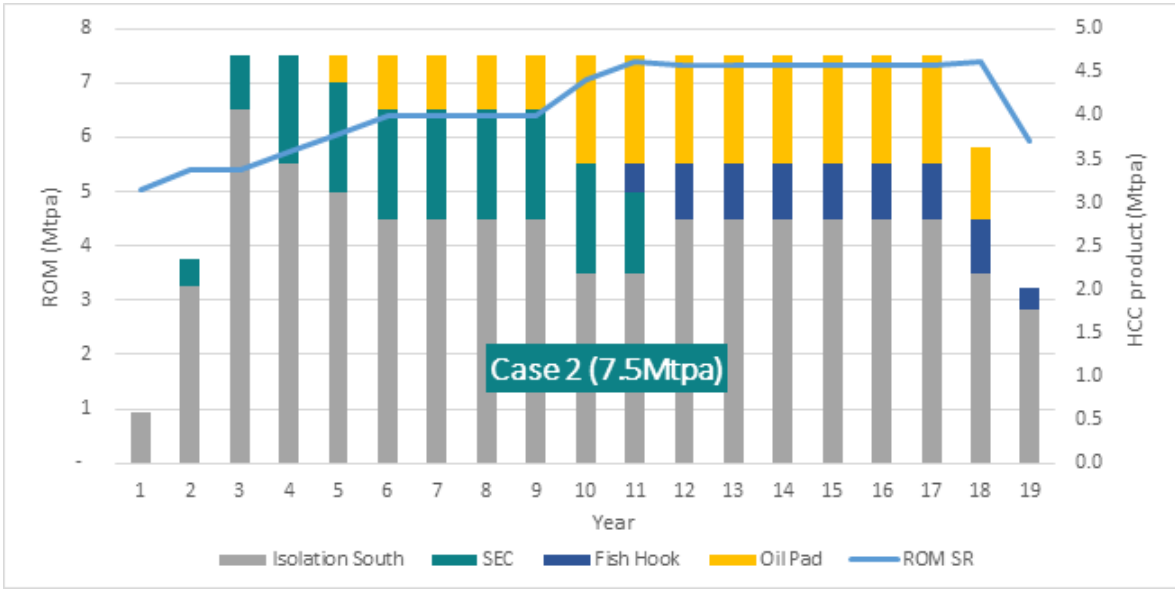
Mine scheduling

Under-utilised resource inventory

- Isolation South is the flagship mining area; single large pit with favourable geology including thick, shallow seams
  - Pit optimisation and mine planning activities initially resulted in a practical pit shell at Isolation South containing 188 Mt ROM coal
  - Approx. 108 Mt ROM coal of in-pit Inferred resources were excluded from the mine schedule and production target, in accordance with the current ASIC/ASX regulatory framework
- Three discrete satellite pits at Elan South (South East Corner, Fish Hook and Oil Pad North); 20km to the south

Pit	Waste Mbcm	ROM Coal Mt	Strip Ratio bcm/t ROM	Product Coal Mt	Indicated Resources	Inferred Resources
Isolation South	262	79.5	3.3	47.7	74%	26%
South East Corner	82	17.0	4.8	10.2	64%	36%
Fish Hook	61	7.9	7.7	4.8	86%	14%
North Oil Pad	136	21.8	6.2	13.1	53%	47%
Total	**541**	**126.2**	**4.3**	**75.8**	**70%**	**30%**





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The Scoping Study mine schedule and production target contain approximately 70% Indicated Resources and 30% Inferred Resources. There is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Resources or that the production target itself will be realised. Atrum confirms that the financial viability of the Elan Project is not dependent on the inclusion of Inferred Resources in the mine schedule.

Mine sequencing

Clear opportunity to enlarge Isolation South pit and defer Elan South development

- Scheduled production is sourced from both Isolation South and Elan South areas throughout the operating life
- This ensures that Inferred resources (of which there is currently a higher proportion at Isolation South) do not feature as a significant component of the overall mine schedule, particularly in the earlier years
- Indicated resources comprise 70% of the overall mine schedule for both cases, and more than 75% over the first three years of operation
- As a result, Inferred resources do not feature as a significant proportion of the proposed mine plan and project financial viability is not dependent on the inclusion of Inferred resources in the production schedule
- Isolation South possesses resource scale (a further 108Mt of in-pit Inferred resources sit outside the current mine schedule for the same reason as above), favourable and relatively uniform geology (shallow, thick, consistent coal seams), and a considerably lower stripping ratio than all planned pits at Elan South (including SE Corner)
- For these reasons, further resource classification upgrade drilling at Isolation South has the potential to
    1. Add substantial tonnage and life extension to the Scoping Study mine schedule
    2. Allow development of Elan South to be deferred until later in the overall mine schedule (thereby lowering both pre-production capital and strip ratio / operating cost in early years)

