



Maules Creek Project

Analyst Visit 5 May, 2014

Boggabri, Australia
5 May, 2014



BUSINESS CASE



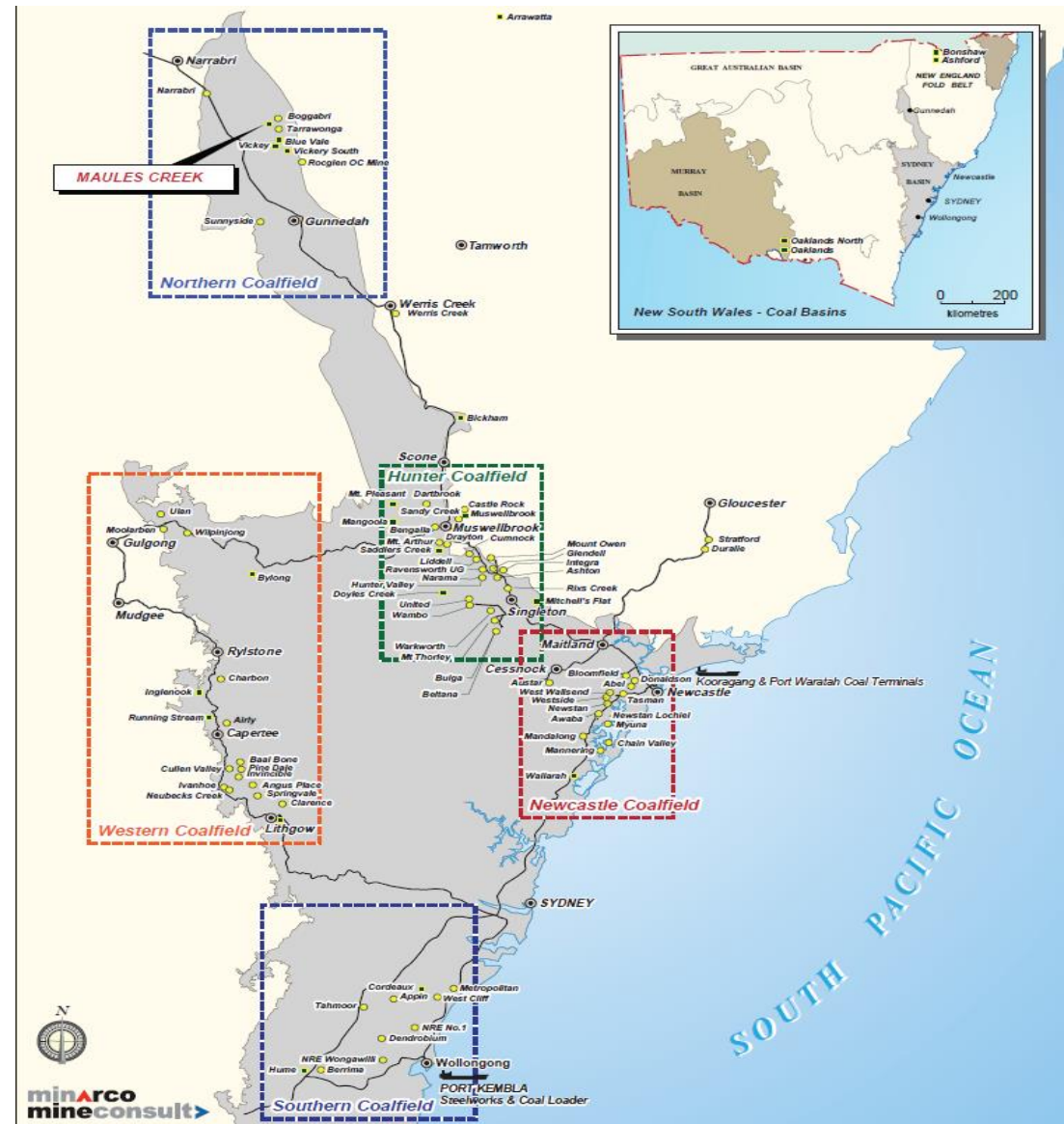
“ Maules Creek Coal – A World Class Resource and Project “

- **The Project is a realistic and feasible plan for the development of the Maules Creek Coal resource**
- **Federal Ministerial signoff of conditions to be satisfied for commencement of construction achieved**
- **Maules Creek will become a significant and valued supplier of premium thermal export coals and premium semi-soft coking coals to the Australian and export markets**
- **The mine plan and project timeline are considered reasonable and achievable and**
- **Cost estimating and economic analysis confirm that Maules Creek Coal is a high value coal project with relatively low capital intensity when compared to development projects in other emerging coal basins**

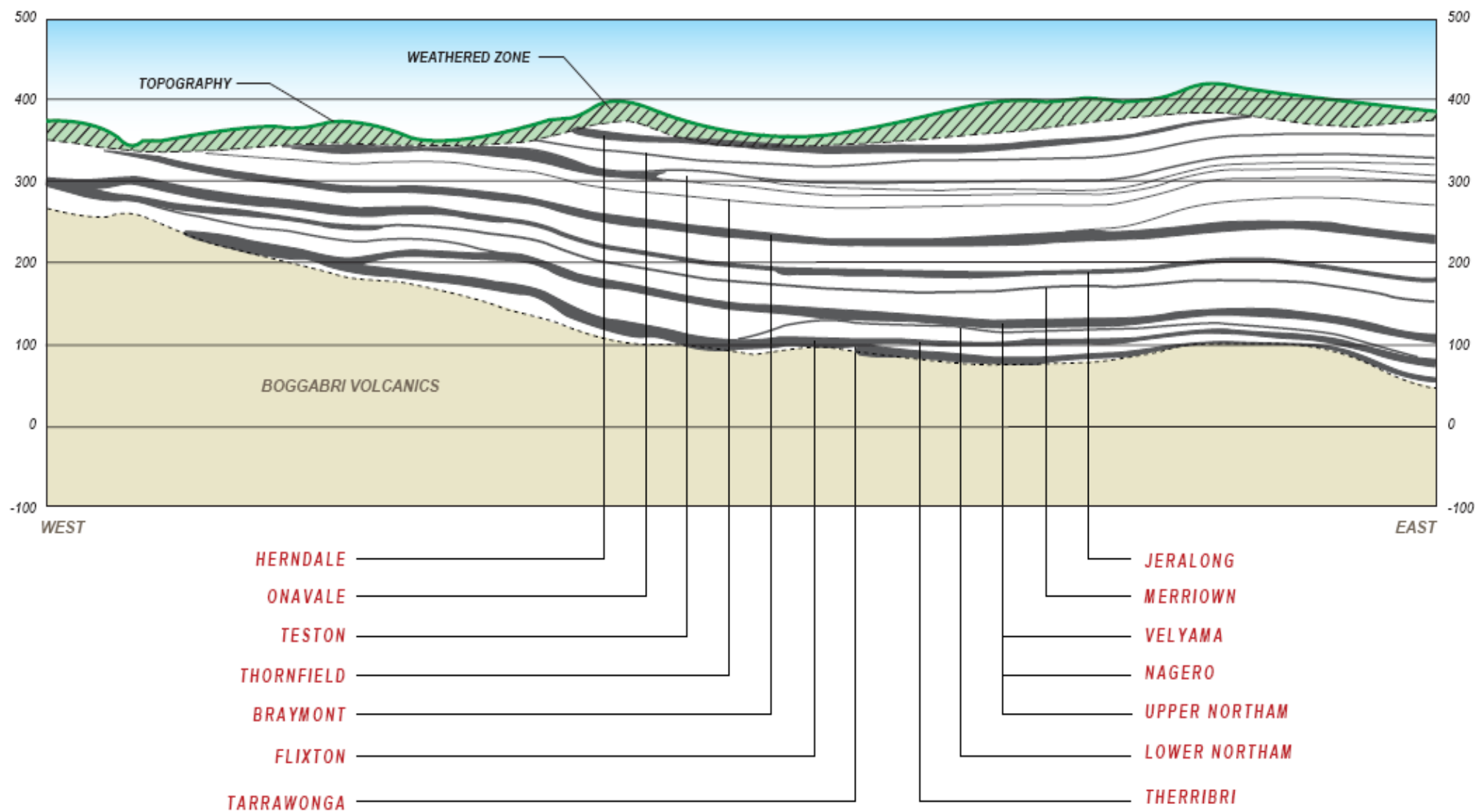
OVERVIEW



- High quality resource which can be mined at relatively low cost
- Simple well understood geology
- Provides both thermal and metallurgical coal products
- 17 km from the main railway line
- Above and below rail capacity available
- 380km from the Newcastle port where significant capacity expansion has been delivered
- Attractive economics from large scale of the project and ability to utilise ultra class equipment



GEOLOGY



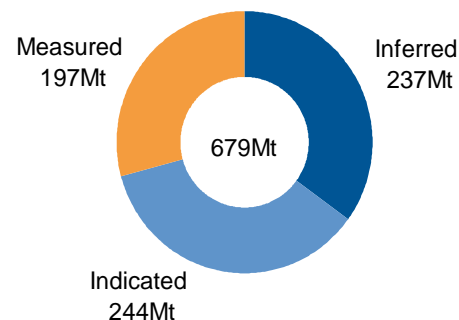
WORLD CLASS RESOURCE



“ Maules Creek is one of the largest Australian coal deposits “

- One of the last major undeveloped coal deposits in NSW with JORC Resources of 679Mt
- Geology well understood and mine planning undertaken with high degree of confidence
 - Definitive feasibility study completed July 2011 and project economics updated in October 2012
 - Over 650 boreholes (~76,000m) drilled and geo-physically logged within the original tenement area prior to 2010
 - 2010 exploration project complete, 14,000m of HQ and LD drilling

