

FASB Emerging Issues Task Force

Issue No. 04-6

Title: Accounting for Stripping Costs in the Mining Industry

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Previously distributed EITF materials: Issue Summary No. 1, dated June 17, 2004; Working Group Report No. 1, dated September 13, 2004; Supplement to Working Group Report No. 1, dated September 28, 2004

References:

FASB Statement No. 3, *Reporting Accounting Changes in Interim Financial Statements* (FAS 3)

FASB Statement No. 19, *Financial Accounting and Reporting by Oil and Gas Producing Companies* (FAS 19)

FASB Concepts Statement No. 6, *Elements of Financial Statements* (CON 6)

APB Opinion No. 20, *Accounting Changes* (APB 20)

AICPA Accounting Research Bulletin No. 43, *Restatement and Revision of Accounting Research Bulletins*, Chapter 4, "Inventory Pricing" (ARB 43)

Securities Act Industry Guide 7, *Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations* (Industry Guide 7)

IAS ED 6, *Exploration and Evaluation of Mineral Resources* (IAS ED 6)

International Accounting Standards Committee, *An Issues Paper Issued for Comment by the IASC Steering Committee on Extractive Industries* (IASC Issues Paper)

*** The alternative views presented in this Working Group Report are for purposes of discussion by the EITF. No individual views are to be presumed to be acceptable or unacceptable applications of Generally Accepted Accounting Principles until the Task Force makes such a determination and it is ratified by the Board.**

Background

1. In the mining industry, companies may be required to remove overburden and other mine waste materials while accessing mineral deposits. The costs of removing overburden and waste materials are referred to as "stripping costs." During the development of a mine (before production begins) it is generally accepted in practice that stripping costs are capitalized as part of the depreciable cost of building, developing, and constructing the mine. These capitalized costs are typically amortized over the productive life of the mine using the units of production method. A mining company may continue to remove overburden and waste materials, and therefore incur stripping costs, during the production stage of the mine. It is the accounting for stripping costs incurred during production that has resulted in questions being raised as to the appropriate accounting for those costs, and diversity in practice exists.

2. The question of accounting for stripping costs is a difficult issue to address because stripping costs incurred during production may benefit both future periods (that is, the nature of the cost is the same or similar to stripping costs incurred in the development phase) and current period production. Until the last unit of reserves is extracted from a mine, some believe that all stripping costs incurred in the mining operation provided an element of future benefit, because the removal of the overburden and waste material allowed the entity to gain access to additional reserves.

3. In practice, many mining companies estimate the total material to be mined throughout the mine's productive life. Those companies, using a long-term mine plan, then develop a "life of mine stripping ratio," or a "stripping ratio," which is calculated as the estimated total number of units (for example, tons) of waste material mined during production divided by the estimated total proved and probable reserves contained within the mine (that is, recoverable ore in a unit of measure, for example, pounds of copper or ounces of gold). Diversity in the mechanical calculation of the stripping ratio and the life of mine concept currently exists in practice. However, irrespective of that diversity, using a stripping ratio and the deferred stripping accounting model yields a consistent result; the allocation of a ratable amount of stripping costs to each unit of reserves extracted from the mine.

4. Because the physical concentration of mineral deposits is not uniform throughout a mine, a company generally is mining a ratio of waste material to mineral deposits that is different from the stripping ratio. Refer to Exhibit 04-6A for an illustration of a cross section of a mine and calculation of a deferred stripping ratio. For each period, the actual stripping ratio is compared to the life-of-mine stripping ratio. If the actual stripping ratio exceeds the life-of-mine stripping ratio (that is, more waste is removed than the estimated average), the excess stripping cost incurred is recognized as a deferred stripping asset. Alternatively, if the actual stripping ratio is less than the life-of-mine stripping ratio (that is, less waste is removed than the estimated average), the shortfall is recognized as a reduction in the deferred stripping asset. In certain limited cases, the shortfall is recognized as a deferred credit on the balance sheet (when the deferred stripping asset, if any, does not absorb the amount of the shortfall). Changes in the average life-of-mine stripping ratio are accounted for prospectively as changes in estimates. The following provides a basic illustration of the application of a deferred stripping ratio:

If an entity estimates a stripping ratio of 4:1 and, during the first period of production, it produces 10 units, and incurs a stripping ratio of 6:1 and \$300 in stripping costs, the entity would attribute \$200 to that period's production and it would capitalize \$100 as an asset. Further, if the entity produces 10 units, and incurs a stripping ratio of 2:1 and \$100 in stripping costs in the following period, the entity would attribute \$200 in costs to that period's production including the costs incurred during the period (\$100) and a reduction to the previously capitalized costs (\$100).

The deferred stripping ratio method may be used in practice in circumstances in which the stripping ratio is expected to vary substantially over the life of the mine. In other situations, entities may expense stripping costs as incurred during production when the stripping ratio over the life of a mine is expected to be relatively stable.

Scope

5. This Issue applies to mining entities. Mining entities include entities involved in finding and removing wasting natural resources—other than oil- and gas-producing entities that are within the scope of FAS 19.

