TR 98/2 - Income tax: miscellaneous trading stock issues affecting the general mining, petroleum mining and quarrying industries

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Taxation Ruling

Income tax: miscellaneous trading stock issues affecting the general mining, petroleum mining and quarrying industries

other Rulings on this topic

IT 2350; TR 92/16; TR 93/3; TR 93/9; TR 93/33; TR 95/36

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*This Ruling, to the extent that it is capable of being a 'public ruling' in terms of Part IVAAA of the **Taxation Administration Act 1953**, is a public ruling for the purposes of that Part. Taxation Rulings TR 92/1 and TR 97/16 together explain when a Ruling is a public ruling and how it is binding on the Commissioner.*

*[**Note:** This is a consolidated version of this document. Refer to the ATO Legal Database (http://law.ato.gov.au) to check its currency and to view the details of all changes.]*

What this Ruling is about

Class of person/arrangement

1. This Ruling deals with a variety of taxation issues involving trading stock, with its main focus being on the calculation of cost of trading stock on hand for the purposes of section 70-45 of the *Income Tax Assessment Act 1997* ('the 1997 Act'). It is directed specifically to the general mining, petroleum mining and quarrying industries. In particular, the Ruling deals with:

(a) the meaning of trading stock;

(b) low grade ore / previously abandoned materials;

(c) the stage in the extractive process when ore or quarried material first becomes trading stock;

(d) the end of the production process and the obtaining of saleable product;

(e) the measurement of the quantity of trading stock;

(f) the value of trading stock;

(g) the calculation of cost of trading stock using the absorption costing method;

(h) the correct treatment of certain costs;

(i) the allocation, accumulation and apportionment of costs; and

(j) the valuation of joint products and by-products.

Ruling

2. Trading stock, for income tax purposes, includes raw materials and work in progress. For a mining or quarrying business, raw materials include those materials that are expected to be converted by further processing into the saleable product, e.g., broken ore, natural gas.

3. Ore or quarried material that is to be converted by further processing to a saleable product first becomes trading stock on hand when it is severed from the land and its quantity can be reliably measured.

4. The production process ends when saleable product is first placed on a stockpile or loaded onto a rail or road transport facility for distribution to a customer, whichever is the earlier. Saleable product is product that is in a saleable condition having regard to the product sold in the ordinary course of the taxpayer's business.

5. The quantity of trading stock on hand is to be accurately measured and all trading stock including work in progress accounted for.

6. The cost of trading stock for income tax accounting differs from general accounting. Income tax accounting requires trading stock to be valued for the purpose of determining assessable income not profits or gains. Accordingly, only tax deductible expenditure that has been incurred in the production process is absorbed as part of cost of trading stock. However, within these parameters, recognition is given to absorption costing principles to identify the type of cost that is absorbed and its rate of absorption.

7. The rate of absorption for fixed production overhead costs is calculated by dividing those costs (net of abnormal idle capacity) by the number of units produced.

8. The three major elements that have to be absorbed in any calculation of 'cost' are direct material costs, direct labour costs and production costs. The following specific costs have to be absorbed:

- supplies, e.g., explosives;
- amortisation of development expenditure;
- advanced blasting and overburden removal costs;
- depreciation charges on assets used in production;
- some direct general and administrative costs;

- production royalties;
- transport costs incurred during the course of production;
- certain payroll fringe benefits.

9. The following costs do not have to be absorbed into the cost of trading stock:

- exploration and evaluation costs;
- township costs;
- indirect general and administrative costs;
- restoration costs;
- petroleum resource rent tax;
- transport costs incurred in transporting the finished product;
- waste disposal costs.

10. The amount to be absorbed on account of development expenditure is determined using rates calculated in accordance with accounting standards rather than rates allowed for taxation deductions. However, depreciation of plant used in the production process may be absorbed using the depreciation rates allowed for taxation purposes.

11. Joint capital and/or revenue costs relating to different phases of operation, different mining properties or various products are to be allocated, accumulated and apportioned on a reasonable basis.

12. Production costs relating to joint products and by-products are to be apportioned on an acceptable basis.

Date of effect

13. As the views expressed in this Ruling are significantly different from those expressed in draft Taxation Ruling TR 93/D11, it applies only from and including the 1997-98 income year unless a taxpayer chooses to apply it to earlier income years. However, the Ruling does not apply to taxpayers to the extent that it conflicts with the terms of a settlement of a dispute agreed to before the date of issue of the Ruling (see paragraphs 21 and 22 of Taxation Ruling TR 92/20).

Explanation

Meaning of trading stock

14. The term 'trading stock' is defined in section 70-10 of the 1997 Act to include 'anything produced, manufactured or acquired that is held for purposes of manufacture, sale or exchange in the ordinary course of a business'. Trading stock of a mining business comprises those tangible assets that are held for sale in the ordinary course of that business.

15. The High Court of Australia explained in *FC of T v. St Hubert's Island Pty Ltd* (1978) 138 CLR 210; 78 ATC 4104; (1978) 8 ATR 452 that the purpose of the definition of 'trading stock' in the *Income Tax Assessment Act 1936* ('the 1936 Act') was to ensure that not only finished goods but also property (at any rate moveable property) which is intended to be worked on or even used up in the process of manufacture will fall within the meaning of the words 'trading stock'.

16. The High Court's decision makes it clear that raw materials and work in progress are to be regarded as trading stock. For a mining or quarrying business, raw materials include those materials that are expected to be converted by further processing into the saleable product, e.g., broken ore, natural gas.

Low grade ore / previously abandoned materials

17. A taxpayer carrying on eligible mining operations sometimes makes a decision to process high grade ore in preference to low grade ore. Considerations concerning cash flows, customer's requirements, etc., may result in the low grade ore being stockpiled for use some time in the future.

18. It can also happen that low grade ore is sometimes discarded and treated as abandoned waste. However, with the advancement of recovery technology or improved metal prices, a taxpayer may decide to process the waste it had previously abandoned.

