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October 8, 2003

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Via Hand Delivery

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board
1925 K St. N.W.
Washington, D.C. 20423

RE: STB Docket No. 42071, *Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company*

Dear Secretary Williams:

Please find enclosed for filing the original and ten (10) copies of Complainant's Reply Evidence (Public Version) in the above referenced proceeding. Also enclosed are three (3) sets of compact disks containing the electronic version of the Reply (Public Version) in PDF format.

Please note that the original and the copies contain COLOR IMAGES in Exhibit II-A-1 (pages 1 and 2); Exhibit II-A-29 (pages 1 and 2); and Exhibit II-A-32 (page 2).

An extra copy of this filing is enclosed for stamping and returning to our offices.

Should you have any questions regarding the foregoing, please do not hesitate to contact the undersigned.

Sincerely,

Nicholas J. DiMichael
Jeffrey O. Moreno
Counsel for Complainant

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cc: Counsel for Defendant

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PUBLIC VERSION
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**BEFORE THE
SURFACE TRANSPORTATION BOARD**

OTTER TAIL POWER COMPANY

Complainant,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,

Defendant.

Docket No. 42071

ENTERED
Office of Proceedings **COMPLAINANT'S REPLY EVIDENCE**

OCT 09 2003

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Public Record

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October 8, 2003



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I

Summary and Argument

PART I

COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

In accordance with the procedural schedule established in this case by the December 26, 2002 order of the Surface Transportation Board ("STB" or "Board"), Complainant, Otter Tail Power Company ("OTP"),¹ hereby submits its Reply Evidence and Argument in response to the Opening Evidence submitted on June 13, 2003 by the Defendant ("BNSF Op."), The Burlington Northern and Santa Fe Railway Company (BNSF). This submission adheres to the format prescribed in the Board's March 12, 2001 decision in STB Ex Parte No. 347 (Sub-No. 3), General Procedures for Presenting Evidence in Stand-Alone Rate Cases ("General Procedures").

A. INTRODUCTION AND SUMMARY OF LEGAL ARGUMENT

In this proceeding, OTP has challenged the common carrier rates published by BNSF in BNSF's Common Carrier Pricing Authority No. BNSF 90062, and supplements thereto,² for the transportation of coal in unit trains from thirteen mines³ in the Powder River Basin of Wyoming ("PRB") to the Big Stone Generating Station ("Big Stone"), near Big Stone, South Dakota. In its Opening Evidence, OTP presented evidence of BNSF's quantitative and qualitative market dominance over the Big Stone coal transportation and presented evidence of a maximum reasonable

¹ OTP is the Operating Agent for the Big Stone Generating Station, which OTP co-owns with MDU Resources Group, Inc. and Northwestern Energy (formerly Northwestern Public Service Company). As the Operating Agent, OTP is prosecuting this Complaint on behalf of all three co-owners.

² See Exhibits I-A-1 and I-A-2 in OTP's Opening Evidence.

³ The thirteen mines are Buckskin, Rawhide, Eagle Butte, Dry Fork, Fort Union, Clovis Point, Caballo, Belle Ayr, Caballo Rojo, Cordero, Coal Creek, Jacobs Ranch, and Black Thunder.

rate for this transportation using the Stand-Alone Cost ("SAC") constraint of Constrained Market Pricing, as adopted in Coal Rate Guidelines, Nationwide.⁴

OTP's Reply Evidence addresses BNSF's opening evidence on the issue of "quantitative market dominance," *i.e.*, whether the rates OTP has challenged are more than 180% of BNSF's variable costs of transporting unit trains of coal from the PRB to the Big Stone Station. In addition, OTP responds to BNSF's improper attempt to inject its system-wide revenue inadequacy into this SAC proceeding.

The purpose of a rail carrier's opening evidence in a rate reasonableness proceeding is to calculate the revenue/variable cost ("R/VC") ratio of the issue traffic in order to determine if the rail carrier possesses quantitative market dominance over the issue traffic.⁵ If the R/VC ratio equals or exceeds 180%, quantitative market dominance exists.⁶ BNSF freely concedes that it possesses quantitative market dominance over the Big Stone traffic, with R/VC ratios ranging from 216-236%; but even so, BNSF has understated its true variable costs for the Big Stone traffic. In this Reply Evidence, OTP shows that the true R/VC ratio for the issue traffic ranges from 255%-277%.

Although BNSF concedes its quantitative market dominance over the Big Stone traffic, its opening evidence does not stop there. BNSF engages in a lengthy discourse on its revenue adequacy and Big Stone's elasticity of demand, which are entirely immaterial to the issue of BNSF's quantitative market dominance. Rather, because it is revenue-inadequate on a system-wide level and

⁴ 1 I.C.C. 2d 520 (1985), *aff'd sub nom. Consolidated Rail Corp. v. U.S.*, 812 F. 2d 1444 (3d Cir. 1987) ("Coal Rate Guidelines").

⁵ Ex Parte No. 527, Expedited Procedures for Processing Rail Rate Reasonableness, Exemption and Revocation Proceedings (served Oct. 1, 1996). See also, General Procedures, *supra*.

⁶ 49 U.S.C. §10707(d)(2).

because Big Stone's demand for coal is highly inelastic, BNSF tries to assuage any concerns the Board may have over even BNSF's own under-stated calculation of a very high R/VC ratio on the Big Stone traffic. But, such arguments are superfluous to a SAC determination of a maximum reasonable rate.

BNSF ignores the fact that its revenue-adequacy and Big Stone's demand elasticity already are factored into CMP principles. Moreover, BNSF's focus on its firm-wide revenue-adequacy is entirely inappropriate in a SAC analysis, wherein OTP is not required to subsidize BNSF services and facilities from which the Big Stone movement does not benefit. Therefore, BNSF is not permitted to differentially price the Big Stone traffic to cover those costs, regardless of how inelastic Big Stone's demand may be.

BNSF's evidence of Big Stone's highly inelastic demand for rail transportation of coal, however, does demonstrate that BNSF possesses qualitative market dominance over the Big Stone movement, in addition to BNSF's concession of quantitative market dominance. Therefore, the Board clearly has jurisdiction to determine the reasonableness of the rates in BNSF 90062. The Board's examination of variable cost evidence in this proceeding, thus, is for the purpose of determining the appropriate jurisdictional threshold below which a maximum reasonable rate may not be prescribed.

B. ALTHOUGH BNSF CONCEDES QUANTITATIVE MARKET DOMINANCE, IT STILL SIGNIFICANTLY OVERSTATES ITS VARIABLE COST OF PROVIDING SERVICE TO BIG STONE.

BNSF concedes that it possesses quantitative market dominance over the Big Stone movement with R/VC ratios that BNSF calculates to range from 216% to 236% on movements

originating at the Belle Ayr and Eagle Butte Mines.⁷ Even these high R/VC ratios, however, are significantly understated. In Part II.A.1 of this Reply Evidence, OTP identifies the numerous empirical and methodological errors in BNSF's Opening Evidence that overstate BNSF's variable costs, which in turn understate the R/VC ratios. OTP also makes adjustments to its own calculation of variable costs from OTP's Opening Evidence in order to reflect certain information from BNSF's Opening Evidence and to reflect agreements reached with BNSF leading up to and at the Technical Conference with Board staff on July 16, 2003.⁸

By far, the single greatest factor contributing to the differences in the parties' calculation of variable costs is road property return and depreciation expenses. OTP discusses this factor in detail at Part I.A.1.c.i. of this Reply Evidence. While OTP has made movement-specific adjustments to BNSF's system average costs in order to reflect the economies of unit train operations and the movement-specific characteristics of the Big Stone movement, BNSF inappropriately defaults to its system average costs. BNSF resurrects claims that it first made in TMPA⁹ that its road property and depreciation data are unreliable for movement-specific adjustments. The Board, however, rejected

⁷ BNSF Op. at I-2 and Ex. II-A-1. BNSF has calculated variable costs only for the Belle Ayr and Eagle Butte Mines from 1Q02 through 1Q03, since those mines were the source of most of the coal transported to Big Stone over that period. OTP, however, has challenged the reasonableness of the rates in BNSF 90062 as they apply to all thirteen mines in the tariff. Therefore, OTP's opening evidence also calculated variable costs for the Cordero and Caballo Rojo Mines in 4Q02, since coal actually moved to Big Stone from those mines in that quarter, and for all thirteen mines in 1Q03. OTP Op. at II-A-4 and Exhibits II-A-7 through II-A-19.

⁸ The July 16th Technical Conference was the first such conference held with Board staff under the procedural rules adopted in Ex Parte No. 638, Procedures to Expedite Resolution of Rail Rate Challenges to be Considered Under the Stand-Alone Cost Methodology, served April 3, 2003. In that conference, OTP and BNSF reached agreement on all of the traffic and operating characteristics for the movement of coal from the Belle Ayr and Eagle Butte Mines to Big Stone. Exhibit II-A-23, *infra*, shows the restated traffic and operating characteristics agreed upon at the Technical Conference, along with OTP's traffic and operating characteristics for the other eleven mines listed in BNSF 90062.

⁹ Docket No. 42056, Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry. Co., decision served March 24, 2003.

BNSF's arguments and accepted TMPA's movement-specific adjustments.¹⁰ Contrary to the Board's admonition, in General Procedures at 6, not to relitigate settled issues without new evidence or different arguments, BNSF persists in repeating the same arguments in this proceeding.¹¹

In Part I.A.1.c.ii. of this Reply Evidence, OTP explains why BNSF improperly relies upon system average locomotive maintenance costs. In contrast, OTP used locomotive maintenance agreements for the actual locomotives used in Big Stone service. Although the Board rejected similar evidence in TMPA at 58, it did so because it believed that TMPA's evidence failed to address many "non-routine" repair costs that were not covered by the maintenance agreements. In this proceeding, OTP has addressed "non-routine" repair costs in its evidence. Because the locomotives used to serve Big Stone are much newer than system average locomotives and because they experience a higher level of utilization, they need repairs far less frequently and they experience far less maintenance per gross ton-mile and locomotive unit-mile than system average.

In Part I.A.1.c.iii. of this Reply Evidence, OTP details the factors that contribute to the parties' difference in locomotive capital costs. Because BNSF draws locomotives for Big Stone service from a pool, the costs of the locomotive pool is used to determine variable costs. OTP then

¹⁰ Id. at 56-57.

¹¹ BNSF submits one additional challenge to OTP's movement-specific adjustments that the Board declined to address in TMPA at 56, note 94. This challenge is made in the Verified Statement of John C. Klick, which was attached to BNSF's "Reply to Complainant's First Motion to Compel Production of Documents," filed on May 1, 2002, and incorporated into BNSF's Opening Evidence at page II-44. Mr. Klick challenges OTP's underlying logic that there are economies of density for road property investment. But, Mr. Klick's argument previously was rejected by the Board in its November 15, 2002 decision in this proceeding, granting OTP's Motion to Compel BNSF to produce its road property investment and depreciation data. If the Board had found any merit to Mr. Klick's arguments, it would have denied OTP's Motion as irrelevant. In addition, Mr. Klick's argument was rejected long ago in Ex Parte No. 431 (Sub-No. 1), Adoption of the Uniform R.R. Costing System as a General Purpose Costing System for all Regulatory Costing Purposes, 5 I.C.C. 2d 894, 919-20 (1989)(rejecting similar arguments made by the AAR to alter the default 50% variability factor for road property investment). Therefore, this argument also violates the Board's admonition against relitigating settled issues.

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has reflected the usage percentages for each type of locomotive in the pool used in Big Stone service to determine all locomotive cost factors, including spare margins, capital costs, and maintenance costs. Inexplicably, BNSF has used a different groups of locomotives for each of these determinations. For capital costs, BNSF correctly adopted locomotive usage percentages. But, for spare margins, it adopted only the spare margin requirements for SD70MACs (and did so incorrectly), and for maintenance costs, BNSF used system average. This has allowed BNSF to game the system, for example, by using new and expensive SD70MACs with very little accumulated depreciation to determine capital costs, but then using the 12-year system average age of locomotives to determine maintenance costs, thereby inflating both cost categories above actual levels for locomotives used in Big Stone service.

BNSF also uses an incorrect spare margin and, contrary to WPL¹², BNSF also bases its special study of locomotive capital costs on the average annual life lease rates as opposed to the lease rates actually paid in 2002 and 2003. The parties' difference in spare margins exists because BNSF determined spare margins incorrectly (see Part II.A.1.c(3)(b), infra) and because BNSF used only SD70MACs from the Alliance Pool, as opposed to the actual mix of locomotives used in Big Stone service. BNSF also failed to reflect the terms of its locomotive maintenance contracts,

The Board accepted these contracts as evidence of the appropriate spare margin in TMPA at 64. In addition, BNSF attempts to redefine "spare margin" in a way that repeatedly has been rejected by the Board.¹³

¹² Docket No. 42051, Wisconsin Power and Light Co. V. Union Pac. R.R. Co., served Sept. 13, 2001, at 57-58.

¹³ See, Increased Rates on Coal, BN, Montana To Superior, WI, 362 I.C.C. 625, 661 (1980); ICC Docket No. 37667S, Central Louisiana Elec. Co. v. Burlington Northern R.R., served Feb. 25, 1983; ICC Docket No. 37021, Annual Volume Rates on Coal - Rawhide Jct., Wyoming to Sergeant Bluff, Iowa, served Aug. 24, 1981; Omaha

OTP also uses actual maintenance of way costs, in contrast to BNSF's use of system average. Therefore, OTP's roadway maintenance costs are demonstrably superior to BNSF's. See Part II.A.1.c.iv., infra.

In Part II.A.1.c.v. of this Reply Evidence, OTP describes how BNSF has overstated crew wage expenses. First, BNSF's attempt to "refine" the "mark-up" by presenting separate non-train related mark-ups by type of service, rather than using methodology repeatedly accepted by the Board and used by OTP, actually shrinks the wage sample on which the mark-up calculation is based and distorts the results by counting the same wages multiple times in different types of service. Second, OTP has identified numerous errors in the BNSF payroll system and it has adjusted special study crew wages where Big Stone trains performed work for other BNSF shippers. Third, OTP has determined that BNSF's determination of the average wages for helper crews is in error because BNSF failed to update an Excel table by using the "Refresh" command. Fourth, OTP's use of BNSF's Train Activity Reports to calculate road switch crew wages is superior to BNSF's special study that is based on general statements by local field workers that are subjective and unsubstantiated observations. Finally, OTP has identified an error in the BNSF payroll system related to loading crew wages.

