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# RESEARCH

INDEPENDENT INVESTMENT RESEARCH

## Allegiance Coal (ASX:AHQ)

Update - August 2019

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**Note:** This report is based on information provided by the company as at August 5, 2019. **This does not however consider the proposed New Elk acquisition as announced to the market on July 15, 2019.**

Investment Profile	
Share Price - August 5, 2019	A\$0.14
Base case valuation	A\$0.340/share
Issued Capital:	
Ordinary Shares	545.7 m
Unlisted Options - All in Money	15.25 m
Fully Diluted	560.9 m
Market Capitalisation	A\$81.85 m
12 month L/H	A\$0.038/\$0.15
Cash, June 30, 2019	A\$2.60 m
Option cash	A\$1.02 m
Remaining Itochu Stage 1 Payments	C\$5.1 m
Debt	A\$1.71 m

Board and Management	
Mr Mark Gray: Managing Director	
Mr Malcolm Carson: Non-Executive Director	
Mr Jonathan Reynolds: Finance Director	
Mr Dan Farmer: Chief Mining Engineer	
Mrs Angela Waterman: Environment & Government Relations	

Major Shareholders	
Altius Resources Inc	10.51%
John Ashton Trust	4.64%
Doug Gray Trust	4.64%
Mark Gray	4.48%
Bernard Laverty	4.25%
Board and Management	4.74%
Top 20	61.94%



Senior Analyst – Mark Gordon

The investment opinion in this report is current as at the date of publication. Investors and advisers should be aware that over time the circumstances of the issuer and/or product may change which may affect our investment opinion.

### DFS HIGHLIGHTS ROBUST, LOW COST TELKWA PROJECT

Subsequent to our November 2018 update, Allegiance Coal ("Allegiance" or "the Company") has completed a Definitive Feasibility Study ("DFS") on its Tenas Metallurgical Coal Project ("Tenas" or "the Project"), located just 375 km by rail from the under-utilised Ridley Island Coal Terminal ("RICT") in northwestern British Columbia, Canada - the study includes both base case and upside scenarios.

The base case presents a robust 22 year operation producing 750,000 tpa of clean mid-volatile, semi-soft coking ("SSCC") or PCI coal with a low estimated up-front capital cost of US\$90.5 million (including US\$36.2 million of equipment finance leasing) and operating costs in the order of US\$50/tonne of saleable product, potentially making Tenas the lowest cost producer in the seaborne metallurgical coal trade.

The upside case includes accelerated production and hence a shorter mine life, and results in a pre-tax NPV of A\$537 million as compared to the base case A\$407 million - it needs to be stressed that this is currently only a hypothetical scenario. Permitting is predicated on the base case, and any changes to production will only be done with the full approval of all stakeholders.

The low upfront capex is partly by virtue of the use of a modular coal handling and preparation plant ("CHPP") designed by Sedgman; in addition the initial 145 tph capacity plant can be progressively upgraded for only minimal capital costs. The operation is also close to major infrastructure, being just 3 km from grid power and 24 km from the Canadian National Rail ("CN Rail"), which links directly to the RICT.

The access to infrastructure and relatively short haulage distances, in parallel with a low strip ratio, have also resulted in the low expected project opex.

As mentioned in our previous note, a key milestone is the Project level contributing joint venture ("JV") with Itochu Trading Company of Japan ("Itochu"), a major global commodities trader and a Fortune 500 company. The first stage of the two stage earn-in includes Itochu paying staged payments totalling C\$6.6 million for 20% of the Project (they have recently agreed to go to 10%), and then having the right to earn up to a further 30% through a consideration based upon a valuation for Tenas based on all permits to operate being in place.

Benefits flowing from this agreement include that the Company will likely now be largely funded through to production, with the potential also for Itochu to provide 100% of the project equity finance, although the quantum of this will form part of the Stage 2 earn-in negotiations. The association with Itochu (who will have the coal marketing rights) will also provide access to potential offtake partners and Japanese banks.

Key milestones will now include finalisation of offtake and financing, and successful permitting - dependent upon the results of these activities, construction could potentially commence in late CY2020, with first production in late CY2021.

### KEY POINTS

**Robust DFS** The DFS has presented a project with attractive economics, which should, along with the association with Itochu, help in Project financing - outcomes include a pre-tax IIR of 56.9%, with our analysis indicating a peak annual EBITDA of ~US\$50 million on a 100% basis.

**Community relations:** The Managing Director, Mark Gray, has relocated to Telkwa, which should prove invaluable in forming and nurturing strong community relations.

**Potential for a niche product:** The potential Tenas product is such that may be in demand to fill a niche market as a blending metallurgical coal, and thus attract a premium over other SSCC products - this is supported by North Asian steel mills showing interest in the product.

**Steady news flow:** The ongoing activities should result in ongoing positive news flow over the short to medium term.

### VALUATION SUMMARY - DOES NOT INCLUDE NEW ELK

**We have updated our technical valuation for Telkwa, with the total risked company value decreasing marginally from A\$207 million to A\$190 million.** This results in a risked, base case per share valuation of A\$0.340/share, down from our 11/2018 figure of A\$0.396/share, largely due to some subsequent dilution and additional project capital.

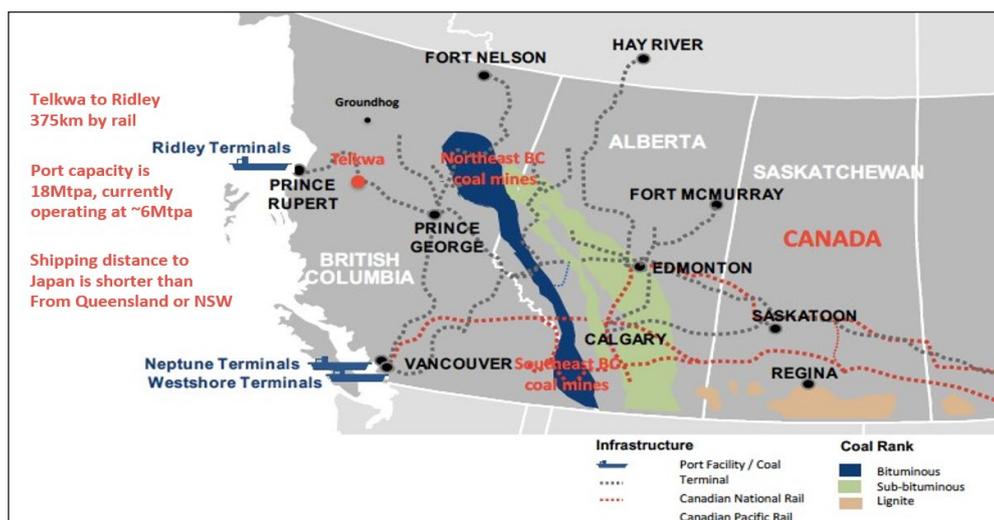
There is upside by virtue of the potential for future expansion or accelerated production of an already very robust project, as well as in higher coal prices - the prices used in the modelling are at the lower end of the forecast price ranges - we have a Company valuation of A\$0.46/share for the DFS upside case.

