IN THE FEDERAL COURT OF AUSTRALIA)
VICTORIA DISTRICT REGISTRY) No. VID 1641 of 2004
GENERAL DIVISION)

BHP BILLITON IRON ORE PTY LTD (ACN 008 700 981)

Applicant

and

THE NATIONAL COMPETITION COUNCIL

First Respondent

and

FORTESCUE METALS GROUP LIMITED (ABN 57 002 594 872)

Second Respondent

AFFIDAVIT

I, **ROBERT IAN RIDLEY** of 9/39 Keesing St Port Hedland 6721, in the State of Western Australia, say on oath that:

1. By affidavit sworn on 14 July 2005 and filed in this proceeding **(July Affidavit)**, I previously deposed to a number of matters in relation to BHP Billiton Iron Ore's **(BHPBIO)** rail operations.

2. With effect from 14 November 2005, my position with BHPBIO was altered to Superintendent RTS (Rail Technology System) Development & Implementation, responsible for business co-ordination, development and implementation of a new train control system. The matters deposed to in this affidavit are based on the knowledge and experience that I gained through the various positions that I have held with BHPBIO until this recent change of position.

3. In this affidavit, I describe and explain the impact that a third party's use of BHPBIO's Newman rail track is likely to have on BHPBIO's iron ore mining operations in the Pilbara, and the types of costs that are likely to be imposed on BHPBIO by reason of those impacts.

In order to describe and explain those impacts and costs, it is necessary to describe the factors that limit the capability of the rail line and to explain why the rail line is currently being operated at its maximum capability by BHPBIO. At the end of the affidavit, I also comment on certain matters stated in the Affidavit of Julian Robin Paul Tapp sworn 29 August 2005.

Factors that limit the capability of BHPBIO's rail operations

Trips and movements

4. Rail capability can be described by reference to either train trips or train movements (which are related to each other) over a given period of time.

5. Whereas a train "trip" refers to a completed journey during a given 24 hour period, a train "movement" refers to an activity on the rail line during a given period and will include, in addition to all train "trips" during the relevant period, the following train activities:

   (a) trains that arrived at the mine but which did not depart the port in the same 24 hour period; and

   (b) trains that departed the mine but which did not arrive at the port in the same 24 hour period.

6. As such, using train movements as a measure of rail line usage intensity over a short period (such as a 24 hour period) provides a more accurate picture of the intensity of train usage (that is, excluding other rail usage, such as maintenance activities on the rail line) over that period.

7. I have considered the discussion of train trips and train movements contained at paragraphs 38 to 48 in the affidavit of Rodney Tytler Hoare, sworn on 22 December 2005 and agree with the comments in those paragraphs.

Notional capability of BHPBIO's rail line

8. The notional capacity of BHPBIO's single track rail line could be simply be measured by calculating the maximum number of possible train trips or train movements per day. Such a measurement would have regard to the physical capacity of the track at a single point in time, where physical capacity takes account of features of the track infrastructure such as:

(a) the length of the single line section of the track;

(b) the number of passing sidings; and

(c) the track speed (which is the safe speed at which trains can travel on the track having regard to its quality and condition).

9. The notional capacity of BHPBIO's single track rail line would also take account of various physical features of the trains that are being operated on the track, including in particular:

(a) the nature and condition of the locomotives and rolling stock, as these factors also affect overall track speed; and

(b) the number and length of the trains being operated, as these factors affect travel times (having regard to the need for trains to pass each other on passing sidings).

Practical capability of BHPBIO's rail line

10. In contrast, the practical capability of BHPBIO's single track rail line is measured by the number of train trips (or train movements) that could be operated by BHPBIO on the rail line on a consistent basis, for example in a given year, in connection with its iron ore business.

11. Such a measurement must have regard to each of the abovementioned factors, but also to a number of additional factors that relate to the operation of the rail line within BHPBIO's iron ore business. The primary additional factors that limit the practical capability of BHPBIO's single track rail line are:

(a) the availability of train crews (particularly the workplace arrangements in place governing the terms and conditions on which crews operate the trains);

(b) track maintenance requirements;

(c) expansions and upgrades to rail infrastructure; and

(d) the variable requirements in the mining and port operations, which cause continual variations to the train schedule, both in terms of the timetable and the configuration and destination of train trips.

Each of these factors are described and explained below.

Availability of train crews

12. BHPBIO's trains are operated 24 hours a day, 7 days a week, and travel up to 421 kilometres between mines and port. BHPBIO's agreements with train crews regulate, amongst other things, the maximum duration of shifts and the transport of train crews between different locations as they change over control of a train to a different crew. The manner in which BHPBIO operates its trains must take account of these requirements, and this provides an operational constraint on the practical capability of the rail line.

Track maintenance

13. The need to undertake regular track maintenance is one of the major constraints on the capability of BHPBIO's single track rail line. This is because the maintenance task requires access to the track. As explained in more detail below, maintenance usually requires use of the track for maintenance equipment to be brought into place (on the stretch of track on which the maintenance is being performed) and for the maintenance to be carried out. Accordingly, in operating its trains, BHPBIO must leave sufficient spare time available on the track for maintenance to be carried out. This time is usually referred to as 'maintenance windows'.