19. Low grade ore that is put aside for later processing is trading stock and must be recognised as such. All costs including initial severance costs (such as costs of explosives, mucking out, etc.) would need to be apportioned between all trading stock produced, i.e., the low grade and the high grade ore. An apportionment based on either the ability of each to contribute to sales revenue or the volume of production is acceptable.

20. Where previously abandoned waste material is re-introduced into the production process, section 70-30 of the 1997 Act applies. The original costs associated with the severance of this waste material would have been allowed as a deduction and treated as part of the costs that were absorbed into the value of any trading stock produced, i.e., treated as part of the cost of obtaining high grade ore.

21. Section 70-30 applies where a taxpayer starts holding as trading stock an item it already owns but does not hold as trading stock. However, the section does not apply to ore *in situ* because the Crown owns minerals in this situation. The principle of the owner of land owning the minerals within it has been virtually abolished in Australia. The general rule is that the Crown (in right of the State) owns all minerals. However, section 70-30 does apply to severed ore that has not become reattached to the land and which was previously regarded as abandoned waste material and which subsequently starts to be held as trading stock, i.e., ore that is to be further processed into saleable product.

22. Subsection 70-30 treats the taxpayer as having entered into an arm's length sale of the previously abandoned waste material and having immediately bought it back as trading stock for the same amount. The taxpayer may elect that the sale/purchase price be cost or market value.

23. The amount of the deemed sale price forms part of the assessable income of the taxpayer under section 6-5, being the sale of mineral bearing ore or quarry materials extracted from a mine or quarry by a taxpayer carrying on mining or quarrying operations for the purpose of deriving assessable income. The taxpayer also obtains a deduction for the same amount under section 8-1, being the cost of acquiring trading stock. Any trading stock on hand at the end of an income year is valued in accordance with section 70-45.

The stage in the extractive process when ore first becomes trading stock

24. Taxation Ruling TR 93/3 discusses the stage when ore first becomes trading stock on hand of a gold miner. The Ruling states that the trading stock of a taxpayer in the business of gold mining includes not only the refined gold ultimately produced but also any partly refined products or concentrates, and any stockpiles and dumps of mined ore on hand or in transit. The ore is to be treated as trading stock on hand as soon as it is severed from the land.

25. [Omitted].

26. By saying that ore is to be treated as trading stock on hand as soon as it is severed from the land, TR 93/3 is assuming that the ore is entirely made up of ore that is expected to be converted by further processing into the saleable product, i.e., gold, and furthermore, the quantity of that ore that has been severed from the land by, say, blasting, can be reliably measured. In these circumstances the ore first becomes trading stock immediately upon blasting.

27. Whether ore that is blasted is trading stock immediately upon blasting is a question to be determined in the light of the facts of each case. The quality and future use of the ore, as well as the ability to accurately measure its quantity, are relevant factors. However, it is not accepted that ore cannot be accurately measured until it is in its final saleable form.

28. Care has to be exercised in drawing any firm conclusions from *Case No B71* 2 TBRD 323; 2 CTBR (NS) *Case 36*. In this case the Taxation Board of Review held that coal did not become trading stock prior to its being loosened by explosive charges. However, the Board did not say that mere blasting caused the coal to become trading stock.

29. In *Case No B71; Case 36*, the taxpayer operated an open cut coal mine and had removed overburden and exposed a thick seam or undivided mass of coal. Before the coal could be removed by steam-shovel, it had to be blasted by explosives. The object was to crack the coal face to loosen it but not to let the whole of the coal face fall with the blast. The steam-shovel worked more efficiently where the major portion of the coal face was allowed to 'hang up'. While not deciding the exact time the coal became trading stock, the Board of Review held that the coal did not become trading stock until severed from the land, and such severance did not occur prior to its being loosened by explosive charges.

30. However, in some mining situations, mere blasting loosens both ore and waste product and more work is needed before the ore that will be further processed can be reliably measured. For example, in an open pit mine, the cuttings produced when blastholes are drilled are often sampled to give an accurate picture of the ore in a particular area to be blasted. Once the ore is blasted, the mine geologist or a technician will sample the muck pile. These results are then used to direct the shovel or loader operator in loading trucks. The muck will be designated either as high or low grade ore or waste and the truck driver will take the muck to the appropriate place.

31. In the above example, if the taxpayer decided to process further only high grade ore, that ore is not trading stock on hand until it is picked up and separated from the low grade ore and waste product. This separation would occur at the time the high grade ore is shovelled onto a haulage truck. Only then can it be said that materials that are to be converted by further processing to a saleable product are capable of being reliably measured.

32. The facts of each case need to be considered in determining the stage when ore first becomes trading stock. A commonsense approach should be taken, similar to that taken by Sir Raymond Evershed MR in respect of the time sand and gravel first became trading stock of a merchant, in *Stow Bardolph Gravel Co Ltd v. Poole (HM Inspector of Taxes)* (1954) 35 TC 459. At 473, Sir Raymond said:

> ' ... the sand and gravel, part of the earth itself, which was the subject of the contract here in question and which I think only could sensibly become part of the stock-in-trade of this gravel merchants' business **when it had in the true sense been won, had been excavated and been taken into their possession**.' (emphasis added)

The end of the production process and the obtaining of saleable product

33. It is usual for the production process to end when saleable product is first stockpiled. The trading stock is then 'on hand' in the relevant sense and the value of that trading stock on hand can be ascertained. Taxation Ruling IT 2350 recognises that production ends when the material purchasing and manufacturing activities have brought an article to the stage where it becomes saleable product. Expenses associated with storage, distribution and selling are not part of the manufacturing or production stage.

34. Saleable product is that product which is in a saleable condition having regard to the type of product sold in the ordinary course of the taxpayer's business. The point in time at which trading stock becomes saleable product varies depending on factors such as the type of product involved, the type of market in which the product is sold and any further production processing required.