Maules Creek JORC (Joint Ore Reserves Committee) Resources

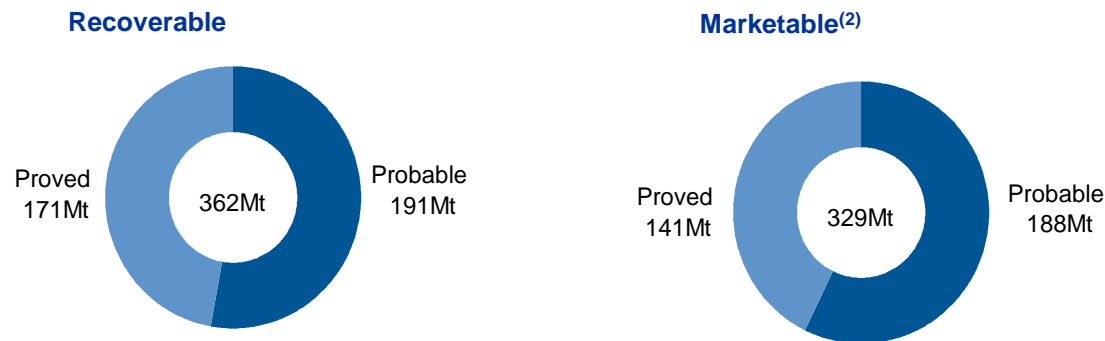


WORLD CLASS RESERVES



- **Recoverable Reserves of 362Mt and Marketable Reserves of 329Mt**
 - Provides for an expected mine life of 30 years
- **Potential to produce both metallurgical and thermal coal**
 - DFS confirmed potential production profile with a high percentage of metallurgical coal
 - Coal quality and CHPP plant design provides significant flexibility to target the production mix to suit market conditions

Maules Creek JORC Reserves



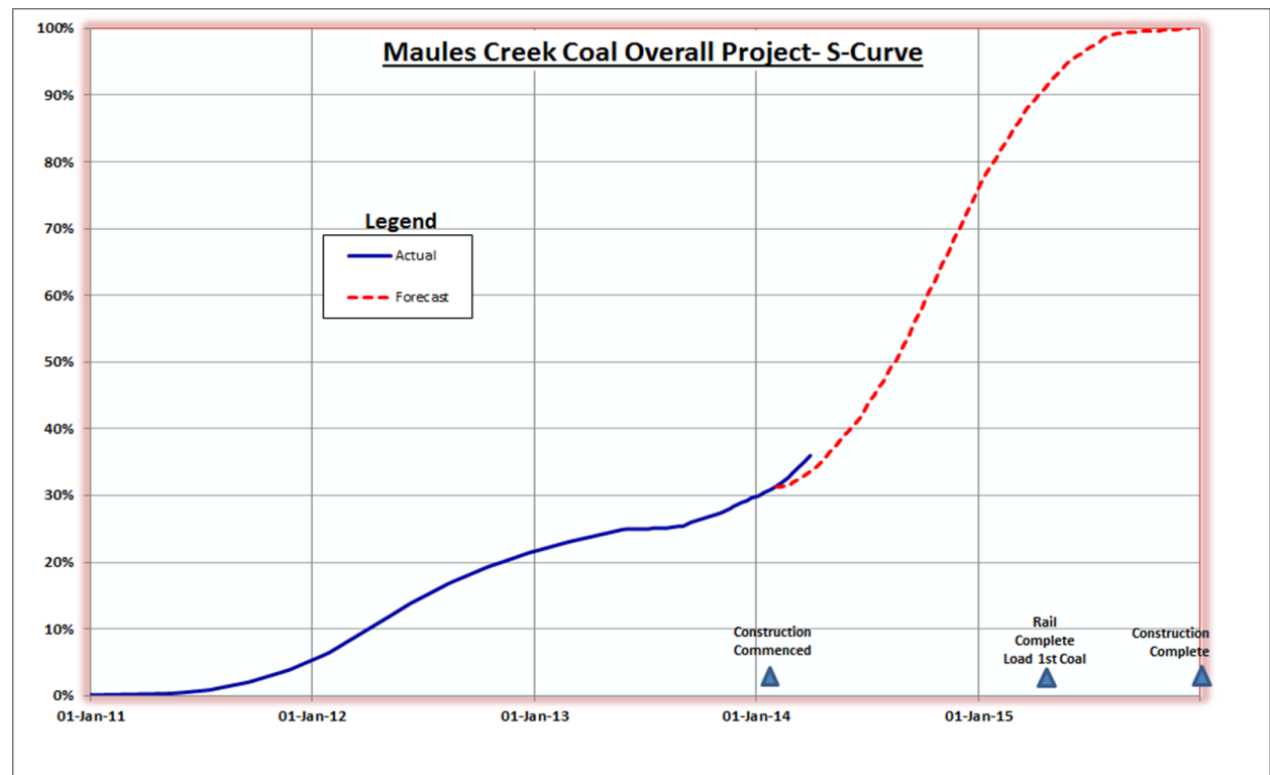
OVERVIEW OF PROGRESS



- Estimated Capital cost remains at \$767M
- Following delays due to court cases and approval, construction commenced in December 2013, with water supply pipeline. Rail commenced in mid January 2014
- Progress currently:

All major contracts in place including:

- Water supply
- Rail and access road
- Bulk earthworks
- Erection of CHPP
- 123kV HV Power supply
- 22kV HV Power reticulation
- Batch Plant
- Portal reclaimers
- Belt Press Filters
- Communications



CONSTRUCTION SETTING



- **Construction commencement was contingent on:**
 - **Primary State and Federal Approvals**
 - **Sign off on Management Plans by State and Federal agencies**
 - **Sign off of cultural heritage salvage on the construction site**
- **Sign off of management plans was achieved in July 2013**
- **Legal challenge to the Minister's EPBC approval launched in July 2013**
- **Threats of an injunction pending the outcome of the legal challenge resulted in an undertaking that clearing would be limited to defined footprint**
- **Rail contract executed in late October 2013**
- **Project schedule revised to reflect approvals / legal delays**
- **Rail available excluding signals Early March 2015**
- **Rail works form the critical path**
- **Signoff of salvage of rail and infrastructure footprint by RAP's achieved in early Nov 2013**
- **Sign off of salvage work by DoPI obtained late December 2013**



CONSTRUCTION SETTING cont'd

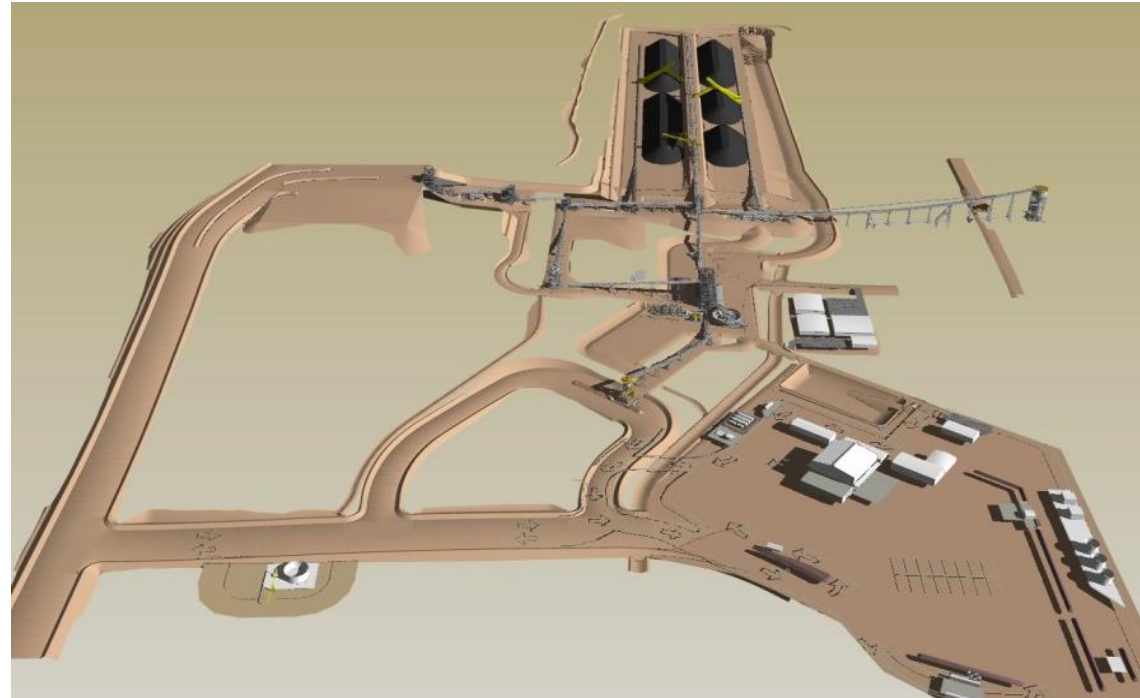


- Construction of water pipeline commenced late December 2013
- Rail works commenced in mid January 2014
- Bulk earthworks contractor mobilised in mid February 2014
- CHPP erection contractor mobilised on site early May 2014
- 132kV and 22kV power supply contracts executed
- Some early delays in start ups plus two weeks wet weather delay due to extremely heavy rain, but schedule for ability to rail coal in Q1, 2015 being maintained
- Mining fleet (both ultra class and conventional) secured
- Mobilisation of crew to erect ultra class fleet scheduled for June 2014
- Mining schedule being synchronised with infrastructure schedule to optimise coal railings
- Forecast capital cost remains within estimate
- Opex model forecasts FOB costs consistent with market expectations.