14. The amount of maintenance required to be carried out on the track is related to the number of train trips conducted on the track and the tonnage of ore being carried. As the trips and tonnage of ore increase, increased maintenance is required. This means that increasing the number of trips and tonnage carried reduces track capability in a compounding manner: the number of trips reduces the amount of time available for maintenance windows, and also increases the need for such maintenance windows in order to undertake the required maintenance.

15. There are a variety of maintenance tasks that are required to be carried out on BHPBIO's rail line. The maintenance tasks are usually categorised into planned and unplanned

maintenance. Unplanned maintenance tasks are those routine maintenance tasks that are undertaken every day. However, these works are undertaken opportunistically, in the sense that they are fitted in between train movements, when the opportunity presents itself.

16. Planned maintenance includes the following tasks:

(a) major re-sleepering;

(b) major re-railing;

(c) bridge repairs;

(d) switch change-outs, in which a switch is cut out of the track and replaced; and

(e) culvert/floodway replacements, which requires the track to be cut, the culvert dug out and replaced and the track replaced.

17. Unplanned maintenance includes the following tasks:

(a) rail welding, which involves cutting broken or deteriorated pieces of rail out of the track and welding new pieces in;

(b) ultrasonic rail testing, which involves driving a specially designed car along the track to undertake ultrasonic testing of the rail;

(c) hi-rail testing, which also involves driving a specially designed car along the track to undertake to test the height of the rail;

(d) sleeper replacements, which involves lifting the rail to replace broken or deteriorated sleepers;

(e) rail grinding (which is described in paragraphs 27 to 32 of my first affidavit);

(f) tamping, which involves lifting the rail and sleepers in order to repack the ballast which is underneath and supports the sleepers; and

(g) 'frog' maintenance, which involves welding and repair to tracks that intersect (the 'frog' being the 'X' shaped piece of track located at a track intersection which are subject to greater than normal wear).

18. Unplanned maintenance decisions may involve extending trip times for particular trains at short notice, as the windows of opportunity for maintenance need to be wide enough to allow for:

    (a) the movement of maintenance equipment along the rail line to a position to undertake the maintenance;

    (b) the carrying out of the required maintenance;

    (c) the completion of the required maintenance; and

    (d) moving the maintenance equipment off the main line.

19. At times, the maintenance work cannot be completed in a single window of opportunity. If the maintenance is incomplete, a speed restriction may need to be imposed on the track until it is completed. Further, some work, such as welding, also requires that no trains pass over the relevant part of the track for up to 2 hours after the completion of the work.

20. The mere movement of maintenance equipment along the rail line and the idle time spent in sidings prior to, and following, maintenance work impacts directly on the trip times and schedule of trains operating. Where the equipment sits in sidings pending the start or completion of the work, then those sidings are not available for the use of ore trains.

21. The train charts annexed at Annexure "**RIR-1**" to this affidavit are two daily train charts that reflect the actual daily rail activity for those days (as opposed to the activity reflected in the long term rail schedule – this is discussed in greater detail at paragraphs 43 – 53 below). The impact of maintenance on the capability of the rail line is illustrated by the following examples from these train charts:

    (a) on 10 September 2005, a steel train (ie a train carrying rails for laying) occupied Gillam siding for 2 hours from 8.20am – 10.45am and then travelled a further 20 kilometres to the 114km point, where it occupied that location for 70 minutes while discharging rail. During that period, nothing could get past that train. It can also be seen that during that period, a loaded train from Yandi was held on the main line track for 38 minutes in order to allow that work to be completed. At the same time, this work caused a 300 car empty train destined for Jimblebar Junction to also be held up for 50 minutes on the main line between 11.30am and 12.20pm. After the steel train completed its work it retuned to Gillam siding where it allowed the empty train to pass, and then it returned to the main line and continued on to Flashbut Yard (off Bing siding). During the time that the steel train was unloading rail, the opportunity to undertake other maintenance was also taken near Gillam siding (reflected by the green line on the train chart); and

(b) on 20 September 2005 a train that was required to dump rocks along the track at two locations required a train path from Jimblebar Junction to Shaw siding betweens the hours of 7.50am – 10.50am.

22. Maintenance plays a critical role in enabling BHPBIO to achieve optimal tonnage rates from its rail operations in the longer term. Delays and short term costs to BHPBIO resulting from maintenance activities are outweighed by the long term improved efficiency of the rail system which is achieved through these maintenance activities. For example, it is often more efficient for BHPBIO to cease rail activity for a period to allow for the prompt removal of a speed restriction on a section of track, rather than retaining the restriction until a scheduled maintenance window opens.

Expansion and upgrades to rail infrastructure

23. Expansions and upgrades to rail infrastructure also cause constraints on the capability of BHPBIO's single track rail line. Similar to maintenance requirements, the works associated with expansions and upgrades often require access to tracks and other rail infrastructure for periods of time, preventing or limiting use of the rail by BHPBIO. As explained further below, some of the works that have been and are being carried out by BHPBIO in conjunction with BHPBIO's expansion plans are likely to be part of the cause of BHPBIO's rail system having failed to operate to the capability forecast in the present financial year.