In Part II.A.1.c.vi., OTP identifies a small difference in the parties' calculation of switching costs, which arises because BNSF used too few years of normalization in its development of the Switch Engine Minute unit cost.

Pub. Power Dist. v. Burlington Northern R.R., 3 I.C.C. 2d 123, 152 (1986); ICC Docket No. 36719, Arkansas P & L Co. v. Burlington Northern R.R., at 4-5, served May 13, 1987.

The remaining areas of difference between OTP's and BNSF's determination of variable costs are addressed in Part II.A.1.c.vii. These areas are (a) carloads originated and terminated; (b) loss and damage; (c) end-of-train devices; and (d) helper service costs.

After correcting BNSF's empirical and methodological errors and updating OTP's opening evidence based on the Technical Conference and information obtained from BNSF's opening evidence, OTP has recalculated the R/VC ratios for all thirteen mines covered by BNSF 90062. The updated calculations are presented in Table II-A-17, *infra*. For the two principal mines from which Big Stone currently receives coal, the R/VC ratios from 1Q02 to 1Q03 range from 255% to 270% for Belle Ayr and from 255% to 277% for Eagle Butte. For the remaining eleven mines, the challenged rates produce R/VC ratios from 253% to 270%.

C. BNSF ATTEMPTS TO ELEVATE REVENUE ADEQUACY TO AN INDEPENDENT AND PARAMOUNT MEASURE OF RATE REASONABLENESS THAT CONFLICTS WITH THE SAC CONSTRAINT.

BNSF attempts to justify the extremely high R/VC ratios on the Big Stone traffic as consistent with the goal of revenue adequacy and the policy of differential pricing based on demand elasticities. This argument, however, disregards the fact that both objectives already are reflected in the CMP guidelines and the SAC constraint. Instead, BNSF would overlay a new, over-riding standard of firm-wide revenue adequacy on top of the SAC constraint's narrower focus on the revenue needs of a least cost, efficient competitor. This standard wrongly would elevate revenue adequacy and differential pricing above the other CMP objectives that focus on honest, economical and efficient management. Furthermore, in advocating for this over-riding standard of system-wide revenue adequacy, BNSF conveniently ignores its solid financial condition in the real world.

1. CMP and the SAC Constraint Expressly Address Revenue Adequacy.

Contrary to BNSF's assertions, there is absolutely no need to consider the Big Stone R/VC ratios in the context of revenue adequacy, because CMP and the SAC constraint already address revenue adequacy in their determination of a maximum reasonable rate. BNSF's position would grossly distort the proper role of revenue adequacy under CMP by elevating it to primary, if not paramount, importance.

Revenue adequacy is just one of four key CMP objectives that the Interstate Commerce Commission ("ICC") set forth in the Coal Rate Guidelines. These objectives are as follows:

1. A captive shipper should not be required to pay more than is necessary for the carrier involved to earn adequate revenues;
2. A captive shipper should not pay more than is necessary for efficient service;
3. A captive shipper should not bear the costs of any facilities or services from which it derives no benefit; and
4. Responsibility for payment for facilities or services which are shared (to the captive shipper's benefit) by other shippers should be apportioned according to the demand elasticities of the various shippers.¹⁴

The first and fourth objectives encompass BNSF's revenue adequacy and differential pricing arguments. But, the second and third objectives restrict BNSF's ability to differentially price its services to achieve revenue adequacy. Thus, in addition to providing carriers the opportunity to earn adequate revenues, CMP protects captive shippers from rates that are influenced by carrier inefficiencies and monopoly pricing.¹⁵

¹⁴ Coal Rate Guidelines, 1 I.C.C. 2d at 523-24.

¹⁵ Id. at 524 ("Taken together, these constraints should ensure that a carrier does not use its market dominance to charge its captive coal shippers more than they should have to pay for efficient rail service.").

The ICC adopted four CMP constraints on the pricing freedom of railroads that carefully balance all of these objectives. These four constraints are commonly referred to as (1) the stand-alone cost constraint, (2) the revenue adequacy constraint, (3) the management efficiency constraint, and (4) the phasing constraint. The first three constraints are alternative means to accomplishing the four objectives of CMP.¹⁶ According to the Coal Rate Guidelines, “[t]hey represent different means of approaching the same basic issue, i.e., the extent of unattributable costs to be covered through differential pricing and the portion that can be charged to the shipper involved.”¹⁷ These three CMP constraints thus may be used individually or in combination, at the option of the complainant, to analyze whether the rate at issue is unreasonably high.¹⁸

CMP explicitly was adopted to meet the “dual objectives of providing railroads the real prospect of attaining revenue adequacy while protecting captive coal shippers from ‘monopolistic’ pricing practices.”¹⁹ While the ICC expressed its “commitment to the concept of demand-based differential pricing, whereby the carrier may price its services according to the varying demand elasticities for them,”²⁰ it also placed an upper limit on the extent to which it would permit a carrier to exploit differential pricing by holding that “a captive shipper need not bear the costs of any facilities or services from which it derives no benefit.”²¹ Thus, a carrier does not have unfettered discretion

¹⁶ The “phasing constraint” is an independent constraint relating not to the reasonableness of the ultimate rate level, but to the reasonableness of collecting it immediately. Id. at 547, note 72.

¹⁷ Id. at 547.

¹⁸ Id. at 548.

¹⁹ Id. at 524-25.

²⁰ Id. at 523.

²¹ Id. at 528.

to differentially price its services to captive shippers up to the point that the carrier is revenue adequate, if such pricing would require the shippers to subsidize other parts of the carrier's system that do not benefit the shippers or that otherwise reflect inefficiencies in the carrier's system. In this way, the statutory goal of revenue adequacy already is reflected in, and satisfied by, CMP and the SAC constraint.²²

2. **BNSF's Emphasis on Its System-Wide Revenue Adequacy is Immaterial to a SAC Analysis.**

BNSF's revenue adequacy argument also erroneously focuses on system-wide revenue adequacy, which is immaterial to a SAC analysis. As demonstrated in the previous section, the first three CMP constraints are alternative means of resolving two basic issues: (1) the extent of unattributable costs to be covered through differential pricing, and (2) the portion that can be charged to the captive shipper.²³ Although revenue adequacy is relevant to the first issue of determining the extent of unattributable costs to be covered through differential pricing, a SAC analysis purposefully does not consider system-wide revenue adequacy.

The first three CMP constraints offer two different approaches for determining the revenue requirements of an efficient carrier. The revenue adequacy and management efficiency constraints calculate a carrier's revenue requirements on a system-wide basis.²⁴ Alternatively, the SAC constraint hypothesizes the revenue requirements of a least cost, efficient carrier.²⁵ The resulting reasonable rate may be different between the two approaches, since the revenue adequacy and management efficiency

²² Consolidated Rail Corp. v. U.S., 812 F. 2d 1444, 1450 (3rd Cir. 1987).

²³ Coal Rate Guidelines at 547.

²⁴ Id. at 534.

²⁵ Id.

constraints recover the total unattributable costs of the carrier's entire system via differential pricing, whether or not the captive shipper benefits from all of the system's services and facilities.²⁶ By contrast, if the captive shipper does not directly utilize all of the facilities and services on a rail system and does not benefit from joining together with shippers who do utilize those other facilities and services, the captive shipper can have those costs segregated.²⁷ The SAC constraint offers a procedure for separating costs and treating them on the basis of identifiable subsystems, rather than on a firm-wide basis.²⁸ Through a SAC analysis, the complainant may specify the level of service provided and, therefore, the costs for which it is responsible.²⁹ In fact, the ICC explicitly advised complainants to consider this difference when deciding which constraint to use.³⁰

BNSF's emphasis on its system-wide revenue adequacy effectively would nullify OTP's decision to employ the SAC constraint to determine a maximum reasonable rate for the Big Stone movement. In addition to examining a carrier's revenue needs, CMP evaluates its efficiency. The SAC constraint considers both factors by "approximat[ing] the full economic costs, including a normal profit, that need to be met for an efficient producer to provide service to the shipper(s) identified."³¹ A core CMP objective underlying this determination is that captive shippers should not pay for facilities or services from which they clearly derive no benefit.³² Thus, the SAC constraint

²⁶ Id. at 534, note 35.

²⁷ Id. at 539, note 47.

²⁸ Id.

²⁹ Id. at 534, note 35.

³⁰ Id.

³¹ Id. at 529.

³² Id. at 523-24, 538.

determines the pool of unattributable costs to which the shipper must contribute by designing a stand-alone system for maximum efficiency and to generate revenues not exceeding an adequate level.³³ Any attempt by BNSF to inject its system-wide revenue inadequacy into this analysis neutralizes the carrier efficiency objective and undermines the Board's purpose for developing, and OTP's rationale for selecting, the SAC constraint, which purposefully does not consider system-wide revenue adequacy.

3. **BNSF's RSAM Analysis is a New Rate Standard Based on System-Wide Revenue Adequacy that would Overlay and Undermine the SAC Constraint.**

In order to justify the extremely high R/VC ratios on the Big Stone movement, BNSF inappropriately resorts to the Revenue Shortfall Allocation Method ("RSAM") that the Board adopted in Rate Guidelines -- Non-Coal Proceedings.³⁴ BNSF Op. at I-5 to 6. In its most recent RSAM calculation, the Board determined that BNSF would need to earn average revenues between 213% and 289% of its variable cost on all traffic that generates revenue in excess of 180%, in order for BNSF to be revenue adequate as determined under 49 U.S.C. 10704(a)(2).³⁵ BNSF, therefore, contends that "the Board should not be troubled that the rate charged to Otter Tail, a highly demand-inelastic shipper, yields R/VC ratios in the range of 220-235 percent." BNSF Op. at I-6. But, as demonstrated in Part II.A.3(c)(4), *infra*, BNSF's RSAM analysis would create a new standard for assessing the reasonableness of a rail rate and, in so doing, completely would undermine the SAC constraint.

³³ Id. at 547, note 73.

³⁴ 1 S.T.B. 1006 (1996) ("Non-Coal Guidelines").

³⁵ Rate Guidelines -- Non-Coal Proceedings, STB Ex Parte No. 347 (Sub-No. 2)(served April 21, 2003).

The RSAM cannot be, and never was intended to be, used to justify a rail rate under CMP principles. The RSAM was but one of three R/VC benchmarks adopted by the Board, which concluded that “none of the r/vc measures alone provides a sufficient, all-purpose test of rate reasonableness, and that, even in combination, these measures can only provide a starting point for what must become a more particularized analysis.”³⁶ In adopting the three R/VC benchmarks, the Board acknowledged that this was a “cruder method” than CMP, but that “because precision must be sacrificed for simplicity, any simplified procedures will necessarily be very rough and imprecise.”³⁷ The Board also concluded, however, that “CMP provides the only economically precise measure of rate reasonableness and therefore must be used wherever possible.”³⁸

The RSAM is particularly inconsistent with the SAC constraint because it measures revenue adequacy only on a system-wide basis. As discussed in the previous section, SAC determines the revenue needs of a least cost, efficient competitor. In this way, SAC eliminates management inefficiencies by ensuring that captive shippers, in accordance with CMP objectives, do not pay for services and facilities that they do not use. SAC also ensures that the rates for all rail service, whether or not the service benefits the captive shipper, at least cover the variable costs of providing the rail service. Under CMP, it is improper to require OTP to pay rates on the Big Stone traffic that subsidize this shortfall in order to make BNSF revenue adequate on a system-wide level.

Thus, BNSF’s reference to the RSAM effectively creates a new over-riding standard of rate reasonableness, based on system-wide revenue adequacy, that undermines the CMP objectives and

³⁶ Non-Coal Guidelines, 1 S.T.B. at 1020.

³⁷ Id. at 1008, 1021.

³⁸ Id. at 1021 [emphasis added].

conflicts with the SAC constraint by benchmarking R/VC ratios against the RSAM, which improperly reflects carrier inefficiencies and facilities that do not benefit the captive shipper. For these reasons, it is inappropriate for BNSF to use the RSAM as a comparison point to assess the reasonableness of the high R/VC ratios on the Big Stone movement.

4. BNSF Is Revenue adequate in the Real World.

BNSF portrays its revenue-adequacy argument simply as an attempt to place its R/VC evidence into context. In other words, because BNSF is not revenue adequate and Big Stone's demand is highly inelastic, BNSF contends that it is appropriate, under differential pricing, to charge a rate for Big Stone that yields such a high R/VC ratio. As demonstrated in Parts I.C.1 through 3, supra, BNSF's system-wide revenue inadequacy is immaterial to, and conflicts with, a SAC analysis. If BNSF is allowed, contrary to CMP principles, to inject its system-wide revenue adequacy into a SAC analysis simply to provide context to its evidence, then it would be no less appropriate to consider BNSF's evidence in the context of its real-world financial condition.

In Part II.A.3.a., infra, OTP has examined various indicia of BNSF's financial health that are used in the real world to conclude that BNSF is in sound financial condition and continually improving. For example, Exhibit II-A-29 shows that, over the last three years, the total return on BNSF stock has increased nearly 32% while the S&P 500 has declined by nearly 30%, and that the stock of BNSF and its predecessors has outperformed the market as a whole over the last 20 years. Similarly, BNSF's bond ratings have improved since the merger between BN and ATSF. According to BNSF's SEC filings, it has had no trouble obtaining financing through cash from operating activities, access to the capital markets, or credit agreements. Industry analysts also are upbeat about BNSF and the railroad industry as a whole.

BNSF's behavior is consistent with its sound and improving financial condition. Its capital expenditures are at significantly greater levels than they were before the merger of BN and ATSF. In addition to maintaining its existing infrastructure, BNSF has expanded and modernized it. BNSF also has increased its annual dividend to shareholders three times since the late 1990's, from 40 cents to 60 cents per share, most recently in July 2003. This fact demonstrates BNSF's confidence that its future earnings will be more than sufficient to fund the company's future growth. This is not the behavior of a revenue inadequate company.