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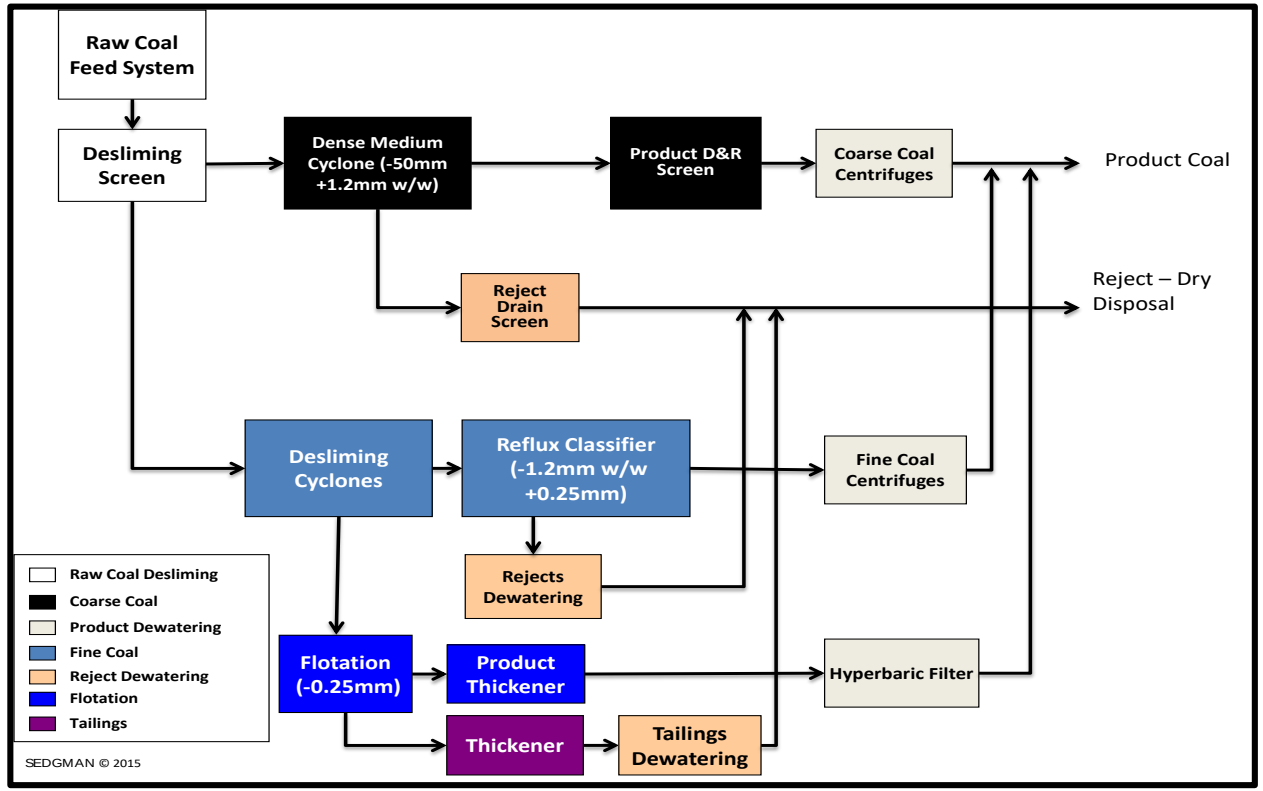
The Scoping Study mine schedule and production target contain approximately 70% Indicated Resources and 30% Inferred Resources. There is a low level of geological confidence associated with Inferred Resources and there is no certainty that further exploration work will result in the determination of Indicated Resources or that the production target itself will be realised. Atrum confirms that the financial viability of the Elan Project is not dependent on the inclusion of Inferred Resources in the mine schedule.

Processing flowsheet

Conventional CHPP design

- Sedgman Canada provided processing design and capex / opex estimates
- Single stage processing plant, consistent with other mines and projects in the region
- Safe, economical, durable and functional design
- Dense media cyclones (DMC), reflux classifiers and a flotation circuit, with product drying completed via hyperbaric filter
- 60% processing yield estimate; regional experience suggests 60 - 70%
- Throughput capacity of 1,650 tph (10 Mtpa ROM) or 1,100 tph (7.5 Mtpa ROM)
- Designed for nominal 30-year LOM and 7,200 operating hours per year
- Planned location near the Isolation South pit



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Coal quality

Established through 2018 and interim 2019 results

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- Mist Mountain Formation seams within the Elan Project are characterised by variable raw ash content, with low total sulphur (TS) and phosphorus content
- Testing at Oil Pad and South East Corner during 2018 and 2019 established key coal quality attributes, including high CSR
- Analytical testing of core samples from Isolation South and Elan South from the 2019/20 field program remains only partially complete
- Indicative results demonstrate strong clean coal attributes including favourable rank range, low ash, low TS and phosphorus, and typically high CSN
- Interim washability results indicate target seams will wash to 8 - 9% product ash at favourable yields
- Full testwork results due in the next few months

Typical raw coal quality parameters (adb)

Area	IM %	ASH %	VM %	TS %	CSN
Isolation South	0.5 - 0.7	11 - 30	22 - 26	0.40 - 0.70	2 - 7
South East Corner	0.6 - 0.7	15 - 30	20 - 24	0.50 - 0.70	2 - 5
Fish Hook	0.4 - 0.6	12 - 25	19 - 24	0.40 - 0.80	2 - 5.5
Oil Pad	0.6 - 0.9	14 - 30	20 - 23	0.30 - 0.60	2 - 5

Typical clean coal quality parameters (adb)

Area	R_oMax %	ASH %	VM %	TS %	PHOS %	CSN
Isolation South	1.10 - 1.24	7 - 9	23 - 25	0.40 - 0.50	< 0.020	3.5 - 9
South East Corner	1.12 - 1.20	6 - 9	22 - 27	0.50 - 0.80	< 0.040	3 - 8
Fish Hook	1.19 - 1.37	7 - 10	21 - 24	0.50 - 0.80	< 0.020	3 - 9

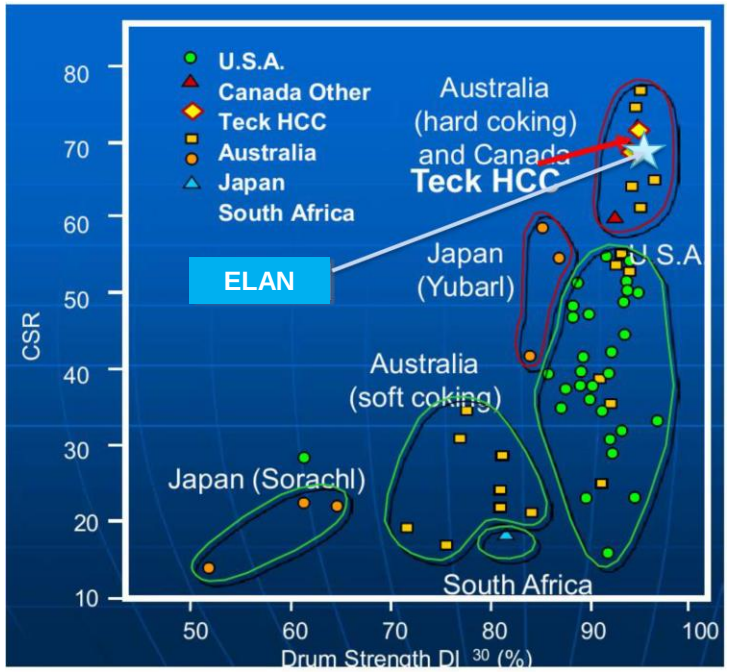
Elan premium HCC products

Bound for Tier 1 HCC markets

- Elan products to be premium mid-to-low-volatile HCC blends with favourable ash content, and low total S and P content
  - Rank (RoMax) of 1.16 - 1.20%
  - CSR of 69 - 71%
- Comparable to Tier 1 HCC products currently exported from Teck's nearby Elk Valley mines; well renowned for their low ash content, low basicity index and high CSR
- Similar to Teck, Elan will produce premium HCC blends from each seam group and across the four planned mining areas
- Value-in-use assessments indicate that Elan products should achieve price levels similar to Platts Queensland premium low-vol HCC index
- For revenue modelling, a price discount of 2% to Qld premium low-vol HCC was adopted