Variable requirements in the mining and port operations

24. As described in my first affidavit, BHPBIO's trains are operated to serve the requirements of BHPBIO in producing its various iron ore products for loading onto ships at Port Hedland. Accordingly, and as described further below, the train schedule is managed in a way that enables the rail operations to respond in the most efficient manner to variations

that occur within the mining and port operations. The types of variations that occur either continually or on a regular basis are:

(a) variations in the demand for particular categories of iron ore products because of the pattern of shipping arrivals;

(b) variations in the grade of ore mined; and

(c) equipment failures at either the mine or the port,

all of which can cause the train schedule to be varied to accommodate the requirements at either mine or port, and to enable BHPBIO to continue to produce the required grades of iron ore in the most efficient manner.

Planning the rail schedule having regard to the rail capability

25. In paragraphs 62 to 80 of my first affidavit, I described in general terms the manner in which BHPBIO plans its rail schedule and operations in order to serve the mine and port operations. This section expands on that description, and also describes the most recent planning undertaken by BHPBIO in relation to the rail operations. The planning has the following principal components:

(a) development of a long term rail schedule;

(b) setting an annual 'railings' budget;

(c) preparing a six weekly production forecast; and

(d) preparing (and revising) a 72 hour rail schedule,

each of which is described below.

The long term rail schedule

26. I was involved in the preparation of the long term rail schedule between 1995 and 2005 (when I changed positions within BHPBIO). The long term rail schedule is essentially a planning document that enables BHPBIO to determine whether the rail operation has the capability to cope with the tonnage of iron ore that BHPBIO wishes to produce. Although

it establishes broad parameters within which rail operations are to be conducted, it is not expected that trains will be operated in accordance with that schedule.

27. The number of train slots or paths operated within a given long term rail schedule is determined by BHPBIO following extensive computer based modelling undertaken by TSG Consulting (**TSG**) on behalf of BHPBIO. This modelling takes into account the various capabilities and interdependence of each of the mine, rail and port operations.

28. In preparing the initial slot allocations for the long term rail schedule, BHPBIO has regard to the following considerations:

(a) *Mine capability*

This involves an assessment of the:

(i) mining capabilities at each mining area (including the blasting and hauling of the ore); and

(ii) mine output capabilities at each mining area (including the crushing and screening of the ore, the production rate onto the mine loadout and the loadout capabilities ie the time required to generate each rake of ore).

These factors determine the minimum time between train arrivals at the mines (ie to allow for the loadout stockpiles to be rebuilt in between trains) and the minimum time required for each train to be loaded at each loadout.

(b) *Port capability*

This involves an assessment of:

(i) the ideal efficient allocation of ore from each of the mining areas to specific car dumpers; and

(ii) the output rate for each of the car dumpers based on the allocation of specific ore to each of the car dumpers.

These factors determine the minimum rake occupancy time at each car dumper.

(c) *Rail capability*

This involves an assessment of:

(i) train speeds and run times (both empty and loaded);

(ii) load carrying capability of each rake;

(iii) dwell times (being the time taken to join rakes together to make trains at the port and the time taken to split and then rejoin the trains at the various mine junctions);

(iv) estimated time that a train waits in a queue prior to dumping at the port; and

(v) estimated time following dumping the ore prior to being ready to depart the port (being for inspection of the rakes and maintenance of the trains);

(vi) estimated time required to undertake both planned and unplanned maintenance activity on the rail line.

(d) *Manpower issues*

A significant factor impacting on the long term rail schedule is BHPBIO's need to have certainty around the times that rail crews needed to be available at the mines and at the port. Accordingly, the long term rail schedule is also designed to take crew rosters into account.

29. All of the above factors are combined in order to enable the preparation of the long term train schedule.

30. The number of train trips per day (comprising both trips from the mines to the port and from the port to the mines) in the long term rail schedule have increased substantially during the past 10 years. I have reviewed the long term rail schedule for each of the past 10 years, and the number of trips per day shown in those schedules is set out in the following table.

Date	Number of train trips per day in the long term rail schedule
From February 1995	14 train trips per day
From April 1997	18 train trips per day
From May 2001	16 train trips per day
From August 2003	18 train trips per day
From November 2003	20 train trips per day
From August 2004	24 train trips per day

31. The most recent version of the long term rail schedule (which commenced from August 2004) is designed to cater for 12 train departures from Port Hedland and 12 train departures from the mines in a 24 hour period (ie 24 trips per day on the rail line). However, for the reasons discussed at paragraphs 4 to 7 above, not all trains that depart the mine or the port within a 24 period, arrive at their destination within the same 24 hour period.

32. Each departure time within the schedule is referred to as a 'train slot' or a 'train path'. The schedule is referred to as BHPBIO's 12 train schedule. Copies of a table setting out that schedule as well as a pictorial representation of that schedule are annexures "RIR-2" and "RIR-3" to the July Affidavit.

33. As noted earlier, I have been directly involved in developing BHPBIO's long term rail schedule and annual railings budget between 1995 and 2005. In the last few years, BHPBIO has sought to maximise its production of iron ore (within existing infrastructure constraints and planned upgrades to infrastructure), as world market demand for iron ore has increased.

34. In that time, computer modelling by TSG has been used in the development of the long term rail schedule with the aim of maximising the capability of the rail operation.

[CONFIDENTIAL INFORMATION REMOVED]

That railed tonnage was based on operating the 12 train long term rail schedule. Based on the computer modelling that was undertaken by TSG and my own experience of the rail operations (having regard particularly to the requirements for maintenance and other operating contingencies within the whole of the mine, rail and port systems), I was of the opinion at the time that the budget was set that that tonnage represented the maximum capability of the rail system (within existing infrastructure constraints).

