

## ASX ANNOUNCEMENT

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# Pre-Feasibility Study on Titiribi coal project completed - highlights relatively low capital and operating cost profile to support fast-tracking development

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## KEY HIGHLIGHTS

- Pre-Feasibility Study (PFS) confirms the technical and economic feasibility for starter mining operation at Titiribi coal project
  - PFS was based on Measured and Indicated components of the total Coal Resource estimate of 8.1Mt<sup>1</sup> developed in accordance with JORC (2004)
  - Starter mine projected to have a minimum 5 year Life-of-Mine (LOM) based on production rate of up to 400,000tpa
  - Low initial start-up capital in the order of US\$7.8m
  - Low average cash operating cost of US\$44/t at mine gate (US\$84/t FOB port)
  - Study based on a blended metallurgical coking coal product with low ash, ultra-low phosphorus, medium volatiles and Free Swell Indexes (FSIs) averaging 6.7
  - Significant upside to PFS economics and to JORC resource remains from further exploration potential along strike from existing concessions
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Colombian-focused coal explorer Ascot Resources Limited (ASX: AZQ) (**Ascot** or **the Company**) is pleased to announce that, following confirmation of its maiden JORC-compliant Resource in mid-July, the Company has completed a Pre-Feasibility Study (PFS) for a proposed 'starter' mining operation at its 90% owned Titiribi coal project in the Department of Antioquia, Colombia.

### PFS Overview

The study was completed in collaboration with independent consultants and industry professionals, and supports the development of a 400,000tpa open-pit mining operation with a minimum LOM of around 5 years.

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<sup>1</sup> Refer to ASX announcement 11 July 2013

The Company's independent mining consultant, Behre Dolbear, was engaged to review raw product quality and verify estimated mining costs and an in-country independent logistics expert was contracted to obtain road transport and port handling and logistics charges.

Mine design was conducted by Jeff Berndt Mining Services Pty Ltd, an experienced mine design and mine scheduling industry professional. The process involved mine concept development, pit optimisation, mine design, production and quality scheduling in order to produce a three dimensional (3D) visualisation of the mine and waste dump advance for each year (refer Appendix A). Mine design and scheduling was based on applying conventional pit design and coal loss/dilution parameters to provide a strong foundation with which to estimate capital and operating costs.

The following provides guidance on the key outcomes from the mining study:

- The pit is mined in 5m benches from the crest at 760mRL to the pit base at 525mRL.
- Access to each bench is straight forward as the bench intersects the topography, with a highwall ramp to be constructed for access to the benches below the 560mRL.
- Waste will be placed in dump to the west of the open pit, with some waste backfilled.
- Life of mine strip ratio is expected to be 6:1 after initial pre-stripping operations.
- The coal will be liberated using small hydraulic backhoes. Front end loaders will transport run of mine (ROM) product to mobile crushers/feeders that are positioned close enough to the working faces to minimize haulage distances, which is expected to result in a significant reduction in mining costs.

The Company expects to produce a saleable raw coal product, sold primarily as a low ash, average sulphur semi-soft coking coal as blending feedstock for the production of coke. A small proportion of raw coal product with lower FSIs is suitable as cement coal and can be supplied to markets within Colombia.

The PFS has enabled Ascot to estimate the likely capital and operating cost structure for an initial 250,000tpa contractor-driven operation under two discrete development scenarios:

- Scenario A – raw coal sales at the mine gate, US\$7.8M capital and US\$44/t operating cost;
- Scenario B – raw coal sales free on board (FOB) Port Buenaventura, US\$14.3M capital and US\$84/t operating cost;
- An additional US\$2.1M in development capital is required to ramp up production to 400,000tpa.

The total capital required to achieve long-run production rate of 400,000tpa suggests average capital intensity in the order of US\$35/t, which compares favourably to the industry average.

Operating cash costs are based on vendor quotations and available Colombian mining benchmarks. Cash operating costs remain in the lowest cost quartile for global metallurgical coal producers on a FOB basis.

The results highlight the significant potential for the Company to fast-track project development with the aim of achieving first coal production by early 2015.