Seaborne coking coal product parameters

Source: Teck Resources, January 2019



	Elan Project (Atrum) (ad basis)	Elk Valley (Teck Premium)[1]	Grassy Mount. (Riversdale)[2]	Platts Premium Low Vol Index[3]	Platts Peak Downs Index[3]
CSR	**69 – 71**	70	65	71	74
Coal Rank R_oMax (%)	**1.16 – 1.20**	1.14	1.18 - 1.20	1.35	1.42
Yield (%)	**60**	(est 60 – 70)	55	-	-
Ash Content (%)	**8 - 9**	8.8	9 - 9.5	9.3	10.5
Volatile Matter (%)	**22 – 26**	25.5	23.5	21.5	20.7
Total Moisture (%)	**10**	10	10	9.7	9.5
Total Sulphur (%)	**~ 0.60**	0.65 – 0.70	0.50	0.50	0.60
Phosphorus (%)	**< 0.050**	0.075	0.040	0.045	0.03
CSN	**7 - 8**	7.5	-	8	8.5
Fluidity (ddpm)	**100 – 300**	200 – 500	150	500	400

1 S&P Global Platts Coal Trader International (pg8), 3 August 2018.
2 Riversdale Resources Targets Statement, Grassy Mountain Technical Report by RPM Global (pg21), 28 March, 2019.
3 S&P Global Platts. Specifications Guide, Metallurgical Coal, April 2020.

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03 INFRASTRUCTURE & LOGISTICS

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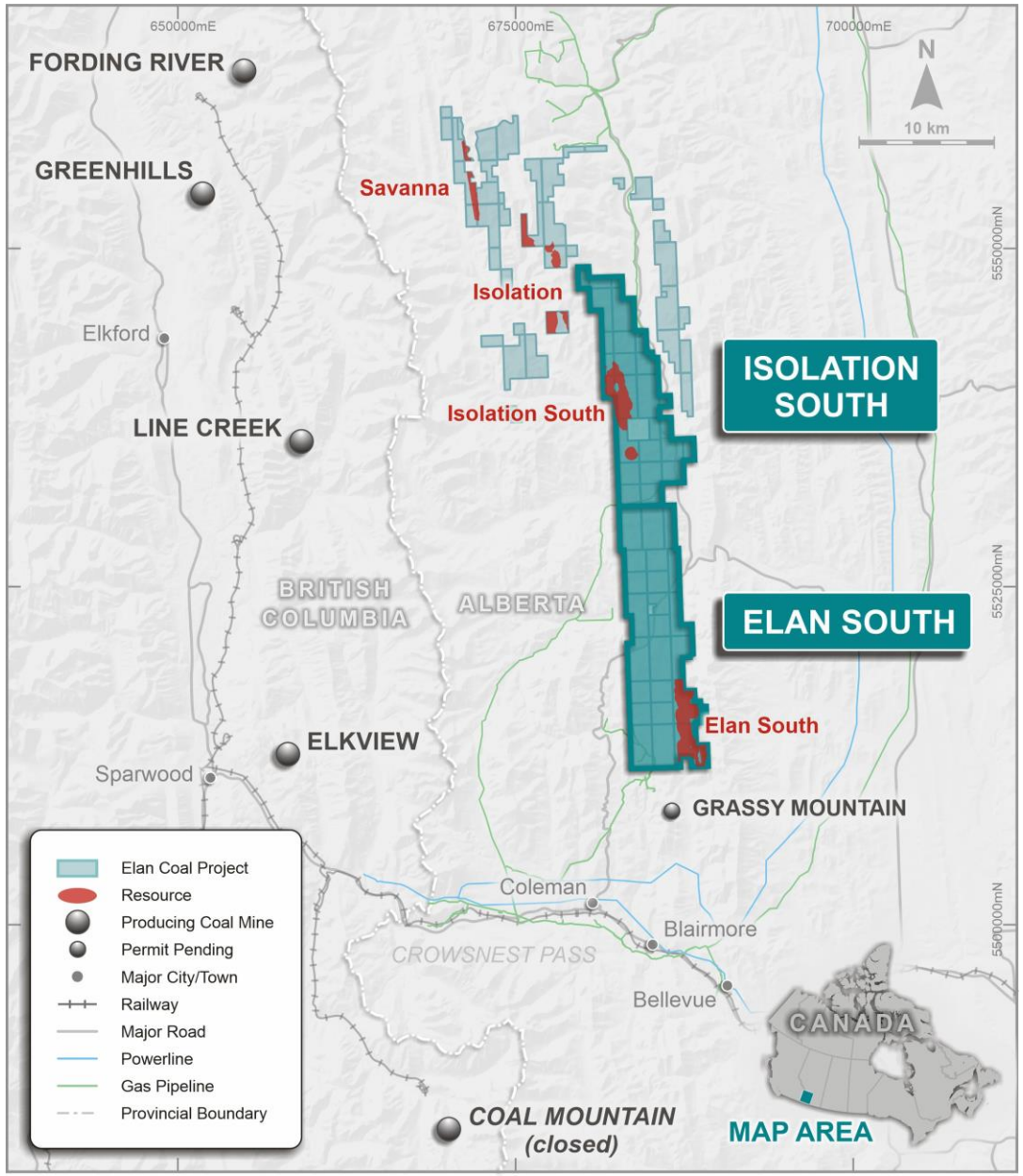
Power and water

Readily available solutions

- High voltage power line (138 kV) runs east and south of Elan
- Requisite power can be readily sourced via a short link
- Optimal tap-in location to be determined during PFS phase
- Water licences or allocations for coal processing are to be permitted under the Alberta Water Act, and may also be granted or transferred from other licence holders
- WaterSmart engaged to identify best option for water licences; this evaluation work will feed into the PFS
- Possible water intake locations identified with details to be further examined during the PFS
- Industry best practices in water conservation and water management in designing and operating the CHPP