35. The method by which train paths are allocated in the long term rail schedule to trains destined for particular destinations is essentially dictated by BHPBIO's tonnage requirements. As noted above, the long term rail schedule is a planning tool that is primarily focussed on tonnage capability. For that reason, the long term rail schedule does not specifically address the sequencing and distribution of rakes within each mining area (which is a process critical to the management of grade). However, it is prepared so that sufficient time is allowed between mine junction arrival and departure to enable grade management decisions to be made. For example, the long term rail schedule allows for trains arriving at Jimblebar Junction to have a window of 6 hours between their arrival and departure, so as to enable any rake arriving at Jimblebar Junction to be sent to any of the loadouts in the Newman mining area (being Whaleback, Orebody 25 or Jimblebar), as may be necessary for grade management as determined by CSMS.

36. The sequencing and distribution of rakes, which is an integral part of BHPBIO's grade management process, within the Yandi and Newman mining areas is an extremely dynamic process, and as such, decisions in relation to sequencing and distribution within the Yandi and Newman mining areas are implemented on a much shorter time frame. Those decisions are not made, even on a preliminary basis, until the preparation of the 72 hour rail schedule (discussed below), and are updated daily based on up to date recommendations from CSMS.

37. The long term rail schedule does not specify the additional train paths that are required for track maintenance. This is because rail maintenance is conducted on an opportunistic basis, and is planned within short term timeframes. For the purposes of preparing the long term rail schedule, BHPBIO's rail operations experts and track maintenance engineers review every proposed long term rail schedule and the proposed spacings between train paths in order to assess whether sufficient windows are likely to exist to enable standard maintenance to take place. In making this assessment, take into account the fact that the actual train paths that are ultimately run will deviate from the long term train schedule, and the impact of such variations on the possible maintenance windows.

Annual railings budget

38. The annual budgeting process for BHPBIO commences in about September for the financial year commencing on 1 July of the following year. The budget process involves an integrated approach between the mining, rail, port and sales divisions within BHPBIO. I have particpated in this process on behalf of the rail division since about 1995, and particpated most recently in the budget for YEJ06.

39. The annual budget is an iterative process in which each division determines its maximum capability. Based on the mine, rail and port capability, an annual railings target is determined. The annual railings target represents total tonnage to be railed, and this comprises discrete tonnages of ore from each of BHPBIO's mining areas. The target is set having regard to:

(a) the overall tonnage of iron ore to be moved between each mine and port;

(b) the number of trains and rakes that can be moved on average per day,

and applying various loss factors to take account of maintenance and equipment outages in the mine, rail and port system.

40. The annual railings target is nominally divided into 12 equal monthly tonnage targets, although the precise constituent ores railed may vary from month to month. However, these monthly targets are only nominal, as they do not take into account the variety of factors that affect day to day production including:

(a) maintenance works (either scheduled or unscheduled);

(b) variations in demand from day to day; and

(c) the fact that the tonnage in the ore cars, as measured at port, often fails to meet the anticipated or budgeted tonnage for a specific ore, thereby requiring adjustments to be made to required tonnages in subsequent weeks and months.

These factors are discussed further below.

The six weekly production forecast and 72 hour rail schedule

41. Actual train departure and trip times are determined by short term planning processes, with the key processes being the 6-weekly Production Forecast (described at paragraphs 67 – 70 of my first Affidavit) and the 72 hour rail schedule (described at paragraphs 71 – 72 of my first Affidavit).

42. In preparing the Production Forecast, BHPBIO adjusts its schedule and operations to allow for planned rail maintenance activities and updates these weekly. Included in the Production Forecast is a 12 hour period, once a month, during which the Newman rail line is not used, to allow for specific planned maintenance requirements such as:

(a) major re-sleepering;

(b) major re-railing;

(c) bridge repairs;

(d) switch change-outs; and

(e) culvert/floodway replacements.

During these planned maintenance periods, the rail track will not be available and trains will not be able to run along the designated train paths.

Variability of the rail schedule 'as run'

43. Given the dynamics of the BHPBIO's mine, rail and port operations, its rail operations rarely run according to the train paths established in the long term rail schedule. The train

schedule and train paths that are actually run (in accordance with the 72 hour rail schedule, as amended each day) vary significantly from those set out in the long term rail schedule. This variability can be seen by comparing the pictorial representation of the long term rail schedule (Annexure RIR-2 to the July Affidavit) to the actual train charts referred to at paragraph 21 above and annexed to this affidavit.

44. The reason that the rail schedule 'as run' varies from the long term schedule is that the schedule "as run" reflects short term decisions made by BHPBIO to maximise its ability to produce and ship its iron ore products in the most efficient manner possible, having regard to the constraints of its infrastructure.

45. To achieve this, the rail system must respond to changing requirements at the mine and port. Those changes may reflect variations in the demand for particular ores as well as outages in any of the mine, rail and port infrastructure. To meet those changing requirements, the rail operations require flexibility in the schedule that is actually run. Without that flexibility, BHPBIO's production would be constrained.

46. BHPBIO is currently able to operate its rail system as an integrated part of its overall mine, port and rail system, and has full control over each component which enables it to maximise production.