### **Projected Production to reach 400,000tpa**

In July 2013, Ascot announced its maiden JORC-compliant coal Resource estimate of 8.1Mt (set out in fill below). Based on extensive mine planning work on the Measured and Indicated components of the Coal Resource estimate (5.9Mt), Ascot has derived an estimated mineable tonnage of 1.4Mt<sup>2</sup>.

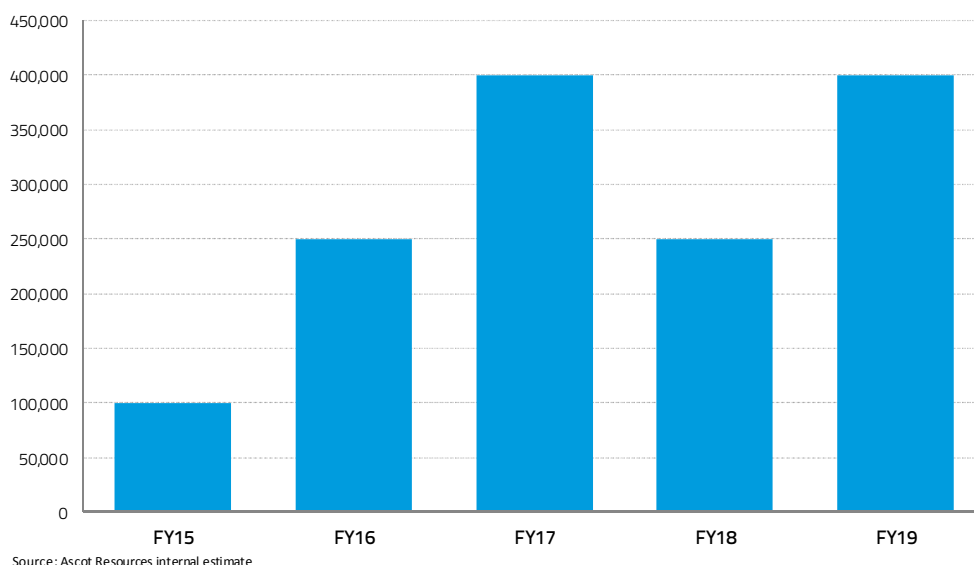
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<sup>2</sup> This estimate is derived from extensive mine planning work including application of suitable modifying factors applicable to open-pit coal extraction to Coal Resource estimate. Further work is required before converting the Resource into a Reserve.

JORC Resource Category	El Balsal / El Silencio (Mt)	Lara (Mt)	Total (Mt)
Measured	5.2	0	5.2
Indicated	0.7	0	0.7
Inferred	0.4	1.8	2.2
<b>Total</b>	<b>6.3</b>	<b>1.8</b>	<b>8.1</b>

The chart below highlights the forecast production of saleable coal product for the initial 5-year LOM period.

### Titiribi Forecast Production Profile



### Titiribi Development Scenarios

In deriving the capital and operating cost estimates, Ascot analysed two development scenarios for the Titiribi project (refer Figure 1 below):

- Scenario A: Raw coal is sold on a Free Carrier (FCA) basis at the Titiribi mine gate**  
 The Company can sell raw product at the Titiribi mine gate on an FCA basis without additional transportation or logistics costs.
- Scenario B: Coal Conveyor across the River Cauca**  
 This involves the construction of a 2km bridge conveyor from the mine (extraction point) to a stockpiling facility located on the western side of the river Cauca that connects to a major highway. Raw product is then transported 512km to a stockpiling facility at port Buenaventura, prior to being exported. The cement coal will be sold domestically from the Titiribi stockpile.

The diagram below highlights the generalised layout of the two development scenarios.