We would expect share price catalysts to be material progress on offtake, financing and permitting.

## ACTIVITIES UPDATE

- ◆ This report presents an update to our initiation report published in September 2017 and March 2018/November 2018 update reports - these reports are available on IIR's ([www.independentresearch.com.au](http://www.independentresearch.com.au)) or the Company's ([www.allegiancecoal.com.au](http://www.allegiancecoal.com.au)) websites, with the initiation report providing a full description of the Tenas Coking Coal Project (Figure 1) as of the report date.
- ◆ **This does not however include any information on or analysis of, or a valuation of the proposed New Elk acquisition as announced to the market on July 15, 2019.**
- ◆ Activities have been focussed on advancing Tenas (with the Company making significant progress in the 2½ years since acquisition), with the aim to commence production in late CY2021, with this timing largely dependent upon permitting and financing.

Figure 1: Telkwa location map



Source: Allegiance

- ◆ Key activities and milestones, concentrating on the DFS, permitting and financing, completed since November have included:
  - The completion of the DFS, which includes updated Reserves,
  - This incorporated a change in the Project scope to 750 ktpa saleable coal, replacing the original 250 ktpa “small mine” start up scenario as presented in the PFS,
  - This was followed by the enhanced DFS, as released to the market on July 1, 2019 - this includes an acceleration of production to 1.35 mtpa clean coal, with minimal extra capex,
  - Drilling of 40 geotechnical and geochemical drillholes,
  - Completion of the baseline environmental studies, with formal commencement of the main environmental assessment studies and permitting process
  - Continuing engagement with stakeholders; and,
  - Receipt of the Section 11 order from the BC Environmental Assessment Office (“EAO”), which amongst other things sets out the scope of work for the environmental assessment process. The formal environmental assessment process with the EAO commenced in December 2018 however, prior to the issuance of the section 11 order.
- ◆ Current funds of ~A\$3.5 million, along with funds due by the end of CY2019 from Itochu of C\$5.1 million (Itochu has recently advised that they will move to 10%, and thus C\$1.5 million of this is imminent) and potential funds from option conversion of A\$1.0 million should be largely sufficient to see the Company through to the finalisation of permitting and a decision to proceed, expected in late CY2020, with permitting being the critical path.
- ◆ On the management front, Mr Mark Gray, the Managing Director, has relocated to Telkwa, with Mr David Fawcett, the Non-Executive Chairman retiring.

## ITOCHU JOINT VENTURE AGREEMENT

- ◆ As discussed in our November update (and reiterated here), Allegiance and Itochu have signed a JV agreement, whereby Itochu can acquire up to 50% of the shares of Telkwa Coal Limited (“TCL”, the subsidiary that owns 100% of Tenas), with proceeds from the share subscription expected to fund a significant part of the Project finance equity.

- ◆ The agreement comprises two parts; the first stage includes the acquisition of 20% of the Project through staged payments totalling C\$6.6 million (~A\$7.1 million) through to completion of permitting, with Stage 2 giving Itochu the right, following the granting of permits to mine, to invest in up to a maximum of 50% of the issued shares in TCL.
- ◆ At the time of execution of the JV the Stage 1 payments assigned an EV of A\$33 million or A\$0.068/share to the Project, which at the time represented a considerable premium to the then share price of A\$0.05/share.
- ◆ The Stage 1 payments include:
  - C\$1.5 million for a 5.3% interest in TCL, following the issue of a section 10 order under the Environmental Assessment Act of British Columbia (which formally acknowledges the Tenas Project has been accepted for environmental review and permitting), with this being received in mid-November 2018,
  - C\$1.5 million for a further 4.8% interest in TCL, following completion of a positive Tenas DFS (with Itochu recently agreeing to proceed, and hence with payment being imminent),
  - C\$3.6 million for a further 9.9% interest in TCL, following lodgement of an application for an Environmental Assessment Certificate, targeted for Q3 2019, subject to Itochu's approval at the time.
- ◆ Also, as part of the Stage 1 investment, Itochu shall have the right to appoint two directors to the board of TCL (one of who will be the Marketing Director), with Allegiance having the right to appoint three directors.
- ◆ Itochu will also be granted all marketing rights to coal produced from the Project.
- ◆ Stage 2 allows for Itochu to acquire, through additional investment in TCL, up to a maximum of 50% of the ordinary shares of TCL.
- ◆ The investment will be based on a "post permit to mine" valuation, with the size and value of the investment to be discussed following completion of the DFS and prior to the completion of permitting.
- ◆ We are of the view that the Stage 2 investment should be at least of such an amount to cover a reasonable proportion of the initial capital expenditure; in addition Itochu will prove invaluable in attracting the required debt financing.
- ◆ Itochu is a major Japanese commodity trading house and one of the largest globally, ranked at 204 on the Fortune 500 list.

### Existing Altius Agreement Conditions

- ◆ Again as discussed in our November 2018 report, the Itochu agreement does not negate the terms of the existing agreement with Altius Resources, with these including performance payments and royalties on production.
- ◆ These milestone obligations and payments are summarised in Table 1.

**Table 1: Telkwa farm-in obligations**

Telkwa farm-in obligations		
	Milestone	Status, Obligation
1	Deliver NI 43-101 JORC compliant report	Completed
	Complete internal scoping studies	Completed
	Upgrade geo-model to a PFS standard	Completed
	Incur C\$1M of expenditure	Pay C\$200k for 20% project equity - Completed through issue of shares
2	Complete baseline studies	
	Complete affected party agreements	
	File small mine permit applications	Pay C\$300k, however small mine application requirement now negated by decision to go to a 750ktpa operation
3	Grant of small mine permits	Pay C\$500k, now negated
4	Sale of 100k tonnes from a small mine	Pay C\$2M, now negated
5	Grant of major mine permits	Pay C\$2M, expected late 2020
6	Sale of 500k tonnes from a major mine	Pay C\$5M, expected early 2022

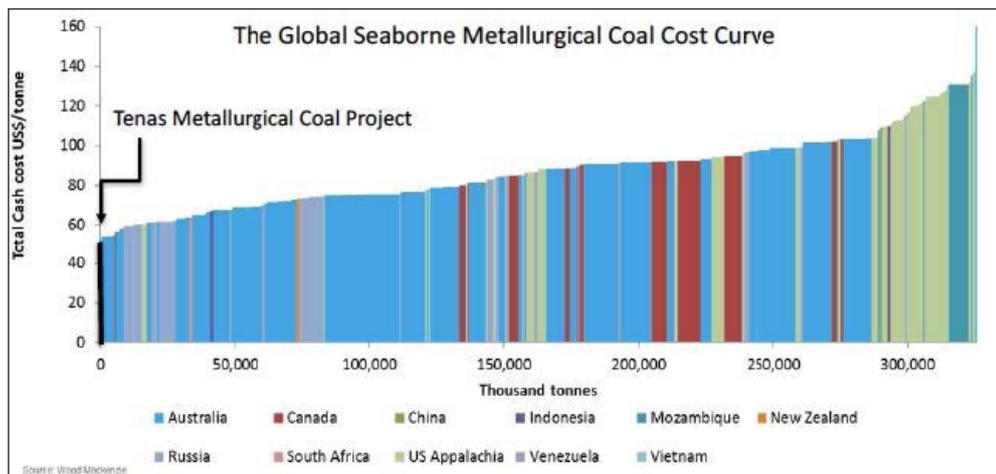
Source: Allegiance

- ◆ The following gross sales royalties payable to Altius remain:
  - 3.0% where the thermal benchmark coal price is less than US\$100/tonne,
  - 3.5% where the price is US\$100 - US\$109.99/tonne,
  - 4.0% where the price is US\$110 - US\$119.99/tonne, and,
  - 4.5% where the price is US\$120/tonne or greater.
- ◆ Note that these are based on the thermal coal benchmark, and not SSCC, which trades at a premium of some 25% to 30% to thermal coal.