D. BNSF'S DEMAND ELASTICITY ANALYSIS IS FLAWED AND INCOMPLETE.

In tandem with its revenue-adequacy argument, BNSF also attempts to demonstrate that Big Stone's demand for the rail transportation of coal is highly inelastic. Therefore, BNSF concludes that, under Ramsey principles of differential pricing, it is entitled to charge OTP a substantially higher rate than non-captive shippers in order to make BNSF revenue adequate. While OTP does not dispute that its demand is highly inelastic and that differential pricing based on demand elasticity is an objective of CMP, both BNSF's analysis of Big Stone's demand elasticity and BNSF's current pricing of coal traffic do not comport with Ramsey pricing principles.

1. BNSF's Demand Elasticity Analysis Proves Only that BNSF is Market Dominant.

BNSF's Opening Evidence expends a substantial amount of effort to prove a truism for any shipper that requires regulatory rate protection: that demand for rail transportation is highly inelastic. A complainant that has economically viable alternatives to rail cannot have a highly inelastic demand for rail transportation, and thus, there would not be qualitative market dominance and the Board would not have jurisdiction over the challenged rate. Consequently, the only relevance and true

significance of BNSF's evidence on the elasticity of Big Stone's demand for rail transportation of coal is to prove that BNSF possesses qualitative, in addition to quantitative, market dominance over the Big Stone movement.

2. **BNSF Has Not Shown that the Big Stone Rates are Consistent with Ramsey Pricing.**

Although BNSF invokes Ramsey pricing to support the high R/VC ratios for the Big Stone rates, it has not made any showing that those rates have been set consistent with Ramsey pricing principles. BNSF, with barely any analysis, concludes that Ramsey pricing permits it to charge relatively high rates for transportation of coal to Big Stone that reflect Big Stone's inelastic demand.³⁹ But, Big Stone's highly inelastic demand and high R/VC ratios, by themselves, do not prove that BNSF's rates to Big Stone are consistent with Ramsey pricing principles.

BNSF incorrectly asserts that the high R/VC ratio on the Big Stone movement "is not a matter of BNSF charging Xcel [sic] an abusive or monopoly price [but rather] is a matter of BNSF engaging in the sort of demand-driven pricing the Coal Rate Guidelines recognize to be essential to railroad financial health."⁴⁰ Apparently, BNSF believes that, because Big Stone's demand for rail transportation is highly inelastic, Ramsey pricing entitles BNSF to differentially charge OTP any rate up to the point at which BNSF becomes revenue adequate on a system-wide basis. But, Ramsey pricing does not require a single captive shipper to bear that entire burden, and instead, assigns that burden to all shippers based on their demand elasticities. As demonstrated in Part I.C., supra, BNSF's position would require OTP to cross-subsidize both BNSF's inefficiencies and BNSF's

³⁹ BNSF Op. at I-5-6.

⁴⁰ BNSF Op. at II-60.

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facilities and services that do not benefit the Big Stone traffic, in violation of the CMP objectives. Precisely because the Big Stone demand is highly inelastic, OTP must be protected from BNSF, which would freely exploit its market dominance absent the regulatory constraints in the Coal Rate Guidelines.

As previously discussed in Part I.C.2., supra, the first three CMP constraints are different means of determining the extent of unattributable costs to be covered through differential pricing and the portion that can be charged to the complainant.⁴¹ Ramsey pricing, based on demand elasticity, is relevant only to the latter issue. As described in Coal Rate Guidelines, “‘Ramsey pricing’ is a widely recognized method of differential pricing, that is, pricing in accordance with demand.”⁴² Under Ramsey pricing, unattributable costs are allocated among shippers in inverse relation to their demand elasticity.⁴³

In the Coal Rate Guidelines, however, the ICC determined that pure Ramsey pricing is not practical because the amount of data and degree of analysis required is overwhelming.⁴⁴ Therefore, the ICC adopted CMP as an alternative. Under CMP, carriers are not required to calculate the precise elasticity of demand for every movement, but they are expected to use the market demand that they observe as the basis for their pricing.⁴⁵ Therefore, in order to show that the Big Stone rate is

⁴¹ Coal Rate Guidelines at 547.

⁴² Id. at 526.

⁴³ Id. at 527.

⁴⁴ Id.

⁴⁵ Id.

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consistent with Ramsey pricing, BNSF should demonstrate that the rate at least is comparable to the rate of shippers with similar demand elasticities. BNSF has not even attempted to do so.

3. **BNSF has not Priced the Big Stone Coal Traffic Consistent with Ramsey Pricing.**

BNSF's pricing of Big Stone traffic does not reflect Ramsey pricing. Because Ramsey pricing requires BNSF to price inversely to its customers' elasticities of demand, the Big Stone rates should be comparable to the rates paid by other captive shippers, and especially other captive coal shippers. In reality, however, OTP pays substantially higher rates for rail transportation than comparably situated shippers.

OTP Witness Crowley has compared the Big Stone rail rate to the rates that BNSF charges other captive coal shippers on OTP's stand-alone railroad, the Otter Tail Railroad ("OTRR"), in Part II.A.3.d(2), infra. The average R/VC ratio of other captive coal shippers on the OTRR is compared to a Big Stone R/VC ratio of 2.83.⁴⁶ This tremendous rate differential among similarly situated shippers of the same commodity cannot possibly reflect demand elasticities.

Mr. Crowley also compared BNSF's revenue from the Big Stone rail rate to BNSF's system average coal revenue in Part II.A.3.d(2)(a) and Exhibit II-A-33, infra. Big Stone's revenue contribution to BNSF has exceeded the average revenue of all BNSF coal movements, since 1999, and the gap steadily has increased to the point that OTP currently pays 50% more in revenue to BNSF, under the challenged rate, than BNSF's average PRB coal shipper currently pays.

⁴⁶ This average R/VC ratio for coal traffic reinforces OTP's determination in its opening evidence that the SAC rate is below the jurisdictional threshold of 180%.

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As Mr. Crowley demonstrates in Part II.A.3.d(2)(b) and in Exhibit II-A-34, infra, while Big Stone's rates have been increasing, rail costs have decreased. For example, the 1Q01-1Q02 increase in the Big Stone rate was while the RCAF-A declined 3.5% and the RCAF-U declined 0.8%.

BNSF's extraordinarily and comparatively high rates to Big Stone also have been extraordinarily compensatory. In Part II.A.3.b. and Exhibit II-A-30, infra, Mr. Crowley examines the implicit rates of return on the Big Stone rates. While the 2002 railroad cost of capital was 9.8%, BNSF's after-tax return on investment from the Big Stone rates was This return

the railroad industry's cost of capital substantially overcompensates BNSF for the services provided to OTP and is indicative of monopolist pricing. Because these rates also greatly exceed the rates of other captive coal shippers, they do not reflect Ramsey pricing.

4. BNSF Presents a Flawed Analysis of Big Stone's Demand for Rail Transportation.

Although Big Stone's demand for rail transportation of coal is inelastic, it is not quite as inelastic as BNSF portrays it to be. OTP Witness Crowley has reviewed the demand analysis of BNSF Witness Slater in Part II.A.3.c.(5), infra, and points out multiple deficiencies in that analysis.

First, Mr. Slater's analysis is limited to only five years of data, which demonstrates only a short-run inelasticity of demand. Because Big Stone is a large, base-load generating unit, it does not possess the operational flexibility to shut down in response to changes in fuel costs. Mr. Slater has not assessed Big Stone's long run demand elasticity vis-a-vis changes in rail transportation rates.

Furthermore, even within the five-year period evaluated by Mr. Slater, Mr. Crowley shows that Big Stone's capacity factor has changed in an inverse relationship to changes in its delivered price of coal.⁴⁷ Thus, there clearly has been some impact upon Big Stone's demand.

Mr. Slater's analysis also focuses only on delivered fuel costs. He ignores the myriad of other factors that also influence a utility's decision to generate electricity.

Finally, through Mr. Slater's testimony, BNSF has attempted to downplay the magnitude of its unreasonably high rail rate to Big Stone by pointing out that an increase in coal costs over the same time period contributed more significantly to an increase in Big Stone's total delivered cost of fuel. BNSF Op. at I-5. But, while Big Stone's coal costs have increased recently, those costs were set in a highly competitive coal supply market. By contrast, Big Stone's rail rates are set in a monopoly market where regulation is the only constraint on BNSF's market power. Furthermore, the rate comparisons discussed in Part I.D.3., supra, which focus just on rail transportation rates, not total delivered costs, amply illustrate the unreasonably high level of the Big Stone rate vis-a-vis other captive coal shippers. For these reasons, changes in Big Stone's cost of purchasing coal are entirely irrelevant to the reasonableness of BNSF's rail rates.

E. CONCLUSION.

For all of the reasons set forth herein and in the remainder of OTP's Reply Evidence in this proceeding, the Board should conclude that BNSF possesses market dominance over the movement of coal from PRB mines to the Big Stone Station and that the rates for these movements in BNSF 90062 are unreasonably high. As such, OTP requests that the Board prescribe maximum reasonable rates for this transportation at the levels described in OTP's Opening Evidence, as modified by this

⁴⁷ OTP Reply Exhibit II-A-32.

Reply Evidence, and award OTP reparations for the amounts BNSF has overcharged OTP since January 1, 2002, when the challenged rates became effective, plus interest and any other appropriate relief.

Respectfully submitted,



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October 8, 2003

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CERTIFICATE OF SERVICE

I hereby certify that on this 8th day of October, 2003, I served a copy of Complainant's Reply Evidence (Public Version) by hand delivery to counsel for Defendant at the following address:

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II-A

Quantitative Market Dominance

PART II **MARKET DOMINANCE**

II. A. QUANTITATIVE MARKET DOMINANCE

Otter Tail's Opening Evidence developed BNSF's variable costs of handling Otter Tail's coal traffic from mines in the PRB to the Big Stone Station.^{1/} The methodology followed by Otter Tail in developing BNSF's variable costs is consistent with the procedures and findings of the ICC and the Board in numerous prior coal and other maximum rail rate cases, as described at pages II-A-1 to 3 and II-A-18 to 42 of Otter Tail's Opening Narrative.^{2/}

Otter Tail's calculation of variable costs for the Big Stone coal movements was based on the Board's 2002 BNSF Uniform Railroad Costing System ("URCS") formula. Variable cost restatements in this Reply are based on the same URCS formula. Base year 2002 URCS costs were indexed to each quarter First Quarter 2002 ("1Q02") through First Quarter 2003 ("1Q03") wage and price levels, and adjusted to reflect the actual characteristics of the Otter Tail coal movements using data provided by Otter Tail, data reported by BNSF to the Board, and information provided by BNSF during discovery.

In its Opening Evidence, BNSF concedes that "the variable costs of the issue traffic movement under the challenged rates exceed the 180% jurisdictional threshold of revenue to variable costs."^{3/} However, BNSF's Opening Evidence also attempts to demonstrate that the variable costs of the Big

^{1/} BNSF's variable cost presentation consisted of the verified testimony of five (5) witnesses: Mr. Richard C. Ellis, BNSF's Assistant Vice President Unit Train Operations (describing operations), FTI Consulting's ("FTI's") Mr. Benton V. Fisher, BNSF's principal variable cost witness; FTI's Mr. Robert J. Plum III (describing switching activities); Mr. Wilbert Kissner, Trainmaster at Aberdeen, South Dakota; and Mr. Howard A. Tait, Trainmaster at Forsyth, Montana.

^{2/} Case name abbreviations included in this Reply are the same as those used in Otter Tail's Opening Evidence.

^{3/} BNSF Opening Evidence at I-3.

Stone movement result in the R/VC ratios ranging from 216% to 236%.^{4/} In this Reply, Otter Tail demonstrates that BNSF made numerous methodological and empirical errors that led BNSF to significantly overstate the actual variable costs of providing unit train coal service to the Big Stone Station.^{5/}

Consequently, the correct weighted average variable costs per ton and revenue-to-variable cost ratios at 1Q02 wage and price levels for the PRB origin rates established in BNSF's Pricing Authority No. 90062 (and 90062-A) are as follows:

Table II-A-12 ^{6/} Variable Costs and R/VC Ratios <u>PRB Mines to Big Stone Station - 1Q02</u>		
1.	Rate	\$13.49 per ton
2.	Variable Cost ^{7/}	\$4.96 per ton
3.	R/VC Ratio	272%

1. Variable Costs

a. Summary

As is explained in detail in the following sections of this Reply, Big Stone Station coal movement variable cost calculations presented by BNSF through its witness Fisher are overstated and in error for numerous reasons. The principal flaws in his approach are as follows:

^{4/} Id. at I-2.

^{5/} BNSF calculated variable costs for 1Q02 through 1Q03. While stated relative to BNSF's 1Q02 costs, the errors and overstatements outlined by Otter Tail in this Reply apply more generally to BNSF's methodology, regardless of the time period to which the methodology was applied.

^{6/} Tables II-A-1 through II-A-11 were included in Otter Tail's Opening Presentation.

^{7/} See Table II-A-17. Weighted average calculations are included in reply electronic file "Var Cost Summary Restated.123".

1. BNSF's road property investment return and depreciation costs are overstated because it used system average costs and made no adjustment for the service-specific, line segment-specific gross investment and depreciation data by valuation section provided by BNSF in discovery;
2. BNSF's locomotive maintenance variable costs are overstated because they do not reflect the actual maintenance costs that may be derived from BNSF's leases and other related agreements;
3. BNSF's locomotive capital costs are overstated because BNSF did not use current lease payment rates, overstated spare margins, and did not reflect the Alliance locomotive pool, the pool of locomotives from which the Otter Tail service locomotives are drawn;
4. BNSF's Roadway Maintenance Costs are overstated because it used URCS system average maintenance-of-way costs, not those calculated using actual maintenance of way data provided by BNSF in discovery;
5. BNSF's helper service costs are overstated because BNSF used incorrect frequencies of helper service;
6. BNSF's variable crew wage costs are overstated due to a) its charging loading crew wages 100% to Otter Tail even though those loading crews serve multiple utilities and b) application of an incorrect markup ratio to the wage data developed in a special study;^{8/}
7. BNSF's switching costs are inflated because they include switching by non-Otter Tail road crews including related locomotive and crew costs;
8. BNSF's loss and damage costs are overstated because it relied on system averages rather than specific cost information available from and produced by BNSF in discovery; and
9. BNSF erred by using an URCS formula that was not developed in accordance with the Board's rules and procedures.