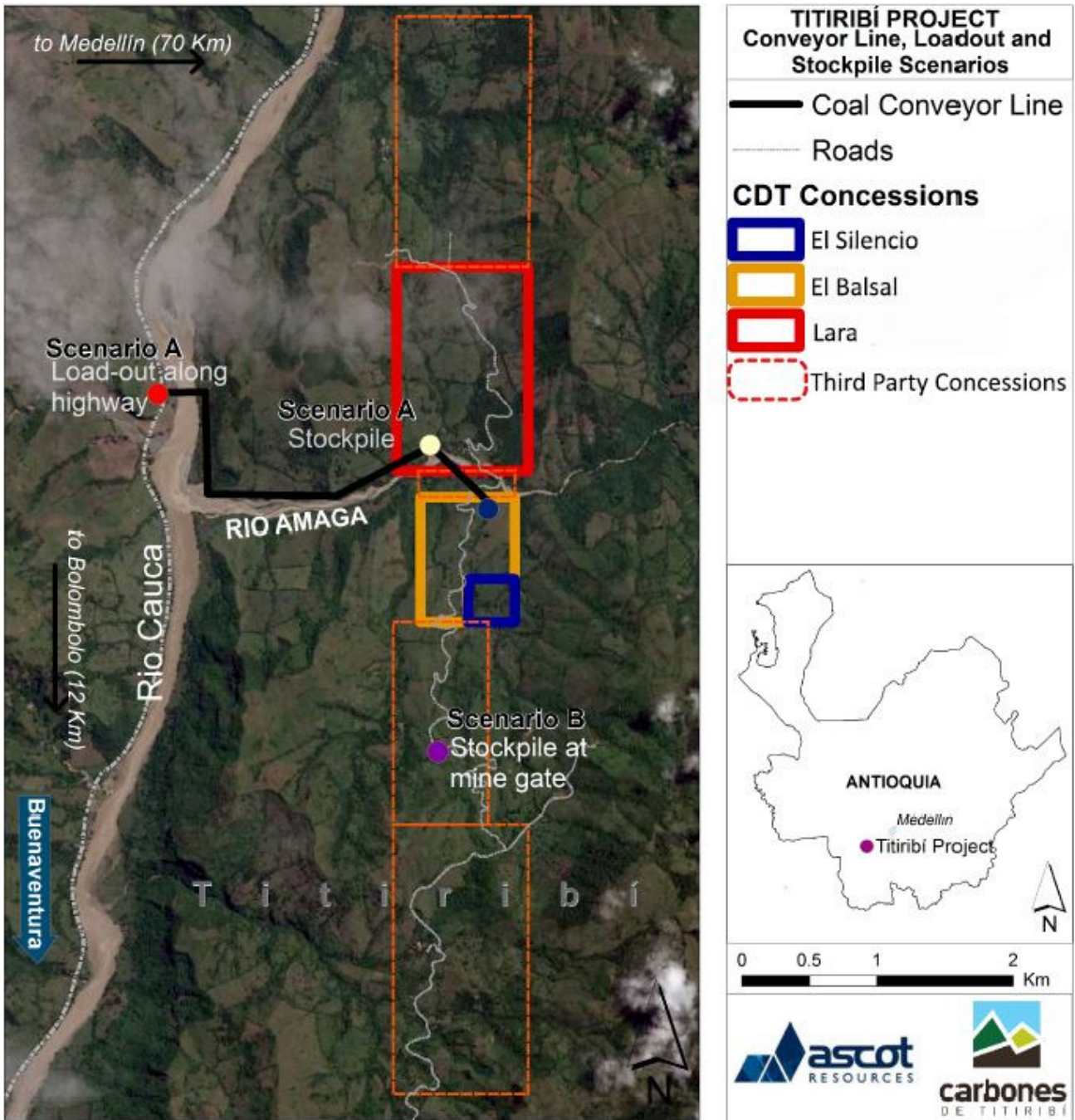


Figure 1: Base Case scenarios for the development of the Titiribi coal project

## Capital Costs

The Company expects total capital costs, including a 20% contingency, to support an initial production target of 250,000tpa to fall within a range of US\$7.8M for Scenario A and US\$14.3M for Scenario B. A detailed breakdown of the underlying capital costs structure is provided below.