## DEFINITIVE FEASIBILITY STUDY

- ◆ The completion of the DFS, which was released to the market on March 17, 2019, has been the major milestone since our last update - this followed the DFS scope as presented in our November 2018 report, and presents an operation producing 750,000 tpa of washed coal from 1 mtpa of open cut ROM coal with a low LOM strip ratio of 3.6:1.
- ◆ This was followed by an enhanced DFS, which presents a three stage operation, ultimately producing 1.35 mtpa of clean coal - the rationale is, that in the base case, significant equipment (and personnel) is retired in year six at the completion of the construction of the water management facility, however this could be better used in increasing the scope of operations, thus decreasing operating costs, bringing forward revenue, and hence significantly enhancing Project economics.
- ◆ There are also significant resources not included in the Reserves that could also add to the life of the Project.
- ◆ It needs to be stressed that current permitting is based on the base case scenario - the change to the upside scenario would only be considered with the approval of all stakeholders.
- ◆ A key takeout of both cases of the DFS is that Telkwa is expected to be at the bottom the seaborne metallurgical coal cost curve (Figure 2) - this is reinforced by the shorter shipping distance to North Asia when compared with the major Australian east coast coal ports.

**Figure 2: Global seaborne metallurgical coal cost curve**



Source: Allegiance

- ◆ Costs, revenue and results are largely similar to those as previously flagged, however with the estimated cost for the leased equipment increasing to US\$36.2 million from US\$20 million - this however has little effect on the overall project value.
- ◆ Inputs and results are shown in Table 2, the initial and sustaining capex estimate in Table 3 and the opex estimate in Table 4 - our view is that these costs are reasonable, however we note that contingency has not been included, nor has any allowance for working capital that will need to be covered in financing - in our modelling we have included 10% contingency for capex and US\$10 million in working capital.
- ◆ The additional capital costs for the upside case are estimated at only US\$1.5 million up front (wash plant infrastructure), and US\$5.3 million on the wash plant in year 4, prior to ramp up - these have not been included in Table 3.
- ◆ As shown in Table 4, the operating costs for the upside case are estimated to be some 10% lower than those for the base case, a significant improvement on an already expected low cost of production.

**Table 2: Telkwa DFS parameters and results**

Telkwa DFS parameters and results			
Item	Units	Upside Value	Base Case Value
Coal Resource and Production Parameters Life of Mine			
Total Telkwa coal complex coal resource across 3 deposits	MTonnes	126.0	126.0
Total Tenas deposit coal resource	MTonnes	36.5	36.5
DFS life-of-mine ROM coal production	MTonnes	22	22
DFS life-of-mine saleable coal production (at 10% moisture)	MTonnes	16.55	16.55
DFS average ROM coal production (at 5% moisture)	MTonnes pa	1.53	1.0
DFS average product coal yield	%	75	75
DFS average saleable coal years 1 to 4	KTonnes pa	750	750
DFS average saleable coal years 5 to 6	KTonnes pa	1,050	750
DFS average saleable coal years 7 to 15	KTonnes pa	1,350	750
DFS average saleable coal years 16 to 22	KTonnes pa	N/A	750
DFS average strip ratio	BCM/ROMt	3.6:1	3.6:1
DFS mine life (incl. pre-production)	Years	23	23
Key Performance Indicators Life of Mine			
2021 and 2022 average coal price	US\$/t	120	120
2023 onwards average coal price	US\$/t	114	114
Exchange rate Canadian dollars to US dollars	CAD:USD	1.33	1.33
Exchange rate Australian dollars to US dollars	AUD:USD	1.41	1.41
Exchange rate Canadian dollars to Australian dollars	AUD:CAD	1.06	1.06
Pre-tax net present value @ 8%	A\$M	537.3	407.3
Pre-tax Internal rate of return	%	60.8	56.9
Payback from commercial production	Years	2.5	2.5

Source: Allegiance

**Table 3: Telkwa DFS capex estimate - base case**

Telkwa DFS capex estimate - base case				
Item	Upfront Capital		Sustaining Capital	
	Lease finance US\$m	Owner finance US\$m	Lease finance US\$m	Owner finance US\$m
Pre-production activities		4.2		
Production milestone payment relating to acquisition				5.6
Mining				8.1
CHPP and associated plant infrastructure	3.3	14		11.4
Minesite infrastructure		12.5		4.4
Water management		17.3		52.4
Rail loop and loadout		5.4		2.8
Mobile equipment	32.9	0.9	10.8	21.6
Administration infrastructure				0.7
<b>Total capital (excludes contingency)</b>	<b>36.2</b>	<b>54.3</b>	<b>10.8</b>	<b>107.0</b>

Source: Allegiance

**Table 4: Telkwa DFS opex estimate - US\$/saleable tonne**

Telkwa DFS opex estimate - US\$/saleable tonne		
Item	Upside Case	Base Case
Site Costs		
Mining – waste removal and coal recovery	17.1	19.5
Coal processing	5.2	6.3
General and administration	3.0	4.2
Reclamation	0.9	0.9
Transportation and Marketing		
Marketing costs	1.9	1.9
Haulage (CHPP to Rail Siding)	3.8	3.8
Rail to port and loaded	13.1	13.1
<b>Total all-in cash cost FOB pre-interest and tax</b>	<b>45.0</b>	<b>49.7</b>