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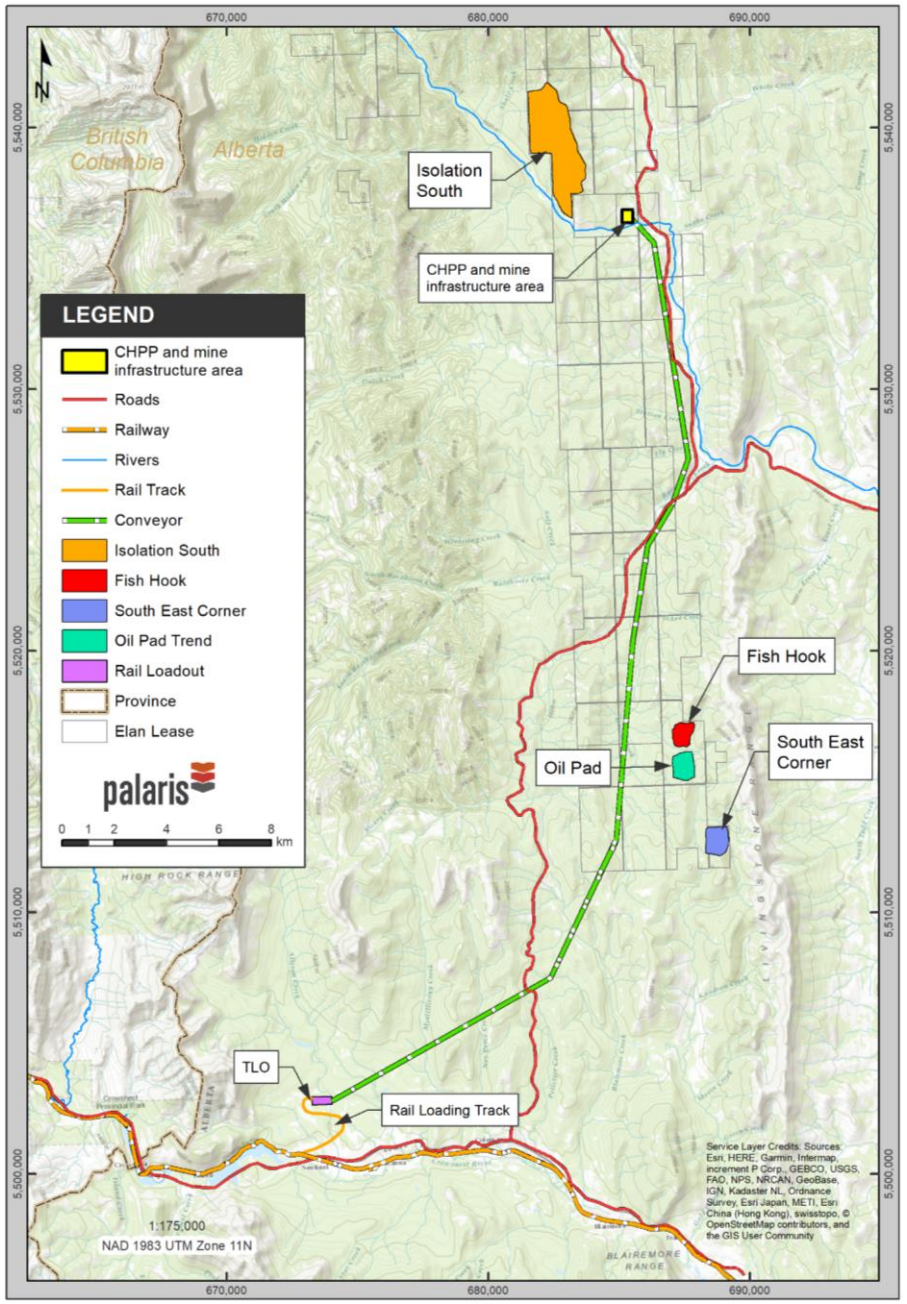
Product coal and tailings

Conveyance to rail loadout

- Hatch review of options to transport product from CHPP to rail loadout
- Use of dedicated covered conveyor system deemed the optimal solution
- Nominal conveyor capacity of 2,000 tph
- Preferred route approx. 36 kilometres to the train loadout facility, set to be located close to Canadian Pacific's Crowsnest subdivision mainline
- Proposed alignment designed to maximise utilisation of existing forestry and gasfield road and access corridors over Crown land
- While the selected alignment and location were assessed as optimal, alternative options could readily be progressed if required
- In-pit co-disposal of CHPP tailings alongside mine waste



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Rail route and access

Ample available track capacity

- Construction of new spur line to the proposed Elan train loadout area, located to the west of Coleman
- Loadout location allows for heavy grade tolerance to be available and minimal environmental impact
- Spur track length required is 4.7 km plus an additional 5.5 km for the loading loop
- Product coal to be railed to Vancouver export terminals, a distance of approximately 1,100 km
- Rail networks linking the Crowsnest Pass to Vancouver are operated by CPR and CN
- Expected 16,500 tonnes per train; equates to approx. 1 train per day (at 6 Mtpa HCC)
- Discussions with CPR have indicated ample track capacity, in addition to Grassy Mountain output
- Two year lead time required for CPR to purchase new rolling stocks

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Port logistics and access

Westshore the preferred option

- Current assessment indicates total future Vancouver port capacity available to handle the full Elan production output, on top of future planned volumes from Grassy Mountain and US Powder River Basin
- Westshore coal terminal the most attractive option in terms of relative proximity and expected availability
- Westshore nominal capacity of 33 Mtpa; nine existing contracts with coal producers in Canada and the US
- Largest current user is Teck (60%); Teck's current agreement concludes in March 2021
- Recent Teck decisions on preferred export logistics suggest future capacity available at Westshore
- Neptune coal terminal (Vancouver) currently being expanded (to 18.5 Mtpa) via funding from Teck; essentially dedicated to Teck shipments
- Detailed port (and rail) access preparations during PFS phase; non-regulated access, commercial discussions