Description	Scenario A	Scenario B
CdT Oversight & Management (internal oversight of construction process)	910	910
Mine Setup & Mobilisation (mobilisation of third-party services)	135	135
Coal Feeding, Blending & Conveying (loadout belt, conveyors, truck scales, crusher)	1,100	6,400
Waste Handling (waste stacker, crusher, drain blanket)	1,285	1,285
Electrical Generation & Distribution (mine & coal generator, camping facilities)	980	1,530
Camp, Communication & Sanitation Infrastructure (water treatment, camping, communication)	1,750	1,300
Environmental (garbage disposal, run-off ponds, ditch system)	175	175
Vehicles & Transportation (pick-up trucks, small flatbeds)	210	210
Contingency (20% on all capital items)	1,310	2,390
<b>Total Start-Up Capital</b>	<b>7,855</b>	<b>14,335</b>

### Key assumptions:

- Costs for material handling equipment and electrical generators were sourced from the US, with transportation, installation and commissioning included as a percentage of total cost.
- All mining equipment is to be supplied by the selected mining contractor at no additional cost to Ascot.
- Management costs have been included to reflect oversight of the capital program and allow for technical, environmental, procurement and administrative functions, and have been costed at prevailing Colombian wage rates for both local and ex-pat employees.
- The lower capital expense required for Scenario A is a function of removing the 2km conveyor across the River Cauca.
- Both scenarios assume pre-stripping and a long-term strip ratio at around 6:1.
- No further mineable tonnage above the initial 1.4Mt is assumed at the end of Year 5, although the Company expects to potentially expand its resource base with further exploration drilling planned within the Lara concession.

The Company expects an additional US\$2.1M in expansionary capital will be required during FY16 to achieve a production rate of 400,000tpa. Under either scenario the capital intensity of developing Titiribi is very low compared to the industry average. This reflects the ability to utilise existing transport infrastructure to get to market, the ability to sell a direct ship product with no need for a wash plant and the competitive cost environment in Colombia.

## Average Cash Operating Costs

Titiribi cash operating costs have been determined by combining the estimated direct cost elements of contract mining and waste disposal, quality control, field and administrative management, environmental, and transport and logistics costs as highlighted in the table below.

	Scenario A	Scenario B
<b>Physicals</b>		
Average Coal Recovery		85%
Marketable Coal Production		1.4Mt
Annual Marketable Coal		Up to 400Ktpa
Mining Method		Open Cut
Mining Commencement		Early 2015
<b>Mining &amp; Processing costs</b>		
Contract Pre-Strip Mining <sup>1</sup>	5.9	5.9
Contract Coal Mining	2.2	3.1
Contract Waste Mining <sup>2</sup>	22.4	22.4
Electrical	3.1	3.6
Quality Control (at Mine)	1.0	1.0
CdT Field Management	2.4	2.4
Environmental, OH&S and other	0.8	0.5
Land Leasing Fees	2.0	2.0
Government Royalty <sup>3</sup>	4.1	4.1
<b>Sub-Total: Mining &amp; Processing</b>	<b>44</b>	<b>45</b>
<b>Transport, Handling &amp; Logistics<sup>4</sup></b>		
Trucking	-	24.4
Port Fees & Handling	-	14.1
Quality Control (at Port)	-	0.2
<b>Sub-Total: Transport &amp; Logistics</b>	<b>-</b>	<b>39</b>
<b>Total Operating Cost</b>	<b>44</b>	<b>84</b>

Notes:

- (1) Pre-strip waste volume of 3.39Mbcm
- (2) Average waste disposal cost incurred to produce 1.4Mt of coal
- (3) Government Royalty of 5% applied to weighted average mine gate price
- (4) Transport and related port costs applied to semi-soft coking and thermal coal sales

### Key assumptions:

- Pre-Strip costs reflect removal of 3.39Mbcm of overburden.
- Current estimates for coal and waste mining costs adopted an open-pit approach, separating production into two mining phases, which allows Ascot to produce the best economic outcome for mine start-up by minimising strip ratios, and maximising coal quality and cash flow.
- Contract mining waste cost is representative of the average cost incurred to mine overburden and interburden required for the production of the total estimated 1.4Mt mineable coal tonnage; this translates into an average LOM strip ratio of 6:1.
- Trucking and Port costs were obtained from independent logistics providers and prepared by an independent third-party in-country consultant.

- Government Royalties have been sourced from legislative publications by Colombia's National Mining Agency and is currently being reviewed. Although subject to price and currency fluctuation, based on the latest published information the Company anticipates government royalties in the order of US\$4.1/t.
- Quality control is an average of rates obtained from certified companies currently operating in Colombia.

