Tab A

United Wambo Open Cut Coal Mine Project Mod 16, Mod 13
Significance of the Resource:

While amendments to the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP) have removed the provision that made the economic significance of the resource the principle consideration when determining mining projects and required the NSW Department of Industry, Division of Resources & Energy (the Division) to assess the significance of the resource, the Division considers that an analysis of the resource utilisation and its economics will assist the consent authority in considering the efficiency or otherwise of the development in terms of resource recovery (cl15(1) of the Mining SEPP).

This analysis concentrates on geological, mining and economic aspects of the United Wambo Open Cut Coal Mine Project (the Project) and the Division makes the following assessment:

Size, quality and economic benefits of the resource
The Project is owned and will be operated by United Collieries Pty Limited and Wambo Coal Pty Limited (the Proponents) under a 50:50 Joint Venture arrangement negotiated between the two parties in November 2014. United Collieries Pty Limited is owned 95% by Abelshore Pty Limited, a wholly owned subsidiary of Glencore Coal Pty limited and 5% by the Construction, Forestry, Mining and Energy Union. Wambo Coal Pty Limited is 75% owned by Peabody Energy Australia Pty Ltd and 25% by Sumiseki Materials Co Ltd. The owners and management of the Proponents and the Project have extensive coal mining experience, both as developers and operators, within Australia and internationally, and are both some of the largest coal producers and coal market players in the world.

The Proponents operate neighbouring mining operations located approximately 16 kilometres west of Singleton in the Hunter Valley. Under the Joint Venture arrangement the Proponents propose to develop the Project which will involve combining the existing open cut operations at Wambo with a proposed new open cut coal mine at United. The Project has been designed to optimise resource recovery and mining equipment use across the two mine sites and also optimise the economic use of Wambo's existing mining infrastructure. The Project has a potential operational mine life of 23 years, approval is being sought to produce up to 10 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal, this 10 Mtpa is ROM coal production from the Project and is separate to the already approved 14.7 Mtpa from the Wambo Coal Handing and Preparation Plant.

The Proponents have submitted an Environmental Impact Statement (EIS) to the Department of Planning & Environment which went on Public display on 11 August 2016.

The Project is located directly to the north-east of the currently operating Wambo mining complex which comprises an open cut and underground mine and proposes to utilise the coal handling and preparation plant, and the rail loop at the Wambo

mine. The Project is unusual for NSW in that two large coal industry players in the State have combined in a joint venture to ensure maximum utilisation of a resource that would otherwise most likely not be economic as standalone operations. Also the joint utilisation of mine infrastructure makes good sense from an economic standpoint.

The Division has verified that the Project will provide approximately 150 million tonnes (Mt) of ROM coal and approximately 102 Mt of product coal. The Proponents have completed resource and reserve estimation for the Project in accordance with the Australasian Code for Reporting Exploration results, Mineral Resources and Ore Reserves “the JORC Code”.

The Project will be an open cut coal mine which will operate both as a new operation to the north-east of the existing Wambo mine and also will increase the extent and depth of the existing Wambo open cut. The new open cut to the east of the existing Wambo open cut proposes to combine the resources of the old United underground mine (previously owned by United Collieries Pty Ltd), and the resources above the old United underground which were previously owned by Wambo Coal Pty Ltd. The Division consider this a most appropriate utilisation of these two previously depth restricted resources. The productive life of the Project will be 23 years. The maximum rate of production in any one year would be 8.5 million tonnes per annum (Mtpa) of run-of mine (ROM) coal, and would produce a maximum of around 6 Mtpa of product coal.

The Project would not be a standalone coal mine if approved, it would be fully integrated with the Wambo mining complex in that all coal from the Project would be washed and railed from Wambo thereby making optimum economic use of this facility.

The Project will produce thermal and coking coal products. All products will be sold into export markets. The estimated product types and splits are:

- Export semi soft coking coal (approximately 20%)
- Export low-ash thermal coal (approximately 38%)
- Export medium-ash thermal coal (approximately 40%)
- Export high-ash thermal coal (approximately 3%)

A review of available coal quality information suggests this target is achievable. Raw ash levels necessitate processing by the Wambo Coal Handling and Preparation Plant to meet export market specifications. The Division considers that a total of around 102 Mt of product (saleable) coal from the Project is feasible.

Over the life of the Project, assuming production is sold mostly on the export thermal market, the value of the coal produced would be worth around $9.4 billion in current dollars. The net present value of this revenue stream has been estimated by the Division at approximately $4.5 billion. In a typical year of full production export income from the Project would be around $500 per year.

Export income is vital for the health of both the NSW and Australian economy, export income contributes to the Nation's balance of trade which provides positive benefits to both the NSW and Australian credit rating. The additional export income from the Project will contribute to the around $13.2 billion (2015-16 total) of coal exports annually. Coal exports are by far the largest value export from NSW, representing around 25% of total NSW exports (both goods and services combined).