Existing and Planned Shippers	Likely Contracted Volume (Mtpa)	Expected Westshore and Neptune Capacity (2021)
Teck (18.5Mtpa through Neptune from 2021 and some minor volumes through Westshore possible**)**	20	Westshore (33 Mtpa) Neptune (18.5 Mtpa)
CST Canada Coal Ltd	1.0 – 1.5	
Riversdale Resources (Grassy Mountain)	4.5	
US Thermal Coal	11	
TOTAL	**36.5 – 37.0**	**51.5**

Teck has the Option to move another 3Mtpa from Westshore to Ridley

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04 SOCIAL LICENCE TO OPERATE

Stakeholder engagement

Early and proactive approach

- Ownership of all critical stakeholder relationships
- Comprehensive stakeholder identification and engagement
  - First Nations
  - Governments
  - Regulatory agencies
  - Local communities
- Entirety of Elan Project tenements are located on Crown land and the Traditional Territory of the Treaty 7 First Nations
- Engaging with Treaty 7 First Nations for coal exploration permits since early 2018; also invited to conduct Traditional Land Use Studies (TUS) and Traditional Ecological Knowledge (TEK) Studies
- Active and regular engagement with local communities and various government bodies and agencies since 2018
- Local office in Crowsnest Pass and regularly supported community events and activities

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Environmental excellence

A world best-practice development

- A core value; ownership of environmental knowledge and commitments
- Accelerated environmental program to establish early understanding and reduce overall approval times
- Baseline study commenced in 2018 and will continue through to 2021; characterisation of environmental setting that will form the foundation for mine planning and the effects assessment
- Comprehensive Impact Assessment (IA) to be prepared leveraging key learnings identified from the Grassy Mountain Project approval process; reducing application review timeframe and avoiding multiple rounds of information requests
- Selenium mitigation and management strategy includes surface water management, seepage collection, waste segregation, passive treatment and potential active treatment

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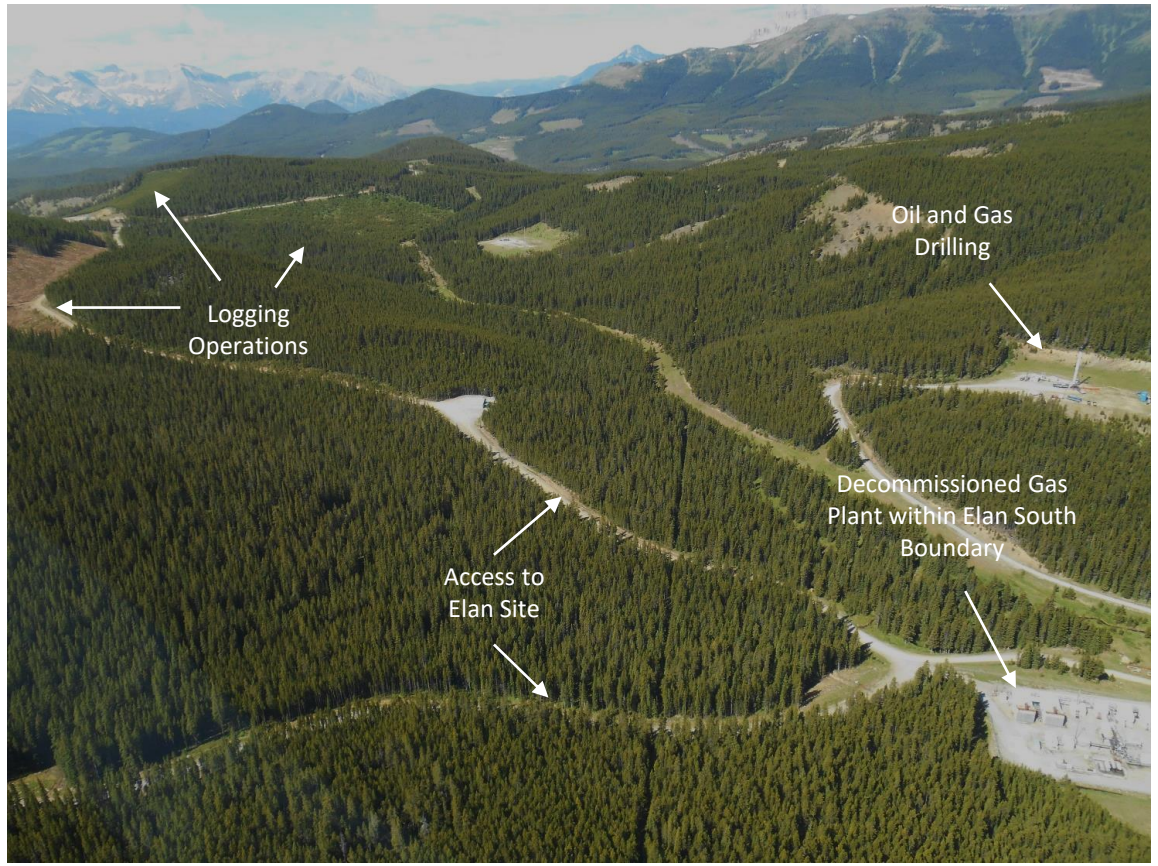
Permitting dynamics

Open cut mining pathway

- Ownership of all regulatory applications, supported by industry-leading experts
- Proactively engaging federal/provincial regulators early
- Category 2 land zoning under Alberta legislation
  - Ram River precedent (2016) with approval to permit an open cut coal mine on Cat 2 land
  - Regular, proactive engagement with Alberta Government has significantly increased confidence of such an approval, potentially as early as this year
  - Coal Association of Canada is also actively engaging the Alberta Government on this general issue
- Workstreams to support other project permits include:
  - Environmental baseline study for IA
  - Mine planning for lifetime scope and impact zones
  - Further extension of stakeholder engagement
  - Preparation of various provincial permits from mining operation to water licensing and land use



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05 OPERATING AND CAPITAL COSTS