47. In operating the rail schedule as run, BHPBIO adjusts its schedule and operations to allow for unplanned contingencies, such as unplanned maintenance requirements. These requirements include mine, rail and port outages, as well as opportunistic rail maintenance (being rail maintenance that is undertaken in a period in which another outage, for example a mine outage, prevents trains from using a particular part of the rail track). These contingencies arise on a daily basis. For this reason, several versions of the 72 hour rail schedule may be issued for any given period, as they are updated to reflect such contingencies as they arise.

48. These short term changes to the rail schedule (reflected in the 72 hour rail schedules) will often significantly impact on BHPBIO's ability to meet its monthly targets for each type of ore. Accordingly, the changes to the schedule in each period have a flow on effect into the next period, to enable BHPBIO to meet its production forecasts and demand for each ore type.

49. An example of the rail schedule as run is contained in Annexure "**RIR-2**", being the Railroad Operations Daily Input Report for 19 October 2005. It can be seen from this report that of the 24 trips recorded on the report, only 1 train departed according to the scheduled time. While several trains departed close to the scheduled time, 7 trains departed early, 3 trains were cancelled and 6 trains departed at times more than one hour before or after the scheduled departure time.

50. While the above data is only one example of actual train data, it is reflective of the variability inherent in the railing system. Further, for every train that does not run according to the train path set out in the long term schedule, additional variations occur to the actual railings, by virtue of additional train meets and restricted maintenance windows.

51. For the above reasons, the majority of "actual railings" (being the actual departure, arrival and trip times) rarely match the train paths set out in the long term rail schedule. Annexed and marked "**RIR-3**" is a bundle of rail performance reports for the period from July to November 2005 for:

(a) departures from Port Hedland;

(b) arrivals at Newman and Yandi;

(c) departures from Newman and Yandi; and

(d) arrivals at Port Hedland.

It can be seen from these tables that on-time port and mine departures occurred in less than 50% of all departures and on-time arrivals varied from 8% to 20%.

52. The fact that the majority of actual railings do not match the train paths set out in the long term rail schedule is not material to BHPBIO's business. Maintenance of the grade of the ore and the finished products is dependent on the sequence and distribution of the trains, and not the timetable. Accordingly, the rail operations are conducted to maintain the correct sequence of trains, and to operate the number of trains and rakes to meet tonnage requirements for each ore.

53. The efficient operation of BHPBIO's business requires an ongoing balance of the competing efficiencies of the individual components of that business (mine, rail and port).

The opportunistic nature of the majority of the maintenance undertaken on the rail line enables maintenance to be undertaken in the most efficient manner possible for the entire business. For example, if queues exist at the port for a car dumper, it may provide an opportunity to undertake rail maintenance works that result in the slowing down of trains on the line for a period of time. However, given that the trains would be likely to sit in a queue at the port in any event, undertaking the maintenance at that time makes sense, as it will not impact on overall productivity and efficiency of the business.

Current rail capability

54. As discussed at paragraph 34 above, at the time that the YEJ06 budget was set, I was of the opinion that the tonnage set in the budget represented the maximum capability of the rail system.

55. Annexed and marked "**RIR-4 CONFIDENTIAL**" is BHPBIO's current Production Schedule for YEJ06 as at September 2005. This schedule sets out the actual railings for July to September 2005, together with the forecast railings for October 2005 to June 2006, as well as the updated YEJ06 forecast railings (as at September 2005) and the YEJ06 targeted railings (headed "Budget YEJ06"). This schedule details all of the stages in the production process, from mine production through to shipped ore.

[CONFIDENTIAL INFORMATION REMOVED]

57. Part of the cause of BHPBIO's rail system having failed to operate to the capability forecast in the present financial year is, in my view, due to the interference to BHPBIO's operations arising from construction works associated with BHPBIO's present expansions.

58. However, notwithstanding the adverse effects of the expansion works, these works have been undertaken to enable BHPBIO to expand the productive capability of each of its mine, rail and port operations over the longer term.

59. As the rail system was currently failing to meet forecast production, in October 2005 BHPBIO undertook an assessment of whether or not it was able to increase the capability of the rail system by altering its method of operation. BHPBIO engaged the modelling services provided by TSG in that assessment. This assessment was called the Benefits of Sequential versus Scheduled (BOSS) study.

60. In undertaking this assessment, all aspects of the mine, rail and port operations were closely examined. Any such assessment is a complex process. Merely introducing additional rolling stock without increasing infrastructure would not allow BHPBIO to increase the tonnes being railed. Rather, the increase in rolling stock would be likely to result in a reduction in the tonnes being carried, due to an increased level of operational inefficiency (eg greater trip times and longer queues).

61. Following completion of the assessment, it became evident that:

(a) two of the port car dumpers were being under-utilised, and periods averaging up to 4 hours a day existed within which those car dumpers were not utilised; and

(b) trains often remained unutilised at the mines and the port for varying periods of time following the completion of loading and dumping ore respectively, until they were subsequently dispatched from the mines and port.

62. As a result of these findings, BHPBIO undertook a further assessment of the measures that could be implemented to reduce the port car dumper "downtime", thereby improving the car dumper efficiency and the system capability. The proposal was to ensure that trains would always be ready to unload ore at the car dumpers, ie increasing the queuing time at the dumper. BHPBIO's preliminary conclusion was that this could be achieved if the trains were able to depart from the port or mine as soon as they were ready to depart (essentially

abandoning the concept of a rail schedule). The essence of this new approach is that trains would depart the mine and the port as soon as they were able to, but that they would still adhere to a predetermined sequence in order ensure that grade requirements were achieved. In other words, the proposal was that trains would run to a sequence rather than a schedule.

