Cobbora Holding Company Pty Limited

DATE: 23 August 2013

MEMO TO: Department of Planning and Infrastructure – Stephen O'Donoghue

FROM: Project Director – Ed Heyting

SUBJECT: ERRATA TO REVISED MINE PLAN REPORT

REFERENCE: M01-CHC-100-RP-ENV-0001 Revised Mine Plan

We write with reference to Department of Planning and Infrastructure's (DP&I) request (16 August 2013) for further information in relation to the revised plan. This request has highlighted a discrepancy within the report when reporting pit quantities and their impacts.

- Table 2.1 Mining Quantities, total for production should read 222 Mt not 22 Mt
- Table 2.2 Mining Reserves, error in quantities for pits 120 and 121. Revised table is provided below with changes in red:

Pit	Waste (Mbcm)	ROM Coal (Mt)	ROM Strip Ratio	Product (Mt)	Product Strip Ratio
Pit 110	27.2	16.2	1.68	11.0	2.47
Pit 111	46.3	27.1	1.71	18.8	2.47
Pit 112	38.1	17.7	2.15	11.6	3.28
Pit 113	14.8	5.9	2.51	4.0	3.68
Pit 120	**12.9**	**7.0**	1.97	**5.5**	**3.12**
Pit 121	**61.6**	**25.9**	2.52	**18.2**	**4.27**
Pit 130	50.7	28.2	1.80	15.5	3.26
Pit 131	61.9	28.6	2.17	14.4	4.30
Pit 132	82.5	35.0	2.36	18.8	4.39
Pit 101	134.7	38.5	3.50	21.3	6.33
Pit 102	348.8	84.0	4.15	48.7	7.17
Pit 103	305.9	77.3	3.96	45.7	6.69
Pit 104	132.9	50.9	2.61	31.3	4.24
Total	**1,318.1**	**442.3**	**2.96**	**263.4**	**4.98**

Note: The numbers may not add up or multiply out due to rounding

These changes do not affect the commentary within the report as the table was provided to indicate the scale of the operations and the various strip ratios in each of the pits.

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- Appendix 1, Typical Coal Sterilisation Impacts, revised appendix attached

  The impact of these changes results in an increase in extra cost per product tonne of ~$3.2 ie from $13.5/t to $16.7/t product.

Please contact Phil Towler on (02) 9493 9518 to seek further clarification or to arrange a time to meet.

Regards

Ed Heyting

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Coal Reserves

If the pit shells in mining area C and in the north of mining area A (Pits 120-132) are avoided to protect the remnant vegetation, it would result in 131.5 Mt ROM of coal being sterilised, refer Table A1. This coal would have to be replaced by additional coal from westward extensions to mining area B (ie extensions to Pits 101-104).

There is limited geological drilling and modelling to the south of the mining area B boundary and hence no detailed mine Reserves calculations have been conducted in this area.

Based on the Reserves and coal quality information available at the southern boundary of mining area B, it can be expected that the strip ratio will be significantly higher than mining area C. Coal quality is also questionable, with some thinning of coal plies and reduction of quality to the south.

Table A1 Impact of Avoiding North Eastern Area

Pit	Waste (Mbcm)	ROM Coal (Mt)	ROM Strip Ratio	Product Coal (Mt)	Product Strip Ratio (bcm/t)
PIT 120	17.3	8.7	1.99	5.5	3.12
PIT 121	77.8	30.8	2.53	18.2	4.27
PIT 130	50.7	28.2	1.80	15.5	3.26
PIT 131	61.9	28.6	2.16	14.4	4.30
PIT 132	82.5	35.0	2.36	18.8	4.39
TOTAL	**290.2**	**131.5**	**2.21**	**72.5**	**3.95**

Note: The numbers may not add up or multiply out due to rounding

Mining Cost Impact

The impact of replacing the 131.5 Mt ROM lost from mining area C and the northern extent of mining area A:

- Strip ratio would increase from 2.21:1 in mining area C to approximately 6:1 in extensions of mining area B
- Waste removal requirement rises from 290 Mbcm to 788 Mbcm, an increase of 498 Mbcm
- Coal haulage to the ROM from the extended mining area B is double the distance required from mining area C.

Using an average waste cost of $4.00 (based on modelled costs) this represents an additional project cost of $1,992M. For coal haulage, the increased distance would also increase the coaling cost from $2.50/t ROM to $4.00/t ROM or result in an additional $197M in coal haulage costs.

Therefore, the financial impact for the replacement 131.5 Mt sourced from extensions to mining area B is estimated to be an extra $2,188M or ~$16.7/t product.

Truck Numbers/Greenhouse Gases

Table A2 shows the increase in truck numbers for the current mine plan relative to the revised waste haulage requirements by extending mining area B and relocating the out-of-pit dump further south. Apart from increased capital to purchase the additional trucks, there are also increased operational cost increases in labour and maintenance.

Table A2 Revised Truck Numbers Impacts

Number of Trucks	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Current mine plan	9	7	8	4	9	
Southern mining area extensions	11	10	11	4	10	
Delta	**2**	**3**	**3**	**-**	**1**	
Estimated extra GHG emissions (t)	**4,025**	**6,038**	**6,038**	**-**	**2,013**	**18,114**

Assumptions		
GHG Emissions	(Fuel Qty*Energy Content*Emission factor)/1000	
Truck diesel consumption	137	L/h
Hours per year	5,500	Hr
Energy content of diesel	39	GJ/kL
Emission factor of CO_2	69	Kg CO_2-e/Gj
ie GHG emissions/truck	2,013	t CO_2-e

Waste Dump Impacts

Associated with the increase in waste of 498 Mbcm (or 623 Mbcm with swell factor applied) is the issue of where to place it. Some can be placed in-pit, but the majority will have to be out-of-pit. If it is assumed that half can be accommodated in-pit, an additional ~311 Mbcm of out-of-pit placement or an area approximately 4.2 times the previous B-OOP E will be required. This has significant ecological and land management impacts.

Summary

The pit shells in mining area C and the northern extent of mining area A contains some 72.5 Mt of coal that if sterilised would require CHC to extend mining area B westwards. An assessment of this change indicates the following impacts:

- Additional cost burden of $2,188M or ~$16.7/t product
- Additional 18,000 t of greenhouse gas emissions released over five years
- Footprint and land management issues associated with trying to locate an out-of-pit dump approximately 4.2 times the size of the existing B-OOP E, in an economic location, whilst avoiding ecologically sensitive areas.