SCOPE OF PROJECT – Key Packages



- **C001 – Rail and Access Road**
- **C003 – HV Power Supply**
- **C101A – Bulk Earthworks**
- **C104 – MIA Facilities**
- **C108 – Water Supply**
- **C109 – 22KV Power Distribution**
- **C115 – Portal Reclaimers**
- **C117 – CHPP Construction**

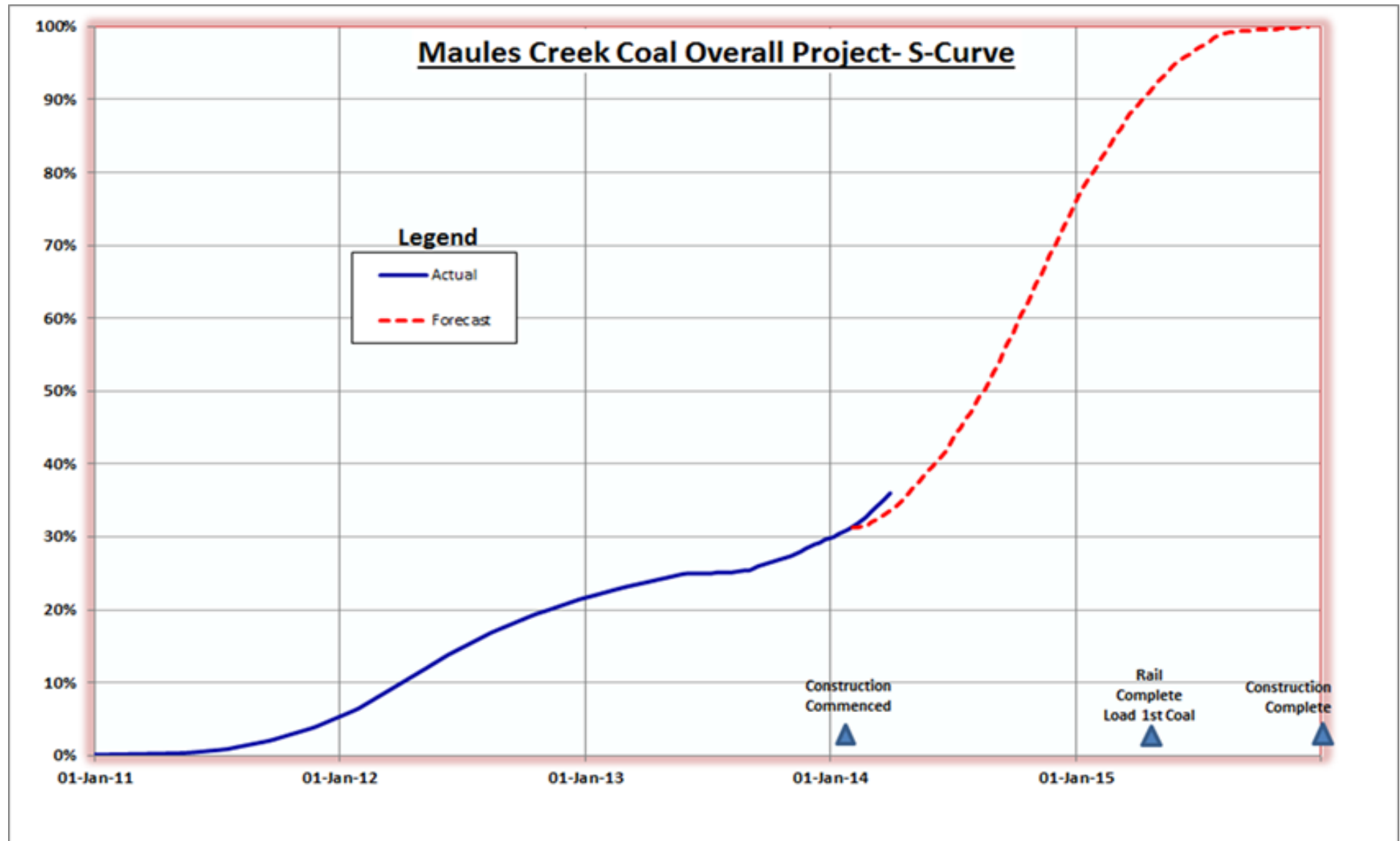


PROGRESS



Area	Contractor	% Complete at End March 2014
Rail	Leighton	18%
Bulk Earthworks	Ditchfield	8%
CHPP Design, Supply, CHPP Erect	Sedgman Downer	44%
Water Supply	Stripes	100%
Power Supply	Transgrid	5%
Mine Infrastructure	Various	15%
Total		36%

OVERALL PROGRESS



WORKPLACE HEALTH AND SAFETY

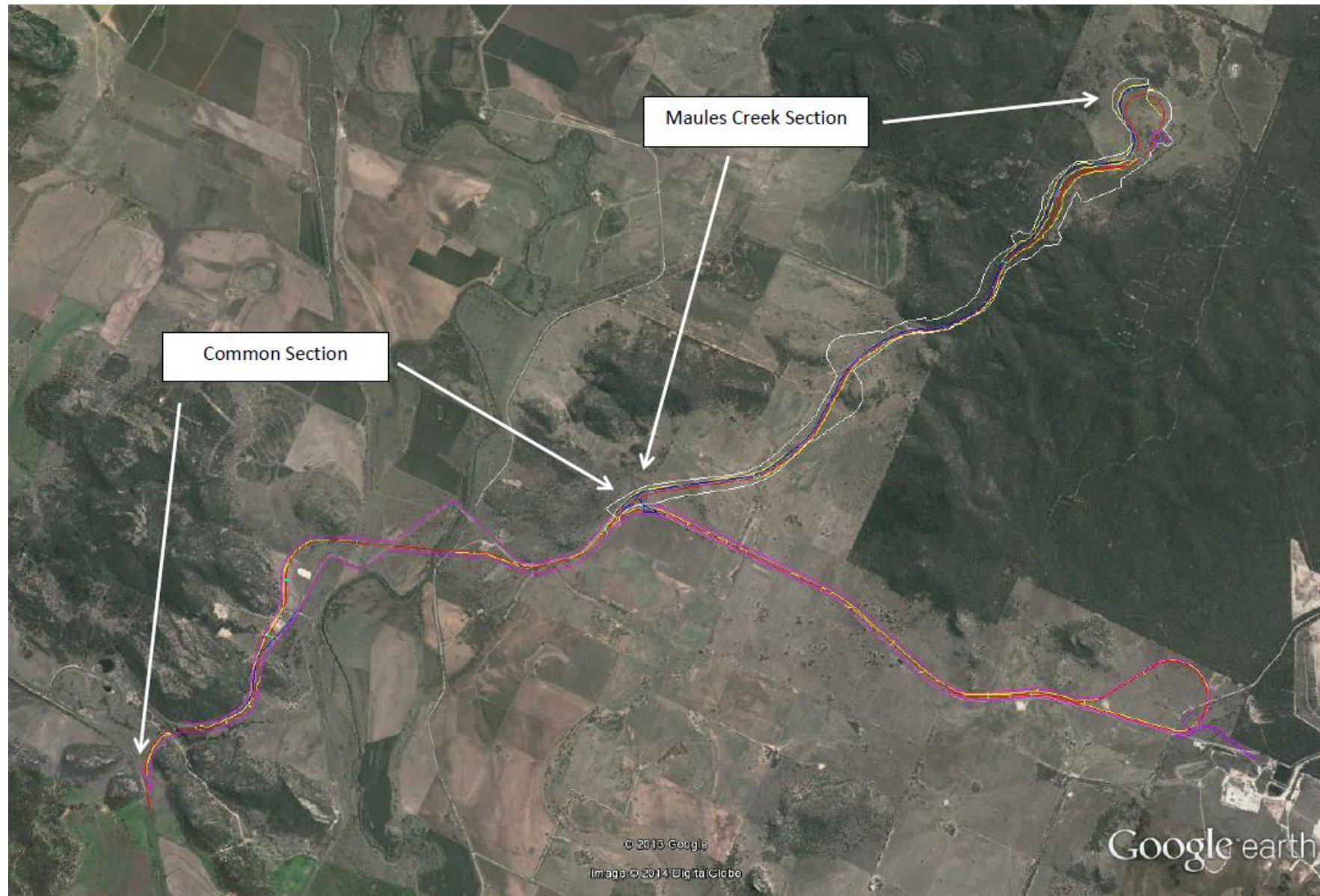


	Current Month March 2014	Year to Date Jul 13 – Mar 14
Total Hours	69085	204871
Reportable Incidents	0	1
Other Incidents	6	22
Total Incidents	6	23
3 month moving ave		
TRIFR	7.4	n/a
LTIFR	0.0	n/a
<i>12 month moving ave</i>		
TRIFR	4.6	n/a
LTIFR	0.0	n/a
Year to date		
TRIFR	4.8	4.88
LTIFR	0.0	0.0