35. Within the mining industry it is not uncommon for goods to be transported by road or rail from the mine site to a port hundreds of kilometres away. Sometimes, further processing is conducted at the port such that the goods only become saleable product once that further processing has taken place.

36. If no further processing occurs at the port it means that the goods were saleable product at the time they left the mine. The goods could have been first stockpiled at or near the mine site for considerably less expense than that involved in transporting them to a port several hundred kilometres away. This suggests that the predominate purpose for incurring the transport costs is to facilitate their sale or distribution to customers. In these circumstances, the production process ceases at the mine site either at the time that the saleable product is first placed on a stockpile or alternatively immediately prior to loading the saleable product onto the road or rail transport facility, whichever occurs first.

37. This accords with the taxation treatment of costs incurred in transporting trading stock to a new location which were held by the Full High Court in *Lister Blackstone Pty Ltd v. FC of T* 76 ATC 4285; (1976) 6 ATR 499 to be revenue costs because the removal was for the purpose of the more economical utilisation and distribution of that stock.

38. However, where further processing takes place at the port to bring the goods into a state in which they are to be sold, the production process is continuing at the port. Costs incurred at the port, together with any transport costs in getting the goods to the port, are part of the cost of production incurred in getting goods into the condition and location where they first become saleable product.

39. Using coal as an example, the normal production process includes crushing, screening, blending, separation, froth flotation and dewatering to get raw coal to the stage where it is a saleable product. If any of these processes are carried out at the port, the production process is continuing at the port and the coal is not saleable product until such processing is complete. However, where the coal is already saleable product and it is, say, washed at the port to remove salt or other impurities to maintain it in top saleable condition, the production process is considered to have already ceased and the costs associated with washing the coal would not have to be absorbed as part of the cost of the coal as trading stock.

40. The question whether blending at a port is part of the production process is a question of some difficulty and requires a careful analysis of the particular facts of each case. Two cases with different factual situations illustrate the type of inquiry that is required. The cases are *FC of T v. Hamersley Iron Pty Ltd* 81 ATC 4582; (1981) 12 ATR 429 and *Re Abbot Point Bulkcoal Pty Ltd and Another and Collector of Customs* (1991) 14 AAR 384.

41. In *Hamersley Iron* the taxpayer extracted different grades of iron ore from two mines, one at Mount Tom Price and the other at Paraburdoo, and railed the ore to the port at Parker Point. Ores from the two mines were blended at Parker Point to produce ore with a standard level of iron content. It was this blended ore that was the only product sold by the taxpayer.

42. Of particular relevance in *Hamersley Iron* was the part played by the boom type stacker at Parker Point. The stacker was a large machine mounted on rails beside the stockpile area. Its boom carried a conveyor belt, and by means of it, the stacker could drop materials from the end of the conveyor belt onto the top of a pile constructed in the stacking area.

43. Upon arrival by rail at the port, ore from each mine was amalgamated into one large stockpile. By moving along the rails, the stacker was able to distribute a batch of materials evenly over the stockpile. This method of blending was done with the obvious aim of distributing materials of different characteristics as evenly as possible throughout the stockpile, so that *in toto* the proportions of the various minerals in the stockpile would be as close as possible to those aimed at.

44. For trading stock purposes the production process ended after the ore was stockpiled by the stacker at Parker Point. The blending operation performed by the stacker was an integral part of the production process to obtain saleable product, i.e., product which the taxpayer sold in the ordinary course of its business.

45. It is true that in *Hamersley Iron* further blending was performed by the use of a bucket wheel reclaimer when the iron ore was being loaded onto ships for sale to customers. However, for trading stock purposes, the cost of loading trading stock onto a ship as part of its sale to a customer is a selling or distribution expense rather than a production cost.

46. In the *Re Abbot Point Bulkcoal* case, coal from two mines, one at Collinsville and the other at Newlands, was transported to the Abbot Point coal export facility. However, upon arrival at the port at Abbot Point, the coal from each mine was stockpiled separately, i.e., not amalgamated into one large stockpile as in *Hamersley Iron*. In fact, coal from different areas of each mine, having different ash content, was stockpiled separately.

47. Blending did take place at Abbot Point but this only occurred at the time of loading the coal onto ships for sale to customers. Examples were given of taking Newlands coal from different stockpiles which had varying ash contents to produce a product whose overall ash content met customer specifications.

48. The cost of blending which takes place at the time of loading trading stock onto a ship as part of a sale to a customer is, for trading stock purposes, a selling or distribution expense. It would follow that a taxpayer in the same situation which existed in the *Re Abbot Point Bulkcoal* case would have saleable product on hand prior to it being loaded onto the ship. In fact, the product would be saleable product when it left the mine site and the production process would have ceased at the time it was first stockpiled at the mine site or, if not stockpiled, then at the time it was loaded onto the train for transport to the port.

49. Where the only saleable product of a seller is a blended product the blending is part of the production process. Costs associated with the blending including any transport expenses to the blending site have to be absorbed into the cost of trading stock. This most commonly occurs where otherwise unsaleable lower grade ores are blended with higher grade ores to achieve a saleable product.

50. On the other hand, where a blended product is produced as a result of contract negotiations to meet the needs of a specific customer, the expenses associated with blending are selling or distribution expenses which do not have to be absorbed into the cost of trading stock. The fact that a seller may only have one customer would not change the character of the blending expenses; they would remain selling or distribution expenses.