Operating costs

Low strip ratio drives outstanding FOR cash cost

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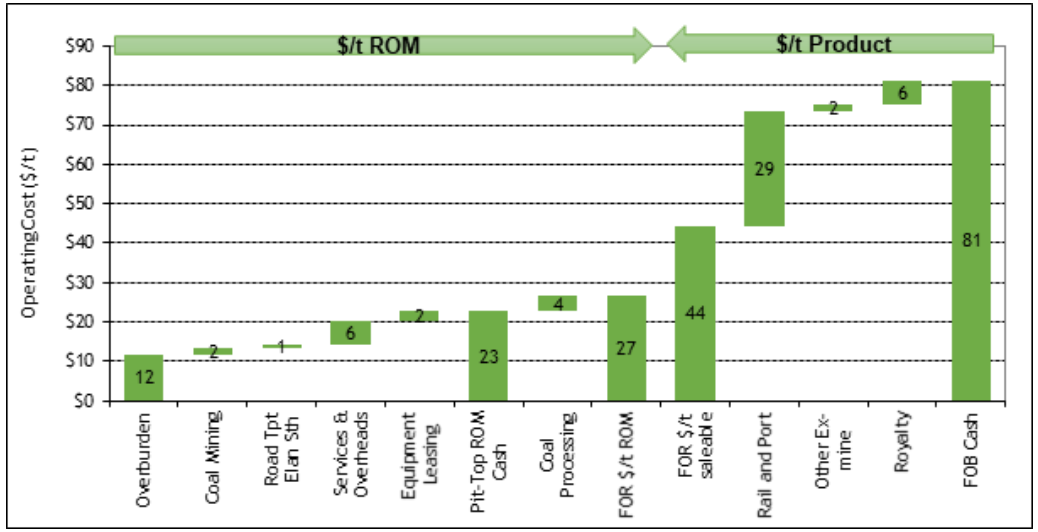
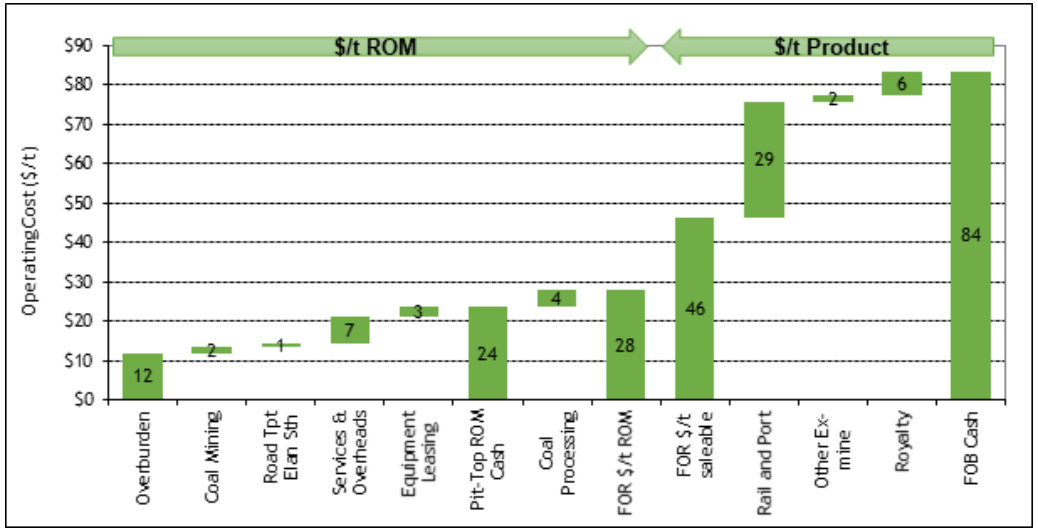
Operating Costs	Units	10 Mtpa ROM	7.5 Mtpa ROM
Overburden removal (incl rehab)	US$/bcm US$/t ROM	3 12	3 12
Coal mining (incl labour)	US$/t ROM	2	2
Road transport	US$/t ROM	1	1
Services, ancillary & overheads	US$/t ROM	6	7
Equipment Lease	US$/t ROM	2	3
Pit-Top ROM Cash Cost	**US$/t ROM**	**23**	**24**
Coal handling and preparation, rejects, loadout	US$/t ROM	4	4
Free on Rail (FOR) Cash Cost	**US$/t ROM** **US$/t saleable**	**27** **44**	**28** **46**
Rail and port	US$/t saleable	29	29
Marketing, commissions and other	US$/t saleable	1	1
Corporate charges	US$/t saleable	1	1
Total Ex Mine Costs (excl. Royalty)	**US$/t saleable**	**75**	**77**
Royalties	US$/t saleable	6	6
Free on Board (FOB) Cash Costs	**US$/t saleable**	**81**	**84**

Forecast operating cost waterfall chart (US$/t) (10 Mtpa ROM)



Forecast operating cost waterfall chart (US$/t) (7.5 Mtpa ROM)



Highly competitive opex, regionally and globally

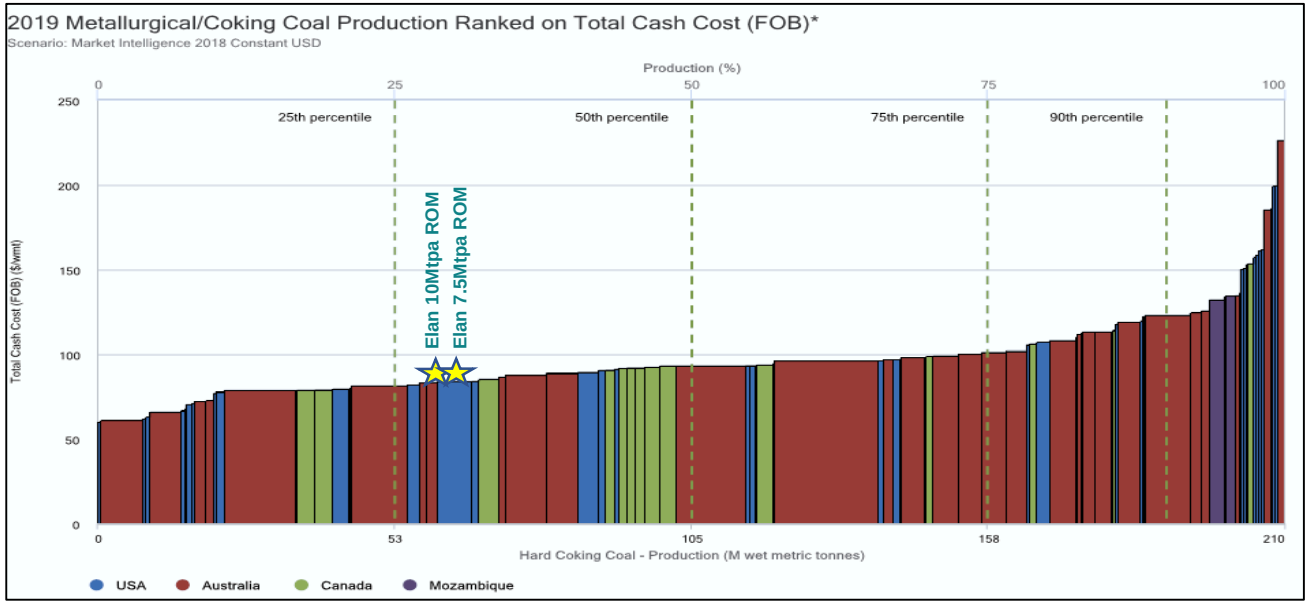
Forecast lower second quartile cash cost