Prior Task Force Discussion

6. At the June 30–July 1, 2004 EITF meeting, the Task Force discussed the accounting for stripping costs incurred during production but did not reach a consensus. The Task Force asked the FASB staff to further explore and develop with the Mining Industry Working Group (Working Group) the following alternatives: (a) expense as incurred, (b) include in inventory as a variable production cost, and (c) defer as an asset (no liability recognition) and recognize in earnings using a proportional performance ratio. The Task Force also requested the FASB staff to solicit a recommended view from the Working Group.

7. On August 19, 2004, the FASB staff met with the Working Group to further discuss and develop the alternatives and to reach a Working Group recommendation. At that meeting, the Working Group developed an additional alternative, which requires stripping costs incurred during production to be capitalized as a mine development cost and attributed to the proved and probable reserves benefited in a systematic and rational manner. This new alternative (View D under Issue 1) is the Working Group Recommendation.

8. At the September 29–30, 2004 EITF meeting, a majority of the Task Force members expressed support for the Working Group Recommendation. However, the Task Force directed the FASB staff to develop additional guidance about what constitutes a systematic and rational method of attribution. Additionally, the Task Force generally agreed that the attribution of stripping costs incurred in the pre-production phase of the mine should be the same as those incurred during the production phase.

Accounting Issues and Alternatives

Issue 1: How stripping costs in the mining industry should be accounted for.

9. Based on Task Force's request, the scope of this Issue has been expanded to address the accounting for all stripping costs—both pre-production and production stripping costs. Additionally, this Issue Summary expands the Working Group Recommendation (View D in Issue 1) to include additional guidance on the attribution of stripping costs. The FASB staff will

ask Task Force members whether they agree with the expanded Working Group Recommendation. The FASB staff also will ask Task Force members whether they would like to provide additional guidance on the attribution of capitalized stripping costs and, if so, whether the use of a units-of-production method and a proportional performance ratio (a stripping ratio) are acceptable attribution methods.

10. Working Group Report No. 1, which was the basis for discussion at the September 29–30, 2004 EITF meeting, included examples to illustrate the impact of Views A-D on current practice. The FASB staff has carried forward those examples in Exhibit 04-6B to assist Task Force members in their review and reconsideration of this Issue.

View A: Stripping costs should be expensed as incurred.

View B: Stripping costs are variable production costs that should be considered a component of mineral inventory cost subject to the provisions of ARB 43.

View C: Stripping costs should be capitalized and recognized in earnings using a stripping ratio, subject to not recognizing a liability in periods when the actual stripping ratio is less than the estimated average stripping ratio for the mine.

View D (Working Group Recommendation): Stripping costs are a mine development cost that should be capitalized as an investment in the mine and attributed to proved and probable reserves benefited in a systematic and rational manner.

11. The FASB staff recommends that the following be included in View D to expand the guidance on the attribution of capitalized stripping costs. The staff will ask Task Force members whether they agree with the guidance in View D, as expanded.

The method of attributing stripping costs to reserves extracted from the mine should be determined based on the facts and circumstances associated with the mine. Differing methods of attribution may be appropriate under differing scenarios. However, the attribution method must be consistent for both pre-production and production stripping costs

incurred for a mine. Additionally, an entity should use the same attribution method for mines with similar geological formations.

An enterprise is expected to perform a detailed analysis of all pertinent facts and circumstances to support its method of attribution. Attribution methods should be reevaluated when there are changes in facts and circumstances. Estimates used to apply those methods should be reevaluated at least on an annual basis or more frequently if there are changes in facts and circumstances.

An enterprise must attribute stripping costs specifically to reserves that directly benefit from the stripping activities. That is, if the reserves in the mine are distinct (for example, the mine has multiple ore bodies) and stripping activities can be identified to benefit only a certain section(s) of the mine or specific reserves, the enterprise should attribute the capitalized stripping costs to the specific reserves benefited. A systematic and rational method of allocating stripping costs to reserves extracted from a mine does not preclude an entity from capitalizing an amount of stripping costs and attributing an equal amount to reserves extracted in the same period. In no circumstances should an entity recognize a liability (or accumulated amortization in excess of cumulative capitalized stripping costs) that results from the application of a proportional performance ratio (stripping ratio).

To further illustrate the attribution principle, consider the following two basic examples. In the first example, assume that the reserves are located in a horizontal (relative to the land surface) seam and the amount of overburden located above the reserve is consistent throughout the entire seam. The waste is removed and the reserves are extracted directly below the waste removed. This process is repeated in a continuous manner until all reserves are extracted. In this fact pattern, the stripping activity associated with removing the overburden can be directly (and solely) attributed to the reserves extracted beneath the overburden. Therefore, the costs of removing the overburden should be attributed to the specific reserves exposed as a result of the stripping activity. The continued capitalization of these costs as an investment in the mine to future periods is prohibited because the reserves that these costs benefit have been extracted.

In the second example, assume that the reserves are located in a vertical (relative to the land surface) seam and the removal of overburden is required to be completed in layers in order to access the full depth of the ore body. That is, the removal of a "layer" of overburden is required to access reserves extracted in the current period, as well as to access reserves extracted in the future. Given this scenario, the stripping activity is directly associated with all of the remaining proven and probable reserves within the mine. Therefore, the attribution of capitalized stripping costs to reserves extracted in future periods is appropriate.