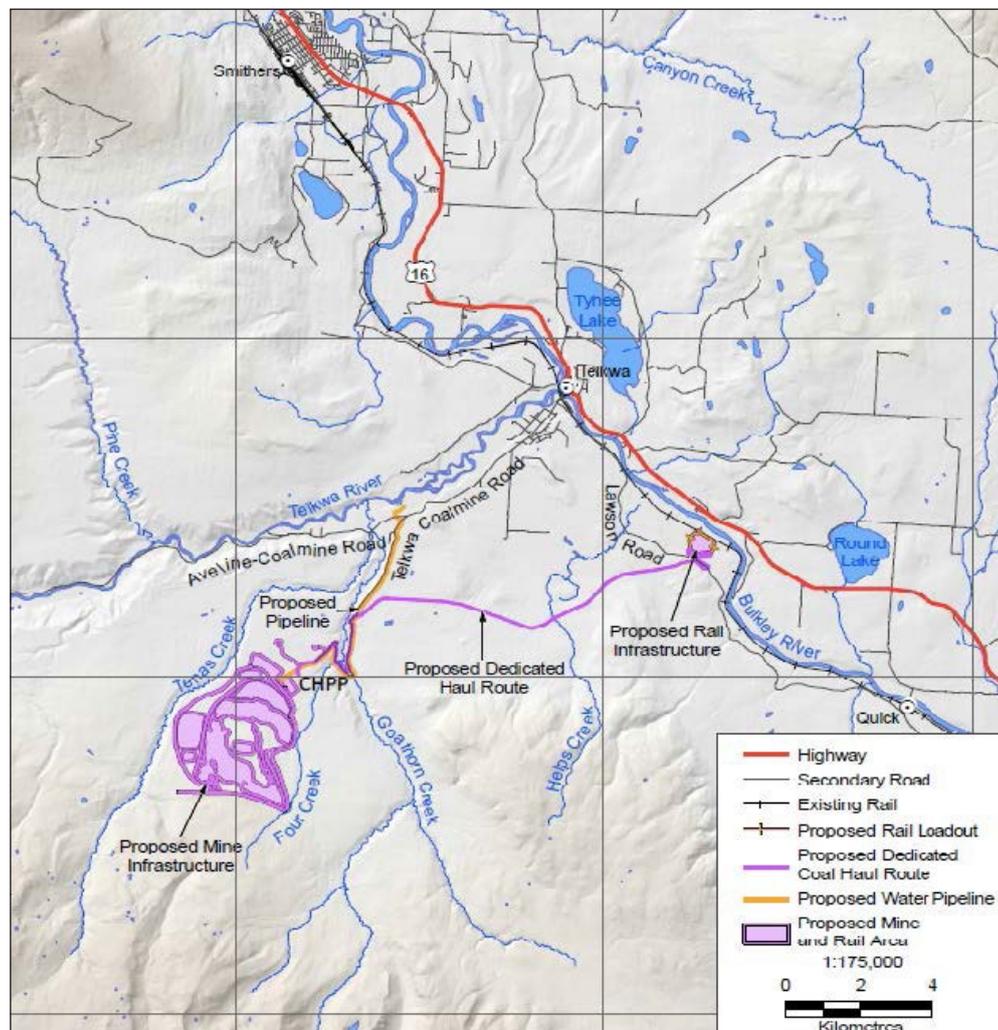
Source: Allegiance

- ◆ The site layout for the planned operation is shown in Figure 3, with key elements including:
  - A single open pit mine,
  - A CHPP plant,
  - A dedicated 16 km haul road to a loading facility on a purpose built 2.5 km rail loop - the loop is designed to accommodate 116, 90 t car trains, with approximately three trains to be loaded every two weeks,
  - A water pipeline from the Telkwa River; and,
  - A 25 kV to 600 V electrical substation connected to the grid by a 3.6 km long, 25 kV transmission line.

## Mining

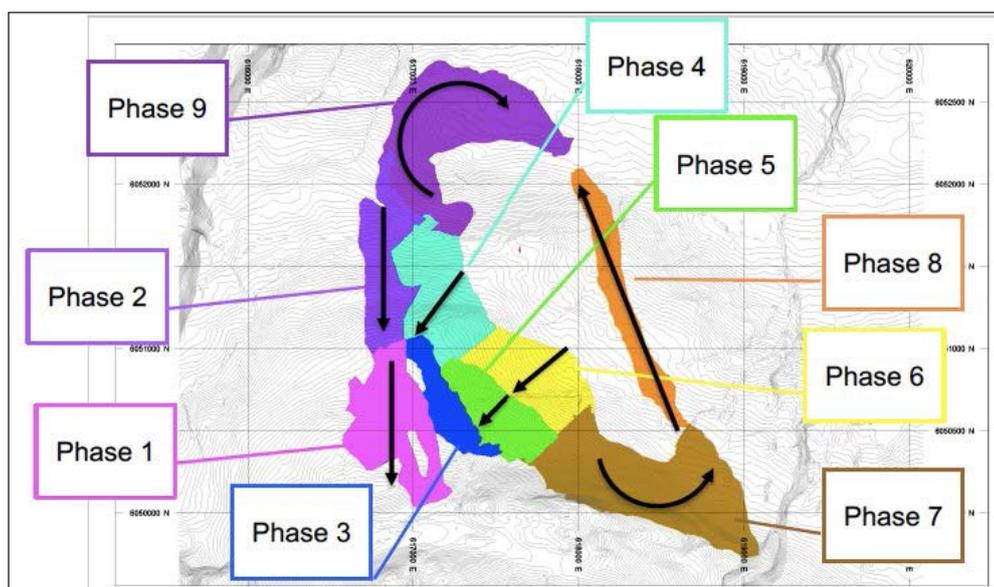
- ◆ The proposed mining operations will include both free dig and drill and blast open pit mining using excavators, dozers and trucks - the planned operation has a low LOM strip ratio of 3.6:1.
- ◆ The mining will include nine stages, starting in the shallowest area of the synclinal basin in the southwest, as presented in Figure 4.
- ◆ Given the dip of the seams, a bottom-up mining approach will largely be used (Figure 5), with the down-dip portions mined first, and then progressing up-dip - this allows for waste to be moved downhill into voids created by the previous mining - in some areas of steeply dipping coal seams a traditional "top-down" approach will be used.