Exhibit II-A-21^{9/} compares the rates, variable costs and R/VC ratios included in Otter Tail's Reply and BNSF's Opening (Restated to Incorporate Agreed -Upon T&O) Evidence for 1Q02

^{8/} BNSF's crew wages included additional modifications. Otter Tail incorporates these additional modifications into its crew wage calculations in this Reply (see Otter Tail's treatment of crew wages, infra).

^{9/} Exhibit II-A-1 through II-A-20 were included in Otter Tail's Opening Evidence.

through 1Q03.^{10/} The balance of this Reply demonstrates why BNSF's proffered variable cost calculations are not credible and should be rejected.

b. Restated Traffic and Operating Characteristics

As a preliminary matter, Otter Tail and BNSF participated in Technical Conference meetings and have agreed on all of the traffic and operating characteristics ("T&O") of the Big Stone movements from Belle Ayr and Eagle Butte mines. Exhibit II-A-23 shows the restated traffic and operating characteristics agreed to by the parties in Technical Conference, along with Otter Tail's traffic and operating characteristics for the other eleven mines listed in BNSF's Pricing Authority No. 90062 (and 90062-A).

c. BNSF's Flawed Variable Costs Calculation

In this section, Otter Tail contrasts its development of variable costs with Mr. Fisher's development of variable costs in BNSF's Opening Evidence.^{11/} Otter Tail also discusses the difference between the standard 2002 BNSF URCS formula that Otter Tail used and the altered one used by BNSF's Mr. Fisher, which affects inter alia, the overhead ratios.

As noted in previous sections, BNSF calculated variable costs only for coal originated from Eagle Butte and Belle Ayr for the time period 1Q02 through 1Q03, whereas Otter Tail calculated variable costs for coal originated from those two mines and also from Cordero and Caballo Rojo for

^{10/} Otter Tail included costs for the four mines originating Otter Tail coal from 1Q02 through 1Q03, that is, Eagle Butte, Belle Ayr, Cordero, and Caballo Rojo (Cordero and Caballo Rojo originated coal only in 4Q02). The common carrier rates under challenge in this proceeding apply to shipments from each of these mines as well as 9 (nine) other BNSF served mines in the PRB. Otter Tail's evidence in Opening at page II-A-2 "...supports a finding by the Board that the quantitative threshold is met for all of the 13 mines listed in Pricing Authority No. 90062 and 90062-A." BNSF offered an estimate of costs solely for shipments from Belle Ayr and Eagle Butte from 1Q02 through 1Q03.

^{11/} Mr. Benton V. Fisher is BNSF's primary variable cost witness.

the time period 4Q02 and 1Q03 and the other nine origin mines listed in BNSF's Pricing Authority No. 90062 and 90062-A for the time period 1Q03.

The results of Otter Tail's Reply and BNSF's Opening variable cost calculations are compared in Exhibit II-A-21. Both parties' costs reflect the agreed traffic and operating characteristics. Exhibit II-A-22 examines these variable cost comparisons and identifies the multiple factors giving rise to the differences in variable cost results. For simplicity, the following analyses of the differences cited for specific cost categories will refer to those set out in Exhibit II-A-22, page 1 of 23, for aluminum shipper cars originating in 1Q02 from the Belle Ayr Mine. However, an inspection of the electronic files covering other mines and time periods will show that the comparisons made and the conclusions drawn from Exhibit II-A-22, page 1 of 23 apply with equal force to other traffic, time periods and to steel cars.

Since the parties agreed on traffic and operating characteristics at the Technical Conference, Otter Tail has restated BNSF's Opening variable costs to reflect the agreed T&O characteristics. Restatement of BNSF's costs was carried out using BNSF's spread sheet.^{12/} Exhibit II-A-22 and Table II-A-13 reflect differences remaining subsequent to the Technical Conference agreement.

The parties' cost component estimates differ by the largest magnitude for the cost categories listed in Table II-A-13. Table II-A-13 also lists the magnitude of the difference for each cost category and its share of the total variable cost difference between Otter Tail and BNSF.

^{12/} BNSF opening electronic file "BNSF OTPO OPEN PRG.123" with modified T&O saved as "BNSF OTPO OPEN PRG with Agreed T&O.123".

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Table II-A-13
Comparison of Otter Tail Opening and Reply and
BNSF Modified Opening Variable Costs Belle Ayr to Big Stone Station - 1Q02 -
Aluminum Cars Cost Component Differences of Largest Magnitude (\$/Carload)^{1/}

<u>Cost Component</u> (1)	<u>Otter Tail Opening^{2/}</u> (2)	<u>Otter Tail Reply^{3/}</u> (3)	<u>BNSF^{3/}</u> (4)	<u>Reply v. BNSF^{3/}</u> (5)	<u>% of Total^{3/}</u> (6)
1. Road Property Capital					44.3%
2. Loco Maintenance					20.0%
3. Loco Capital					15.7%
4. M of W					14.2%
5. Helpers					3.5%
6. Crew					1.0%
7. Switching					0.2%
8. Other					<u>1.1%</u>
9. Total					100.0%

Totals may not match due to rounding.

^{1/} Otter Tail's Reply and BNSF's Opening costs reflect the agreed traffic and operating characteristics.

^{2/} Opening Exhibit II-A-7, Page 1 of 12 and electronic file "VC Difs Open 1Q02 Belle Ayr.123".

^{3/} Source: Exhibit II-A-21, Page 1 of 8 and "VC Difs Reply 1Q02 Belle Ayr.123".

In certain instances in this Reply, Otter Tail is adopting BNSF's evidence or modifying Otter Tail's Opening Evidence to reflect information obtained for the first time from BNSF's evidence.^{13/} Below, in the discussion of individual cost components, Otter Tail will identify the changes adopted in this Reply and quantify the impact of that change on each cost component. Table II-A-15 that follows the discussion of the cost components will compare Otter Tail's Reply costs with BNSF's Restated Opening costs for the move covered in Table II-A-13, that is, the movement of coal in unit trains of shipper-owned aluminum cars from Belle Ayr Mine to the Big Stone Station for 1Q02.

^{13/} While examining the differences between the parties' costs, Otter Tail discovered an inadvertent error in its calculation of fuel costs. This error has been corrected removing almost all the difference between Otter Tail's and BNSF's fuel costs.

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Discussion of each parties' development of individual cost components will be grouped into the following categories:

1. Return on Road Property and Depreciation Expense
2. Locomotive Maintenance
3. Locomotive Capital
4. Roadway Maintenance (MOW including Joint Facilities)
5. Crew Wages
6. Switching
7. Other Costs (including Helper Service Costs)
8. Indices

i. **Return on Road Property and Depreciation Expenses**

BNSF has improperly overstated its variable costs by using system average road property return and depreciation data despite the presence of reliable and accurate movement specific data. More particularly, Exhibit II-A-22, page 1 of 23, Line 6(d) compares Otter Tail's Opening Road Depreciation cost calculation with BNSF's comparable calculations. Exhibit II-A-22, Line 6(e) makes that same comparison for Return on Road costs. Column (16) of that Exhibit shows that the total difference between the parties is

At the jurisdictional threshold level, per ton equates to per ton (that is, times 1.8). On an annual basis, per ton for the of coal that Otter Tail consumes at Big Stone equates to almost just for this

one cost component. In the time period between San Antonio^{14/} and WTU,^{15/} BNSF presented Road Depreciation and Return on Road on a movement-specific basis in rate cases brought under the Coal Rate Guidelines. (Otter Tail's Exhibit II-A-25 shows the results of BNSF's WTU calculations.) Now, however, BNSF, through its witnesses Mr. Fisher, Mr. Klick and Ms. Elliott, claims that BNSF no longer maintains road property investment return and depreciation data on a segment-specific basis. While Otter Tail shows below that BNSF's claims regarding its road property data base are not valid, the fact that BNSF would adopt such a tactic is a cause for larger concern.

Table II-A-13 shows that differences in this cost category are more significant than the cost differences from any other category and contribute 44.3% of the total cost difference between the parties. Column (5) through Column (15) of Exhibit II-A-22 detail the factors causing or contributing to these differences. In the case of Road Depreciation and Return on Road, the causal factor for almost the entire difference is Otter Tail's use of a line segment-specific special study of return on and recovery of road property investment, compared with the system average costs used by BNSF's Mr. Fisher.

(a) Procedural Differences: Otter Tail v. BNSF

Otter Tail includes all URCS road investments in its Road Depreciation and Return on Road costs. Otter Tail's Opening Exhibit II-A-4 explains how the URCS road investments are divided into two categories: (1) those road investments that receive a line-specific adjustment (that is, "Adjusted

^{14/} See San Antonio, 1 I.C.C. 2d at 584-86.

^{15/} See West Texas Utilities, 1 S.T.B. at 724.

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Road Property Ownership Costs”); and (2) those that remain in Otter Tail’s costs on a system average basis.^{16/}

For the “Adjusted Road Property Ownership Costs” portion, Otter Tail calculated return on road property investment and depreciation expenses attributable to the Big Stone coal movements using BNSF’s own recorded line segment-specific gross investment and annual depreciation data by valuation section, which was produced in response to Otter Tail’s discovery requests.^{17/} Otter Tail’s analysis showed that line-segment specific cost per gross-ton-mile for return on road property is approximately of BNSF’s 2002 system average unit cost developed in URCS, and that depreciation expenses per gross-ton-mile ranged from of 2002 system average, depending on the mine origin.^{18/} The recognition that line specific road property costs are less than system average is consistent with the Board’s findings in other western coal rate cases involving long-haul movements via BNSF, including WTU.

BNSF’s witness Fisher did not use the Otter Tail route-specific line segment investment data that was provided by BNSF in discovery. Instead, Mr. Fisher used system average costs. Mr. Fisher’s treatment of road property return on and depreciation of investment is not in keeping with the Board’s long-standing preference for service-specific costs over system average costs. Costs

^{16/} The property investment accounts that are assigned on a specific basis are determined by the accounts flowing into the URCS unit costs for road depreciation (D1L234C10) and road return (D1L251C10). Those accounts are 2 Land, 3 Grading, 4 Other ROW, 5 Tunnels and Subways, 6 Bridges, Trestles & Culverts, 7 Elevated Structures, 8 Ties, 9 Rails & OTM, 11 Ballast, 13 Fences, Snow Sheds & Signs, 17 Roadway Buildings, 27 Signals & Interlockers and 39 Public Improvements. All other road property accounts are included in URCS, but not on a Gross Ton-Mile basis, so they are included in Otter Tail’s costs on a system average basis. Account 37 Roadway Machines is also included in the URCS unit costs

^{17/} See Otter Tail’s Opening Narrative at II-A-26 through II-A-28, Exhibit II-A-4, and computer file “Road Inv OTP Open.123”.

^{18/} Id.

tailored to the transportation characteristics and costs per unit of a particular movement (i.e., specific costs) generally are preferred over system average costs whenever they can be shown to be “demonstrably superior to system average costs” as Otter Tail has done here.^{19/} The Board’s preference for specific costs over system average costs in the area of road property investment return and depreciation costs was specifically affirmed in WTU^{20/} and San Antonio^{21/}. Mr. Fisher’s use of system average costs is particularly egregious in the case of coal traffic road property return and depreciation, because those costs, stated on a per gross ton-mile basis, long have been recognized as being so much lower on the routes used by coal traffic than the routes used by general freight traffic. Significant economies of scale are realized on BNSF’s coal lines in general, and the PRB to Big Stone Station coal line in particular. While BNSF has made substantial road property investments in coal lines, the carrier also has been able to increase traffic volumes over those lines to such an extent that the cost per unit is much less than it is on the routes used by general freight or system average traffic. There is no justification for Mr. Fisher’s failure to reflect these economies of scale.

Mr. Fisher’s explanation for his use of system average road property investment and depreciation costs and his failure to use line-specific costs is as follows:

^{19/} See FMC at 48 (“Because a carrier’s systemwide average costs are not necessarily representative of the costs of providing a particular service, however, movement-specific adjustments are sometimes made to better reflect the costs attributable to providing a particular service”). Also see the Board’s September 25, 2002 decision in STB Docket No. 42057, Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company (Xcel) in which, in response to Xcel’s motion to compel BNSF to provide line segment-specific road property data, the Board quoted a decision in TMPA on this issue “...adjustments to a defendant carrier’s system-average costs are appropriate to reflect the economies and efficiencies that are associated with high-volume, repetitive movements such as ...unit-train service...” Also see the Board’s November 15, 2002 decision in this proceeding in response to Otter Tail’s motion to Compel the Board referenced Xcel and stated “... that same reasoning applies here.”

^{20/} See WTU, 1 S.T.B. at 724.

^{21/} See San Antonio, 1 I.C.C. 2d at 574-75, 584-86.

“As explained in BNSF’s Response to Otter Tail’s Motion to Compel which is incorporated herein by reference, BNSF’s road property data cannot be used to develop a reliable line-specific adjustment to system-average road ownership costs. Nor does BNSF maintain data that would support the development of a movement-specific adjustment for maintenance-of-way (“MOW”) variable costs..”^{22/} (Emphasis added.)

In Exhibit II-A-24, Otter Tail responds in detail to the road investment points raised by BNSF in its Response to Otter Tail’s Motion to Compel.