Working Group Recommendation

12. The Working Group recommends View D. The Working Group believes that stripping costs are development costs that should be recognized as investments in the mine. The Working Group believes that View D offers a conceptually sound model, while at the same time providing

flexibility to permit the model to be applied to the myriad of mining scenarios that exist within the industry.

Additional Attribution Guidance under View D

13. The FASB staff will ask Task Force members whether they would like to provide additional guidance on the attribution of capitalized stripping costs. Some believe that View D, as expanded, provides the appropriate guidance because it (a) requires a detailed analysis of the facts and circumstances to determine the appropriate attribution method so that costs are specifically attributed to the reserves that are benefited, and (b) provides flexibility to address the wide variations in the types of mines and mineral formations found in practice. Others believe that View D provides too much flexibility and that diversity in practice will continue. If the Task Force decides to provide additional attribution guidance, the FASB staff will ask the Task Force to consider Issue 2.

Issue 2: Attribution of stripping costs to proved and probable reserves benefited in a systematic and rational method.

14. The FASB staff has identified the following potential attribution methods: (a) units of production, (b) proportional performance ratio (stripping ratio), and (c) straight-line over the estimated life of the reserves. Based on the discussion at the September EITF meeting, the Task Force did not reach an agreement as to whether the units-of-production or the proportional performance ratio methods were systematic and rational methods for attributing capitalized costs under View D. Accordingly, if the Task Force decides to provide additional attribution guidance, the FASB staff will ask the Task Force whether the units of production or the proportional performance ratio are systematic and rational methods that an entity may apply under View D. The FASB staff believes that the straight-line method of allocating capitalized costs is appropriate only in limited circumstances—that is, when production is consistent from year-to-year and a declining gross margin (the depreciable asset increases each period as additional stripping costs are incurred and capitalized) reflects the economics of the mine.

15. The following addresses the *units of production* and *proportional performance ratio* methods in more detail.

Units of production

16. A *units of production* method attributes capitalized costs so that each unit produced is assigned a pro rata portion of the unamortized capitalized costs. The unit cost is computed based on the estimated total units of proved and probable reserves. For example, an entity that has \$100 of unamortized capitalized costs and estimates 20 units of proven and probable reserves would attribute \$5 ($\$100/20$ units) to each unit that is extracted. Changes in reserve estimates are accounted for prospectively as changes in accounting estimates.

17. FAS 19 requires oil and gas entities to use the units of production method based on proved reserves to attribute capitalized acquisition costs, exploratory drilling costs, and development costs. FAS 19 requires entities to expense production costs. Accordingly, when production begins, the costs that an oil and gas company amortizes (the depreciable asset) have been incurred and capitalized. Generally, the only change in the amortization cost per unit of production for an oil and gas entity is based on revisions to proved reserves (the denominator). In contrast, under View D, a mining entity will continue to capitalize stripping costs after production begins and, accordingly, both the capitalized costs (the numerator) and the proven and probable reserves (the denominator) will change in the calculation of the cost per unit of production.

Proportional performance ratio

18. A *proportional performance ratio* attributes unamortized capitalized costs to each unit produced on an activity-based ratio (for example, a stripping ratio). A mining entity may calculate a stripping ratio (or yield) by dividing the estimated tons of waste material to be mined by the estimated total proven and probable reserves. A mining entity then compares the actual ratio with the estimated ratio. To the extent that the actual ratio is greater than the estimated ratio, the entity capitalizes a portion of the costs incurred for that period. The result of applying a proportional performance ratio is that a ratable amount of stripping costs will be attributed to each unit of ore extracted.

19. Refer to paragraph 4 of this Issue Summary for a more complete description of the use of a proportional performance ratio. However, the recognition of a liability from the application of a proportional performance ratio, as described in paragraph 4, is prohibited under View D.

Illustration of the attribution methods

20. Exhibit 04-6C illustrates the application of the units of production method and a proportional performance ratio under View D to a basic example of a mine that has reserves that are located in a vertical seam (relative to the land surface) that requires the removal of overburden to be completed in layers in order to access the full depth of the ore body. The Exhibit does not include a basic example of a mine that has reserves that are located in a horizontal seam (relative to the land surface) where the removal of waste benefits the reserves directly below the waste. In those circumstances, the stripping costs should be attributed to the reserves extracted for the period and not to production in future periods.

View A: Both the units of production method and a proportional performance ratio may be systematic and rational methods to attribute capitalized costs to reserves benefited depending on a detailed analysis of the facts and circumstances.

21. View A proponents believe that both the units of production method and a proportional performance ratio may be systematic and rational methods to attribute capitalized costs to the reserves benefited. View A proponents believe that this view provides the flexibility that is required to apply the model to the myriad of mining scenarios that exist. Most View A proponents believe that View D, as expanded, should acknowledge that both of these attribution methods may be acceptable based on a detailed analysis of the facts and circumstances. However, some believe that View D, as currently drafted, provides sufficient guidance and that specific acknowledgment of these methods is not required.

22. View A opponents believe that View A does not provide any additional guidance and that the diversity in practice that currently exists will continue.

View B: The units of production method may be a systematic and rational method to attribute capitalized costs to reserves benefited depending on a detailed analysis of the facts and circumstances. A proportional performance ratio is not an acceptable method to allocate capitalized costs to reserves benefited.