Measurement of trading stock

51. ASRB 1022[1] recognised that some companies adopt the practice of bringing to account, as inventory, only product in a saleable form. This practice is not acceptable for taxation purposes as it is contrary to the decision in *St. Hubert's Island* which held the expression 'trading stock' denotes not only finished goods but raw materials, components and partly manufactured goods. All trading stock must be accounted for and in a typical integrated mining operation this would include:

(a) all severed ore, either underground or in a pit, that is to be converted by further processing to saleable product provided it can be measured with reliability;

(b) ore or metal in circuit during the extraction process, e.g., gold in the carbon pulp plant, mineral sands during the separation process, etc;

(c) crushed ore after it has been through the crushing plant or mill;

(d) concentrate and matte in the process of being smelted or refined;

(e) materials in transit between production processes; and

(f) stockpiles of saleable product.

52. The methodology adopted by taxpayers to measure physically the quantity of trading stock must recognise such factors as the compaction factor that affects large stockpiles, the moisture content of many materials, the presence of trading stock in enclosed vessels or pipes (often with varying degrees of density) or assay factors, etc.

[1] As at the date of the Addendum to this Ruling, ASRB 1022 'Accounting for the Extractive Industries' was no longer current and there was no equivalent accounting standard.

Valuation of trading stock

53. Section 70-45 of the 1997 Act states that a taxpayer must elect to value each item of trading stock on hand at the end of an income year at its cost or its market selling value or its replacement price.

54. The calculation of cost for taxation purposes is based upon taxation principles and concepts found in case law and public Taxation Rulings. The value a taxpayer adopts for trading stock in its financial accounts is not necessarily determinative of its value for taxation purposes.

Philip Morris - the case

55. The leading case on valuing trading stock where a taxpayer is using cost is *Philip Morris Ltd v. FC of T* 79 ATC 4352; (1979) 10 ATR 44. This case involved a cigarette manufacturer and the court had to determine, in the context of the 1936 Act, the cost price of finished and partly finished goods on hand at the end of the year of income. The court proceeded on the basis that cost price should be understood as meaning 'cost'.

56. The taxpayer had valued its trading stock using the true direct cost method. Under this method, the costs ascribed to the trading stock consisted only of the costs of materials and the wages of those employees who moved or performed operations on those materials in the course of the manufacturing process.

57. At the hearing there was no argument about variable production overheads, the taxpayer having conceded these as being part of the cost of trading stock prior to the hearing. These are costs of production which vary directly, or nearly directly, with the volume of production, e.g., factory light and power.

Philip Morris - the decision

58. In its decision, the court focused on the treatment of fixed factory overhead costs, i.e., costs of production that remain relatively constant from financial period to financial period irrespective of variations, within normal operating limits, in the volume of production. Examples are rent, insurance, property taxes, depreciation and supervisory salaries.

59. The court held that a proportion of fixed factory overhead costs also had to be included as part of the cost of trading stock.

Philip Morris - the court's reasons

60. The court decided that a proportion of fixed factory overhead costs had to be included as part of the cost of trading stock because the statutory meaning of cost price in the former subsection 31(1) of the 1936 Act was its actual or true cost.

61. The court rejected the direct costing method on the basis that it produced a value for cost that was a measure of the gains of the business rather than a value that accurately reflected what the article of trading cost had cost the manufacturer to make.

62. The court was not concerned with identifying costs that would be useful for decision-making by managers, investors and other interested parties. Rather, it favoured the approach that inventories should carry a fixed cost component because both variable and fixed costs are necessary to produce goods.

Philip Morris - relevance of accounting principles and practice

63. In determining the meaning of cost of trading stock in the former subsection 31(1) of the 1936 Act, Jenkinson J went to considerable lengths to explain that the income tax concept of cost of trading stock differs from the concept of cost of trading stock for general accounting purposes, which is a concept concerned with cost of trading stock as part of the determination of the profits or gains of a business. He quoted with approval the remarks of Mason J in the *St. Hubert's Island* case, who, after pointing out that the Australian income tax legislation did not assess profits or gains like the United Kingdom legislation, said (at CLR 228; ATC 4113; ATR 462):

> 'One consequence of this difference is that some accounting principles and practices which have been held to be appropriate in the ascertainment of a taxpayer's profit may have no application here because our statutory provisions specifically instruct us as to what constitutes assessable income and as to the items that shall be allowed as deductions from that income. The trading stock provisions contained in ss. 28 to 36 are a case in point. Accounting principle and practice cannot prevail over them.'

64. ASRB 1022 specified the accounting method of calculating the cost of trading stock for disclosure purposes. This disclosure was designed to ensure that users were provided with information about the company that was necessary for an understanding of its financial position.

65. ASRB 1022 was an application of the accounting doctrines of disclosure and materiality and care must be exercised in relying too heavily on it in calculating cost of trading stock for taxation purposes. As Hill J said in *FC of T v. Citibank Limited & Ors* 93 ATC 4691; (1993) 26 ATR 423 (at ATC 4700; ATR 433):

> 'But it must be remembered that the role of the accounting standards is in the determination of profit so as to ensure that financial statements, required to be prepared by statute, give a true and fair view and not the determination of "income", notwithstanding that those two concepts may, as will be seen, sometimes overlap.'

66. As general accounting standards are concerned with accounting concepts of profits or gains and not assessable income, some non-deductible costs that are absorbed for accounting purposes, e.g., provision for holiday pay, provision for restoration costs, depreciation based on an upward asset revaluation figure, etc., are not relevant for the calculation of cost of trading stock for income tax purposes.

Philip Morris - meaning of cost

67. The meaning of 'cost price' in the former subsection 31(1) of the 1936 Act and 'cost' in section 70-45 of the 1997 Act is a tax accounting concept. Income tax accounting requires trading stock to be valued for the purposes of determining assessable income and its value can differ from that determined in calculating profits or gains for general accounting purposes. The meaning of cost price was explained by Jenkinson J in *Philip Morris* where he said (at ATC 4360; ATR 51):

> ' ... in my opinion the conception which is expressed in sec. 31(1) by the words "cost price" is not in itself any such a measure of gain or loss. The statutory conception of "cost price" or, in the case of a manufacturer's stock, "cost" is merely a measure of a value at a particular time which does not purport itself to measure any gain. The gain or loss is to find expression only in the amount by which the aggregate of closing stock values exceeds or falls below the aggregate of opening stock values.'