(b) Restatement to Reflect Recently-Provided BNSF Data

In Otter Tail’s Opening Narrative, system average URCS unit costs for road return and depreciation were adjusted based on the ratio of the line-specific values to system average costs.^{23/} As discussed above, BNSF’s witnesses claim that the FADB data relied on by Otter Tail did not account for all of the gross investment reported in the BNSF’s 2002 R-1. In addition, BNSF claimed that the accumulated depreciation in the FADB data exceeded accumulated depreciation as reported in the BNSF 2002 R-1.^{24/}

^{22/} BNSF Opening Narrative at II-44. BNSF’s statement that they do not “...maintain data that would support the development of a movement-specific adjustment...” is totally inconsistent with BNSF’s general position that once AFE’s are closed, they are assigned to specific line segments. At page 24 of her verified statement attached to the May 1, 2002 “Defendant’s Reply to Complainant’s First Motion to Compel Production of Documents” (included as Otter Tail Reply workpapers 4827-4840), Ms. Elliott explains that road property investments once put into service are placed into a data base called Property In Service Not Unitized - “PISNU”. Funds then reside in the PISNU data base until all expenditures covered by the corresponding AFE have been made and the AFE is closed out. At that time, the funds are unitized, or assigned to specific valuation sections in the Fixed Asset system. These funds are either directly assigned to specific line segments or they are allocated to line segments on a reasonable basis.

^{23/} The development of the adjustment ratios and unit costs were shown in Exhibit II-A-4 and the spreadsheet “Rd Inv OTP Open.123” submitted as part of Otter Tail’s Opening workpapers.

^{24/} BNSF does not show that the accumulated depreciation for any specific line segment traversed by Otter Tail’s coal trains is misstated.

On September 18, 2003, BNSF submitted supplemental workpapers responsive to Otter Tail's Fourth Request for Workpapers related to the Verified Statement of Ms. Elliott^{25/} to identify, by road property account for the BNSF system, the unallocated gross investment monies, and the accumulated depreciation in the FADB data for the system. Although the data provided by BNSF were only in summary form and were only for the year 2000, Otter Tail's Reply variable cost calculations incorporate the data provided by BNSF on September 18, 2003.

The gross investment data provided by BNSF identified the total monies, by account, in the FADB data base for the BNSF system and the FADB monies that are not assigned directly or allocated to any valuation section.^{26/} The BNSF supplemental workpapers also identified, by account, the PISNU monies not included in the FADB data base but claimed to be in the BNSF R-1 reported gross investment.^{27/}

Specific detail was not provided by BNSF to identify which of the non-allocated monies relate, in any way, to the line segments utilized by Otter Tail's coal trains. For example, the unallocated monies may be related to BNSF intermodal yards, or signalling systems in service areas far away from Otter Tail's coal route. Therefore, in order to make a proper comparison of the line specific unit costs in the FADB data to the BNSF's system average costs, the system values were adjusted to be comparable to the FADB line-specific values.

^{25/} Incorporated by reference at page II-44 of BNSF's Opening evidence.

^{26/} A copy of the summary provided by BNSF is included in Otter Tail's Reply Workpapers, p. 4859.

^{27/} A copy of the summary provided by BNSF is included in Otter Tail's Reply Workpapers, Vol. 1, p. 4859. When the FADB monies plus the PISNU monies plus the ATSF "write-up" monies (see BNSF/OTP 18370-71 included in Otter Tail's Reply Workpapers Vol. 1, pp. 4855-4856) are summed, the total exceeds the R-1 values by \$127 million. Therefore, to tie the BSNF data to the R-1 totals, the PISNU has been adjusted to equal the R-1 totals (See Otter Tail's spreadsheet "Rd Inv OTP Reply.123", level "Reconciliation" submitted with the workpapers to support this Reply Narrative).

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The adjustment to make the values comparable was accomplished in the following steps.^{28/}

- (a) Step 1 -- the URCS system gross investment was adjusted to exclude the monies related to PISNU and FADB Unassigned monies.
- (b) Step 2 -- the accumulated depreciation in the BNSF R-1 was replaced with the accumulated depreciation shown in the FADB data base for the BNSF system. This has the effect of increasing accumulated depreciation and decreasing the system average net investment unit cost to be compared with the line-specific unit cost.
- (c) Step 3 -- the revised net investment for the BNSF system (based on the adjustments in Steps 1 and 2 above) was divided by the URCS system gross ton-miles to develop a revised unit cost per gross ton-mile.
- (d) Step 4 -- the line-specific unit cost for net investment was compared with the adjusted system average net investment cost per gross ton-mile to develop an adjustment ratio for Road Return.

As shown in Exhibit II-A-26, the adjustment ratio ranged from _____ depending upon the particular origin.^{29/}

ii. Locomotive Maintenance

Variable Locomotive Maintenance costs were covered in Otter Tail's Opening Narrative at pages II-A-28 through II-A-30, Exhibit II-A-5 and at pages 5 and 6 of 12 of Exhibits II-A-7 through II-A-18 and Exhibit II-A-19. BNSF's Locomotive Maintenance costs are presented in BNSF's Opening at page II-44 to 45 where they simply state that system average costs were used.

Exhibit II-A-22, page 1 of 23, Lines 6(f) and 11(e) compare Otter Tail's Reply Locomotive Maintenance cost calculation with BNSF's Revised Opening estimates. Column (16) of that Exhibit shows that the total difference between the parties is

^{28/} A detailed description of the adjustment is included as pages 9 of 13 to 13 of 13 of Exhibit II-A-26.

^{29/} The detail of the calculations is shown in the spreadsheet titled "Rd Inv OTP Reply.123" included in the electronic workpapers accompanying this Reply Narrative.

Table II-A-13, line 2 shows the Locomotive Maintenance cost difference between Otter Tail and BNSF. Column (5) through Column (15) of Exhibit II-A-22 detail the factors causing or contributing to the difference. The major factor is Otter Tail's use of BNSF-provided locomotive maintenance agreements for the equipment used in Otter Tail's coal service.

In its Opening Narrative, Otter Tail explained the development of Locomotive Maintenance costs. Otter Tail relied on the maintenance costs included in contracts that BNSF has with vendors providing locomotive repair services because those contracts determine the locomotive maintenance costs incurred by BNSF. Otter Tail's calculation of Locomotive Maintenance costs is based on the full service contract maintenance rates for the Otter Tail locomotives.^{30/} The use of this calculation methodology was made necessary by BNSF's refusal to produce actual locomotive maintenance data, even though Otter Tail requested that data in discovery.^{31/}

In TMPA at page 58, the Board stated, "TMPA developed locomotive maintenance costs based on BNSF's contract with General Motors' Electro-Motive Division (EMD), the manufacturer of the SD70MAC locomotives. BNSF points out, however, that many repair costs are not covered by the contract (such as costs incurred due to wrecks, derailments, vandalism, abuse, or running out of fuel)." The Board went on to state, "As pointed out by BNSF, other, non-routine maintenance costs are incurred and must be accounted for in developing variable costs."

In the TMPA decision, the Board rejected the use of a special study regarding BNSF's locomotive maintenance costs – and defaulted to system average – because the Board believed that TMPA had not properly accounted for "non-routine costs" such as costs incurred due to "wrecks,

^{30/} See Otter Tail Workpapers Vol. III, pp.387-656.

^{31/} See Complainant's First Set of Interrogatories and Requests for Production of Documents, Request for Production No. 20 and No. 21.

derailments, vandalism, abuse, or running out of fuel.” *Id.* at 58. Otter Tail’s determination of locomotive maintenance costs addresses the Board’s TMPA concerns by identifying the locomotive maintenance costs that reflect “costs incurred due to wrecks, derailments, vandalism, abuse, or running out of fuel” and treating those costs on a system average basis.^{32/} “Routine” locomotive maintenance costs remain specific to the locomotive maintenance agreements that BNSF has with its maintenance contractors.

It is also important to note that Otter Tail’s locomotive maintenance adjustment ratios include at a system average level the hours in Otter Tail service by locomotives not covered under a maintenance agreement. Using this method, Otter Tail has captured movement-specific costs where the underlying records will allow such a determination to be made, but Otter Tail has utilized system average costs to properly compensate BNSF where the Board has specifically found the use of a movement-specific special study to be inadequate. As such, Otter Tail’s locomotive maintenance costs are superior to the system average costs submitted by BNSF.

In Opening, BNSF used system average locomotive maintenance costs including the maintenance costs of all system locomotives many of which are never used in coal service. These locomotive maintenance costs have no relationship to the maintenance costs of the locomotives that are used in service to Otter Tail’s Big Stone plant. The locomotives that are used in Big Stone service are much newer than system average. The average age of the locomotives used in Big Stone

^{32/} The URCS accounts adjusted by the special study ratio are Diesel Road Locomotive Repairs (D3L101), Loco Machine Repairs (D3L135), and Loco Damages Billed to Others (credit) (D3L145). Other repairs which are not part of normal maintenance are charged to accounts such as Clearing Wrecks, Locomotive Equipment Damaged and Other Locomotive Casualties and are included in the residual “other” GTM and “other” LUM costs, which are not adjusted by the special study locomotive maintenance ratio and are included at system average.

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service is only ^{33/} compared with for BNSF's system-average locomotives.^{34/} Newer locomotives need repairs less frequently than older locomotives. In addition, there are many DC locomotives in the non-coal fleet that BNSF has included in its locomotive maintenance costs. Those DC locomotives have more moving parts (principally traction motor wires and brushes) that require significantly more maintenance than AC locomotives such as the SD70MAC. This is one of the principal reasons why railroads such as BNSF are replacing DC locomotives with AC locomotives. Board precedents recognizes that newer locomotives need repairs less frequently than older locomotives. See San Antonio, TX v. Burlington Northern, Inc., 362 I.C.C. 161, 163 (1979); see also Increased Rates on Coal, BN, Montana to Superior, Wisconsin, 362 I.C.C. 625, 665 (1980) (noting in its discussion of locomotive maintenance costs that "[a]ccording to BN, DE made a fundamental mistake by comparing new coal locomotives to significantly older system average locomotives."). The simple system average approach used by BNSF, on the other hand, ignores all the differences in "routine" maintenance costs between the locomotives used to provide service to Otter Tail and the balance of the locomotives used by BNSF in its system-wide operations.

As Otter Tail pointed out on Opening,^{35/} locomotives used in Big Stone Station coal service experience

confirms that these locomotives experience far less maintenance per gross ton-mile and locomotive unit-mile than the system average.

Otter Tail's service-specific locomotive maintenance costs are "demonstrably superior" to BNSF's system average locomotive maintenance costs that are not service-specific. The Board

^{33/} See Otter Tail Opening file "Loco Cap Inputs OTP Open.123."

^{34/} See Otter Tail Opening electronic file "BNSF System Avg Loco Age.123."

^{35/} See Otter Tail Op. at II-A-30.

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should adopt Otter Tail's costs as the better evidence of record because Otter Tail's costs better represent the locomotive maintenance costs BNSF actually incurs in providing the Otter Tail Big Stone service.

iii. Locomotive Capital

Variable Locomotive Capital costs were covered in Otter Tail's Opening Narrative at pages II-A-30 and II-A-32 and at page 10 of 12 of each of Exhibits II-A-7 through II-A-18 and line 13 of Exhibit II-A-19. BNSF's Locomotive Capital costs are presented in BNSF's Opening at pages II-49 through II-57

Exhibit II-A-22, page 1 of 23, Line 12(a) compares Otter Tail's Opening Locomotive Capital Depreciation Costs calculation with BNSF's Opening estimates and Line 12(b) compares the parties' Locomotive Capital ROI Costs. Column (16) of that exhibit shows that the total difference between the parties is

Table II-A-13 shows that Locomotive Capital Cost differences between Otter Tail and BNSF are the third most significant and contribute of the total cost difference. Column (5) through Column (15) of Exhibit II-A-22 detail the factors causing or contributing to these differences. The factors are (a) BNSF's use of a totally incorrect spare margin percent and (b) differences in the parties' special studies of locomotive capital costs including the use of average annual life lease rates as opposed to lease rates actually paid in 2002 and 2003. Each of these factors will be discussed in turn following a discussion of the locomotives that properly should be included in the calculation.

(a) Locomotives Included

For quite some time BNSF has stated that they have "...established locomotive "pools" to efficiently meet the motive power needs of unit train coal operations..." These locomotive pools are

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assigned to specific locations for scheduled maintenance. The pools allow each user to share in the pool efficiencies and facilitate the management of those valuable assets by a centrally located power control team.^{36/} BNSF has never claimed that they assign locomotives to particular services, and the evidence proves that BNSF does not assign locomotives to the Otter Tail Big Stone service. In fact, only different locomotives included in BNSF's train movement data for Otter Tail's Big Stone service were used in more than one quarter during 2002, proving that BNSF draws locomotives from their pools on a first come, first served basis, and that BNSF does not dedicate locomotives to specific services.^{37/} Because of this, it is the costs of the pool (by locomotive type) from which BNSF draws the Big Stone locomotives (by locomotive type) that should be used in the determination of variable costs for that movement. BNSF recognized this in their determination of the locomotive spare margin, which they based on the their study of the SD70MAC locomotive type in the Alliance Pool, not on the basis of the actual locomotives used on the Big Stone train.

Because BNSF does not dedicate locomotives to specific services, but rather, draws specific types of locomotives at random from a larger pool of the type of locomotive, the Board has frequently adopted the costs associated with the pool of that locomotive type.^{38/} Also see Burlington Northern's testimony in I.C.C. Docket No. 39386, *The Kansas Power & Light Company v. Burlington Northern, et al.*, Defendant's Reply Evidence - Defendant's Reply Evidence, Volume II - Variable Costs, Verified Statement of Burlington Northern's Duane R. Michener, May 7, 1984, page 30 (not filed under seal), where Burlington Northern states, "BN locomotive capital costs are based

^{36/} See copy of pages of Burlington Northern verified statement included as Otter Tail Reply Exhibit II-A-25.

^{37/} See Otter Tail Opening electronic file "2002 Trn Mvmnt Loco Hours.xls"

^{38/} See, for example, San Antonio, Appendix C, page 1 and OPPD, p. 23, included in Otter Tail Reply Workpapers, pp. 4877-4882.