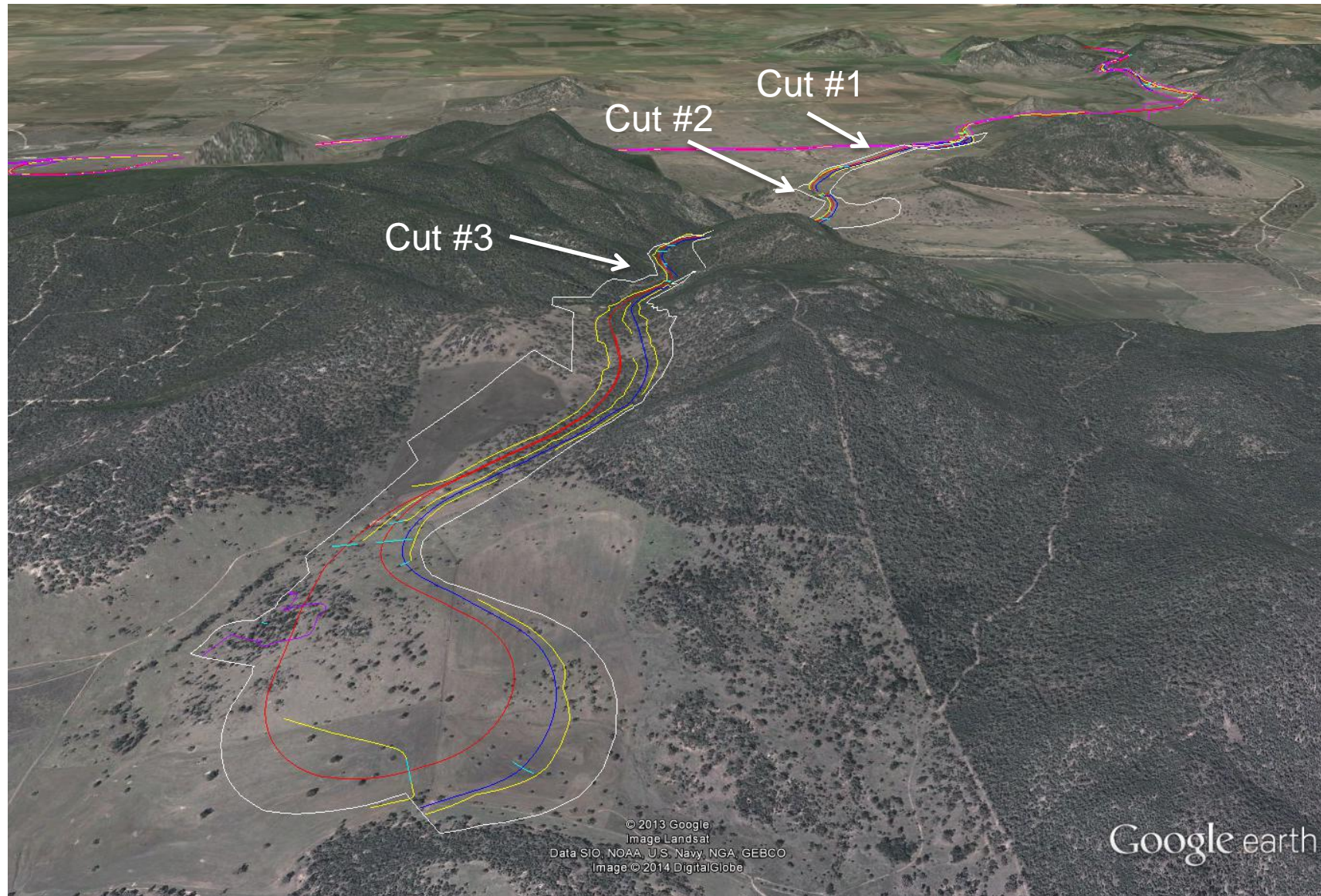
C001 - RAIL WORKS & ACCESS ROAD



C001 - RAIL WORKS & ACCESS ROAD



C001 - RAIL WORKS & ACCESS ROAD



C001 - RAIL WORKS & ACCESS ROAD



Design, construction & commissioning of:

- **11.9km rail spur and balloon loop**
- **7.9km common section**
- **9.5km mine access road**
- **2km creek diversion**
- **27 transverse pipe and box culverts**
- **1.6 Mm3 of cut, approx. 500 Km3 each free dig, rip, blast**



Common Section Namoi River Crossing

C001 - RAIL WORKS – Progress

- Maules Creek section tracking in accordance with the early schedule despite losing 10 days due to rain
- As at end March construction activity was 18% complete – excluding design and early works
- Clearing 100% complete
- Topsoil stripping 100% completed
- Foundation treatments commenced
- Work progressing in cuts 1, 2 and 3 concurrently
- Volume of material moved to date approximately 500,000m³



Culvert in Rail Loop area

C101A - BULK EARTHWORKS



C101A - BULK EARTHWORKS - Scope



Bulk Earthworks scope:

- CHPP
- ROM
- Train Load Out (TLO)
- MIA Area Works
- Site Access Roads
- Area Pavement Works
- Dams
- Water Management Structures.



Top section of ROM Slot Wall and Micro Piles

C101A - BULK EARTHWORKS



➤ Bulk Earthworks Key Dates :

- Milestone 1 – ROM to TLO
Jun 2014 : On schedule
- Milestone 2 – Overall PC
Jan 2015 : On Schedule

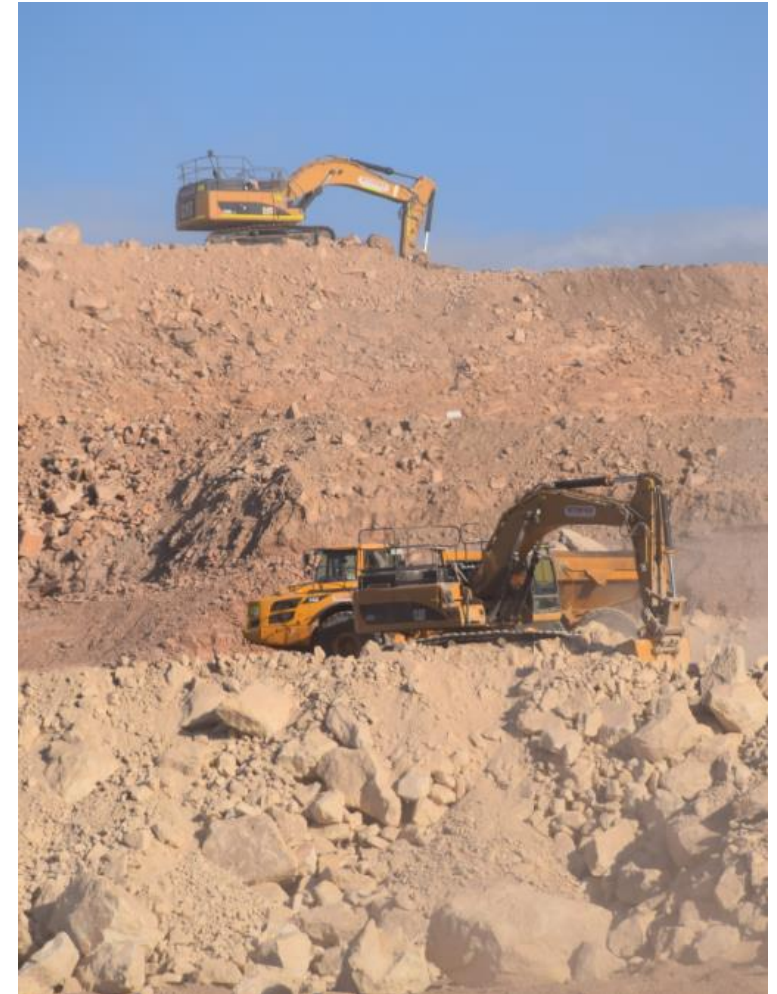


TLO Platform Complete ready for Piling

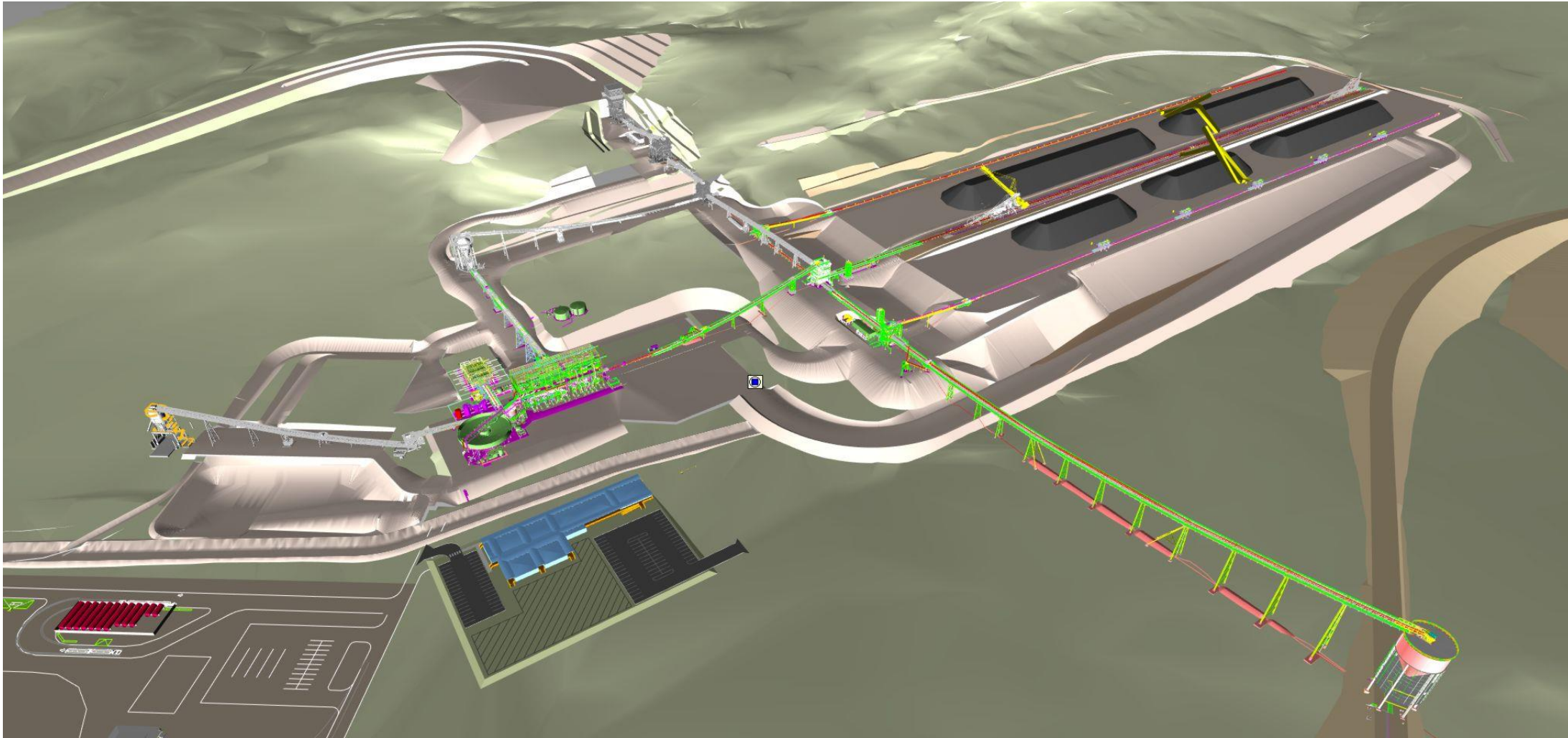
C101A - BULK EARTHWORKS

➤ Progress to Date:

- Contract Executed 20 Jan 2014
- Commenced clear and grubbing activities 11 Feb 2014
- Lost time due to major rain event >200mm
- Worked through Easter and Anzac breaks to recover time
- Planning double shift on ROM slot wall and stockpile areas
- CHPP construction office pad, CHPP laydown pad and TLO areas handed over, 60ML borrow pit dam created for construction water



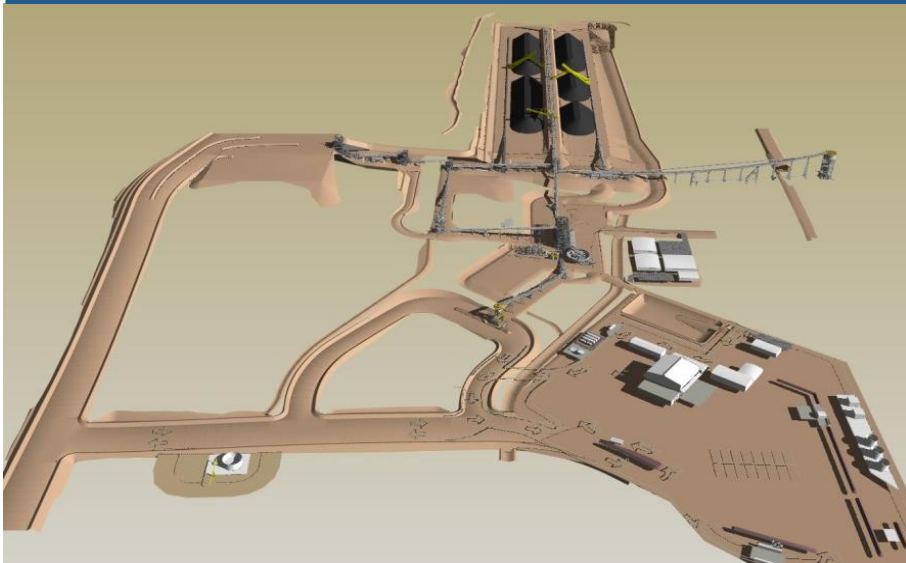
C117 - COAL HANDLING & PREP PLANT



COAL HANDLING & PREP PLANT

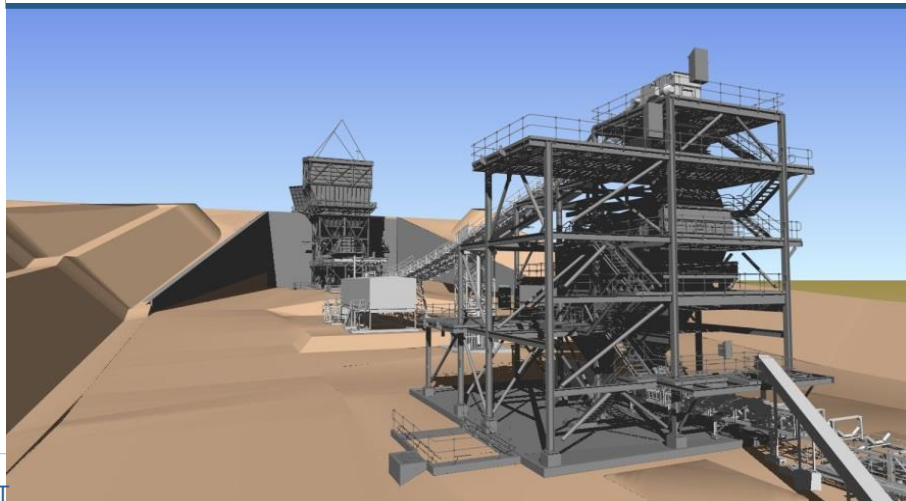


CHPP looking south



- **Class-leading CHPP design by Sedgman**
- **Bypass system rated for 1,850tph (13.3Mtpa)**
- **Wash plant system rated at over 1,700tph (12.3Mtpa)**
- **Critical, long lead time, equipment ordered and fabricated and stored at Narrabri**
- **Configuration allows for some staging of construction**
- **Train loading capacity and stockpile handling systems to deliver operational efficiencies**

Secondary sizing station, looking to ROM hoppers



CHPP and thickener



C117 - COAL HANDLING & PRE PLANT



- Downer EDI appointed Principal Contractor for construction
- Full Audit of all equipment completed
- Bulk earthworks handover of train load out area completed. Piling activities commencing after Easter
- Pre assembly of equipment at the Narrabri yard has commenced
- Additional equipment orders have been placed for sections of the plant that have been redesigned.



C117 - COAL HANDLING & PREP PLANT



- Piling activities for Train Load Out Bin commenced on 29 April
- Piling Rig will move to CV853 trestle supports during the second week of May



CHPP PORTAL RECLAIMERS



- Design Hazop has been completed with final sign off expected in Germany on May 5th
- GSI heavy industries in China have commenced procurement of materials and will commence fabrication in May
- GSI quality assessment visit planned for June
- Temporary loading facilities for the stockpile are being finalised

CHPP BELT FILTER PRESS



- All six filters have been fabricated and QA testing completed
- Filters passed Factory Performance Testing in March
- Filters have been despatched via sea freight and are due to arrive in Australia in May
- The Filters will be stored at the Narrabri storage facility until they are required for installation in late October

CHPP CONSTRUCTION SCHEDULE



Key points of note as follows:

- **Piling activities commence 29 Apr 2014**
- **Site deliveries for pre-assembly works commence 5 May 2014**
- **CHPP Construction offices assembled on site 19 May 2014**
- **Site civil works commence 5 Jun 2014**
- **Erection of structure commences late Jul 2014**
- **Bypass system commissioning commences Jan 2015**
- **Bypass ready Feb 2015**
- **CHPP commissioning May 2015**

MINE INFRASTRUCTURE



C108 - Water Supply



C003 & C109 Power Supply



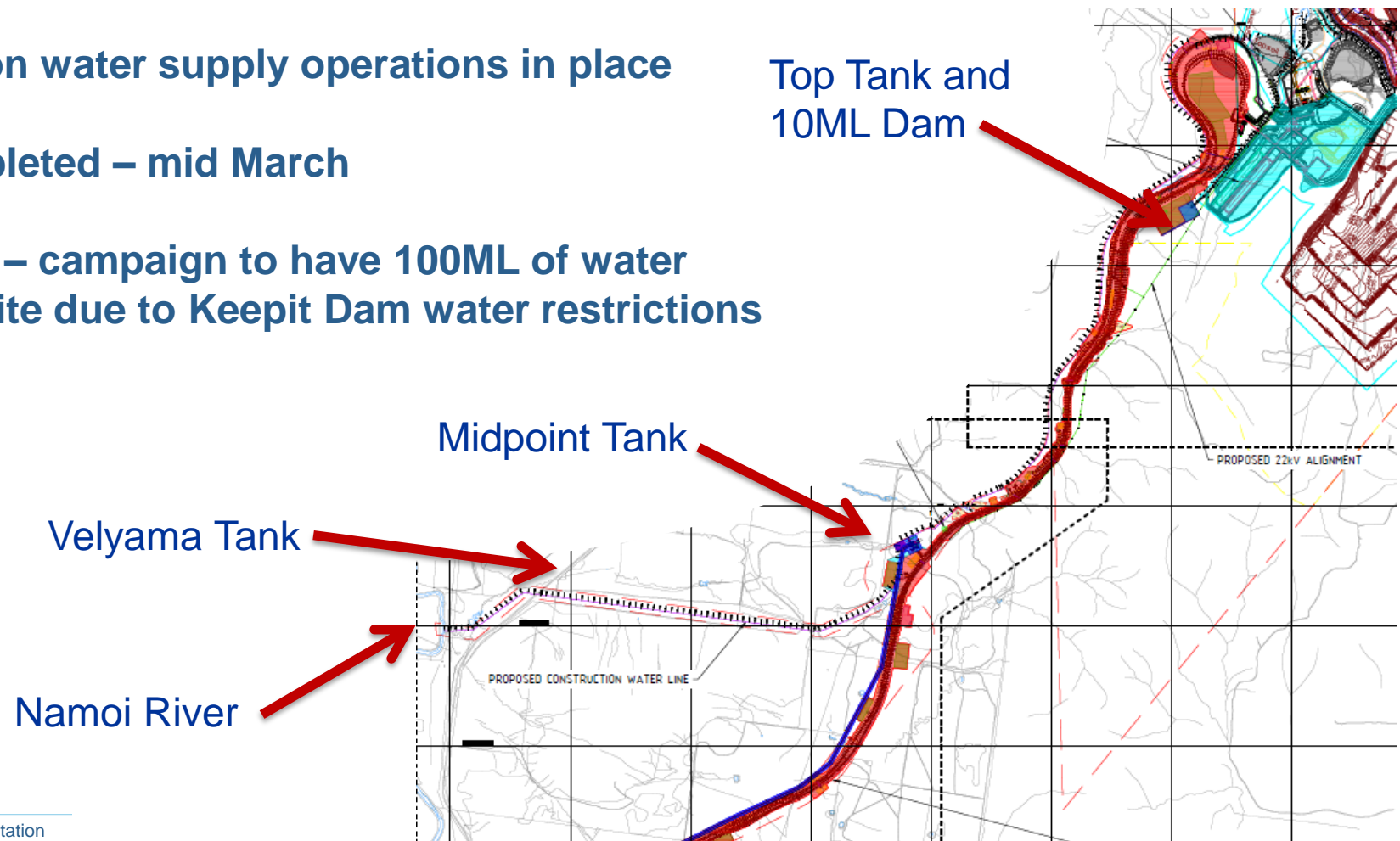
C104 - MIA Facilities



C116 – Site Communications

C108 – WATER SUPPLY - Scope

- Water infrastructure installed from Velyama to Top Tank
- 10ML Dam Complete
- Construction water supply operations in place
- 100% Completed – mid March
- Project 100 – campaign to have 100ML of water stored on site due to Keepit Dam water restrictions - complete