### Further Work

The key areas of focus for the Company during the next phase of its Development Plan (i.e., Phase 2) will be designed around:

- The additional upside potential of current project economics by undertaking trade-off studies and further analysis of key cost variables in order to further refine the low-cost nature of the project;
- Expanding the exploration drilling program at Lara, focusing on increasing the overall resource estimate and improving the JORC resource category in order to extend the mine-life of future operations;
- Continuing with its advanced negotiations with surrounding concession-owners regarding the acquisition of strategic, coal-bearing concessions along strike to the north and south of its current tenements at Titiribi;
- Further coal sampling and testing to qualify metallurgical properties and increase yield optimisation; and
- Investigating the possibility of establishing a coal handling and blending facility for local third-party producers to produce a blended Titiribi coal product to increase overall coal quality and marketability.

At this stage, Ascot expects to move into its Feasibility Study carrying both development scenarios. This will enable greater flexibility in future operational decisions, as well as placing the Company in a strategic position to discuss project development with potential off-takers. In parallel with the Feasibility Study, Ascot will be in a position to advance both the Environmental and Mining permit applications for the proposed mining development.

### Executive Chairman Andrew Caruso commented:

'Completion of the PFS provides confirmation and strong endorsement that a 'starter' mining operation at the Titiribi project can be developed to support the Company's objective of targeting projects that exhibit near term production and low development capital.

In the near term, the Company will continue to advance environmental and mining approvals, complete 'trade-off' studies and position the project to interested parties prior to the commencement of the Feasibility Study later in 2013.

In tandem, the Company will also begin to undertake further in-fill drilling and exploration work at the Lara concession, as well as progress discussions and negotiations with surrounding concession owners to expand the Titiribi project site.

Ascot is dedicated to its strategy of demonstrating ability to fast-track coal interests in Colombia, and in doing so establish a solid in-country reputation."

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## Competent Person Statement

The information in this report that relates to Mineral Resources is based on information compiled by Mr Gardar Dahl, who is a Certified Professional Geologist and member of the American Institute of Professional Geologists, a Recognised Overseas Professional Organisation included in a list promulgated by the ASX from time to time.

Mr. Dahl is a Senior Associate with Behre Dolbear and Company (USA), Inc. Mr Dahl has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Dahl consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## About Ascot Resources Limited

Ascot Resources Limited (**Ascot**) is an ASX listed coal explorer and developer. Its major asset is its 90% JV interest in the Titiribi Coal Project located in the Department of Antioquia, Colombia. With the Project site located only 70km from State Capital Medellin, it is close to existing utilities and infrastructure. It is Ascot's intention to grow the Colombian business via asset acquisition and it will be continually assessing opportunities within Colombia.

For more information, visit [www.ascotresources.com](http://www.ascotresources.com) or contact:

### **Andy Caruso**

Executive Chairman and Chief  
Executive Officer  
T: +61 8 9381 4534  
F: +61 8 9380 6440

### **David Tasker**

Investor Relations  
T: +618 9388 0944  
F: +618 9388 0933



## APPENDIX A: Visualisation of Annual Stage Plans

The waste was dumped and the advance for each year in the dumping was visualised. Figures 1 to 5 show the advance of the mining faces for coal and waste, the waste dump advance, an indicative arrangement for the layout of the waste and coal conveyors, and the traffic network, as predicted for the end of years 1 to 5. Figure 6 is an illustration of the underlying shape of the resource, as it encapsulates the 6.3Mt JORC Resource on the El Balsal and El Silencio concessions.