23. View B proponents believe that the units of production method may be a systematic and rational method to attribute capitalized costs to reserves benefited and that a proportional performance ratio would never be appropriate. View B proponents acknowledge that a consensus on View B effectively would require an entity to use a units-of-production method to attribute capitalized stripping costs. These proponents essentially believe that the unit of account is the ore that is extracted from the mine and that the ore should carry costs that reflect the effort required to extract the ore.

24. For example, assume that a mine has reserves that are located in a vertical seam (relative to the land surface) that requires the removal of overburden to be completed in layers in order to access the full depth of the ore body. That is, the removal of a "layer" of overburden is required to access reserves extracted in the current period, as well as to access reserves extracted in the future. Given this scenario, the stripping activity is directly associated with all the remaining proven and probable reserves within the mine. Therefore, the attribution of capitalized stripping costs to reserves extracted in future periods is appropriate. Under a units-of-production method, the entity would capitalize the stripping costs for each layer of waste and amortize those costs over the remaining proven and probable reserves. The result of the application of this method is that the cost per unit of ore will be less in earlier periods (for the ore closer to the surface) and greater in later periods (for the ore further from the surface).

25. View B opponents believe that the unit of account is the mine, not the extracted ore. These opponents believe that mining entities assess the economic viability of a mine as a single unit and that the accounting should reflect the economics of the mine, not the individual units of extracted ore. In particular, View B opponents are concerned that selecting a units-of-production amortization method may result in a mining entity recognizing "artificially high" operating margins in the early years of a mine's life. Under a units-of-production method, the margins

would gradually decrease over time, thus resulting in the entity recognizing "artificially low" gross margins toward the end of a mine's productive life, which ultimately may result in an impairment charge for the mine before reaching the end of its productive life.

View C: A proportional performance ratio may be a systematic and rational method to attribute capitalized costs to reserves benefited depending on a detailed analysis of the facts and circumstances. The units-of-production method is not an acceptable method to allocate capitalize costs to reserves benefited.

26. View C proponents believe that a proportional performance ratio may be a systematic and rational method to attribute capitalized costs to reserves benefited and that the units-of-production method would never be appropriate. View C proponents acknowledge that a consensus on View C effectively would require an entity to use a proportional performance ratio to attribute capitalized stripping costs. These proponents essentially believe that the unit of account is the mine (or a distinct ore body) and the attribution of costs should be ratable over the production of the mine (or the distinct ore body).

27. For example, assume that a mine has reserves that are located in a vertical seam (relative to the land surface) that requires the removal of overburden to be completed in layers in order to access the full depth of the ore body. That is, the removal of a "layer" of overburden is required to access reserves extracted in the current period, as well as to access reserves extracted in the future. Given this scenario, the stripping activity is directly associated with all the remaining proven and probable reserves within the mine. Therefore, the attribution of capitalized stripping costs to reserves extracted in future periods is appropriate. Under a proportional performance ratio, the entity would capitalize the stripping costs for each layer of waste and attribute those costs based on an estimated performance ratio (stripping ratio). The result of the application of this method is that the entity will attribute a similar amount of stripping costs to each unit of ore that is extracted from the mine.

28. View C opponents believe that the unit of account is the extracted ore, not the mine. These opponents believe that an entity should attribute the capitalized stripping costs to the extracted

ore based on the effort required to extract the ore. They believe that a proportional performance ratio is a mechanism to smooth earnings, which does not provide investors with information about the volatility in operations and escalating costs of certain mines.

Cash Flow and Income Statement Characterization of Stripping Costs under View D

29. The basic premise of View D is that all stripping costs improve the mine and, therefore, should be capitalized as an investment in the mine. The FASB staff believes that the cash flow statement and income statement characterization of stripping costs should be consistent with that basic premise. As a result, a View D consensus will require a recharacterization of stripping costs in cash flow statements and income statements of mining entities.

30. For the statement of cash flows, mining entities currently report stripping activities incurred during production as operating activities, irrespective of the method used to account for the stripping costs. Under a View D consensus, mining entities will capitalize all stripping costs as a development activity and, therefore, should report the costs as an investing activity in the statement of cash flows. Attribution of the capitalized stripping costs should be included in "depreciation, depletion, and amortization" (DD&A). As a result, cash flows from operations will increase through an increase in DD&A.

31. For the income statement, most mining entities currently report costs of sales and DD&A as two separate components of operating costs. Mining entities also generally report stripping costs incurred during production in costs of sales, irrespective of the method used to account for the stripping costs. Under a View D consensus, mining entities will capitalize all stripping costs and attribute those costs to production. The attribution of those stripping costs should be included in DD&A in the income statement. Accordingly, a View D consensus will result in a significant recharacterization of stripping costs from costs of sales to DD&A in the income statement.

32. The FASB staff acknowledges that the recharacterization of stripping costs in the cash flow and income statements is a significant financial reporting change for mining entities. However, the staff believes that these changes are necessary to remain consistent with the basic premise of View D. If the Task Force reaches a View D consensus, the FASB staff will acknowledge in the

minutes and the abstract that the income statement and cash flow statement characterization of stripping costs should be consistent with the notion that stripping costs are mine development costs.