63. This proposal was modelled by TSG, with the model indicating that it might be possible to obtain a net increase of approximately 3 - 4% in the system capability through the improved utilisation of the port car dumpers. However, to achieve this, it was necessary to reduce the amount of time spent unloading each train. This could be done by ceasing to operate 3 rake trains and instead operating 2 rake trains. Previously, the rail schedule was based on a combination of 1, 2 and 3 rake trains. In the new 'sequencing' model, virtually all of the trains would become 2 rake trains. In order to make up the tonnage reduction caused by shortening the trains to 2 rake trains, it was necessary to run 14 trips per day, rather than 12 trips per day. Running additional trains per day would increase trip times, because of the increased number of meets on the track. Nevertheless, the model indicated that this approach might be feasible, as the increased trip times would be offset against the reduced loading and unloading times because of the shorter trains.

64. The model also predicted that while trip times would increase, these increases would still allow for necessary maintenance (both planned and opportune). BHPBIO also undertook extensive planning to determine the necessary changes to crew rosters and crew changeovers in order to enable this approach to be implemented.

65. Annexed and marked **"RIR- 6"** is a document entitled "Rake Sequencing Implementation Plan" that was prepared by the BHPBIO working party responsible for implementing the new "sequence" approach. This document provides an overview and explanation of the sequence approach.

66. BHPBIO implemented a trial of this new "sequence" approach to its rail system in the week commencing 14 November 2005. A sample of the 72 hour rail sequence being used during the trial is Annexure "**RIR**-7" to this affidavit. These 72 hour rail sequences are also subject to last minute changes and alterations (in the same manner as changes arose to the 72 hour rail schedule), as can be seen from the nature of some of the unplanned

changes noted at the bottom of the sequence alongside the heading "Comments On Sequence Alterations".

67. The success of the trial will not be known until its completion. The trial will be reviewed in January 2006, but it is possible that it may be extended due to the impact on operations from works being undertaken pursuant to BHPBIO's current expansions. If it is successful in increasing the rail capability, it will become the current operating procedure for BHPBIO.

Impact of third party access to the rail line

68. Based on my experience in operating BHPBIO's rail line and the matters described above, in my opinion third party access to BHPBIO's rail line is likely to have a number of significant adverse consequences for the efficient and productive operation of BHPBIO's rail system and therefore on BHPBIO's business as a whole. Those adverse consequences are likely to impose substantial costs on BHPBIO.

69. It is not my function within BHPBIO's business to calculate such costs. My function is to identify rail system operational requirements and constraints, and provide that information to either or both of TSG Consulting (to undertake necessary modelling) and BHPBIO's Commercial Group for analysis. Accordingly, I describe below the likely adverse consequences for the efficient and productive operation of BHPBIO's business from third party access to the rail system.

70. For the purposes of this affidavit, I have assumed that BHPBIO will remain in control of the rail line. Significant additional adverse consequences may arise if BHPBIO did not remain in control of the rail line.

71. First and foremost, adding additional train trips to the rail line will:

(a) increase train meets;

(b) increase travel times; and

(c) reduce maintenance opportunities (leading to greater wear on the rail line requiring more extensive maintenance at a later time and increased standby time for expensive maintenance machinery which has to sit idle in the meantime).

72. As explained above, in my opinion BHPBIO's rail line is currently being operated by BHPBIO at its maximum capability. Accordingly, third party access will further congest the rail line and reduce the capability available to BHPBIO. Depending on the terms and conditions of access that are imposed, this will either result in the performance of the rail line being reduced (ie the railing tonnage of the rail line will be reduced) or BHPBIO will have to remove some of its train trips on the rail line. In either case, this will reduce BHPBIO's production of iron ore.

73. Accommodating a third party's rail haulage operations on the Newman rail line will also remove a significant degree of the flexibility that is otherwise utilised by BHPBIO to maximise the rail capability. As described above, currently BHPBIO is able to operate its trains in a manner that maximises tonnages railed, within the constraints imposed by rail maintenance, demand variability and various other contingencies such as equipment outages at mine, rail and port. Depending on the terms and conditions of access imposed on BHPBIO, BHPBIO may be forced to adopt a form of fixed schedule for its rail operation. This will reduce the rail capability to BHPBIO because, for the reasons explained above, BHPBIO is able to operate its rail operations in the most efficient manner by adopting a flexible and variable rail schedule (presently BHPBIO is trialling a rail sequence approach, rather than a schedule).

74. As BHPBIO is currently using its rail operations to their maximum capability in order to maximise iron ore production, and reduction in the rail capability available to BHPBIO will result in both tonnes lost and the opportunity cost of inefficient operation of its infrastructure. This outcome is exacerbated in today's market where every tonne of iron ore that is produced is capable of being sold.

75. Calculating the cost of any changes to a rail schedule or rail operations as a result of third party access is a complex exercise. First, it is necessary to know the train trips and train sizes proposed to be operated by the third party. Secondly, it is necessary to know the terms and conditions that will govern the use of the rail line. For example, it is necessary to know whether the third party has the right to use a fixed train slot or path that BHPBIO must recognise and not impede.