- Forecast FOB cash cost of US$81 – 84/t places Elan in the lower second quartile of the global export coking coal operating cost curve
- Relatively low FOB cost driven by the overall low mining strip ratio
- Rail haulage and port usage operating cost estimates largely based on actual or expected costs reported by nearby operating and proposed coal mining operations
- Total HCC product unit operating costs are readily comparable with Teck Elk Valley reported actuals and Grassy Mountain Project forecasts

Cost Parameters	Unit	Teck 2019 Actual	Grassy Mountain LOM Target	Elan 10 Mtpa ROM
Site costs	US$/t saleable	49*	40	44
Rail and port costs	US$/t saleable	29	29	29
Corporate / G&A / inv chg.	US$/t saleable	1	1	1
FOB ex royalty, marketing	**US$/t saleable**	**79**	**70**	**74**

** Total cost of sales includes an additional C$16/t charge for amortization of capitalized stripping costs*

Source: Teck Resources Q4 2019 Financial Report (pg56), 20 February 2020.
Riversdale Resources Targets Statement, Grassy Mountain Technical Report by RPM Global (pg47), 28 March, 2019.



Source: S&P Global Market Intelligence

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Pre-production capital cost

Attractive upfront capital intensity of US$114 – 130/tpa

- Forecast pre-production capital expenditure
  - 10 Mtpa ROM: US$683M
  - 7.5 Mtpa ROM: US$587M
- Attractive upfront capital intensity of US$114 – 130 per tonne of annual HCC capacity
- Main capex items:
  - Mine infrastructure
  - CHPP (1,650 tph)
  - Covered product conveyor (36 km)
  - Rail spur and loop
- Sustaining capex of US$1.7/t ROM; derived using unit rates from similar operations

Item Description	Contingency	10Mtpa ROM US$M	7.5Mtpa ROM US$M
Owners Costs - exploration, feasibility studies, approvals / EIA process, owners team / EPCM	10%	45	45
Surface Infrastructure - on and off-site civils, MIA / buildings, water and waste management, utilities to site, rail loadout	21%	151	148
Coal handling and preparation civils, ROM and raw coal handling at CHPP	15%	69	45
Coal processing plant	15%	122	88
Product coal handling and conveyor, product drying, and reject dewatering and emplacement	15%	102	69
Overland covered conveyors 36km - CHPP to TLO	20%	182	182
Contractor indirects	30%	12	10
TOTAL	**18%**	**683**	**587**

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06 FINANCIAL PROJECTIONS

Atrum Coal
COAL FOR STEEL

Key financial metrics

Strong return profile

- Owner operated, with mobile equipment leasing
- Real, ungeared cashflows; 9% discount rate
- LOM benchmark price forecast for premium low-volatile HCC (FOB Queensland) of US$141/t
- Forecast 2% pricing discount applied for Elan HCC products (reflective of approximate long-term market discounts for equivalent HCC products)
- LOM C$/US$ exchange rate forecast of 0.79

- **$NPV_{9\%}$ (post-tax) of US$790 – 860M**
- **IRR (post-tax) of 25 – 26%**
- **Payback period (post-tax) of 3.9 – 4.4 years**

Key financial outcomes	Unit	10 Mtpa ROM	7.5 Mtpa ROM
Price inputs (LOM average)			
C$/US$ (long term forecast)	USc	0.79	0.79
HCC price (Platts Premium LV FOB Queensland)	US$/t	141	141
HCC price (Elan MV HCC FOB Vancouver)	US$/t	138	138
NPV, returns and key metrics			
$NPV_{9\%}$ (post-tax, real basis, ungeared, Y-1 basis)	US$M	860	790
$NPV_{9\%}$ (pre-tax, real basis, ungeared, Y-1 basis)	US$M	1,180	1,070
IRR (post-tax, real basis, ungeared, Y-1 basis)	%	25	26
IRR (pre-tax, real basis, ungeared, Y-1 basis)	%	29	30
Payback period (post-tax, from first production)	years	4.4	3.9
Payback period (pre-tax, from first production)	years	4.0	3.6
Capital expenditure			
Pre-production capital expenditure	US$M	683	587
LOM sustaining capital expenditure	US$ / ROM t	1.7	1.7
Capital efficiency (post-tax NPV / PP capex)	x	1.3	1.3
Operating costs			
Total cash operating cost - Free on Board (FOB)	US$/t saleable	81	84
Project cashflow (ungeared, approx.)			
Gross revenue	US$M	10,450	10,450
Operating costs	US$M	(6,160)	(6,320)
Operating cashflow	US$M	4,290	4,120
Pre-production capital expenditure	US$M	(680)	(590)
Sustaining capital expenditure	US$M	(220)	(220)
Project net cashflow (pre-tax)	US$M	3,400	3,340
Project net cashflow (post-tax)	US$M	2,610	2,580