68. Here, his Honour is recognising that cost price is a tax accounting concept. He acknowledged that whilst the concept of 'cost' does not purport to measure a gain or loss, the operation of the former section 28 of the 1936 Act does achieve a measure of a gain or loss, or more correctly, a measure of an amount of assessable income or allowable deduction. Unless only appropriate tax expenditures are included in the cost of trading stock, the mechanics of the former section 28 of the 1936 Act will not achieve its intended result. Section 70-35 of the 1997 Act applies in the same way as the former section 28 of the 1936 Act.

69. His Honour went on to say at ATC 4360; ATR 52:

> 'The concept expressed by the words "cost price" in sec. 31(1) in my opinion is, in its application to an article of trading stock manufactured by a taxpayer, directed to ascertainment of the expenditure which has been incurred by the taxpayer, in the course of his materials purchasing and manufacturing activities, to bring the article to the state in which it was when it became part of his trading stock on hand.'

70. His Honour referred to 'cost price' in the former subsection 31(1) of the 1936 Act as being calculated by ascertaining 'the expenditure which has been incurred by the taxpayer'. He repeated this requirement in relation to amounts of sick pay, tea money and holiday pay when he specifically said only **payments made** to an employee in the year of income should be taken into account (ATC 4362; ATR 54).

71. Thus, the meaning of 'cost price' in the former subsection 31(1) of the 1936 Act and 'cost' in section 70-45 of the 1997 Act, is directed towards accounting for the value of trading stock as part of the calculation of assessable income. Accordingly, only tax deductible expenditure that has been incurred in the production process is absorbed as part of the cost of trading stock. However, within these parameters recognition is given to absorption costing principles to identify the type of cost that is absorbed and its rate of absorption.

Absorption costing - degree of absorption

72. The identification of the actual costs that go to make up the cost of trading stock for the purposes of section 70-45 of the 1997 Act involves questions of degree. At what point should the line be drawn between those costs which are allocated (absorbed) and those which are expensed outright (i.e., treated as period costs)?

73. A critical issue in deciding what costs should be absorbed into the value of trading stock is that of 'remoteness' from the production operations. Some costs are too remote in time to be absorbed, e.g., provisions for restoration costs. Likewise, some costs are too geographically remote, for example, only relevant development expenditure that relates to the particular mining or quarrying property from which the mineral or quarry material is extracted forms part of the cost of production.

74. It is also important to understand that only production costs are absorbed. Costs which relate to finance, marketing, selling and distribution to customers are too remote from the production of the saleable trading stock to be absorbed.

75. Production costs to be taken into account are limited to those costs incurred in the course of the production activities associated with changing the state or condition of the article to be traded.

Absorption costing - rate of absorption for fixed production costs

76. As fixed production costs which relate to the capacity to produce have to be absorbed as part of cost for the purposes of section 70-45, it is necessary to have some means by which the fixed production costs relating to a period can be attached on a reasonable basis to the trading stock on hand at the end of the period. This is done by using a fixed production absorption (hence the name absorption costing) rate:

$$\frac{\text{Fixed production overhead costs for the period (net of abnormal idle capacity)}}{\text{Actual number of units produced}}$$

77. As 'cost' for the purposes of section 70-45 means actual cost, only fixed production overhead costs that have actually been incurred are included in the numerator. In addition, only those fixed production overhead costs that relate to 'the period' are absorbed. The reference to 'the period' is a reference to the accounting concept of allocating costs incurred to the particular period to which they relate. Thus, the relevant proportion of a production overhead cost that had been prepaid in a previous year would be absorbed into the cost of an item of trading stock produced during, and on hand at the end of, a subsequent period to which that production cost relates.

78. The reduction of fixed production overhead costs, on account of abnormal idle capacity, in calculating the absorption rate is consistent with accounting concepts which identify and separate significant unavoidable costs during strikes, business downturns, etc., and classify these costs as abnormal costs. This is not to say that anything less than full or maximum operation capacity is to be taken as a downturn in production or abnormal idle capacity. In each case a downturn or idle capacity must be established against normal operating capacity. Normal operating capacity is the level of capacity utilisation that will satisfy average consumer demand over a span of time long enough to include seasonal, cyclical and trend factors.

79. The adoption of a standard absorption cost system is acceptable. Paragraph 16 of Taxation Ruling IT 2350 states:

> 'Use of the standard cost method is acceptable provided that the standard contains a component for production overheads costs (i.e. a standard absorption cost system) and the standards have been properly set and are regularly reviewed and updated to meet current conditions. Where a discrepancy, i.e. a variance, between budgeted cost (being the total cost based on the standards) and actual cost is due to faulty or incorrect standards, for example when they have not been changed to reflect changed circumstances, the variance, if significant, should be apportioned between the stock that has been sold and that remaining at the end of the year of income ...'.

Absorption costing - 'cost' of trading stock

80. In the *Philip Morris* case Jenkinson J identified three major cost elements that have to be absorbed when calculating the cost of trading stock for taxation purposes. They are:

> **(1) Direct Material**. This includes the cost of all raw material which is an integral part of the finished product and which may be conveniently assigned to specific products.
>
> Most mining businesses do not purchase raw material to sell; rather, they process their own ore into the finished product. However, some taxpayers may purchase ore or minerals to blend with their own products to form the finished product. In these circumstances the cost of purchasing that ore or those minerals would be taken into account in calculating the 'cost' of trading stock. Such costs would include not only the actual invoice costs but other costs including any duties and taxes, inward transport costs, etc., relating to purchase.
>
> **(2) Direct Labour**. This is the remuneration paid to employees and sub-contractors that can be identified in an economically feasible way with the finished products.
>
> As long as the employee or sub-contractor performs tasks that can be identified specifically with obtaining ore, petroleum or quarry materials and converting it into the finished product to be sold, this remuneration is a direct cost. The word 'direct' as it is used in absorption costing, embraces all those cost items that can be identified with the production of saleable product.
>
> The costs to be absorbed are those direct costs which relate to the remuneration paid for the performance of work done in producing the trading stock.