C108 – WATER SUPPLY - Progress



River Pump Station – 100%



Velyama 100%



50MI Construction Water Dam



Top Tank100% - Dam 100%

C104 INFRASTRUCTURE - MIA



➤ Works packages

- Workshops, MIA and CHPP offices
- Site services – Water backbone including Potable and Fire water
- Bulk fuel and oil storage and HV / LV refuelling
- HV / LV wash bays
- Equipment spares laydown area and goline parking area
- Visits conducted to Werris Creek and Mangoola

➤ Self Manage works packages

➤ Key dates:

- Packaging and schedule dates under review
- Target Tender date – May 2014
- Target Award date – Jun 2014
- Completion Target – February 2014



C003 – POWER INFRASTRUCTURE



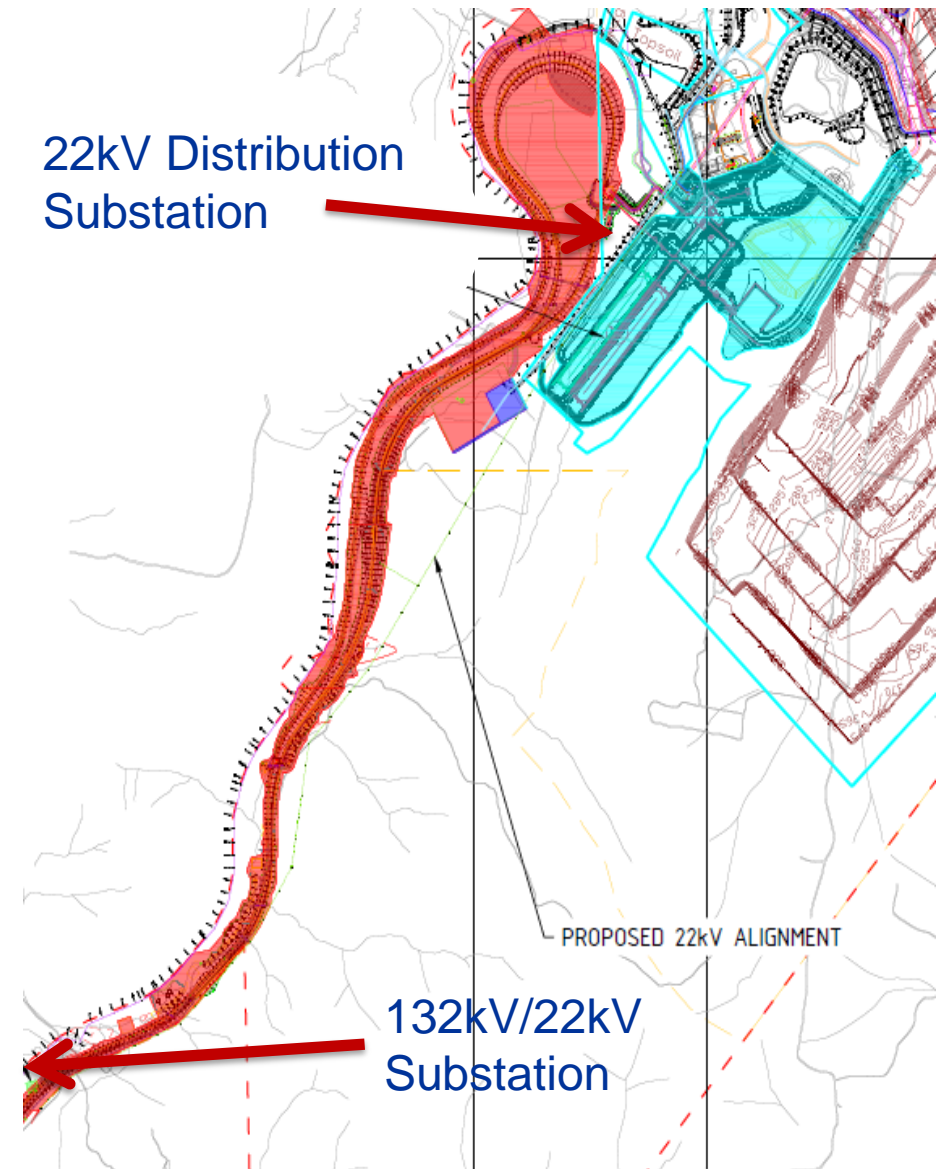
- **Power Infrastructure consists of 2 parts:**
 - **C003 - 132kV Transmission Infrastructure – Transgrid**
 - **C109 - 22kV Power Supply – Downer**

- **C003 - 132kV TransGrid Power Supply**
 - **4.5km Transmission Line**
 - **132kV Switching Station**
 - **Power Agreement finalised with Transgrid 17 April**
 - **BCEP Constructed in 8 months**
 - **Target Date Jan 2015**

- **Key Interactions**
 - **BCEP – shared transmission line**
 - **22kV Contractor – interface of 132kV to 22kV equipment**

C109 – 22kV POWER

- **C109 - 22kV Power Supply**
 - 132kV / 22kV Substation
 - 4.5km Transmission Line
 - 22kV Distribution Substation
- **Key Dates**
 - Contract Award – 30 April 2014
 - Target completion – January 2015
- **Key Interactions**
 - Leightons – pad construction
 - Transgrid - 132KV Power Supply



C116 – SITE COMMUNICATIONS



➤ Scope:

- Microwave Link for data scope being reviewed
- Mine Hardwired Fibre Optic infrastructure
- Fibre Optic Link to public telecommunications infrastructure

➤ Status:

- Construction Microwave Link being set up for construction – Vertel
- Investigations ongoing for Fibre Optic installation for permanent Telecommunications services – VOICE/DATA

PORT AND RAIL INFRASTRUCTURE



- 7.5Mtpa of contracted below-rail capacity available to Maules Creek from July 2014
- Provisional notice provided for an additional 2.8Mtpa in below-rail capacity from 2016
- ARTC track expansion projects in relation to these contracted and prospective volumes are underway and on target for completion prior to first railed coal
- In December 2012 finalised an agreement with Aurizon to haul up to 16Mtpa
- 8.5Mt of contracted port capacity
- Can access both PWCS and NCIG coal terminals and will require additional capacity as the mine ramps up to full production
- Additional capacity is available