The Hunter coalfield is the largest in NSW and currently had 16 mines producing coal as at June 2016. In 2015-16 the Hunter coalfield produced nearly 103 million tonnes of product coal, which was 54% of the State's total. The additional around 10 Mtpa of ROM coal to be produced for 23 years from the Project will assist in ensuring the Hunter remains a vital part of NSW coal industry. In 2015-16 the Wambo mining complex produced around 6 Mt of product coal, if approved the Project would add significantly to this total.

The Project will continue the economic activity that the coal industry in the region has generated over the past over 40 years. Many local industries have relied on the coal industry in the past, and hence Project approval would ensure that these businesses continue to operate, or new mine related businesses could commence. These industries include; mine equipment maintenance firms, mining equipment supply firms, coal handling plant maintenance and supply firms. These firms are mainly local industries which employ locally and would rely on the Project for their continued existence.

At full production direct employment from the Project would be 230 employees and during the construction phase would be around 130 positions. Based on other mine projects, DRE believes the indirect employment within the region and in NSW as a whole from the Project could be around 900 positions. Capital investment over the life of the Project would be of the order of $380 million.

From the Proponent's EIS on the Project, DRE also notes the following economic benefits have been calculated by Deloitte Access Economics Pty Ltd:

- Increase Gross Regional Product by $2.1 billion (NPV)
- Increase NSW Gross State Product by $3 billion (NPV)
- Overall net benefit to the NSW community of $413.5 million (NPV)
- Net local employment effect of between $5 to $9 million per year over the life of the Project
- The mines' local share of expenditure on non-labour inputs is estimated at 29%, assuming this share is maintained during the Project, the locality is expected to benefit from $66 million a year during the establishment phase and $89 million a year during ongoing operations.

Resource Recovery

A large number of factors constrain extraction of resources in the Project mine plan and methodology. These include geological constraints, lease extent, infrastructure and geotechnical constraints. Open cut truck and shovel mining proposed will extract all seams where technically possible. Given the constraints outlined in the

proponent's EIS, the Division considers the Project mine plan for open cut operations to adequately recover coal resources within the mine footprint.

The Project, a result of the joint venture between United Mine and Wambo Mine, maximises coal production and resource recovery. The United Mine was constrained with little dump space, no rail and limited infrastructure (no CHPP). By integrating the operational facilities and mining leases in the adjacent Wambo Mine, the Project achieves far greater resource recovery than separate open cut coal mining projects could.

Coal Royalty Calculation

The Project is a proposed open cut mine and as such a royalty rate of 8.2% applies to all saleable production, this rate is applicable to the net disposal value. Net disposal value is the price received per tonne minus any allowable deductions. The main allowable deduction is for coal beneficiation which is either; $3.50 per tonne for coal subjected to a full washing cycle, or $2.00 per tonne for coal subjected to a simple washing process, or $0.50 per tonne for coal that is washed and screened. As all product coal from the Project will be subjected to a full washing cycle, a deduction of $3.50 per tonne from the value of coal produced applies. A deduction for levies also applies which would amount to no more than $1.00 per tonne. Hence allowable deductions for royalty for the Project would amount to $4.50 per tonne.

One of the most important assumptions in the calculation of future Royalty for a coal proposal is the estimate of a future coal price over the life of a project. Coal from the Project is expected to be sold into mainly the export thermal market (80%) and the remaining 20% into the export metallurgical market. A review of coal quality information by DRE suggests this is achievable.

Coal price forecasting is inherently difficult and over the long term time frame of the Project there will be many variations in coal prices. However, there is a growing consensus in the coal industry that coal prices will improve in the medium to long term over the current five year lows, indeed over the last three months spot coal prices have increased by between 30-50% in the metallurgical and thermal coal markets. While it is currently unclear that these short term increases are sustainable it does indicate the difficulty of forecasting coal prices going forward, it also provides some optimism for the future, i.e. possibly the bottom of the price cycle was reached in mid-2016. For its royalty calculation, the Division uses export prices (in real terms) in the range of A$90 to $A105 per tonne for the semi-soft coking coal from the Project and A$80 to A$95 per tonne for thermal coal from the Project.

Another important aspect of future royalty calculation for a proposed coal project is estimation of future annual production. The Division has estimated that if the Project is approved, around 104 Mtpa of product coal would be able to be economically mined from the Project area from 2017 to 2039. The maximum rate of extraction would be nearly 6 Mtpa of product coal.

Using the above parameters the Division has calculated that in a typical full production year the State will receive around $40 million per annum in royalty and

$731 million over the life of the Project. The net present value of this royalty stream would be $352 million using a 7% real discount rate.