**Figure 3: Proposed DFS site layout**



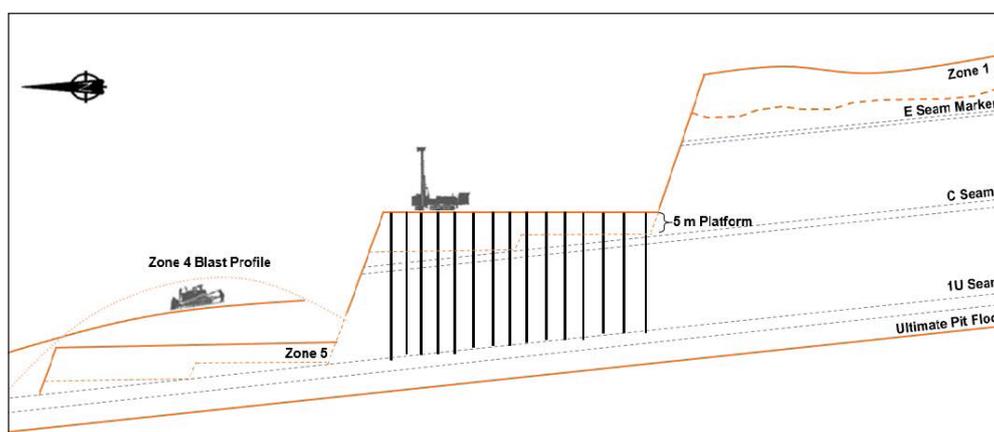
Source: Allegiance

Figure 4: Proposed mining sequence



Source: Allegiance

Figure 5: "Bottom-up" mining schematic



Source: Allegiance

## Processing

- ◆ Processing will be undertaken in a modular Sedgman designed DMC/flotation CHPP, with a capacity of 145 tph of raw coal - the plant has been designed with a minimum upfront capital cost in mind and to allow for expansion to 190 tph (1.35 mtpa ROM) once cashflow is established (with an estimated cost of C\$5 million), and eventually to 350 tph (2.5 mtpa ROM) processing.
- ◆ Coal treatment and transport incorporates the following stages:
  - Raw coal reclaiming and size reduction,
  - Coarse coal (DMC) circuit for coal between 50.0 by 0.50 mm with horizontal basket centrifuge for dewatering,
  - Magnetite recovery circuit,
  - Fine coal flotation for coal <0.50 mm with screen bowl centrifuge for dewatering,
  - Fine rock thickening and dewatering using a belt press filter,
  - Washed coal loadout at the plant via an 8,400-tonne open air stockpile,
  - Plant rock loadout via a 6,600-tonne open air stockpile,
  - 16 km on-highway truck haul to the Rail Loadout,
  - Washed coal loadout via a 30,000-tonne open air stockpile, and;
  - 375 km rail transport using 116 car unit trains to Ridley Terminals.

## Infrastructure

- ◆ Key infrastructure items include:
  - Haul road,
  - Rail loop,
  - Electricity supply,
  - Miscellaneous items,
  - Water supply; and,
  - Water discharge.
- ◆ The haulage infrastructure includes a new 10 km haul road (and upgrading of 6 km of existing road for a total haul distance of 16 km), leading to the train load out on the planned new 2.5 km rail loop off the existing RN Rail main rail line to the RICT, some 375 km from Telkwa.
- ◆ Electricity will be sourced from the main grid, with new infrastructure including a 3.6 km 25 kV connection and 25 kV to 600 V substation.
- ◆ Miscellaneous items will include, amongst others, buildings and fuel tanks.
- ◆ It is planned to source process water from the Telkwa River, with any surface water collected in the area of operations to be discharged back into the catchment following being stored in ponds to allow for sediment settling - effective and reliable water management is a vital part of permitting operations in British Columbia, with this reflected in water management being a significant component in the sustaining capex (Table 3).
- ◆ Some mined waste rock has acid generating potential, with this planned to be stored under water in management ponds to prevent oxidation.

## Reserve Update

- ◆ As part of the DFS, SRK updated the coal Reserves as shown in Table 5, with 78% now in the Proven category.

**Table 5: Telkwa updated Reserves**

Telkwa updated Reserves		
Coal Resource Deposits	ROM Coal Mt	Washed Coal Mt
<b>Tenas Proven</b>	17.1	12.9
<b>Tenas Probable</b>	4.9	3.7
<b>Tenas Total</b>	<b>22.0</b>	<b>16.5</b>

Source: Allegiance

- ◆ These followed on from the geological re-interpretation and Mineral Resource Estimate update as presented in our November 2018 report, with the MRE presented in Table 6.

**Table 6: Telkwa updated MRE**

Telkwa Updated MRE				
Coal Resource Deposits	Measured Mt	Indicated Mt	Inferred Mt	Total Mt
<b>Tenas</b>	27.1	9.4	-	36.5
<i>Tenas Previous</i>	<i>58.8</i>	-	-	<i>58.8</i>
<b>Goathorn</b>	59.5	9.2	0.2	68.9
<b>Telkwa North</b>	15.7	3.7	1.0	20.4
<b>Total Telkwa</b>	<b>102.3</b>	<b>22.3</b>	<b>1.2</b>	<b>125.8</b>
Tenas Coal Resource	Measured Mt	Indicated Mt	Inferred Mt	Total Mt
<b>C seam</b>	4.5	1.5	-	6.0
<b>1U seam</b>	4.5	1.6	-	6.1
<b>1 seam</b>	18.1	6.3	-	24.3
<b>Tenas Total</b>	<b>27.1</b>	<b>9.4</b>	-	<b>36.5</b>

Source: Allegiance

## Coal Test Work, Quality and Pricing

- ◆ Extensive coal test work has been undertaken, with this being carried out by commercial laboratories as well as by three steel mills in Japan and one in South Korea.
- ◆ The results of this work as presented in Table 7 and Figure 6 show that the coal is generally suitable for use as a blending mid-volatile SSCC or PCI coal; the main out of specification parameter is the low fluidity, however this will be able to be overcome with appropriate

blending at the steel mills, and this is a common and expected characteristic for Canadian coking coals.

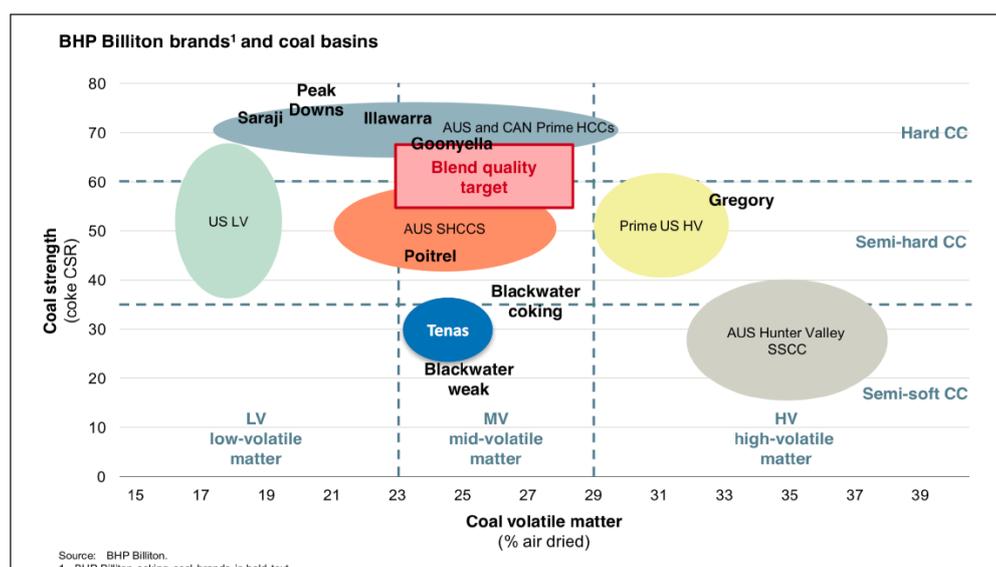
- ◆ The steel mills have indicated their interest in the coal as either a blending SSCC or PCI product, with one also highlighting the limited supply of similar mid-volatile SSCC in the sea-borne market - as such Tenas has the potential to be the only non-Australian provider of mid-volatile SSCC into the market and as such could be a niche provider commanding premium prices to a market dominated by lower value high volatile SSCC from predominantly the Hunter Valley in New South Wales, Australia.