Disclosure

33. Under View D, the Working Group and FASB staff believe that the following disclosures should be required: (a) the accounting policy for stripping costs, in particular the methods and assumptions used to capitalize and amortize those stripping costs (b) the amount of capitalized stripping costs included in property, equipment, and mine development (or comparable balance sheet caption) at each balance sheet date, (c) the estimated period over which capitalized stripping costs will be amortized, and (d) the amount of stripping costs attributed to production and the amount recognized in the income statement during each period that an income statement is presented.

Transition

34. Current practice for the accounting for stripping costs is diverse. Given the significant costs associated with stripping activities for the mining industry, reaching a consensus on this Issue will result in a significant change in accounting and financial reporting for certain entities. Accordingly, the FASB staff believes that the Task Force should consider transition alternatives for any consensus reached on this Issue,. The staff has identified the following transition alternatives.

View A: The guidance in this consensus shall be effective for financial statements issued for fiscal years beginning after June 15, 2005, with early adoption permitted. An entity shall recognize the cumulative effect of initially applying this consensus in accordance with the provisions of APB 20. Entities that elect to early adopt the guidance in this consensus during an interim period, shall report the effects of this change in interim financial statements in accordance with the provisions of FAS 3. To the extent necessary, balance sheet amounts are required to be reclassified for all years presented to conform to the presentation required by this consensus. Additionally, where practicable, income statements and statements of cash flows

should be reclassified for all years presented to conform to the presentation required by this consensus.

35. Proponents of View A believe that the change in financial reporting resulting from a consensus on this Issue will have significant effects on the financial statements of certain entities. Accordingly, these proponents believe that reporting the effect of a significant change in accounting principle is most effectively accomplished through the reporting of a cumulative effect adjustment, with pro-forma disclosures to highlight the effects of retroactive application of the consensus on previously issued financial statements. An effective date of fiscal periods beginning after June 15, 2005, is proposed to allow entities adequate time to prepare for the adoption of the guidance in this Issue.

36. Opponents of View A believe that this transition alternative is impractical (particularly View D in the first Issue). These proponents cite the difficulty in determining the cumulative effect in those circumstances under which the mines may have been in operation for long periods of time.

View B: The guidance in this consensus shall be applied for fiscal years beginning after June 15, 2005, with earlier application permitted. The effects of applying this guidance shall be reported by retroactive restatement of prior period financial statements in accordance with paragraphs 27 and 28 of APB 20.

37. Proponents of View B believe that the change in accounting and financial reporting resulting from this consensus will be a significant change in practice for certain mining entities. Additionally, View B proponents believe the advantages of restating prior periods (that is, comparability in financial reporting period-to-period and among entities in the mining industry) outweigh the disadvantages, and, therefore, mandatory restatement of prior period financial statements should be required. An effective date of fiscal periods beginning after June 15, 2005, is proposed to allow entities adequate time to prepare for the adoption of the consensus guidance in this Issue.

38. Opponents to View B believe that re-creating the financial statements in prior years to conform to a consensus in this Issue (particularly View D in Issue 1) would be impractical and virtually impossible in some circumstances. Accordingly, opponents to this view believe that the costs of requiring restatement would far outweigh any perceived benefits.

View C: The guidance in this consensus shall be effective for financial statements issued for fiscal years beginning after June 15, 2005, with early adoption permitted. Recognition of a cumulative effect in accordance with the provisions of APB 20 and FAS 3 would not be permitted, except in the case in which an enterprise had previously recognized a liability pursuant to a stripping ratio accounting policy. In that case, the liability should be de-recognized and recognized as a cumulative effect of an accounting change in accordance with APB 20 and FAS 3. Amounts previously recognized as stripping assets are required to be reclassified to property, equipment, and mine development (or comparable balance sheet caption), for all years presented and accounted for in accordance with the guidance in this consensus on a prospective basis. Where practicable, income statements and statements of cash flows should be reclassified for all years presented to conform to the presentation required by this consensus. Restatement of prior period financial statements to conform to the guidance in this consensus is permitted but not required.

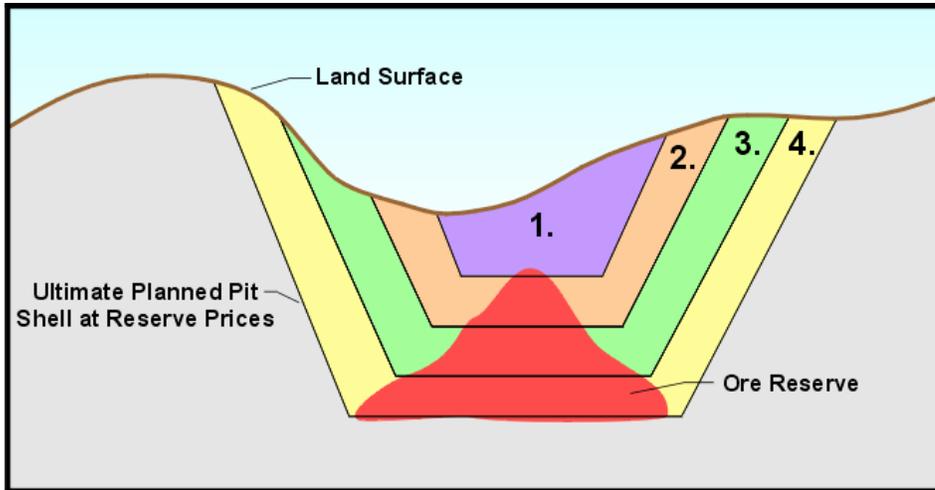
39. Proponents of View C believe that prospective transition is acceptable for a change of this nature. Proponents of View C also believe that restatement of prior period financial statements to conform to the guidance in this consensus in those circumstances when it is practical and results in improved financial reporting should be permitted. If the Task Force reaches a consensus other than View D (or View C) under Issue 1, this transition alternative is not preferable as it would have the effect of prolonging the continued capitalization of past stripping costs over extended periods (thereby, prolonging the diversity in practice).