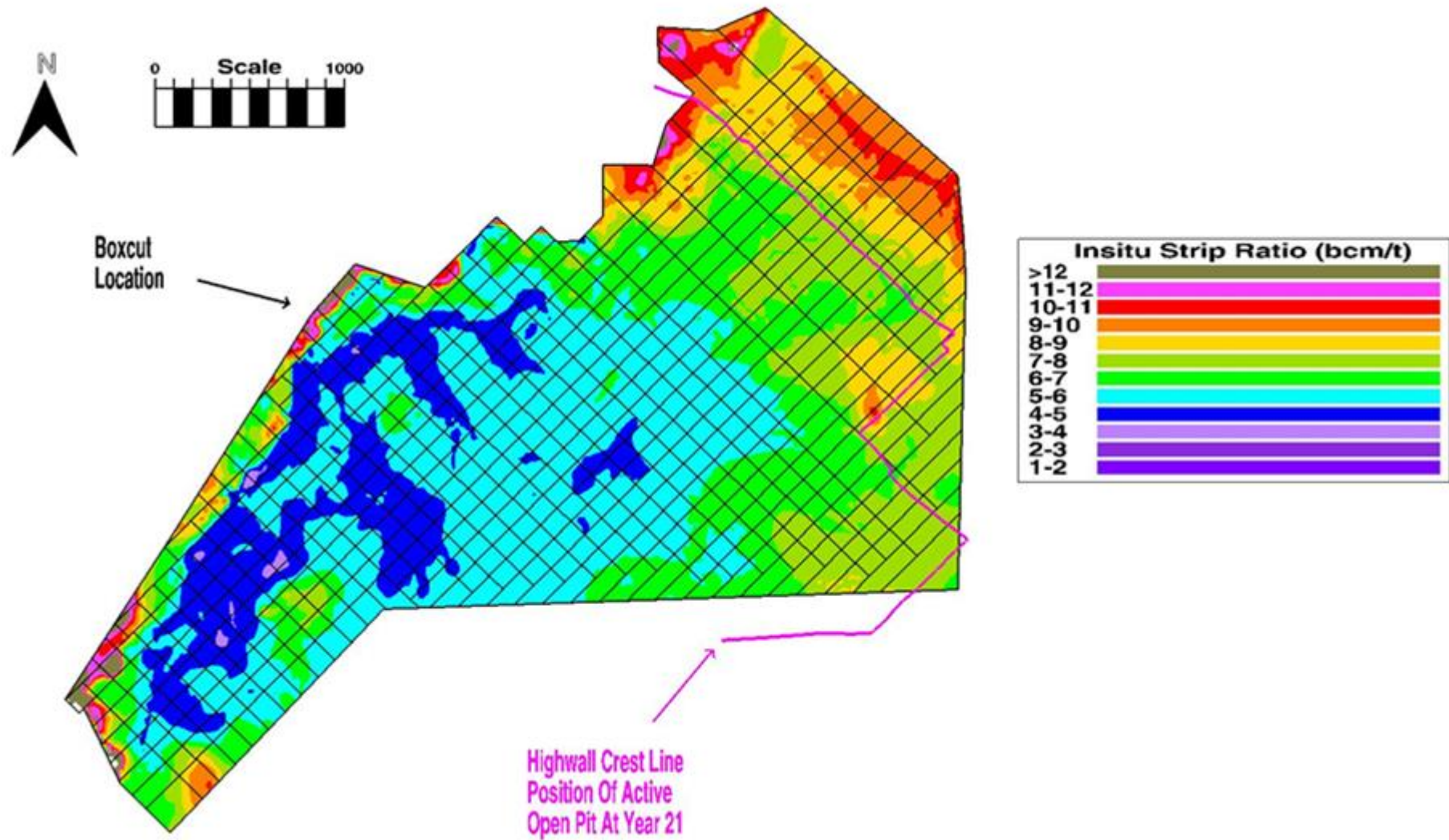
MINING



- Mine method is by shovel and truck
- Robust mobilisation & build-up
 - After thorough analysis have adopted owner operate model.
 - Leveraging internal mining capability
 - Have secured ultra class mining fleet.
- Detailed mining sequence for LOM created (Month x Month)