**Table 7: Tenas deposit coal properties compared with Australian coals**

Tenas deposit coal properties compared with Australian coals				
Item	Units	Tenas	NSW HV SSCC	QLD MV SSCC
Inherent moisture	%	1.1	2.5-4.5	2-2.5
Volatile matter	%	25.8	33-38	25-27
Ash	%	9	5-9.5	9.5-10
Sulphur	%	0.98	0.35-0.85	0.35-0.55
Fixed carbon	%	65.3	50-60	55
Free swell index		3-4	3-6	3-3.5
HGI		63	40-52	70-80
Reflectance	%	0.96	0.65-0.85	0.99-1.06
Maximum fluidity	Ddpm	6	10-500	15-50
Base acid ratio		0.15	0.10-0.20	0.12-0.21

Source: Allegiance

**Figure 6: Tenas coal quality compared to BHP coals**



Source: Allegiance

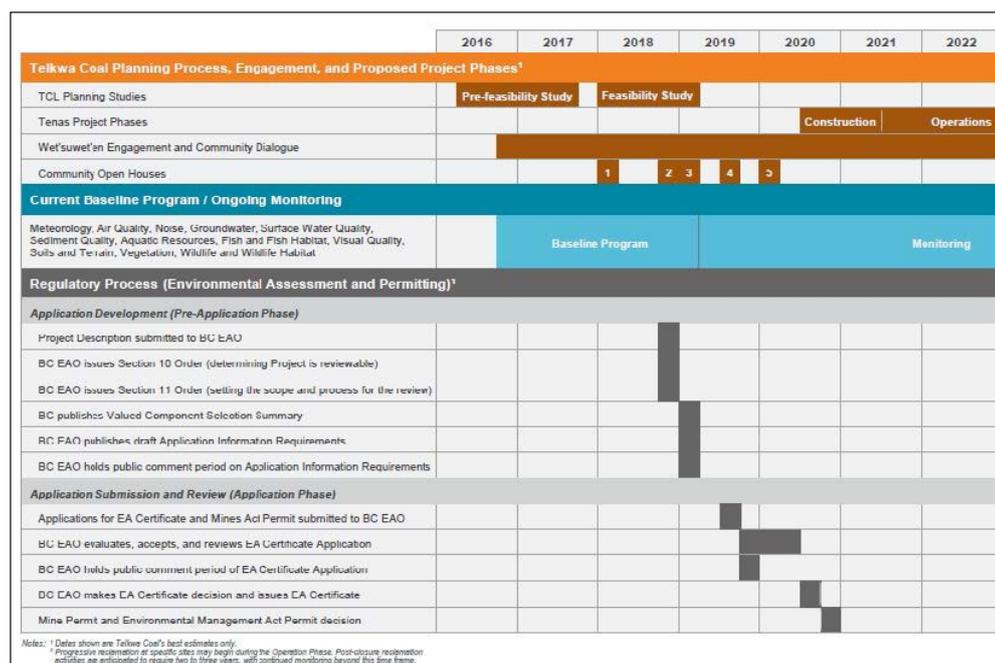
- ◆ Coal prices have been estimated by Kobie Koornhof and Associates (“Koornhof”) and are based on similar Queensland medium volatile SSCC with relevant discounts and premiums applied.
- ◆ The base price is 66% of the benchmark hard coking coal (“HCC”), with a US\$2.05/tonne discount to the pricing for high volatile SSCC.
- ◆ With the Australian SSCC price being settled at US\$135/tonne on January 29, 2019, the estimated price for the Telkwa product is US\$132.95/tonne.
- ◆ This has resulted in forecast prices of US\$120 - US\$137/tonne from 2020 to 2022, and US\$114 to US\$137/tonne from 2023 onwards - the lower figures have been used in the Company’s modelling, and thus the modelling could be considered conservative.

## CURRENT AND UPCOMING ACTIVITIES

### Permitting and Stakeholder Engagement

- ◆ One of the key aspects of the successful development of the Project is permitting (which includes stakeholder engagement) - on the stakeholder engagement side the Managing Director, Mark Gray has relocated to Telkwa, which is proving invaluable in fostering and maintaining good relationships with the local community.
- ◆ As discussed in previous notes, the Company has engaged Mrs Angela Waterman as Director of Telkwa Coal Limited – Environment & Government Relations - Angela has significant experience in these vital aspects of project development in British Columbia.
- ◆ The Company continues to engage with the Office of the Wet’suwet’en nation (“OW”), the traditional owners of the land on which the Project is located - a Communication and Engagement Agreement was signed between the Company and the OW in April 2017.
- ◆ Baseline environmental studies have now been completed, with the formal Environmental Assessment now underway - It is expected that the total permitting process will take 18 months from now (Figure 7) - this is now formally in motion with the issue of both the Section 10 and Section 11 orders by the EAO of the Provincial Government of British Columbia.
- ◆ One aspect of the permitting process is that timelines are mandated under the applicable legislation, and as such the regulatory authorities are obligated to operate to them.
- ◆ Recent years have seen a number coal mines permitted in British Columbia, thus somewhat mitigating the permitting risks.

Figure 7: Project time line



Source: Allegiance

### Rail and Port Access Negotiations

- ◆ Port and rail agreements are yet to be finalised, however early discussions with RICT have indicated that there is ample capacity to handle Tenas coal given it is only 750 ktpa, and that bond payments to secure a place in the port will not be required - RICT is also closer to the target North Asian markets than the East Coast ports of Australia.
- ◆ Although CN Rail is a monopoly, the ability for it to charge “monopoly” prices is constrained through legislation, with there also being an arbitration process in place to resolve any disputes during negotiations - CN Rail has also provided indicative pricing to Allegiance, with this being used in the DFS.

### Financing and Offtake

- ◆ This work is being carried out in association with Itochu, and are key aspects of the eventual success of the project.

- ◆ The response of the North Asian steel mills, in addition to interest shown by independent coke producers, indicates good potential for offtake agreements to be settled - this is helped by the JV with Itochu.
- ◆ Funding should also be eased through the Itochu association - as mentioned earlier Itochu is expected to provide a reasonable proportion of the project equity funding, and that debt funding will be helped by Itochu's relationships with Japanese banks.
- ◆ As presented previously, the expected upfront funding for the project presented in the DFS includes US\$54.3 million in owner sourced financing, and US\$36.2 million in equipment leasing - this does not include contingency or working capital - our view is that 10% contingency and at least US\$10 million in working capital will be required, taking the non-leased financing requirements to ~US\$70 million.
- ◆ The Company has an indicative financing structure of:
  - US\$30 million equity from Itochu (to be negotiated),
  - Up to US\$50 million in project senior and mezzanine debt financing, with indicative conditions of a seven year term following start up of operations and a 7% interest rate; and,
  - Equipment finance leasing of US\$36.2 million.
- ◆ Allegiance has been given indicative finance lease terms from two major suppliers for the mobile equipment - in the DFS the Company has assumed an interest rate of 5.6% pa, with repayment in full over 60 months.
- ◆ The Company expects that the remaining Stage 1 payments from Itochu of US\$5.1 million will be sufficient to last through to completion of permitting; there is also approximately A\$1 million available through the conversion of in the money options.