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upon the actual average value and age of the locomotives used in the Alliance Coal Locomotive Pool.”^{39/} On certain other occasions, the specific facts of the case have prompted the Board to use something other than the pool concept. Most recently, the Board in TMPA used the capital costs associated with the locomotives used to provide service to TMPA’s Gibbons Creek Station, but the ruling in TMPA was rooted in the Board’s preference for determining the locomotive costs through weighting based on the actual hours of use in the instant service. The TMPA decision did not rule out the validity of a pool concept based on the actual locomotives used to provide the service such as that included in Otter Tail’s Reply herein. In conformance with TMPA, Otter Tail calculated its Opening capital cost determination by determining the costs of the pool of each locomotive type in the overall Alliance Pool and weighting each of those pool costs separately by the hours of actual usage of that locomotive type in the service to Big Stone.

In 2002, BNSF’s train movement data shows it used _____ locomotives (based on the hours each locomotive type was used) in the Otter Tail Big Stone service.^{40/} Otter Tail reflected these usage percentages in its determination of all locomotive cost factors including spare margins, locomotive capital costs, and locomotive maintenance costs. BNSF, on the other hand, has used a different group of locomotives for each of these determinations. Only for capital costs did BNSF adopt locomotive usage percentages in its determination and this did not embrace the pool concept. For determining locomotive spare margins, BNSF adopted only the spare margin requirements for SD70MACs (and BNSF determined those spare margins incorrectly as will be demonstrated below).

^{39/} See Otter Tail Reply Workpapers, Vol. III, p. 4894.

^{40/} See Otter Tail Opening electronic file “2002 Trn Mvmnt Loco Hours.xls”, tab “Summary”.

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For determining locomotive maintenance costs, BNSF adopted all the locomotive types used on BNSF, that is, system average locomotives. It is absurd to use 3 different groups of locomotives to determine the 3 major cost components associated with providing locomotives for the Otter Tail Big Stone service. BNSF used expensive, year old SD70MACs with very little accumulated depreciation to determine capital costs, and then used a year old pool of locomotives (that is, system average locomotives) to determine maintenance costs. Everybody knows that new locomotives and new automobiles require less maintenance than old locomotives and old automobiles.

Otter Tail has used the group of locomotives actually used in Otter Tail Big Stone service to determine locomotive capital costs, locomotive spare margins and locomotive maintenance costs. BNSF has used a different group of locomotives for each determination. The Board should adopt the group of locomotives used by Otter Tail as the only group that is consistently based upon the actual locomotives used in Otter Tail Big Stone service.

(b) BNSF's Invalid Locomotive Spare Margin

Otter Tail calculated locomotive spare margins of for 2002 and for 2003, as shown in Otter Tail's Opening Narrative at p. II-A-17 (Item 33). Details concerning the calculation of the spare margins were provided in Otter Tail's Opening electronic workpaper files "Loco Maint OTP.123" and "Loco Maint OTP-2003.123." BNSF calculated a much higher locomotive spare margin, as shown in BNSF Op. at II-54 through II-57.

Otter Tail's Reply Exhibit II-A-22, page 1 of 23, column (11), line 21 shows that the difference in the parties' locomotive spare margins causes per carload of the difference in the total variable costs for the 1Q02 movement from Belle Ayr.

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total difference per carload in the variable costs estimates for this movement.

The spare margin of the actual locomotives used in Big Stone service in 2002 is whereas BNSF claims the spare margin should be The following explains Otter Tail's development of the spare margin and demonstrates that the fiction mathematically determined by BNSF is not grounded in the reality of the accepted determination of variable costs resulting from BNSF's provision of the Big Stone coal unit train service.

The Spare Margin difference arises because BNSF based its spare margin estimates, not on the actual locomotives used in Big Stone service, but upon all the SD70MACs in the Alliance Pool only. BNSF totally ignored the C44-9's, SD40-2's, SD60's, SD75's and other locomotives types that BNSF admits are used in the Big Stone service.^{42/} The Spare Margin difference also arises because BNSF failed to properly reflect the terms of its locomotive maintenance contracts, in which the suppliers guarantee between availability for the locomotives covered by the contracts in 2002. Otter Tail reflected a spare margin for the SD70 MAC locomotives, a spare margin for the GP60 locomotives, spare margin for the Dash 9 44CW locomotives, a spare margin for the SD75 locomotives, a spare margin for the Dash 8 40 CW locomotives covered by these maintenance contracts, and a spare margin for all other locomotives used by BNSF to provide the Big Stone service but not covered by these contracts.^{43/} Weighting the spare margin requirement for each locomotive type based on its hours of usage in Big

^{41/} See Otter Tail Reply electronic file "Reply Loco Maint OTP.123".

^{42/} See BNSF Opening electronic file "Big Stone Trains 2002.xls", tab "Total Locomotive Use".

^{43/} This is a conservative approach because the actual spare margin requirements on "other" locomotives is less than even though the suppliers did not guarantee availability.

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Stone service, Otter Tail has used a composite spare margin for 2002 in this proceeding.^{44/} This is consistent with the Board's ruling in TMPA that a spare margin requirement is appropriate for the SD70MACs relied upon by the Board in TMPA.^{45/} Otter Tail has used this same basis for determining the spare margin requirement for the SD70MACs used in the Big Stone service in the instant proceeding.

BNSF claims the locomotive spare margin should be for 2002, compared with the (2002) and (2003) spare margins for the actual locomotives used in Otter Tail coal service.

The spare margin difference arises because Otter Tail's spare margins are based upon the actual locomotives and recognizes the proportion of locomotive hours included under each of the applicable maintenance agreements for those units used in Otter Tail service. In contrast, BNSF based its spare margin upon all the locomotives of one specific type assigned to Alliance and has redefined "spare margin." BNSF thus effectively ignored the terms of its locomotive maintenance contracts, in which the contractors for locomotives covered under these contracts, and the locomotives actually used in Otter Tail service.

(1) BNSF Failed to Reflect Locomotive Maintenance Contracts

Otter Tail's spreadsheet "BNSF Locomotive Maintenance Contracts Covering Locomotives Used in Otter Tail Service Defining Spare Margin Requirements"^{46/} summarizes the clauses relevant to the issue of locomotive Spare Margin from each of the locomotive agreements which apply to SD70MAC locomotives, SD40 locomotives, and Dash 9-44CW locomotives in 2002 and 2003. The

^{44/} See Exhibit II-A-27 and electronic file "reply Loco Maint OTP.123".

^{45/} See TMPA, page 62.

^{46/} Otter Tail's opening electronic file "BNSF Spare Margin Agreements.123." Tabs '2002' and '2003' identify the maintenance agreements in 2002 and 2003, respectively.

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agreements submitted by Otter Tail as workpapers covering locomotives used during 2002 are as follows:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

The following three guarantees are typical under the foregoing agreements and amendments:

Reporting on these guarantees is required . Each of these

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guarantees is addressed below.

The maintenance contract guarantees to BNSF that the locomotives covered by the agreement will be available for use of the time.

Where:

e

Otter Tail records show no occurrences of "Extraordinary Damage".^{48/} Likewise, no evidence of "Extraordinary Damage" occurrences were recorded in the

^{47/} See Otter Tail Opening Workpapers, Vol. III, p. 0463.

^{48/} While a contract is in effect, Otter Tail records this type of information in conjunction with recording force majeure incidents and train tracking in the normal course of business designed to insure an adequate coal supply.

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train event file or the other electronic files that BNSF furnished during discovery. These facts, gleaned from BNSF's own data sources, provide persuasive evidence that the locomotives used in Otter Tail service routinely meet or exceed the availability factor specified in the agreements..

These same facts also strongly suggest that actual availability also has met the availability guarantee over the last three years, even when Contractual Availability is defined to include the).

 Otter Tail maintains records of such occurrences, however, and the records show that these "exclusion occurrences" have not taken place. The evidence is strong that actual availability has been achieved

bad order locomotives are unlikely to occur with any frequency. This also contributes to increased reliability and availability.

In the case of "Reliability Locomotives",

49/

470.

50/ See for example, Otter Tail Opening Workpapers, Vol. III, p. 464.

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its guarantee. BNSF has been operating SD70MAC's since 1994, and has refined its agreements

re

... ..

(2) BNSF Has Incorrectly Defined Spare Margin

The spare margin difference also arises because BNSF has not correctly defined spare margin. BNSF's development of its spare margin of 2002 is discussed on pages II-54 through II-57 of BNSF's Opening Evidence and calculated in BNSF's Opening file "spare margin.xls". Spare margin for equipment is generally defined as the proportion of locomotives necessary to replace units removed from service for repairs and/or maintenance. BNSF's calculation would re-define spare margin as the ratio of time in which a locomotive is not directly utilized in train service to the hours the unit is in direct train service. BNSF has developed its locomotive spare margin using the concepts of "Utilization", "Non-Utilized," and "Availability."

BNSF has been urging its re-defined "spare margin" on the Commission and on the Board for decades and it has never been accepted.^{51/} In the first San Antonio proceeding, BN used a spare margin of 15% and that was rejected. In Minnesota, the Commission rejected the use of a 30% spare margin stating:

^{51/} Complainant's Rebuttal Evidence, Rebuttal Verified Statement of Thomas D. Crowley, Omaha Public Power District v. Burlington Northern Railroad Company, I.C.C. Docket No. 38783, March 25, 1985, included as Otter Tail Reply Workpapers, pp. 4895-4905.

“...there is no demonstration of record to support defendant’s use of a 30 percent spare margin. Defendant’s discussion of the need for spare motive power deemed necessary to meet scheduling requirements is not persuasive. Therefore, we have accepted complainants’ spare margin estimate of 10 percent.” (362 I.C.C. 625, 661)

The Commission rejected BN’s 30% spare margin in CLECO^{52/} saying,

“The restatement adheres to the traditional use of the actual number of locomotives used increased by a 10 percent spare factor to represent the bad-order ratio for both road locomotives and cabooses. BN’s statistical data and operating testimony supporting a 30 percent spare margin lack sufficient probative value to warrant acceptance on this record in the absence of a study reflecting both normalized repair and maintenance experience and demand factors.”

The Commission rejected BN’s 26.85% in Sergeant Bluff^{53/} and BN’s 30.27% in OPPD.^{54/}

In ICC Docket No. 36719, Arkansas Power & Light Company v. Burlington Northern Railroad Company, et al., served May 13, 1987 “(Arkansas Power & Light)” the Commission adopted the standard 10% locomotive spare margin. (Arkansas Power & Light, at page 4). The Commission went on to state the following:

^{52/} ICC Docket No. 37667S, Central Louisiana Electric Company v. Burlington Northern Railroad Company and Missouri Pacific Railroad Company, served February 25, 1983.

^{53/} ICC Docket No. 37021 in the consolidated case Docket No. 37029, Annual Volume Rates on Coal - Rawhide Jct., Wyoming to Sergeant Bluff, Iowa, filed August 24, 1981.

^{54/} ICC Docket No. 38783, Omaha Public Power District v. Burlington Northern Railroad Company, decided November 14, 1986, 3 I.C.C. 2d 123, 152.

“However, BN challenges the 10 percent figure, arguing that a spare margin of approximately 30 percent is a more accurate estimate for the APL movements based upon studies from its Alliance Pool. As in Omaha, supra, we conclude that BN’s studies are not sufficiently reliable to depart from the 10 percent figure applied by APL.”

“One issue in this context concerns whether the spare margin should include all locomotives that are not in active service...”

“There is a problem with including all non-cycle hours from the Alliance Pool, as BN has done, and attributing that figure to the APL movements. The non-cycle factor appropriate to coal pool locomotives may reflect not only the traffic patterns of the various coal movements which draw power from the pool, but also the overall level of line congestion influenced by non-coal movements. For example, a decline in non-coal movements may have the effect of decreasing coal train running times. Whether such decrease would translate into a reduction in pool locomotive units would depend upon the ability of the mine or utility to handle the train at the origin or destination terminal upon arrival. However, the record does not disclose whether trains involved in the APL movements that arrive at a terminal ahead of schedule are handled immediately or must await scheduled loading/unloading times....”

“In sum, applying to an individual movement the average cycle experience for a pool serving numerous coal movements may result in significant distortion. For example, when an individual movement experiences an increase in cycle times, with no such increase occurring generally, the likelihood is that the relatively fixed number of non-cycle hours identifiable with that movement would constitute a smaller than average proportion of total cycle hours. Hence, in the absence of compelling reasons otherwise, the pool non-cycle factor would be inappropriately high for such a movement. Here, we cannot test the BN study’s reliability as applied to the pool as a whole or to the subject movement.”^{55/}

The Commission’s ruling in Arkansas Power & Light applies equally to the results of BNSF’s SD70MAC Alliance Pool locomotive spare margin study in this proceeding. We saw above that BNSF’s SD70MAC Alliance Pool locomotive spare margin study made no allowance whatsoever

^{55/} Id. at 4-5.

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for other locomotive types or for the availability guarantees that BNSF has negotiated with its locomotive suppliers. We see below that BNSF's Alliance Pool locomotive spare margin study did not measure spare margin.

BNSF's locomotive spare margin study^{56/} has other shortcomings in addition to those cited by the ICC in Arkansas Power & Light:

- The data universe used to compute the spare margin ratio includes all locomotives of a specific type assigned to one maintenance location. After developing all of the locomotive capital factors based solely on the specific locomotives in Otter Tail's trains, BNSF uses the characteristics of all units of a specific type to calculate its spare margin, regardless of whether or not they were used in Otter Tail service.
-
-
- According to the data included in BNSF's Opening electronic workpaper file "Spare Margin.xls," the hours classified as "Unavailable Shop" constitute of the total "Measurable Hours" for locomotives maintained in part by EMD. This results in an availability percent during 2002 for these locomotives of BNSF would have received compensation from the maintenance contractor when the availability percent specified in the contract was not met. This is not reflected in BNSF's locomotive capital calculations.