An example of direct labour costs is remuneration paid to miners involved in extracting ore, petroleum and quarry materials including operators of drills, mucking machines, continuous miners, bulldozers, loaders, haulage trucks, shovels, conveyor belts, hoists, etc. In addition, remuneration paid to those involved in processing such as crusher operators, ball mill operators, flotation and solution tank operators, furnace operators and refinery operators is also a direct labour cost.

(3) Production Costs. These are all production costs other than direct material and direct labour. Other terms to describe this category include production burden, indirect production costs, production overhead and production expenses. The term 'production' was defined in ASRB 1022 and its meaning was relevant for both accounting and taxation purposes. Production means 'the day to day activities directed to obtaining saleable product from the deposit or field on a commercial scale and includes extraction and any processing prior to sale'. There are two major types of production costs:

(a) Variable Production Costs. These are costs of production which vary directly, or nearly directly, with the volume of production. Examples include supplies, mine amortisation charge, depreciation (if based on output), some administration expenses, production royalties, relevant transport costs. Also included are indirect labour costs.

Indirect labour costs are any labour costs associated with production other than direct labour costs. They are labour costs that are impossible or impracticable to trace to a specific product. Examples are remuneration relating to employees and sub-contractors who are engaged in a host of service trades such as blasters and rock bolters, pipe fitters who string pipes that supply water and compressed air to the drills, electricians, carpenters, tramming crews, maintenance crews, and so on.

Other indirect labour costs may involve remuneration paid to technical and professional staff carrying out sampling, surveying, drafting or planning duties. These staff would include mining, chemical, industrial and metallurgical engineers, assayers, physicists and geologists (involved in duties such as mapping, assaying and analysing samples for the control of the mining and milling operations) and production supervisors.

Payments made for on-costs such as holiday pay, sick pay, tea money, long service pay, workers' compensation, superannuation, payroll tax and certain fringe benefits for both direct and indirect labour personnel are also variable production costs.

(b) Fixed Production Costs. These are costs which relate to the capacity to produce and which remain relatively constant from financial period to financial period irrespective of variations, within normal operating limits, in the volume of production. Examples are rent, insurance, property taxes and depreciation (if on a time basis).

Absorption costing - treatment of certain costs

81. Our views on the need to absorb certain costs that are specific to taxpayers carrying on mining, petroleum or quarrying businesses are set out in the following paragraphs.

Exploration and evaluation costs

82. Exploration is the search for mineral deposits or quarry materials and it may occur before any mine or quarry is commenced or during actual mining or quarrying with a view to finding new deposits to continue the life of an existing mine or quarry. Evaluation is the determination of the technical feasibility and commercial viability of a particular project or extension of an existing project.

83. Both exploration and evaluation costs occur before any commercial extraction takes place from the area in which the exploration took place. They are, therefore, too remote in time to the production operations and do not have to be absorbed into the cost of trading stock.

Development expenditure

84. The allowance of income tax deductions for the capital cost of developing a mine or quarry recognises the wasting nature of such assets. The extracted ore bearing mineral or quarry material is trading stock and, by its extraction, the value of the mine or quarry diminishes.

85. To the extent that capital expenditure incurred in developing a mine or quarry qualifies as a tax deduction it should be absorbed into the cost of trading stock obtained from the particular mine or quarry to which it relates.

86. The capital expenditure that should be absorbed is that identified in subsection 40-860(1) of the 1997 Act.

87. The rationale for absorbing part of the cost of developing a mine is that the mine is a capital asset that is used up in the production of trading stock. An analogy can be drawn to the situation in *Philip Morris.* In that case capital assets in the form of plant, such as the leaf treatment plant, were used in the manufacture of cigarettes and it was held that depreciation on the plant had to be absorbed into the cost of trading stock.

Alternative view

88. It has been suggested by some that if allowable capital expenditure has to be absorbed into the cost of trading stock then section 70-25 of the 1997 Act applies to treat it as a revenue expense that is deductible under section 8-1. We do not agree that section 70-25 applies in this way.

89. Allowable capital expenditure is not incurred in 'acquiring' trading stock; rather, it is incurred in respect of a capital asset that is used in the 'production' of trading stock. As explained in Taxation Ruling TR 93/9, trading stock may be 'produced', 'manufactured' or 'acquired'; section 70-25 is concerned with costs connected with 'acquisition' of trading stock and not costs connected with the 'production' or 'manufacture' of trading stock.

Amortisation of development expenditure - tax or accounting rates

90. Having determined that allowable capital expenditure has improved the value of a capital asset, i.e., the mine or quarry, and that this asset has been used in the production process such that a relevant part of the expenditure should be absorbed into the cost of trading stock, the question arises as to what proportion should be absorbed.

91. The rate of absorption should be one that reflects the reduction in value of the mine or quarry corresponding to the amount of mineral bearing ore or quarry material that is extracted. In this way the reduction in value of an asset used in production is reflected in the actual cost of the trading stock obtained.

92. The amortisation rate used for taxation purposes is based on the life of a mine or quarry with an arbitrary maximum write-off period of 10 years for a mine and 20 years for a quarry. The use of the taxation rate as a basis for absorbing allowable capital expenditure into the cost of trading stock produces distortions where the life of the mine or quarry exceeds the maximum write-off period or where output varies substantially from year to year.

93. We consider the amortisation rate calculated under ASRB 1022 and used for accounting purposes produced an outcome that more accurately calculated the actual cost of trading stock. In the circumstances the amortisation rate used for accounting purposes should be applied to the allowable capital expenditure identified in paragraph 86, to calculate the cost price of trading stock.