## VALUATION

### Summary

- ◆ We have updated our valuation for Allegiance, with a summary presented in Table 8 - we would expect significant share price movements towards our valuation with material progress in permitting, offtake and financing activities.
- ◆ As stated earlier, we have not considered the New Elk Project in Colorado, for which the Company announced the proposed acquisition on July 15, 2019.
- ◆ Our risked valuation of A\$0.34/share for Allegiance is based on the base case DFS scenario - we have run the upside scenario through our model, and this results in a risked upside valuation of A\$0.46/share; we have however used the same risk multipliers for both scenarios.
- ◆ Given the JV with Itochu we have completed this on an after tax basis using a conceptual funding model and assumed Itochu's final stake and investment in the project:
  - As a base case we have assumed that Itochu's ultimate equity in the Project is determined through the Stage 2 share subscription estimated at US\$30 million, which is predicated on Itochu covering 100% of the estimated equity portion of the project finance, ,
  - We have assumed that the quantum of Itochu's final project ownership and Stage 2 investment is based on 50% of the pre-tax, ungeared project valuation (previously 60%) - calculation methods and sensitivity to the final stake and relative valuation is presented in Tables 8 to 10; and,
  - All funds received from Itochu (both Stage 1 and Stage 2) have been "run through" the Tenas DCF model, and hence do not appear as separate items in the NAV.
- ◆ Per share values are calculated on the current share structure diluted for option conversion - the Company's view is that current cash reserves and payments due under Stage 1 of the agreement with Itochu will be sufficient to fund activities through to the completion of permitting, and as such we would therefore not expect any dilution in that period.
- ◆ In funding we have used the structure:
  - US\$30 million equity from Itochu,
  - ~US\$40 million in project senior and mezzanine debt financing, with indicative conditions of a seven year term following start up of operations and a 7% interest rate; and,
  - Equipment finance leasing of US\$36.2 million.

- ◆ We have included working capital of US\$10 million and capital contingency of 10% above that presented in the Company's DFS.
- ◆ Costs are similar to those used in our previous valuations (and as presented by the Company in the DFS), and we have used a forward coal price of US\$120/tonne and a AUD:USD exchange rate of 0.70.

**Table 8: Allegiance valuation summary - A\$**

Allegiance valuation summary - A\$							
Asset	100% Value	O'ship	Un-risked Value to AHQ	Risk Multiplier	Risk Value	Risk/Share	Notes
Telkwa After Tax, Funding	A\$376.9 m	62%	A\$233.7 m	70%	A\$163.6 m	A\$0.292	NPV <sub>8</sub>
Other Coal - M & I	A\$515.1 m	62%	A\$319.3 m	10%	A\$31.9 m	A\$0.057	See point below
Head Office After Tax	-A\$16.8 m	100%	-A\$16.8 m	70%	-A\$11.7 m	-A\$0.021	A\$700k pa NPV <sub>8</sub>
Current Cash	A\$1.0 m	100%	A\$1.0 m	100%	A\$1.0 m	A\$0.002	Mar 31, '19
Option Cash	A\$1.0 m	100%	A\$1.0 m	100%	A\$1.0 m	A\$0.002	Assume full conversion
Remaining Stage 1 Itochu	A\$5.5 m	100%	A\$5.5 m	100%	A\$5.5 m	A\$0.010	-A\$1.6 m imminent
Debt	-A\$0.6 m	100%	-A\$0.6 m	100%	-A\$0.6 m	-A\$0.001	Mar 31, '19
<b>Total Value</b>	<b>A\$882.0 m</b>		<b>A\$543.1 m</b>		<b>A\$190.6 m</b>	<b>A\$0.340</b>	
Shares for Calculations	560,931,260						

Source: IIR analysis

- ◆ We have valued the Measured and Indicated Resources at Goathorn and Tenas North at A\$6.41/tonne - this is calculated from the Tenas NPV per tonne of original Resources (58.8 Mt) - we have used this figure rather than the current MRE on the assumption that current Resources at Goathorn and Tenas North may also include seams that may be excluded from future estimates.
- ◆ Table 9 presents our methodology for calculating the Itochu's increased equity in the Project - note that this is conceptual, and the actual figures will probably be different.
- ◆ The Itochu equity figure of US\$30 million returns a debt:equity ratio of just over 70:30 when the finance leasing is included in the project debt.
- ◆ Also note that we have based the calculations on the un-funded pre-tax valuation - the actual calculations could actually be made using a different basis.

**Table 9: Itochu equity calculations**

Itochu equity calculations		
Description	Value	Notes
Itochu Initial Ownership (A)	20%	Completion of Stage 1 payments
Telkwa Unrisked Valuation for Stage 2 Payment (B)	\$335,722,445	Pre-tax project valuation
Itochu Stage 2 Payment (C)	\$30,000,000	Company guidance
Percentage of Full Valuation to Calculate Ownership (D)	50%	Our estimate - ranges
Itochu Additional Stake (E)	18%	= C / (B x D) - rounded to nearest full %
Itochu Final Project Ownership (F)	38%	= A + E
Allegiance Final Project Ownership	62%	= 100% - F
Project Financing - Not Including Vendor Finance		
Telkwa Funding Requirements (not inc. equipment leasing)	\$69,730,000	
Itochu Equity	\$30,000,000	
Allegiance Equity	\$0	
Project Debt	\$39,730,000	

Source: IIR analysis

- ◆ Tables 10 and 11 present the sensitivity of various outcomes to changes in key Itochu investment parameters:

- ◆ Table 10 presents the sensitivity of AHQ's ultimate Project ownership share, the unrisks value of the Company's share of the Project and the Company per share valuation to changes in the percentage of the Project valuation used by Itochu - this is based on Itochu contributing US\$30 million in equity.

**Table 10: Sensitivity to changes in percentage of valuation used**

Sensitivity to changes in percentage of valuation used			
% of Project Valuation Used	AHQ Ultimate Ownership	Tenas Unrisks Value Due AHQ	Company Per Share Valuation
30%	50.0%	A\$188.4 m	A\$0.272
40%	57.0%	A\$214.8 m	A\$0.312
50%	62.0%	A\$233.7 m	A\$0.340
60%	65.0%	A\$245.0 m	A\$0.357
70%	67.0%	A\$252.5 m	A\$0.368
80%	68.0%	A\$256.3 m	A\$0.374

Source: IIR analysis

- ◆ Table 11 presents the sensitivity of the Allegiance per share valuation to the equity split between Itochu and Allegiance - this is based on an equity requirement of US\$30 million as used in our modelling.