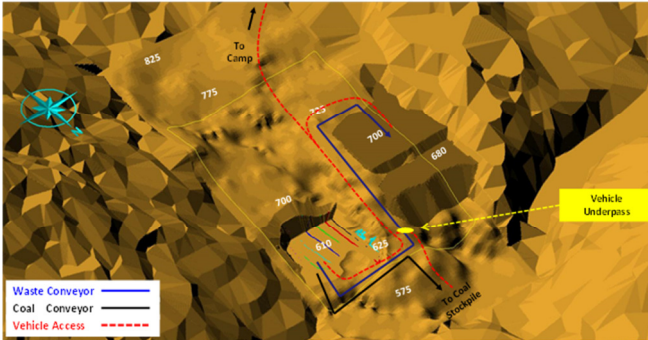


Figure 1: Predicted Mining Advance Year 1

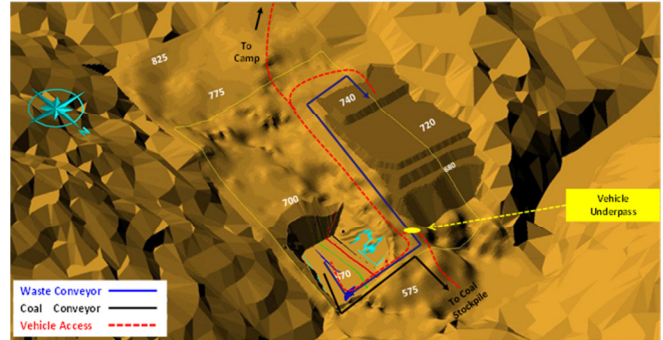


Figure 2: Predicted Mining Advance Year 2

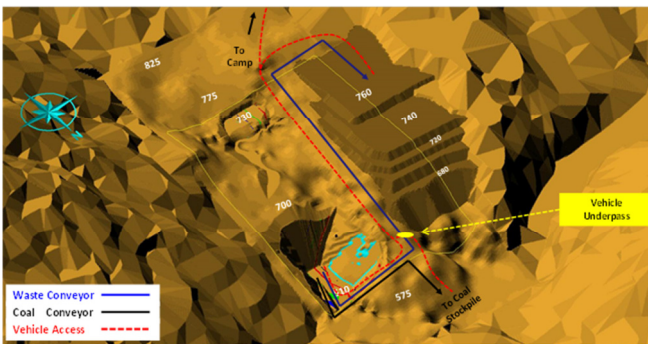


Figure 3: Predicted Mining Advance Year 3

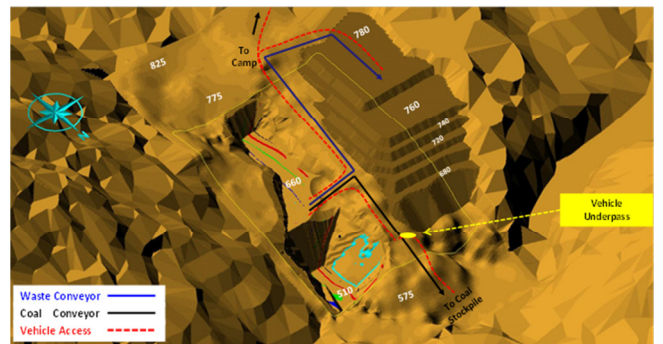


Figure 4: Predicted Mining Advance Year 4

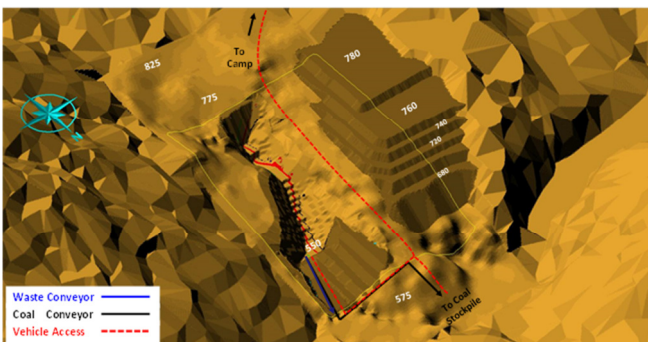


Figure 5: Predicted Mining Advance Year 5

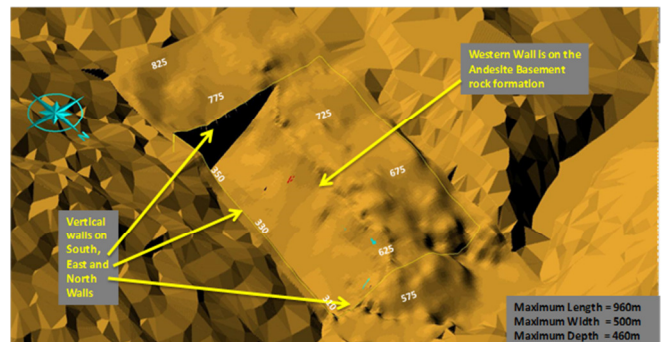


Figure 6: Resource Shape