94. Under ASRB 1022, the amortisation rate was determined on a production output basis unless, in the particular circumstances, a time basis was more appropriate. The basis of amortisation, i.e., production output or time, adopted by a taxpayer must be applied consistently from year to year.

95. The circumstances where it would be appropriate to determine an amortisation rate on a time basis is where production is limited by time, as it would be under a fixed-period tenure. However, in most cases, use of the production output basis is more appropriate because it takes into account variations in the production rate.

96. Under the production output basis, production costs are written-off by the proportion that the ore or quarry material extracted during the year bears to the total economically recoverable reserves. An acceptable refinement of this method uses units of recoverable metal rather than ore. While the ore or quarry material extracted during the year is known, this method requires an estimation to be made of the economically recoverable reserves.

97. It is appropriate for taxpayers to limit reserve figures to proven and probable reserves that relate to an existing mine or quarry and, for the purposes of determining the existence of economically recoverable reserves, to take into account future costs that will be necessary to develop all the reserves in the proven and probable category.

98. Proven reserves are those reserves where the geological limits of the ore or quarry material body are definitely known and the chances of failure of the ore or quarry material to reach those limits is so remote as not to be an element in the practical planning of mine or quarry operations. Probable reserves includes extensions near at hand to 'proven reserves', where conditions are such that ore or quarry material will probably be found, but the extent and limiting conditions cannot be defined as precisely as for 'proven reserves'. For example, 'probable ore' may include ore that has been cut and identified by drill holes too widely spaced to ensure continuity.

99. Estimates of reserves are normally made at least annually by qualified staff members of mining and quarry entities. Information about the characteristics of an ore body or quarry material tends to expand as the deposit is developed. Expectations in relation to future prices and productions costs also vary as a result of changes in economic and technological factors. Consequently, estimates of economically recoverable reserves may fluctuate from time to time during the life of a mine or quarry.

Advanced blasting and overburden removal costs

100. Taxation Ruling TR 95/36 recognised that expenditure incurred in blasting and removing overburden from an open pit mine was either a capital or revenue expense depending whether it was incurred in building an access or haulage road or as part of the extractive process that was open pit mining.

101. Expenditure of this nature is sometimes incurred in advance of any actual extraction of the desirable mineral bearing ore. Nevertheless, such expenditure is incurred in the production process and an appropriate portion of any deduction allowed under section 8-1 or section 40-25, or allowed for a project amount under Subdivision 40-I,of the 1997 Act must be absorbed into the cost of trading stock when the desired mineral bearing ore is severed from its natural site and becomes trading stock.

102. Expenditure on overburden removal of a revenue nature is deductible under section 8-1 in the year it is incurred. As explained in Taxation Ruling TR 93/9, this is not an expense of 'acquiring' trading stock required to be deferred under section 70-15; rather, it is an expense associated with the 'production' of trading stock.

Township costs

103. Allowable capital expenditure relating to the construction of housing and amenities for the workforce is too remote from the production process to be absorbed into the calculation of cost of trading stock. They are not costs which are incurred in the course of the production activities nor are they associated with changing the state or condition of the article being produced.

104. These township costs are incurred for the purpose of attracting personnel to the mine rather than in the production activity. Moreover, there is a practical difficulty in apportioning their cost to the output from a particular mine, quarry or field. At the time the township is constructed the full extent of the deposit, the number of mines to be developed or the expansion of mining into adjoining areas is usually not known. The case of *Mount Isa Mines Limited v. FC of T* (1955) 10 ATD 423 well illustrates the point. In that case, township costs were incurred in 1926-27 to provide accommodation and amenities for a workforce to establish a new mine, a mine which is still in operation today.

105. However, to the extent that water, gas or electricity facilities are consumed in the mining or quarrying production activities, a relevant proportion of their costs has to be recognised in calculating the cost of trading stock.

Treatment of depreciable assets

106. It was determined in *Philip Morris* that a proportion of depreciation in respect of plant used in the manufacturing process had to be included in the cost price of trading stock. On this authority depreciation of plant used in the extraction and production process of minerals or quarry materials has to be recognised in the calculation of cost of trading stock.

107. The rate of depreciation that should be used is one that reflects the reduction in value of the plant that corresponds with the use of that plant in the extraction or production process.

108. The rate of depreciation for taxation purposes is calculated on the effective life of the plant, either by the Commissioner or the taxpayer. This rate may be used to absorb depreciation of plant into the cost of trading stock. However, where the taxpayer can demonstrate that the rate of depreciation calculated for accounting purposes produces a more accurate calculation of the actual cost of the trading stock, the accounting rate of depreciation may be used.

General and administrative costs

109. Only general and administrative costs that relate directly to the mining and processing areas should be absorbed into the calculation of cost of trading stock. These would include costs relating to accounting and audit, payroll preparation, vehicle fleet maintenance, etc., provided they are directly related to mining and production activities.

110. However, general and administrative cost that relate only indirectly to operational activities, such as directors' fees, secretarial and share registry expenses, and salaries and other expenses of general management, should be treated as expenses of the financial period in which they are incurred and not absorbed into the calculation of 'cost' of trading stock.

Restoration costs

111. In *Philip Morris* it is said that the concept expressed by the words 'cost price' in its application to an article of trading stock manufactured by a taxpayer is directed to the ascertainment of the expenditure incurred in material purchasing and manufacturing activities to bring the article to the state in which it becomes part of trading stock. This concept limits the costs absorbed to those incurred during the material purchasing and manufacturing stages with a cut-off point being reached once the article becomes part of trading stock.

112. Since restoration costs are not part of the production activity and usually are incurred some time after the ore or quarry material becomes saleable trading stock, these costs do not have to be absorbed into the calculation of cost of trading stock.