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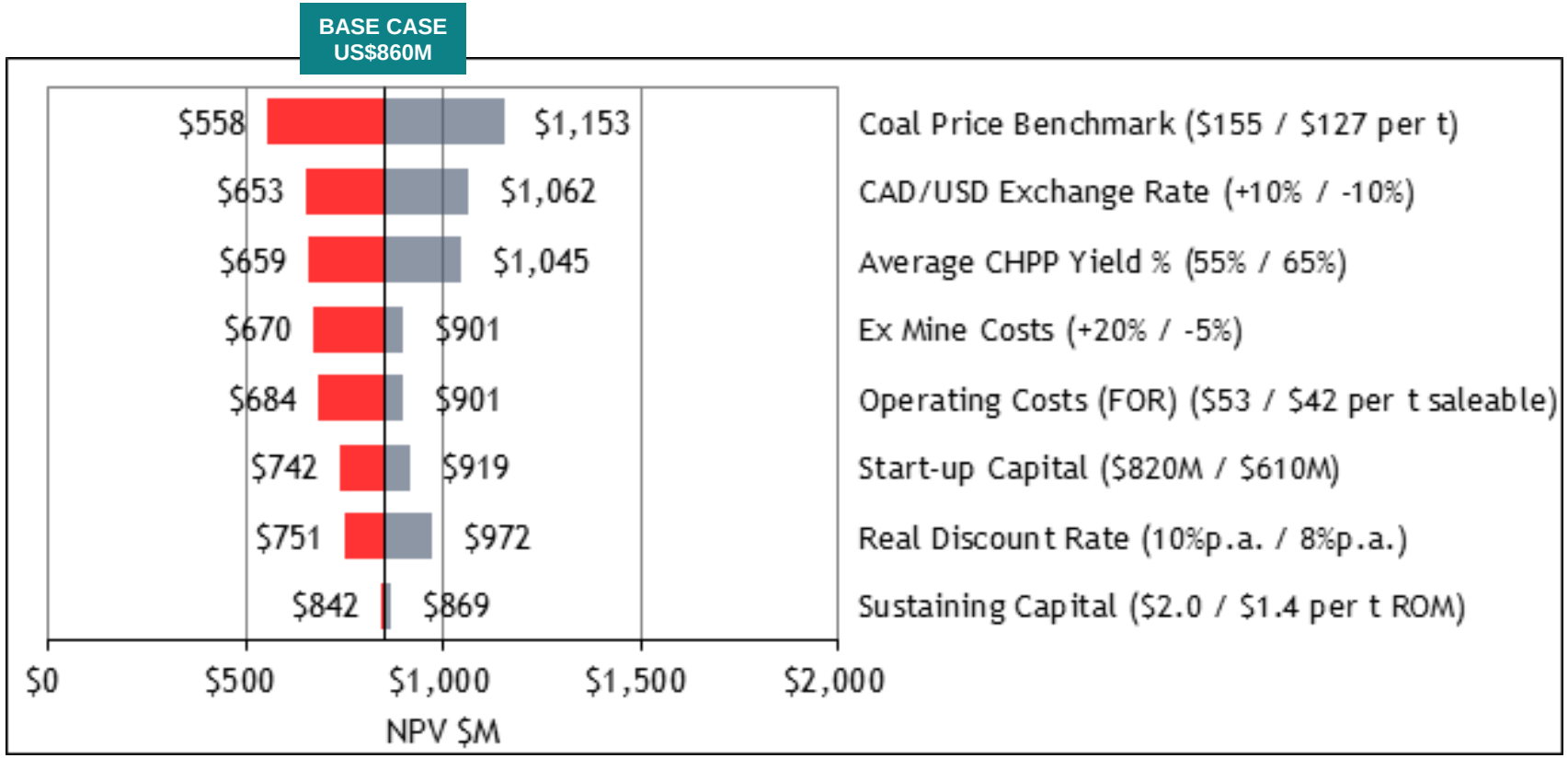
Valuation sensitivities

Strong HCC and C$/US$ price leverage



Elan Project $NPV_{9\%}$ input sensitivities (10 Mtpa ROM)

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Key risks

Appropriate planning to mitigate key development and operating risks

- Land categorisation (Cat 2 zoning)
  - Active engagement of Alberta Government, Ram River Aries Project precedent
- Stakeholder support
  - Proactive engagement, meaningful consultation and future employment opportunity creation
- Selenium
  - Mine design to incorporate potential selenium sources and all mitigation strategies (e.g. saturated backfill)
  - Holistic water management approach and potential water treatment solution for final discharge point
- Westslope Cutthroat Trout habitat
  - Providing a robust offsetting and enhancing plan for habitat that is directly impacted by mine development
- Approval timeframes
  - Streamline the approvals process, learnings from Grassy Mountain, early engagement with AER and Federal IAA

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Key opportunities

Latent potential upside

1. **Isolation South pit expansion:** 108 Mt in-pit Inferred resources excluded from mine schedule
2. **Further exploration and resource growth:** significant undrilled and under-drilled areas of the Elan tenement base
3. **BOOT financing:** potential reduction in pre-production capex to US$140 – 150M and IRR boost to 52 – 54%
4. **Higher processing yield:** regional experience suggests +60% yield; every +1% yield equates to + ~US$40M NPV
5. **HCC price & C$/US$ inputs:** conservative; +10% HCC price = + ~US$300M NPV; -10% C$/US$ = + ~US$200M NPV

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07 SUMMARY

Atrum Coal
COAL FOR STEEL

Atrum and the Elan Project: A rare opportunity

1. Large-scale deposition with multi-mine development potential; Elk Valley comparative
2. Shallow and thick seams deliver very low strip ratio and credible & attractive operating costs
3. Tier 1 hard coking coal quality established via detailed testwork
4. Located proximate to direct rail access to key export terminals (with surplus capacity)
5. Well established mining region with excellent infrastructure and skilled labour
6. New Alberta Government engaged and supportive
7. Grassy Mountain defined permitting pathway and learnings
8. Experienced Board and management team

= **A GLOBALLY SCARCE ASSET**

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Appendix slide

Elan Project total Resource estimate

Area	Project	Indicated (Mt)	Inferred (Mt)	Total (Mt)	Date of Announcement
Elan Northern Tenements	Isolation South	82	148	230	10-Feb-20
	Isolation	-	51	51	22-Jan-19
	Savanna	-	30	30	22-Jan-19
Elan South	South East Corner	16	22	38	10-Feb-20
	Fish Hook	15	11	26	10-Feb-20
	Oil Pad	29	50	80	10-Feb-20
TOTAL		**142**	**312**	**454**	

Atrum confirms that it is not aware of any new information or data that materially affects the information included in its ASX releases dated 10 February 2020 (*Total Elan Project Resources Exceed 450 Mt*) and 22 January 2019 (*Additional 201 Mt 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.

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