76. Once these matters are known, to calculate the cost that would be incurred by BHPBIO by third party access it is then necessary to model numerous factors including:

(a) the effect on cycle times (total trip times from the port to the mine and back);

(b) the effect on dwell times (the time that trains are stationary at the mine or port);

(c) the likely increase in train breakdowns, and the consequential effects of such breakdowns;

(d) the effect on fuel efficiency ratios (comparing the fuel efficiency of different combinations of rakes);

(e) the effect on manning costs; and

(f) the cost to BHPBIO of reduced maintenance opportunities because of the reduction in the size of the maintenance windows.

77. As noted above, I would not undertake such modelling myself. Rather, I would advise TSG on the operational issues that may arise as a consequence of third party access and TSG would then model the likely impact of these issues on BHPBIO's operations. The actual costs to BHPBIO's operations would then be calculated by BHPBIO's Commercial Group based on the modelling provided by TSG.

78. It is not possible for these cost to be calculated without knowing the train trips and train sizes proposed to be operated by the third party, as well as the terms and conditions that will govern the use of the rail line.

79. Further costs that are likely to be imposed on BHPBIO by third party access to the rail line is through increased maintenance. Given that the rail line is currently being operated at its maximum capability, use by a third party is likely to replace BHPBIO use and therefore the overall maintenance task will not increase (although I would expect that the third party would become responsible for the cost of its proportion of the maintenance cost). However, there are features of the rail line and BHPBIO's train operations that mean that third party access is likely to impose a greater maintenance cost than BHPBIO's use of the rail line. I refer in particular to BHPBIO's management of the wheel and rail interface (the rail profile, as discussed in paragraphs 26 to 32 of my first affidavit). If a third party does not

have the same wheel profile as used by BHPBIO, its trains will cause greater wear to the rail line. A further cause of increased maintenance costs will arise from vertical force impacts. The vertical force that is imposed on the track is dependent on the axle load on the track, and can cause rail breakage and shortened track life. If trains are not sprung effectively, vertical force impacts are increased.

80. Costs are also likely to be imposed on BHPBIO by third party access to the rail line if the effect of such access is that expansions and upgrades to rail infrastructure must be carried out. As noted earlier expansions and upgrades to rail infrastructure cause constraints on the capability of BHPBIO's single track rail line because the necessary works often require access to tracks and other rail infrastructure for periods of time, preventing or limiting use of the rail by BHPBIO.

81. BHPBIO will also be adversely affected by breakdowns of a third party's trains. Train breakdowns on a single line track cause delays to all other trains travelling both to and from the port. Accordingly, if a third party's train was to breakdown, BHPBIO's production would be delayed until the train could be repaired. The delay in production would generally lead to BHPBIO incurring demurrage charges in respect of ships waiting for loading. I am not aware of the terms and conditions that would govern the repair of a third party train that broke down. In the case of BHPBIO's own trains, BHPBIO is able to utilise other trains travelling on the track to move a train that has broken down. Often BHPBIO will make a decision to redirect a locomotive attached to an empty train travelling from port to mine for this purpose. This may slow production by delaying that train from getting to mine, but is nevertheless necessary to ensure that any blockage on the line is cleared. If BHPBIO is required to undertake this task on behalf of a third party using the rail line, that will impose other costs on BHPBIO which are likely to be significant. BHPBIO experiences breakdowns on its rail line almost every day, and is required to swap a locomotive from one train to another every two to three days.

Affidavit of Julian Robin Paul Tapp (Tapp Affidavit)

82. In his affidavit sworn on 29 August 2005, Julian Robin Paul Tapp (Tapp) deposed to range of matters, including FMG's proposed Mindy Mindy operations and its access requirements with respect to both the Newman and Goldsworthy rail lines.

83. At paragraph 90 of the Tapp Affidavit, Tapp stated that FMG intends to haul iron ore from a siding near the Mindy Mindy mine (at sub-paragraph 84(6) of the Tapp Affidavit, this distance is stated to be 17km) using a locomotive and a single rake comprising up to 100 ore cars, to Port Hedland once per day and back.

84. For the reasons set out below, I do not believe that this proposal is feasible, regardless of the question of the capacity of BHPBIO's operations to cater for such demand (which matter is addressed separately below).

85. Each FMG train would be required to travel along BHPBIO's line on the length of track between the rail sidings known as Hesta and Shaw. The incline (known as the "ruling grade") between Hesta and Shaw sidings is such that a single locomotive would not be capable of hauling a loaded rake of approximately 100 cars. At least two locomotives would be required to haul a single rake of loaded ore cars up the relevant ruling grade.

86. In the event that FMG were to obtain access to the Newman rail line, it would need to ensure that its train was ready to depart both the mine and the port within a pre-determined window of time, essentially forcing BHPBIO to adopt a form of fixed schedule (reducing BHPBIO's flexibility to make a range of necessary operational decisions at short notice).

87. The proposition in the Tapp Affidavit that FMG proposes to haul iron ore from the point at which the loaded ore cars will join the Newman rail line once per day and back, assumes that FMG would be able to have its train ready to depart the mine and the port within those windows. In the event that the train was not ready to depart within those windows, it would be likely to be delayed until the next window, 24 hours later.