^{56/} See BNSF.OP.WP.II.A-0028 to 0030

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- The difference between the “Available Hours” and the total of “Utilized” plus “Non-Utilized” would appear to be hours that BNSF locomotives are off-line in run through service on other railroads. The reciprocal of BNSF locomotives’ being off-line is locomotives provided by other railroads to BNSF in run through service. If there is an imbalance of horsepower hours in BNSF’s favor, then there is a payment made by the other railroad to BNSF. The series of multiplications used in BNSF’s spare margin calculation procedure accounts for a portion of this time, but not all. All of the hours off-line in run through service should be included in “Utilized” hours, because their inability to be utilized by BNSF is off-set by the provision of substitute locomotives by the other railroad and/or payments to BNSF.
- The “Non-Utilized” category includes elements that by their identification show that the locomotives have been released by the shop and are available for service, but not assigned to a specific train while other locomotives are available in the yard but not assigned to a train. There also appears to be some overlap or duplication of time between certain categories.^{57/} The categories MERS-WOAS (“Shop Release to Work Order Assign”) and MERS-TD (“Shop Release to Train Departure”), and the categories TA-WOAS (“Train Arrival to Work Order Assign”) and TA-TD (“Train Arrival to Train Departure”) could have duplication except for the time between WOAS (“Work Order Assign”) and TD (“Train Departure”). However, the WOAS-TD (“Work Order Assign to Train Departure”) time is included by BNSF as a category under “Utilized.” The “Non-Utilized” category of time does not appear to include any time when the locomotive is not available for service except for the TA-MESH (“Train Arrival to Mechanical Shop”) activity. In addition to the procedural shortcomings identified above, BNSF’s calculation of its spare margin includes data errors. The “Hours Utilized” for January 2002 exceed both the “Hours Available” and “Total Measurable” hours. Since the hours utilized are a subset of both of these categories, it is impossible for them to be greater than either category.^{58/}

On July 25, 2003, Otter Tail served BNSF with its first request for workpapers. This request focused on additional support for BNSF’s calculation of its locomotive spare margin. BNSF’s response did not provide any additional information that would support or explain its procedures.^{59/}

In summary, the BNSF spare margin study is flawed in many ways and should be rejected. Otter Tail utilized the methodology adopted by the Board in TMPA to derive its

^{57/} See BNSF.OP.WP.II.A-0028.

^{58/} See BNSF.OP.WP.II.A-0030.

^{59/} See BNSF’s Responses to Complainant’s First Request for Workpapers, dated August 11, 2003.

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margins for the locomotives actually used to provide Otter Tail train service. The Board should adopt Otter Tail's spare margin for 2002 and spare margin in 2003 as the better evidence of record.

(c) Otter Tail's Development of its Spare Margins

Through the use of these contracts provided to Otter Tail in discovery, Otter Tail developed a separate spare margin for SD70 MAC locomotives, GP60M locomotives, C44-9W locomotives, C40-8W locomotives, and SD75M locomotives.^{60/} Otter Tail used a spare margin for all BNSF locomotives used to provide Otter Tail service that are not covered by specific maintenance contracts. Weighting the spare margin requirement for each locomotive contract based on the hours of usage for units included under that contract in Otter Tail service, Otter Tail developed composite spare margins of that it believes are appropriate for use in this proceeding.^{61/}

Otter Tail's method and result are both consistent with the Board's ruling at page 58 of the recent TMPA decision that a 5% spare margin requirement is appropriate for the BNSF SD70MACs used to provide the service at issue in that case, based on a 95% availability guarantee in the locomotive contract between BNSF and EMD. Otter Tail has used this same basis to calculate the spare margin requirement for the SD70MACs used in Otter Tail service in the instant proceeding as well as the contractual guaranteed availability percentages for the other types of locomotives used in the Otter Tail service.

^{60/} A summary of the maintenance provisions of these agreements as they pertain to calculation of the spare margin is provided in Otter Tail's Opening Exhibit II-A-5.

^{61/} See Otter Tail's Opening Exhibit II-A-5 and Otter Tail's Opening electronic workpaper files "Loco Maint OTP.123" and "Loco Maint OTP-2003.123."

(d) Special Study of Locomotive Capital Costs

There are two issues related to the locomotive lease cost included by BNSF in their calculation of locomotive capital. First, BNSF has based the average lease cost on only those locomotives identified in the Alliance Pool that actually moved in Otter Tail trains. Second, the annual lease cost was calculated at the annual average of the lease payments made over the life of the lease.

Otter Tail showed earlier that BNSF erred by using only the owned and leased locomotives of specific types that actually moved in Otter Tail trains as opposed to all the owned and leased locomotives of that type included in the Alliance Pool. A corollary dysfunction of using only specific locomotives rather than specific locomotive types is shown in the computation of locomotive capital costs. The computation of the locomotive capital cost is impacted by the relative proportion of locomotives leased versus owned. BNSF's computation resulted in a disproportionate share of the total locomotives being classified as owned in the locomotive capital calculation whereas the proportion of leased/owned locomotives of that type in the Alliance Pool is vastly different.

BNSF used the wrong lease costs for leased locomotives. WPL rejected the railroad's calculation of lease costs "...based on the average lease rate over the life of the lease agreement..." (WPL, page 57). In the instant proceeding, BNSF has also based its lease costs on the average lease rate over the life of the lease agreement, the exact procedure rejected by the Board in WPL. WPL rejected that method stating that the lease rates should be for the time period being costed, not the average over the life of the lease because that average "...would likely produce a different lease cost from that actually incurred ..." during the time period being costed. (WPL, page 58)

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BNSF goes on to try to convince the Board to overturn its WPL ruling stating that its treatment is consistent with how it accounts for leases and that treatment makes BNSF's treatment consistent with URCS. However, neither BNSF nor Otter Tail used URCS for the determination of this cost component. Both parties eliminated the URCS measurement of this cost and substituted its own "Special Study" estimate of the cost.

BNSF further rationalizes its use of the average annual lease cost over the life of the lease by citing three leases in their workpapers that had uneven lease payments over their lives. (BNSF Opening, pages II-49 to II-50 and BNSF.OP.WP.A-0043-45). However, those cited lease payments are extreme examples and are not representative of BNSF's lease payments based on the BNSF leases provided to Otter Tail in discovery. Lease payment schedules included in Otter Tail work papers, Complainant's Opening Evidence, Volume III - Workpapers, pages 340 through 386, reveal

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The Board should select Otter Tail's locomotive capital costs as the best evidence of record because 1) BNSF did not include the correct locomotives in its capital cost computations, 2) BNSF used an invalid spare margin, and 3) BNSF erred by using a lease cost averaged over the life of the

lease agreement rather than the lease cost actually being incurred during the time period being costed.

(e) BNSF's Procedural Errors

In addition to the differences between Otter Tail and BNSF discussed above, there are two areas of procedural errors that relate to BNSF's calculation of locomotive capital costs. These are (1) the number of locomotives included in their calculations and (2) the time frame used in calculating the locomotive capital costs.

Regarding the first procedural error category, both Otter Tail and BNSF calculated the locomotive hours for individual units in Otter Tail trains using the BNSF's train movement data for 2002. Otter Tail included 128 different locomotives in its calculation of locomotive hours in 2002 for Otter Tail trains. BNSF has based its locomotive capital inputs on 100 different locomotives.^{62/} Using the first quarter of 2002 as an example, Otter Tail includes hours associated with 42 different locomotives while BNSF only shows hours for 31 locomotives.

All locomotives included in BNSF's train movement data are used by Otter Tail to calculate the average locomotives per train. Otter Tail's calculation of the average locomotives per train was accepted by BNSF during the technical conferences. The capital factors applied to the average locomotives per train have to be based on the same universe of locomotives. There is no apparent reason why BNSF omitted the hours of certain locomotives from the locomotive capital calculations. The BNSF locomotives included in Otter Tail's development of locomotive capital costs are more accurate.

Regarding the second procedural error category, Otter Tail calculated its investment data

^{62/} See BNSF's Opening electronic workbook "Big Stone Trains 2002.xls", Tab "Total Locomotives Use".

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separately for each quarter in 2002. The locomotive hours extracted from BNSF's train movement file were summed by locomotive type for each quarter of 2002. The hours for each type were applied to the average investment and age for that particular type of locomotive to calculate the weighted average for the types used in Otter Tail trains during each quarter.

In contrast, BNSF has computed its locomotive investment based on the locomotives for which they calculated locomotive hours from the train movement data. The investment and age of the owned units and the lease cost were weighted based on the total locomotive hours, in Otter Tail trains during 2002 as calculated by BNSF. Otter Tail calculated separate capital inputs for each quarter, but BNSF calculated a single average investment, age and lease cost for 2002. BNSF then increased the age from the first quarter by .25 years each succeeding quarter of the year.

iv. Roadway Maintenance (MOW including Joint Facilities)

In its Opening Evidence, Otter Tail developed variable maintenance-of-way ("MOW") costs for BNSF's Big Stone coal movement using actual maintenance of way data provided by BNSF in discovery. See Otter Tail Op. at II-A-22 to 26. In their Opening Evidence, on the other hand, BNSF used system average MOW costs. Table II-A-13 and Exhibit II-A-22, page 1 of 23, line 6c., show that MOW cost differences account 14.2% of the total difference in variable costs between the parties. The STB should adopt Otter Tail's development of actual maintenance of way costs as demonstrably superior to BNSF's system average and as the better evidence of record.

v. Crew Wages

Otter Tail's Opening Evidence presented the calculated crew wage expenses associated with the movement of unit coal trains to Big Stone Station. Crew Wages were addressed in Otter Tail's

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Opening Narrative at pages II-A-32 through II-A-34 and Exhibit II-A-6. BNSF addressed Opening Evidence crew wage calculations at pages II-45 through II-47.

The crew wage expenses presented by BNSF in Opening are overstated, differing from those developed by Otter Tail by between 1% and 5%, as is shown in Table 14 below:

Table 14 Opening Evidence - Special Study Crew Wages Otter Tail Power Unit Coal Trains From the PRB to Big Stone, SD, by Mine ^{1/} and Quarter				
(1)	<u>Otter Tail</u> ^{2/} (2)	<u>BNSF</u> ^{3/} (3)	<u>Difference</u> (4)	<u>Percent</u> (5)
Belle Ayr				
2002 Q 1				
2002 Q 2				
2002 Q 3				
2002 Q 4				
Eagle Butte				
2002 Q 1				
2002 Q 2				
2002 Q 3				
2002 Q 4				
^{1/} Although BNSF did provide payroll data for trains originating at Caballo Rojo and Cordero mines, they presented no associated cost evidence.				
^{2/} See Otter Tail Opening Evidence Electronic workpaper "Open-Wages Summary.123".				
^{3/} See BNSF Opening Evidence Electronic workpaper "BNSF-02-T&E-ADJ.123".				

A comparison of the special study crew wage expenses calculated by Otter Tail in Opening Evidence to those presented by the BNSF identified five areas of discrepancy:

- (a) Non-Train Related Mark-Up Percent - The methodology utilized by BNSF to develop the non-train related mark-up percent is fundamentally flawed, yielding dramatically skewed results. The error in this computation impacts all crew wages presented in evidence.

- (b) Road Crews - In Opening, Otter Tail's detailed analysis of payroll records^{63/} and review of the sample of BNSF Train Activity Reports^{64/} uncovered numerous flaws in the payroll data. Otter Tail's special study adjusts for these inadequacies. BNSF's evidence makes no such adjustments and incorporates inaccurate and/or erroneous data in its calculations.
- (c) Helper Crews - BNSF Opening Evidence Electronic workpaper "ottertail.bnsf helper crew wages.xls" contains a technical error, resulting in an erroneous computation of average wages per helper shift.
- (d) Road Switch Crews - BNSF's calculation is based on general statements by local field personnel and relies wholly on subjective, unsubstantiated observations, resulting in an overstatement of these expenses.^{65/} In this Reply, Otter Tail has performed a comprehensive analysis of the sampled BNSF's Train Activity reports and calculated the wages attributable to Otter Tail unit coal trains.
- (e) Loading Crews - Otter Tail's allocation of loading crew wages was developed based on sample Train Activity Reports collected from BNSF at Gillette, WY and is consistent with BNSF's description of the loading operation in their Opening Narrative at page II-5. BNSF's calculated loading crew wages^{66/} do not agree with their described operations.

The five areas of discrepancy are discussed in greater detail below:

(a) Non-Train Related Mark-Up Percent

The underlying premise for calculating the non-train related mark-up percent utilized by both Otter Tail and BNSF is fundamentally the same. Both Otter Tail and BNSF summarize the wage payments for all employees working in Otter Tail service, identify each constructive allowance payment as train related, non-train related and non-taxable, and then calculate the relationship between the non-train related and train related wages to determine the "mark-up" percent. BNSF, however, errs in their attempt to further refine this calculation by presenting separate non-train

^{63/} Data extracted from BNSF/OTP/Tape 132 provided by BNSF in discovery processed by Otter Tail in MS Access database "OTP FullWages".

^{64/} Opening Evidence Hardcopy workpapers Vol. III, 2 of 6, pg. 937 through 1615.

^{65/} See BNSF Opening Narrative at page II-9.

^{66/} See BNSF Opening Evidence Electronic workpaper "BNSF-02-T&E-ADJ.123".

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related mark-up percents by type of service. Although on the surface this “refinement” appears to generate more specific results, in fact this methodology is flawed because the wages represented within each service type calculation are not solely for that service, but rather include wages for all service types. Specifically, only of the payroll records in the helper service full wages file show a helper service train symbol, while another of the records show a road service coal train symbol, and show a loading crew train symbol.^{67/}

Further, BNSF’s methodology fails to adjust for employees who work in more than one type of service (i.e., all wages for employees who worked in both helper and loading crew service for Otter Tail trains are included in both the helper crew non-train related mark-up calculation and the loading crew mark-up calculation).^{68/} These employees’ wages are allocated multiple times yielding vastly different results. In fact, in BNSF’s calculation, over half of the records used to develop the helper service mark-up percent are also used to calculate the loading crew mark-up percent, and over 85% of the payroll wage records used to calculate the road switch crew service mark-up are also used in the development of the road crew mark-up.^{69/}

Rather than succeeding in isolating the wages by type of service to refine the mark-up calculation, this methodology merely shrinks the wage sample on which the mark-up calculation is based and distorts the results. By segregating the wages, the mark-up percent calculated by the BNSF for any given occupation code varies drastically by type of service^{70/}. The more accurate allocation of non-train related wages is based on the methodology, repeatedly accepted by the STB

^{67/} See Otter Tail Reply Electronic workpaper “Reply-Train Symbols in Full Wages Helper file.xls”.