Working Group Recommendation

40. If the Task Force reaches a consensus on View D under Issue 1 (Working Group Recommendation), the Working Group recommends the View C transition alternative.

EXHIBIT 04-6A

**CROSS SECTION OF A MINE AND CALCULATION OF A DEFERRED STRIPPING
COST RATIO**



**Waste/Ore
Stripping Ratio**

- Year 1 - Initial stripping-all waste material (capitalized)
- Year 2 6:1 Stripping ratio is high as waste material is removed to reach lower portions of the ore body
- Year 3 3:1 Stripping ratio is slightly lower as the ore body is being accessed
- Year 4 2:1 Stripping ratio is low as most waste was removed in prior phases
- Life-of-Mine 3:1

EXHIBIT 04-6B

ANTICIPATED IMPACT OF ACCOUNTING FOR STRIPPING COSTS INCURRED UNDER THE VIEWS PRESENTED UNDER TWO BASIC EXAMPLE MINING SCENARIOS

To assist the Task Force in understanding the impact of reaching a consensus on the alternative views under Issue 1, the FASB staff has prepared the following analysis of the expected change to the current practice of accounting for stripping costs incurred during production under two basic mining scenarios. The analysis has been prepared for informational purposes only and is not intended to be prescriptive of the current or future accounting for any specific sector or entity within the mining industry.

Example A

Coal Company owns and operates a coal mine that extracts coal from an open pit mine. The coal reserves are in a horizontal seam that is relatively close to the surface. The effort required to mine the coal (remove the overburden and extract the coal) is consistent from period to period. That is, the coal reserve being extracted is found in a consistent seam and the overburden removed is directly associated with specific reserves extracted. Mining of the coal is a continuous activity of removing overburden and replacing overburden to reclaim portions of the mine.

Assumptions: For purposes of this example it is assumed that Coal Company currently accounts for stripping costs incurred during production as a cost of current production and typically does not stockpile inventory.

View A: Stripping costs should be expensed as incurred.

Evaluation: Since Coal Company does not stockpile inventory, it is expected that accounting for stripping costs incurred during production (hereinafter referred to as Stripping Costs) under View A would result in only a minimal change in current practice.

View B: Stripping costs are a variable production cost that should be considered a component of mineral inventory cost subject to the provisions of ARB 43.

Evaluation: Accounting for stripping costs under View B is the current practice for Coal Company. Therefore, a consensus on View B would not have an impact on Coal Company's financial reporting.

View C: Stripping costs should be capitalized and recognized in earnings using a stripping ratio, subject to not recognizing a liability in periods when the actual stripping ratio is less than the estimated average stripping ratio for the mine.

Evaluation: It is assumed that the effort to mine the coal is consistent from period to period (that is, the life of mine stripping ratio is consistent from period to period), therefore it is expected that a View C consensus would have only a minimal impact on Coal Company's current practice as it could also be assumed that the life of mine stripping ratio does not vary from the actual stripping ratio from period to period. However, the classification of stripping costs within the income statement and the reporting of cash activities within the cash flow statement may be significantly impacted.

View D: Stripping costs are a mine development cost that should be capitalized as an investment in the mine and attributed to proved reserves benefited in a systematic and rational manner.

Evaluation: It is assumed that the effort to mine the coal is consistent from period to period, therefore it is expected that under a View D consensus the capitalized costs would be attributed to proved reserves benefited in a systematic and rational manner that would mirror accounting for the costs as a production cost. That assumption would be supported by the fact that the stripping costs can be specifically associated with reserves extracted and therefore would be attributed to those specific reserves. Under that assumption, it is expected that the accounting for stripping costs under View D would result in a minimal or no change in Coal Company's results from operations. However, as discussed in the Working Group Report, the classification of stripping costs within the income statement and the reporting of cash activities within the cash flow statement may be significantly impacted.

Example B

Gold Company owns and operates an open pit gold mine. Because of the location and shape of the ore deposit containing the related reserves, the gold will not be mined at a uniform rate over the life of the mine. Accordingly, the stripping costs incurred during production will be incurred in a non-uniform manner. Gold Company expects the life of the mine to be 10 years and management estimates that 500,000 ounces of gold will be extracted over the life of the mine.

Assumptions: For purposes of this example it is assumed that Gold Company currently accounts for stripping costs incurred during production using a deferred stripping accounting model, which has no prohibition on the recognition of a liability in periods when the actual stripping ratio is less than the life of mine stripping ratio. Assume further that Gold Company does not typically stockpile inventory.

View A: Stripping costs should be expensed as incurred.