88. Based on my experience with BHPBIO's rail operations, I do not believe that it is possible for FMG to consistently meet those windows. This conclusion is based on the estimates set out in the table below, each of which do not allow for unforseen delays, which regularly arise across BHPBIO's rail operations.

Task	**Approximate time required**
Trip time from mine to port	6 – 8 hours

Trip time from port to mine	6 – 8 hours
Ore loading onto FMG train	3 – 4 hours. FMG will be loading the ore cars via front end loader (see sub-paragraph 84(9) of the Tapp Affidavit). This estimate is based on BHPBIO's experiences at Jimblebar where its ore cars are loaded via front end loader, and also on the basis that commercially, no more than 2 loaders would be used. If only one front end loader were to be used, the time involved would be longer.
Pre-loading and post loading activities	1 hour
Unloading	2 hours. This assumes the use of a rotary car dumper operating at a rate of 6,000 tonnes per hour.
Pre and post unloading checks	1 hour
Total	19 – 24 hours (assuming no delays)

89. Accordingly, I do not believe that the statement at paragraph 95 of the Tapp Affidavit, that "*All that Fortescue requires is a single train pathway each way every day*", is feasible from FMG's perspective, let alone BHPBIO's, for FMG to consistently ensure that it was capable of having a rake depart from the mine and the port once a day.

90. It would therefore follow that the minimum demand that FMG would place on the Newman rial line would be four train paths per day, rather than two.

91. At paragraphs 100 – 102 of the Tapp Affidavit, Tapp refers to the usage by BHPBIO of the Goldsworthy rail line, and the fact that BHPBIO presently only requires 8 pathways per day along the Goldsworthy rail line, utilising the relevant part of the rail line to which FMG seeks access for only 8 hours per day.

92. However, pursuant to BHPBIO's announced RGP2 and RGP 3 projects, over the following 6 – 24 months, BHPBIO will be expanding output at some of its mines while at the same time installing a new car dumper at Finucane Island.

93. The new car dumper at Finucane Island is scheduled to be completed and operational by the middle of 2006, and has been designed to receive ore cars that presently run along the Newman rail line, and in particular, handle ore from the Yandi and Area C mining areas. The ore cars destined for Finucane Island will also travel along the Goldsworthy rail line, from the point at which it intersects the Newman rail line, being the same point referred to in the Tapp Affidavit.

94. Following the commencement of the operation of the new car dumper at Finucane Island, BHPBIO's rail requirements along the relevant part of the Goldsworthy rail line will increase from 8 train paths to up to 32 train paths. At this time, there will be no opportunity for the addition of any further trains by BHPBIO or any third party without a significant capital investment.

95. At paragraphs 104 – 105 of the Tapp Affidavit, Tapp says that: "*Fortescue expects that the conditions of access granted by BHP would be the same as which BHP would apply to any new operation of its own requiring access to transport iron ore. Fortescue is willing to accept flexible arrangements and times for the running of its trains on both the Mount Newman and Goldsworthy railway tracks and to work with BHP to ensure that such access does not unduly interfere with or prejudice BHP's existing operations.*"

96. For the reasons explained in this affidavit, access to BHPBIO's rail line by FMG will interfere with and prejudice BHPBIO's existing operations, because BHPBIO's rail line is currently being used by BHPBIO to its maximum capability, and will continue to be so used for the foreseeable future. Flexibility arrangements for the running of FMG's trains on the Mount Newman and Goldsworthy railway tracks will not remove the interference with BHPBIO's operations.

97. I do not believe that FMG's statement that it expects that the conditions of access granted by BHPBIO would be the same as which BHPBIO would apply to any new operation of its own requiring access to transport iron ore, has any practical meaning. As described in this affidavit, BHPBIO's decisions about the use of its rail line are made so as to optimise its

overall production of iron ore. Those decisions take account of the overall requirements of its mine, port and rail systems, particular variations in demand (caused by ship arrival patterns) and variations in supply factors (caused particularly by maintenance and reliability issues ie outages). None of those factors are relevant or applicable to FMG.

98. Accordingly, access to the rail system by FMG would require the determination of an entirely new set of operating procedures to cater for, amongst other things, the scheduling of FMG trains, the co-ordination and control of those trains moving on the track and responsibility for breakdowns.

SWORN by the said deponent at Perth, in)
the State of Western Australia, this 22nd)
day of December 2005) ....

Before me:

DANIEL PRESTON
Blake Dawson Waldron
101 Collins Street, Melbourne Vic 3000
An Australian practitioner within the
meaning of the Legal Profession Act 2004

Form 20A

(Order 14, rule 5A)

IN THE FEDERAL COURT OF AUSTRALIA	)	
VICTORIA DISTRICT REGISTRY	)	No VID 1641 of 2004
GENERAL DIVISION	)	

BHP BILLITON IRON ORE PTY LTD (ACN 008 700 981)

Applicant

and

THE NATIONAL COMPETITION COUNCIL

First Respondent

and

FORTESCUE METALS GROUP LIMITED (ABN 57 002 594 872)

Second Respondent

AFFIDAVIT – CERTIFICATE OF COMPLIANCE

I, **DANIEL PRESTON**, certify to the Court that the affidavit of **ROBERT IAN RIDLEY,** sworn on 22 December 2005 filed on behalf of the Applicant, complies with Order 14, rule 2 of the Federal Court Rules.

Date: 22 December 2005

DANIEL PRESTON
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