**Table 11: Sensitivity to changes in provision of equity**

Sensitivity to changes in provision of equity				
Itochu Equity	Allegiance Equity			
	\$0	\$10,000,000	\$20,000,000	\$30,000,000
\$0				A\$0.292
\$10,000,000			A\$0.304	
\$20,000,000		A\$0.319		
\$30,000,000	A\$0.340			

Source: IIR analysis

## Upside Potential

- ◆ There is the potential for significant expansions at Tenas (both in throughput and mine life), with this only requiring minimal additional capital that would most likely be funded out of cash flow, with upgrades to the coal preparation plant being in the order of US\$6.6 million for the DFS upside case .
- ◆ As mentioned above, we ran the DFS upside case through our model and this resulted in a value for Allegiance of A\$0.46/share - note that this used the same risk factors as the base case figure.

## Sensitivity

- ◆ Our analysis indicates that the base case Project is most sensitive to operating costs and coal prices, with the un-risked base case sensitivity being presented in Table 12.
- ◆ This shows that, by virtue of the relatively low operating and capital costs that Telkwa presents a viable, robust project, with the NPV still a multiple of the up-front capex in all but the worst cases.
- ◆ The sensitivity to coal price will also be affected by exchange rates.

**Table 12: Telkwa base case funded, post-tax un-risked NPV sensitivity - AUD, 100% basis**

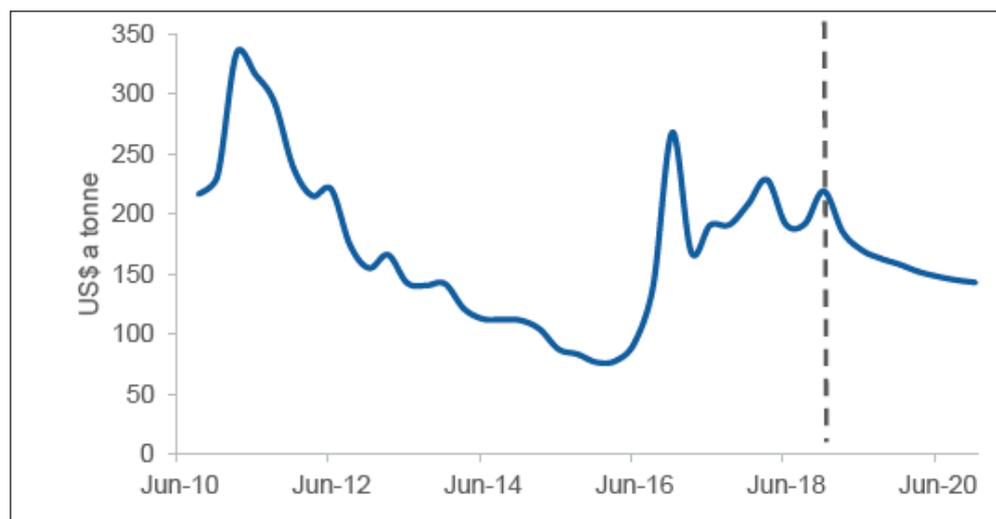
Telkwa base case funded, post tax un-risked NPV sensitivity - AUD, 100% basis						
Change in Operating Costs						
		-20%	-10%	0%	10%	20%
FOB Coal Price US\$/t	US\$90	A\$240 m	A\$204 m	A\$168 m	A\$132 m	A\$96 m
	US\$100	A\$310 m	A\$274 m	A\$238 m	A\$202 m	A\$166 m
	US\$110	A\$379 m	A\$343 m	A\$307 m	A\$271 m	A\$235 m
	US\$120	A\$449 m	A\$413 m	A\$377 m	A\$341 m	A\$305 m
	US\$130	A\$513 m	A\$477 m	A\$441 m	A\$405 m	A\$369 m
	US\$140	A\$582 m	A\$546 m	A\$510 m	A\$474 m	A\$438 m

Source: IIR analysis

## SEA-BORNE METALLURGICAL COAL MARKETS

- ◆ Telkwa plans to sell metallurgical coal into the global sea-borne market, targeting Asian customers.
- ◆ In 2018 the metallurgical trade was ~324 Mt, and is forecast to remain relatively stable or grow at ~1-2% per annum over coming years to reach ~340 Mt in 2020.
- ◆ The largest exporter is Australia, which in 2018 exported ~178 Mt, or 55% of demand, with Australia being followed by the US (~54 Mt, 17%) and Canada (~30 Mt, 9%).
- ◆ Due to the potential for supply disruptions out of Australia (see below), Asian steel makers, particularly those in Japan and Korea, ideally like to have diversity of supply; this is not so critical in China which can make up shortfalls from domestic supply.
- ◆ China is the largest consumer of metallurgical coal, using some 61% of global production, and is followed by India (10%), Russia (6%), Japan (5%) and South Korea (4%); in 2018 China was the largest importer (~69 Mt), followed by India (~63 Mt) and Japan (48 Mt), however with the balance expected to swing in favour of India over the next few years.
- ◆ The concentration of supply from Australia, particularly from Queensland, has led in the past to supply shocks resulting largely from tropical cyclones - Cyclone Debbie, which disrupted supply in March 2013 led to a short term price spike to over US\$300/tonne for HCC from the then prevailing price of ~US\$150/tonne; prices subsequently retraced to around US\$150/tonne, however more recently spot prices again reached over US\$200/tonne based on a number of factors, including strong steel demand.
- ◆ Figure 8 shows eight year historic and two year forecast prices for HCC, and highlights a potential base forming at ~US\$175/tonne on the historic data - this implies minimum FOB prices of ~US\$130/tonne and US\$122/tonne for PCI and SSCC coals respectively, in line with the upper limits of current forecasts.

**Figure 8: Australian FOB HCC prices**



Source: Resources and Energy December 2018 Quarterly

- ◆ The above prices are for HCC, with PCI coal generally trading at ~70-75% of that for HCC and SSCC trading at 65-70%, although these discounts were exacerbated during the recent price spikes.
- ◆ Due to their higher quality, metallurgical coals trade at a significant premium to thermal coals, with this variable, currently being at ~100%, however historically ranging between 50% and 100% - this is naturally exacerbated by spikes in the metallurgical coal prices.

### Price Forecasts

- ◆ Price forecasts, as usual for commodities, are varied; with long term research and broker FOB Queensland forecasts compiled by KPMG in January 2019 ranging between US\$125/tonne and US\$150/tonne for HCC, US\$92/tonne to US\$111/tonne for LV PCI and US\$80/tonne to US\$100/tonne for SSCC - these forecasts are largely unchanged from those in the July 2018 KPMG compilation.
- ◆ We note that these are lower than the long term forecasts for the Tenas product of US\$114 to US\$137/tonne used in the DFS, and our modelled case of US\$120/tonne, however we would consider the forecasts to be relatively conservative, with all having prices in backwardation.

- ◆ These are also significantly lower than the December 2018 quarter benchmark prices as reported in Whitehaven Coal's (ASX: WHC) September Quarterly Report - these were US\$212/tonne for HCC, US\$142/tonne for LV PCI and US\$130/tonne for SSCC.
- ◆ The potential for the Tenas product to supply a niche potentially means that it will demand a premium to the typical high volatile SSCC products on which the forecasts are based; as well, there is a slight FOB price benefit by virtue of the fact that Ridley Island is closer to markets than the Australian ports.

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