Evaluation: In this example, stripping costs are incurred in a non-uniform manner over the life of the mine. Since Gold Company's current accounting policy results in the attribution of a uniform amount of stripping costs to each unit of reserves extracted from the mine, accounting for stripping costs under a View A consensus would be a significant change in practice for Gold Company and would result in income statement volatility.

View B: Stripping costs are a variable production cost that should be considered a component of mineral inventory cost subject to the provisions of ARB 43.

Evaluation: In this example, stripping costs are incurred in a non-uniform manner over the life of the mine. Since Gold Company's current accounting policy results in the attribution of a uniform amount of stripping costs to each unit of reserves extracted from the mine, accounting for stripping costs under a View B consensus would also be a significant change in practice for Gold Company and would result in income statement volatility. Since Gold Company does not typically stockpile inventory, it is expected that accounting for stripping costs under View B would be similar to the accounting required under a View A consensus.

View C: Stripping costs should be capitalized and recognized in earnings using a stripping ratio, subject to not recognizing a liability in periods when the actual stripping ratio is less than the estimated average stripping ratio for the mine.

Evaluation: Gold Company currently accounts for stripping costs under a manner that is similar to View C, with the exception of the prohibition on liability recognition. Therefore, it is expected that a View C consensus would result in a change in practice for Gold Company only to the extent that it had previously recognized a liability related to stripping costs incurred during production. However, the classification of stripping costs within the income statement and the reporting of cash activities within the cash flow statement may be significantly impacted.

View D: Stripping costs are a mine development cost that should be capitalized as an investment in the mine and attributed to proved reserves benefited in a systematic and rational manner.

Evaluation: It is assumed that Gold Company's effort to mine the gold varies from period to period, therefore it is expected that under a View D consensus the capitalized costs would be attributed to proved reserves benefited in a systematic and rational manner that may be similar to recognition of the stripping costs using a stripping ratio. Therefore, it is expected that accounting for stripping costs under View D would not require a significant change in the results of operations for Gold Company. However, as discussed in the Working Group Report, the classification of stripping costs within the income statement and the reporting of cash activities within the cash flow statement may be significantly impacted. Gold Company could decide that the units-of-production method of attributing the capitalized costs to the proved reserves is the systematic and rational manner to be used. In that case, the accounting under a View D consensus would result in a significant change in Gold Company's financial reporting.

EXHIBIT 04-6C

ILLUSTRATION OF THE APPLICATION OF THE UNITS OF PRODUCTION METHOD AND A PROPORTIONAL PERFORMANCE RATIO UNDER VIEW D OF ISSUE 1

To assist the Task Force in understanding the impact of reaching a consensus on the alternative views under Issue 2, the FASB staff has prepared the following illustration of the application of the units of production method and a proportional performance ratio under View D to a basic example of a mine that has reserves that are located in a vertical seam (relative to the land surface) requiring the removal of overburden to be completed in layers in order to access the full depth of the ore body. The FASB staff also has included a table to compare the effects of the two methods on the net carrying amount of the asset and the amortization per unit for the period. This analysis has been prepared for informational purposes only and is not intended to be prescriptive of the current or future accounting for any specific sector or entity within the mining industry.

Example

Mining Company owns and operates a mine that has reserves that are located in a vertical (relative to the land surface) seam requiring the removal of overburden to be completed in layers in order to access the full depth of the ore body. That is, the removal of a "layer" of overburden is required to access reserves extracted in the current period, as well as to access reserves extracted in the future. Given this scenario, the stripping activity is directly associated with all of the remaining proven and probable reserves within the mine. Therefore, the attribution of capitalized stripping costs to reserves extracted in future periods is appropriate.

Assumptions: Assume that Mining Company sells the ore in the same period that it extracts the ore. The mine contains an estimated 100 units of proven and probable reserves that will be mined over 11 periods. The following is the production information for the ore body:

	Units of production	Stripping costs incurred
Period 1 (pre-production)	0	200
Period 2	10	300
Period 3	10	100
Periods 4 - 10	10	200
Period 11	10	0

UNITS OF PRODUCTION

Period 1

In Period 1, the mine is in the preproduction phase. All stripping costs are capitalized as mine development costs.

		Debit		Credit
Asset – Mine Development		\$200		
Cash				\$200

Period 2

In period 2, the mine begins production. All stripping costs are capitalized as mine development costs. Unamortized capitalized stripping costs are attributed to the period's production using the units of production method. Amortization per unit is calculated based on the unamortized costs (\$200 of preproduction stripping costs + \$300 of current period stripping costs) divided by the estimated units of remaining proven and probable reserves (100 units). Accordingly, amortization per unit for Period 2 is \$5 (\$500/100 units). Total amortization for the period is \$50 (\$5 per unit × 10 units of production).

		Debit		Credit
Asset – Mine Development		\$300		
Cash				\$300
Cost of Sales (DD&A)		\$50		
Amortization – Mine Development				\$50

Period 3

All stripping costs are capitalized as mine development costs. Unamortized capitalized stripping costs are attributed to the period's production using the units of production method. Amortization per unit is calculated based on the unamortized costs ((\$500 of previously capitalized stripping costs – \$50 of previously recognized amortization) + \$100 of current period stripping costs) divided by the estimated units of remaining proven and probable reserves (100 units – 10 units of previous production). Accordingly, amortization per unit for Period 3 is \$6.11 (\$550/90 units). Total amortization for the period is \$61 (\$6.11 per unit × 10 units of production).