Royalties and petroleum resources rent tax

113. Royalties that are output based, i.e., based on tonnes of ore extracted, are a direct cost of obtaining materials and are absorbed into the calculation of cost of trading stock.

114. Royalties based on sales and the petroleum resource rent tax do not have to absorbed. Both costs are too remote from the production process. Petroleum resource rent tax is a profit based tax which only becomes payable after the petroleum project has recouped certain expenditure; it is not a cost arising from the day to day production activities.

Transport costs

115. Transport costs that are part of the material purchasing or production activity have to be absorbed into the cost of trading stock. This means that transport costs incurred in moving partly completed goods through the various stages of the production process are absorbed into the cost of trading stock. Therefore, if the production process is not complete, any costs in transporting trading stock from one process to another must be taken into account in the calculation of cost of trading stock. Selling and distribution expenses incurred after the trading stock becomes a saleable product do not have to be absorbed.

Payroll fringe benefits

116. Direct and indirect labour costs have to be absorbed into the calculation of cost of trading stock. In addition, certain on-costs and costs of providing direct fringe benefits to those employees or sub-contractors who make up the direct and indirect labour workforce must also be absorbed into the cost of trading stock. The relevant employees and sub-contractors are those mentioned in paragraph 80 under the headings **'Direct Labour'** and **'Variable Production Costs'**.

117. On-costs such as actual payments of sick pay, tea money and holiday pay were identified in *Philip Morris* as being costs that had to be absorbed. Jenkinson J said that they ought to be treated, for the purposes of calculating the cost of trading stock, as if the payments had been made on account of wages earned by that employee in that year of income. To these on-costs can be added payroll tax, workers' compensation and superannuation costs.

118. Other costs of providing direct fringe benefits that are a part of a 'salary package' provided to those employees and sub-contractors who are part of the direct and indirect labour workforce have to be absorbed. These benefits include such things as cost of providing employee cars, payment of expenses on behalf of employees (i.e., children's education expenses or health insurance), rent and holiday assistance, costs associated with home purchase schemes, etc.

119. Other costs closely connected with the direct and indirect labour workforce that have to be absorbed include costs associated with fly-in / fly-out arrangements, work travel costs and costs of providing meals during working hours.

120. For the purpose of absorption costing, we are not calculating the value of the benefit to the employee but rather examining the cost of providing the benefit and determining its nexus to the production process. Those costs which are a part of the 'wages' under a salary package arrangement have to be absorbed. On the other hand, annual costs associated with providing light and power to the township, costs of providing recreation facilities, etc., do not have to be absorbed. Like the township costs, these costs are too remote from the production process to be absorbed.

Waste disposal

121. In Taxation Ruling TR 1999/2 it is stated that facilities such as mudlakes, initial containment areas, tailings dams or other industrial residue or waste storage or disposal facilities, are items of plant.

122. The Ruling also acknowledges the Commissioner's acceptance of the decision in *FC of T v. Mount Isa Mines Ltd* 91 ATC 4154;

(1991) 21 ATR 1294 that the construction of a new retaining wall for a tailings dam was expenditure on an improvement for use in connection with the storage of minerals. The majority of the Full Federal Court held in that case that the word 'minerals' could be taken to describe all the various products of the treatment of ore, even those with no commercial value.

123. In accordance with the *Mount Isa Mines* decision, the costs associated with mudlakes, initial containment areas, tailings dams and other industrial residue, waste storage and disposal facilities are storage costs and not part of the production process. These costs do not have to be absorbed as part of cost of trading stock (refer Taxation Ruling TR 93/33).

124. The actual 'minerals' contained within the storage facilities do not have to be valued as part of trading stock where they have no commercial value or their value is insignificant.

Allocation, accumulation and apportionment of costs

125. In the mining and quarrying industry it is necessary for costs to be allocated, accumulated and/or apportioned for the purposes of calculating the cost of trading stock for taxation purposes. The reasons for this may involve distinctions between:

- phases of operations, such as exploration and development;
- areas of interest;
- various products arising from operations; or
- capital and revenue expenses.

126. While many costs are capable of direct allocation, joint costs need to be apportioned on a reasonable basis. The basis of apportionment should be properly founded and, wherever possible, based on physical or measurable units of activity, for example, labour hours, machine hours, tonnes of material, metres of drilling, units of power, etc.

127. Instances of the application of the various methods include:

- hoisting costs being apportioned between production and development based on tonnes hoisted of ore and mullock respectively - with measurements based on actual weights or skip counts;
- power being apportioned on a metered usage basis; and

- drilling costs being apportioned between exploration and development and production based on metres drilled or on hours of drill use.

128. The methods by which such allocations, accumulations and apportionments are made must be able to be justified as producing a fair and reasonable cost price for trading stock.

Joint products and by-products

129. Joint products are two or more products produced simultaneously from a common raw material source, with each product having a significant relative sales value. One joint product cannot be produced without the other, and the products are not identifiable as distinct until a certain production stage, often called the 'split-off point', is reached.

130. By-products are secondary products obtained during the course of production or manufacture, having relatively small importance when compared with the principal product or products.

131. The apportionment of production costs between joint products should be done at the split-off point and based on the ability of each product to contribute to the sales revenue of the business. The apportionment should be done using either historical or estimated production and revenue data relevant to the period under review. Costs of production after separation should be charged directly to the product to which they relate.

132. Varying practices are used to value by-products. Some taxpayers value by-products at estimated net realisable value, with a corresponding credit to the cost of the main product. Others attribute to by-products only the costs of processing subsequent to the split-off point and carry them in their accounting records at the lower of that cost and net realisable value. Another alternative involves the valuation of by-products at an arbitrary separation cost, to which the cost of subsequent processing is then added.

133. As by-products are trading stock, a value must be recognised for them at the end of an income year. Any of the various methods of valuing by-products outline above is acceptable provided it is consistently applied and the corresponding credit to the cost of the main product is recognised.

134. [Omitted].

Detailed contents list

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