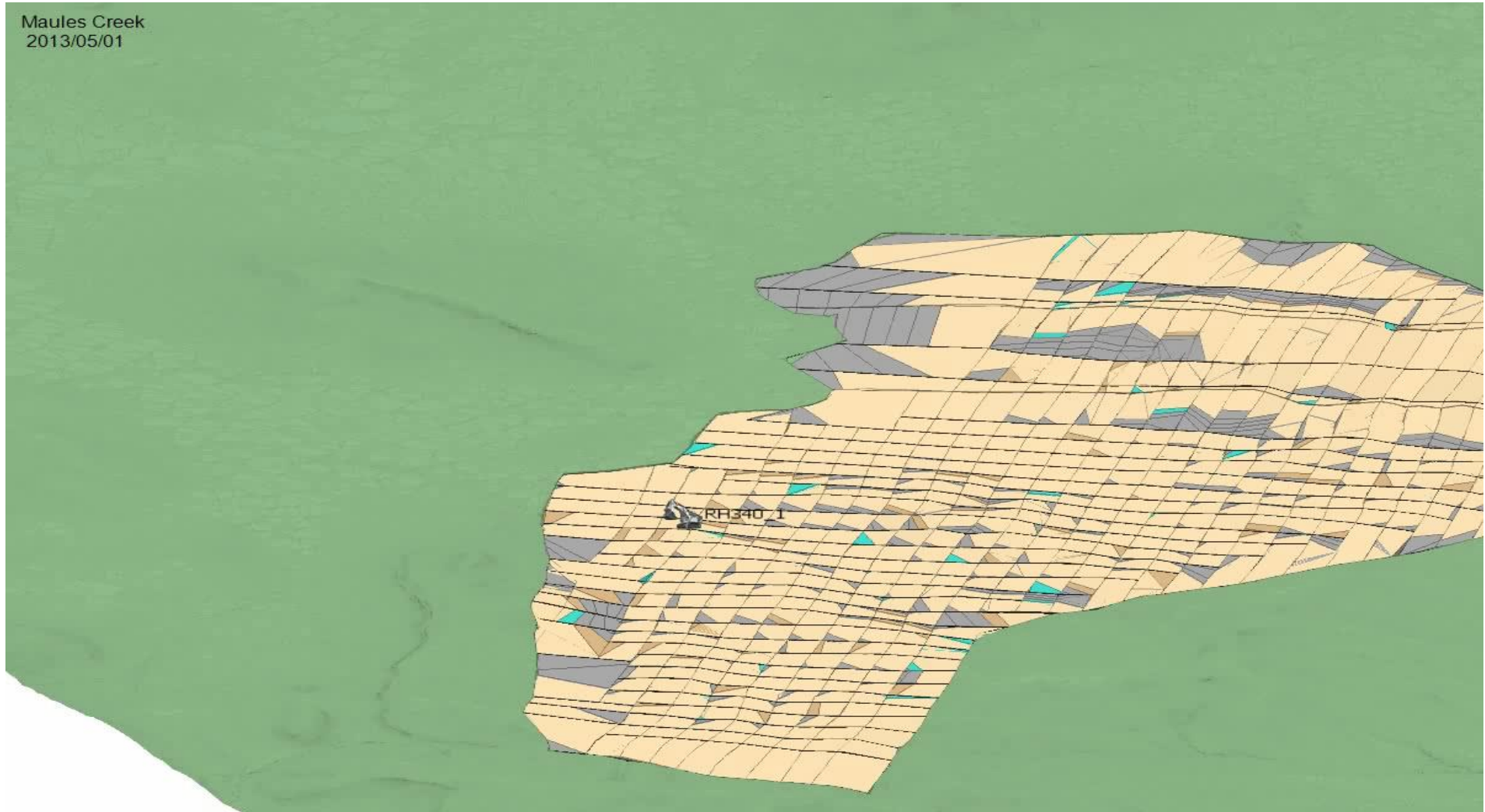
STRIP RATIO



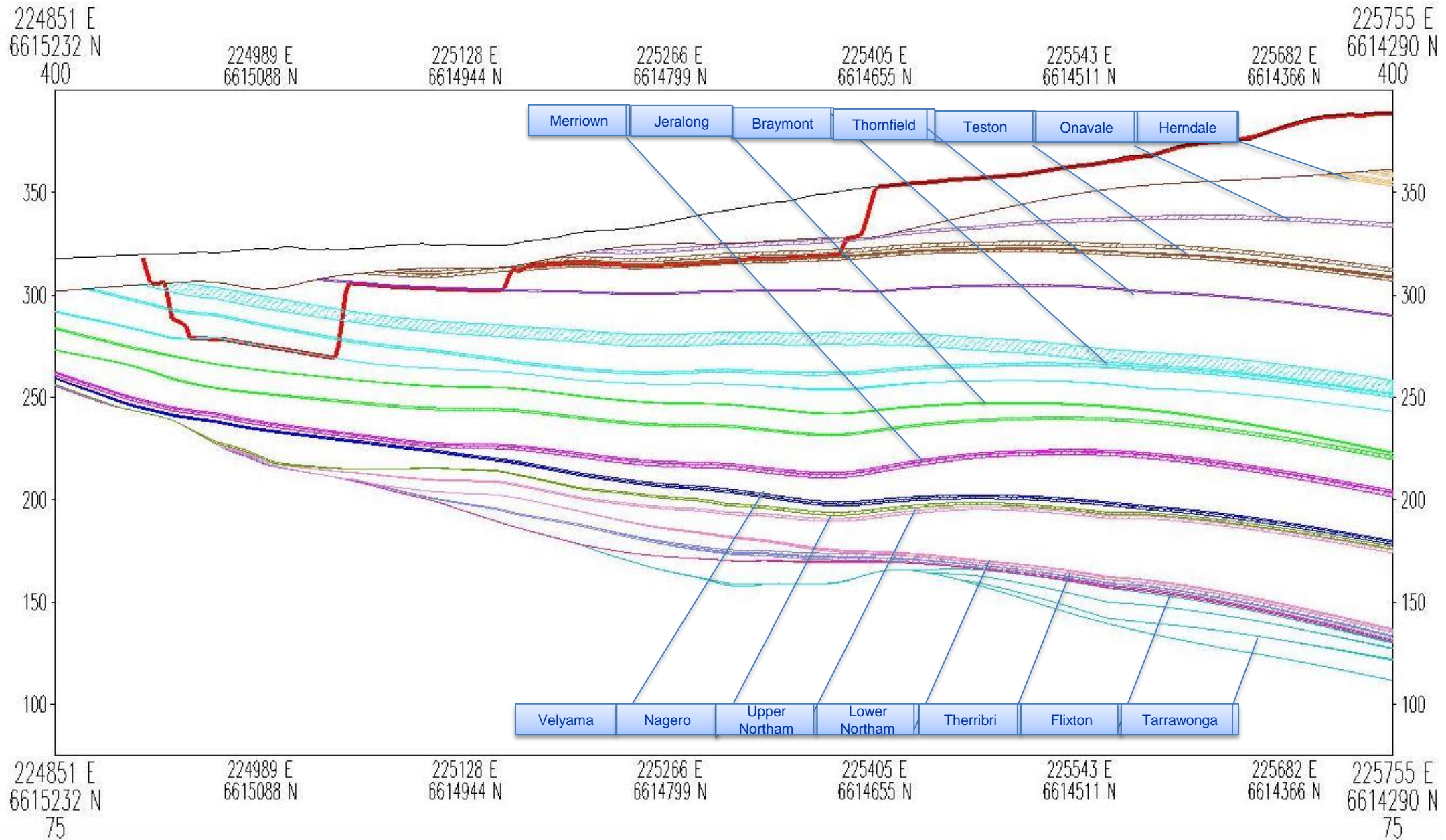
MINE PLAN



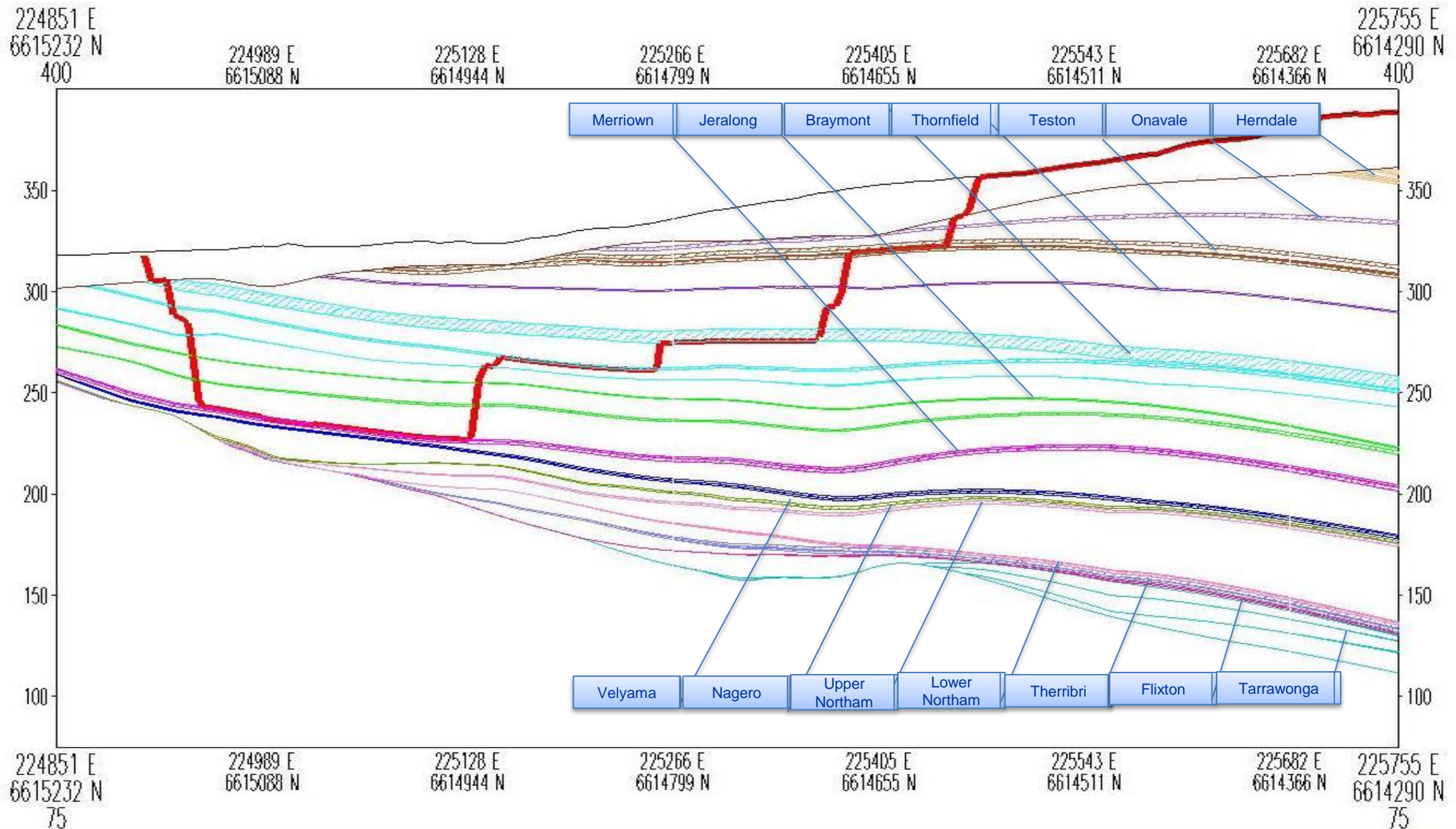
Maules Creek
2013/05/01



Yr1 X-Section



Yr2 X-Section



MINING STRATEGY



- **First stage Ramp up of production to target 6Mtpa ROM rate from February 2015**
 - **Blasting to commence July 2014**
 - **Waste removal to commence August 2014**
 - **Staged introduction of mining fleet**
 - **Four excavators to be introduced successively between August and February**
 - **First coal being mined from January 2015**
 - **Coal mined at 6MT rate from March 2015**

- **Second stage Ramp up to 9Mtpa rate from February 2016**

MINING FLEET STRATEGY

➤ Hitachi Equipment Selected For Excavators and Large Trucks

- 2 x EX3600 Excavators (350t)
- 2 x EX8000 Excavators (800t)
- 11 x EH5000 Trucks (304t)



➤ Westrac (CAT) to supply bulk of ancillary fleet

- 4 x CAT 789D's
- 6 x Dozers
- 4 x CAT MD6290 Drills
- 3 x Graders

➤ Emeco to supply other ancillary equipment

- 4 x CAT 789D's
- Water Carts
- Opportunity to provide Maintenance Services



OPERATIONS TEAMS



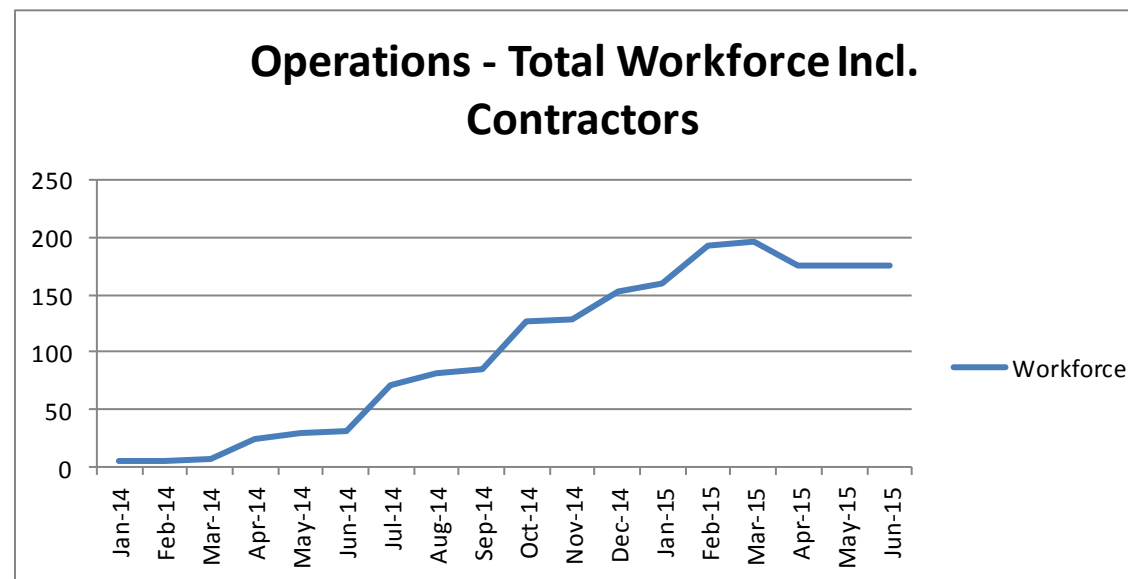
- **Staged introduction of Operations teams with successive fleet installation**
 - **Each excavator will be scheduled to ramp up over a period of 4 weeks from commissioning**
 - **This will allow adequate time for induction and training on equipment**

- **Initial roster to include 10.5 hour shifts**
 - **This is consistent with other existing WHC Open Cuts**
 - **Equipment to be serviced during 3 hour window**
 - **Ability to achieve ~5,600 hours per annum on Tier 1 machines**

RECRUITMENT



- Target experienced operators in initial Ramp Up
- Incorporate Indigenous recruitment program
- Incorporate local candidates



OPERATING COSTS



Average real FOB cash costs over first three years currently forecast to be approximately A\$67/t

- **Detailed mine planning is currently underway to determine the optimum mining strategy**
 - **Low strip ratio (6.4:1)**
 - **Simple, open cut, truck and shovel operations**
 - **High mine yield of 86%**
 - **Current and future market conditions.**
- **Maules Creek expected to improve its competitive cost position over time**
 - **Low strip ratio remains relatively constant over the first 20 years of production**
- **Owner operate model shown to be most competitive.**
 - **Ultra class fleet secured.**
 - **Also conventional coaling and auxiliary fleet secured as well.**

INDEPENDENT RANKING



Wood Mackenzie ranked Maules Creek second highest out of a large number of international projects

The project will deliver significant value to Whitehaven shareholders when it commences production

Top 7 based on NPV, IRR, payback, price risk and P/I criteria

Country	Operator	Asset	NPV	IRR	Payback	Price risk	P/I ratio
Australia	QCoal	Byerwen	2,713	22%	8.0	3%	2.8
Australia	Whitehaven	Maules Creek	2,490	31%	7.0	3%	3.2
Canada	Canadian Dehua	Murray River	2,038	37%	6.3	3%	2.9
Indonesia	Bagus Setia Giri	Selo Argokencono Sakti	591	51%	5.3	4%	4.4
Indonesia	Cokal	Bumi Barito Mineral	323	47%	4.2	3%	3.6
Indonesia	Itochu	Suprabari Mapanindo Mineral	229	28%	5.1	2%	3.1
United States	Alpha	Cresson	169	32%	5.2	3%	3.0
Indonesia	Harum Energy	Tambang Batubara Harum	117	43%	5.3	3%	3.6
Indonesia	Altura Mining	Tabalong	92	58%	4.2	4%	6.2

Source Wood Mackenzie Coal GEM

High ranking, high value project

CLOSING COMMENTS



- Construction has been in progress for three months for the rail and two months for the earthworks
- Today you will see what has been achieved in that time
- The site has been cleared and topsoil removed
- Excavations of the major cuts on the rail have been commenced and opened up to show the nature of the ground
- Aiming to complete earthworks by around September
- Handover of early earthworks accomplished
- Contractor for erection of CHPP has commenced assembly at the storage yard and is mobilising on site
- Mining equipment secured with assembly to commence in June
- Groundwork to move forward to complete the project on time has been achieved
- Opportunities to bring future milestone dates forward are being pursued.

Thank you