		Debit		Credit
Asset – Mine Development		\$100		
Cash				\$100
Cost of Sales (DD&A)		\$61		
Amortization – Mine Development				\$61

Period 4

All stripping costs are capitalized as mine development costs. Unamortized capitalized stripping costs are attributed to the period's production using the units of production method. Amortization per unit is calculated based on the unamortized costs ((\$600 of previously capitalized stripping costs – \$111 of previous recognized amortization) + \$200 of current period stripping costs) divided by the estimated units of remaining proven and probable reserves (100 units – 20 units of previous production). Accordingly, amortization per unit for Period 4 is \$8.61 (\$689/80 units). Total amortization for the period is \$86 (\$8.61 per unit × 10 units of production).

	Debit	Credit
Asset – Mine Development	\$200	
Cash		\$200
Cost of Sales (DD&A)	\$86	
Amortization – Mine Development		\$86

Periods 5-11

This table illustrates the effect of the application of the units of production method on the attributed cost per unit of amortization.

	Units of production	Stripping costs incurred	Amortization per unit
Period 5	10	\$200	\$11.47
Period 6	10	200	14.80
Period 7	10	200	18.80
Period 8	10	200	23.80
Period 9	10	200	30.47
Period 10	10	200	40.45
Period 11	10	0	40.45

PROPORTIONAL PERFORMANCE RATIO

Assumptions: Use the same assumptions as above. Additionally, the entity estimates a 4:1 stripping ratio for the ore body, which is calculated as the estimated total waste material to be mined during preproduction and production divided by the estimated total proven and probable reserves in the mine. The actual stripping ratios for each period are as follows:

	Actual stripping ratio	Units of waste removed
Period 1 (pre-production)	0	40
Period 2	6:1	60
Period 3	2:1	20
Periods 4-10	4:1	40
Period 11	0	0

Period 1

In Period 1, the mine is in the preproduction phase. All stripping costs are capitalized as mine development costs.

	Debit	Credit
Asset – Mine Development	\$200	
Cash		\$200

Period 2

In Period 2, the mine begins production. All stripping costs are capitalized as mine development costs. Unamortized capitalized stripping costs are attributed to the period's production using a stripping ratio. Amortization of capitalized stripping costs for the period is calculated as actual stripping costs incurred for the period, divided by the actual stripping ratio for the period, then multiplied by the estimated stripping ratio for the ore body (\$300 of actual stripping costs for the period ÷ 6:1 stripping ratio = actual cost per unit × 4:1 estimated stripping ratio). In this example, the stripping costs incurred during production that are attributed to the current period are \$200 or \$20 per unit (\$200/10 units).

	Debit	Credit
Asset – Mine Development	\$300	
Cash		\$300
Cost of Sales (DD&A)	\$200	
Amortization – Mine Development		\$200

Period 3

All stripping costs are capitalized as mine development costs. Unamortized capitalized stripping costs are attributed to the period's production using a stripping ratio. Amortization of capitalized stripping costs for the period is calculated as actual stripping costs incurred for the period, divided by the actual stripping ratio for the period, then multiplied by the estimated stripping ratio for the ore body (\$100 of actual stripping costs for the period ÷ 2:1 stripping ratio = actual

cost per unit¹ × 4:1 estimated stripping ratio). In this example, the stripping costs incurred during production that are attributed to the current period are \$200 or \$20 per unit (\$200/10 units).

	Debit	Credit
Asset – Mine Development	\$100	
Cash		\$100
Cost of Sales (DD&A)	\$200	
Amortization – Mine Development		\$200

In this example, unamortized stripping costs still represent a debit to the mine development asset at the end of period 3 (\$200 of preproduction stripping costs + \$400 of production stripping costs – \$400 of amortization = \$200 of unamortized mine development costs). Although not illustrated in this example, it should be noted that View D does not permit the recognition of amortization in excess of capitalized stripping costs (either as a liability or as a contra-asset amount). In such cases, the accumulated amortization is limited to the cumulative capitalized stripping costs.

Periods 4 - 11

The costs of sales (DD&A) and amortization of mine development costs are the same as under Periods 2 and 3.

Table: Comparison of the Attribution Methods

Periods	Units of Production		Proportional Performance	
	Net Asset ²	Amortization Per Unit	Net Asset	Amortization per Unit
1	200	0	200	0
2	450	5.00	300	20.00
3	489	6.11	200	20.00
4	603	8.61	200	20.00
5	689	11.47	200	20.00
6	740	14.80	200	20.00
7	752	18.80	200	20.00
8	714	23.80	200	20.00
9	609	30.47	200	20.00
10	405	40.45	200	20.00
11	0	40.45	200	20.00

¹ This example assumes that the actual cost to remove a unit of overburden remains constant from period to period. In practice, the unit cost to remove overburden will vary—unit costs typically increase as mining progresses to greater depths because of the greater distance to remove materials from the mine. However, this example illustrates that a proportional performance ratio results in a similar amount of stripping costs being attributed to each unit of ore extracted assuming the estimated stripping ratio remains constant. Changes in the estimated stripping ratio are accounted for prospectively as changes in estimates.

² The net asset is the cumulative capitalized stripping costs less accumulated amortization at the end of the period.