^{68/} See Otter Tail Reply Electronic workpaper “Reply-dupes.xls”, TAB “summary”.

^{69/} Ibid.

^{70/} See BNSF Opening Electronic Workpaper “ottertail.bnsf markup 2002.xls”.

and utilized by Otter Tail, which calculates the mark-up based on all wages, regardless of type of service, and includes all wage payments only once, eliminating the possibility of distortion resulting from the same wages being counted multiple times in different types of service.

Finally, Otter Tail and BNSF differ on the train related and non-train related classification of 11 Constructive Allowance Codes under which wages were paid.^{71/} Any associated adjustments have been made in this Reply.

(b) Road Crews

Otter Tail's review of the Train Activity Reports and detailed Otter Tail payroll records^{72/} identified numerous errors in the BNSF payroll system.^{73/} Additionally, Otter Tail identified instances where Otter Tail trains performed work for other BNSF shippers, and adjusted the special study crew wages accordingly.^{74/} BNSF makes no such adjustments to the crew wage data presented in their Opening.

(c) Helper Crews

An initial review of BNSF's Opening evidence showed that, although BNSF and Otter Tail agreed on the number of helper trips to use in the development of average helper crew wages, the wage dollars extracted by BNSF from the payroll data exceeded those identified by Otter Tail. Closer inspection of BNSF's workpapers revealed that the underlying data used by BNSF agreed with Otter Tail's. BNSF's calculation of average wages, using the Pivot Table function in MS Excel,

^{71/} See Otter Tail Reply Electronic workpaper "Reply-BN CACodes.xls", TAB "Dif".

^{72/} See Otter Tail Opening Evidence Hardcopy workpapers Vol. III, 2 of 6, pg. 937 through 1615, and data extracted from BNSF/OTP/Tape 132, processed by Otter Tail in MS Access database "OTP FullWages".

^{73/} See Otter Tail Opening Electronic workpaper "Open-Avg Road Crew Wages per train.xls", and Reply Electronic workpaper "Reply-Avg Road Crew Wages per train.xls", TAB "4-adjustments".

^{74/} See Otter Tail Opening Electronic workpaper "Open-Avg Road Crew Wages per train.xls", TABS "6-bmen adjustment" and "8-sw adjustment".

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was not updated using the “Refresh” command, and therefore did not agree with the underlying data.^{75/}

(d) Road Switch Crew

Otter Tail has performed a comprehensive analysis of the sampled BNSF’s Train Activity reports and calculated the road switch crew wages attributable to Otter Tail unit coal trains.^{76/} Otter Tail’s analysis is based on a sample of Train Activity Reports for train RTW1890, examined to determine whether it did any work for Otter Tail coal trains.^{77/} Otter Tail applied the average hours spent by this train on Otter Tail activity to the average road switch crew hourly wage to develop the amount allocated to Otter Tail trains.

BNSF’s Opening Evidence Narrative at page II-9 to II-10 describes their allocation of road switch crew wages to Otter Tail unit coal trains. As noted earlier, BNSF’s calculation is based on general statements by local field personnel and relies wholly on subjective, unsubstantiated observations, resulting in an overstatement of these expenses.

(e) Loading Crews

In Opening, Otter Tail identified an error in the BNSF payroll system related to loading crew wages. BNSF’s payroll system erroneously pays it’s three-man loading crews CA Code 32-Reduced Crew Allowance when, in fact, these are not reduced crews. Otter Tail adjusted the conductor and brakeman wages accordingly.^{78/} BNSF makes no such adjustment, thereby overstating the average

^{75/} See BNSF Opening Electronic workpaper “ottertail.bnsf helper crew wages.xls”

^{76/} See Otter Tail Reply Electronic workpaper “Reply-Avg Rd Sw Wages.xls” and Reply Workpapers, pp. 4918-4952.

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^{78/} See Otter Tail Opening Electronic workpaper “Open-Avg Loading Crew Wages.xls”.

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loading crew wages per shift. Also, BNSF includes direct costs for the third party loading crews at Eagle Butte. These costs are captured in the BNSF Annual Report Form R-1 on lines 402 and 403 under purchased services, and therefore captured in the Special Study Ratio applied to all wages.^{79/} To avoid double counting, Otter Tail has not included these direct costs.

vi. Switching

Switching costs were addressed in Otter Tail's Opening Narrative at page II-A-38 and at pages 2, 3, and 4 of 12 of each of Exhibits II- A-7 through II-A-18. BNSF covered switching at pages II-31 through II-43 of its Opening Narrative.

Exhibit II-A-22, page 1 of 23, Lines 3, 4, and 5 compare Otter Tail's Opening Switching costs for the three switching cost categories with BNSF's Opening estimates. Column (16) of that Exhibit shows that the total difference between the parties is

Table II-A-13 shows that Switching cost differences between Otter Tail and BNSF contribute 0.2% of the total cost difference. Column (5) through Column (15) of Exhibit II-A-22, Lines 3, 4, and 5 detail the factors causing or contributing to this difference.

Both parties broke Switching by Road Locos (SEM) - Yard into three categories: 1) Road Sw - Yd by Otter Tail Crews excluding crew wages and locomotive investment (each of which is included in costs directly on a special study basis); 2) Road Sw - Yd by Road Switch Crews including wages and locomotive investment; and 3) Road Sw - Yd by Other Road Crews including system average crew wages and locomotive investment. The number of switching minutes applied to each of these

^{79/} See Otter Tail Reply Electronic workpaper "Reply-Wages Summary.xls", TAB "SpStudy".

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categories was the same for both parties.^{80/} The remaining minor cost difference arises because BNSF used too few years of normalization in its development of the Switch Engine Minute unit cost.^{81/}

Because of the BNSF normalization error, the Board should adopt Otter Tail's switching costs as the best evidence of record.

vii. Other Costs (including Helper Service Costs)

For several other cost factors, Otter Tail and BNSF agreed. These agreed cost categories include: 1) Carload Originated or Terminated - Clerical; 2) Carload Handling - Other; 3) Fuel; and 4) Train Mile Expense Other Than Crew. For still other cost categories, both parties agreed that the cost categories had 0 costs as follows: 1) SEM Yard; 2) SEM - Road Locos - Yard Track; 3) Operating Expense for Railroad Cars; 4) Railroad Car Ownership; and 5) Joint Facilities.

There are four (4) other areas in which Otter Tail's variable cost calculations differ from those submitted on behalf of BNSF:

- (a) Carloads Originated and Terminated;
- (b) Loss and Damage;
- (c) End-of-Train-Device; and
- (d) Helper Service Cost.

^{80/} At the Technical Conference, the parties agreed on total switching minutes of minutes calculated as being between the Otter Tail's Opening and BNSF's Opening switching minutes. of the difference between the parties switching minutes were added to Otter Tail's Opening minutes.

^{81/} BNSF used 2 years normalization for many operations expenses that call for 3 or 5 year normalizations in the development of the Switch Engine Minute unit costs. See BNSF Opening electronic file "BNSF-02-SwitchSplit.123".

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Each of these items is discussed below.

(a) Carloads Originated and Terminated

In their Opening Evidence, the parties used the same procedures to develop station clerical expenses. See Otter Tail Op. at II-A-37; BNSF Op. at II-31. The parties' use of different indexing procedures, however, produced a slight cost difference. In its Reply, Otter Tail has revised its 1Q03 index replacing the projected 1Q03 index with the June 2003 AAR Railroad Cost Index, discussed infra.

(b) Loss and Damage

Loss and Damage costs were addressed in Otter Tail's Opening Narrative at page II-A-38-39 and at page 8 of 12 of each of Exhibits II- A-7 through II-A-18 and line 18 of Exhibit II-A-19. BNSF covered Loss and Damage costs at page II-48 of its Opening Narrative.

Exhibit II-A-22, page 1 of 23, Line 17, compares Otter Tail's and BNSF's Loss and Damage costs. Column (16) of that Exhibit shows that BNSF's use of system average Loss and Damage costs have caused BNSF to overstate these costs by _____ Because Otter Tail's costs are based on an analysis of actual Otter Tail loss and damage experience during the years 1999 through 2002 (as provided by BNSF during discovery), the Board should adopt Otter Tail's costs as the best evidence of record.

(c) End-of-Train Device

Exhibit II-A-22, page 1 of 23, line 16, compares Otter Tail's and BNSF's EOTD Ownership costs. Column (16) of that Exhibit shows that the parties' cost estimates are essentially the same. The parties costed Caboose and EOTD expenses using the same procedures. See Otter Tail Op. At II-A-35; BNSF Op. At II-58. The difference in the parties' results is the inclusion of certain

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investment elements by Otter Tail that were excluded by BNSF. In addition, there was a large purchase of EOTD's in November of 2002. BNSF only included these units in calculations for 4Q02 and 1Q03, whereas, Otter Tail weighted these units in all quarters. In Reply, Otter Tail has used the same investment criteria as BNSF, and only included the units purchased in November 2002 in the 4Q02 and 1Q03 calculations. Any remaining difference between the parties results from differences in BNSF's base data and the data provided to Otter Tail by BNSF in discovery. See Otter Tail Reply. electronic workpaper file "BNSF 2002 EOTD Reply.123".

(d) Helper Service Cost

Helper Service costs were addressed in Otter Tail's Opening Narrative at pages II-A-36 and 37 and at page 7 of 12 of each of Exhibits II-A-7 through II-A-18 and lines 10 and 11 of Exhibit II-A-19. BNSF covered the subject at pages II-12 and 13 of its Opening Narrative.

Exhibit II-A-22, page 1 of 23, Line 10 compares Otter Tail's Helper Service costs with BNSF's Opening estimates. Column (16) of that exhibit shows that the total difference between the parties

Table II-A-13 shows that Helper Service cost differences between Otter Tail and BNSF contribute 3.5% of the total cost difference. Columns (5) through Column (15) of Exhibit II-A-22, Line 10 detail the factors causing or contributing to these differences. The parties are in agreement on the number of helper locations. Belle Ayr trains use the Belle Ayr helper; Eagle Butte trains use the Campbell helper; and all trains to Big Stone require use of the Sheridan helper. The primary factor causing the cost difference between Otter Tail and BNSF is the frequency of using helper service, and Otter Tail reflected that factor in Column (6) Service Units and Column (12) Special Study for LUM and Wage expense, respectively. This factor will be discussed below.

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The use of helper services in the railroad industry has declined in recent years as the use of distributed power ("DP") has increased. The August 2001 issue of Trains states, "More recently, DP has replaced or eliminated manned helpers on UP and Burlington Northern Santa Fe in California's Tehachapi Mountains, and on the Kansas City Southern across the Ozark Mountains between Neosho, MO., and Hatton, Ark".^{82/} Where the requirement to use helpers is marginal, such as at Logan, DP locomotives make helpers unnecessary.

When helper service is provided, BNSF incurs locomotive and crew wage costs. Otter Tail's Number of Locomotives, Helps per Crew Shift, and Round Trip Miles agree with those used by BNSF and were taken from the same source, BNSF.OP.WP.II.A-0013-0015, which BNSF provided to Otter Tail in discovery. However, BNSF has overstated the frequency with which they use the helper services available at each location. Otter Tail's Opening Helper Service costs were based on the frequency of use of helper services as determined from BNSF's Train Activity Reports.^{83/} Otter Tail's analysis of BNSF's Train Activity Reports shows BNSF's frequency of use of helper service is for Belle Ayr helpers and for Campbell helpers. In contrast, BNSF has assumed that 100% of Otter Tail's trains are helped by either the Belle Ayr or Campbell helper. BNSF's Opening Statement offered no evidentiary support for this assumption.

Differences in the crew wage calculation also contribute a small amount of the difference between the parties' Helper Service costs. Otter Tail's calculation of helper wages are shown in Opening Evidence electronic workpaper file "Open-Avg Helper Wages.xls".

^{82/} Murray, Tom, "Helpers - Where They Are - Manned Helpers vs. Distributed Power" Trains, August 2001, pp. 54-55. (See Otter Tail Reply Workpaper, pp. 4906-4917.

^{83/} See Otter Tail Opening Workpapers Vol. 2 of 6, pp. 937-1615, and Opening electronic file "Open-Gillette Helper.xls"

Because BNSF has overstated the frequency of their use of the available helper services, the Board should adopt Otter Tail's Helper Service costs as the better evidence of record.

viii. Indices

Otter Tail discusses indexing in Otter Tail Op. at II-A-39, and BNSF discusses the subject in BNSF Op. at 58-59. In this Reply, Otter Tail has updated its index using the June 2003 AAR Railroad Cost Index and corrected an error in the base fuel price. Minor differences between Otter Tail and BNSF indexing is due to rounding and the fact that BNSF used the annual 2002 index as the base for 1Q02 through 4Q02 and an average of the four quarters as the base for 1Q03. This is not the methodology that has been accepted by the STB in past cases, which is using the average of the four quarters for costing within the same year and the annual index which includes adjustments as the base for indexing to the next year.

ix. BNSF's Misapplication of the URCS Formula

Otter Tail's Opening Evidence on variable costs relied upon the STB's BNSF 2002 URCS developed in accordance with the methodology prescribed by the ICC in its various URCS rulings and reaffirmed by the Board in the FMC and WPL decisions. This adherence extended to Otter Tail's development of the general overhead ratio for return on investment. Consistent with Board policy and precedent, Otter Tail included monies recorded in Road Property Account 76 (Interest During Construction), and excluded monies recorded in Account 90 (Construction Work in Progress).

In its Opening Evidence, BNSF based its cost analysis on an URCS formula that BNSF has adjusted to include costs recorded in Account 90 ("Construction Work in Progress") and exclude

costs recorded in Account 76 ("Interest During Construction"), the opposite position historically relied upon by the STB.

d. Conclusion

As described in this Reply, Otter Tail and BNSF disagree on a number of cost factors that influence BNSF's variable cost of providing service for unit coal trains moving to Otter Tail's Big Stone Station. Table II-A-13 supra Section II.A.1.c compared Otter Tail's cost evidence with that of BNSF's opening for the cost categories where the parties' cost estimate differences were the greatest. Table II-A-15 below, restates Otter Tail's Reply vs BNSF Opening cost differences for Belle Ayr to Big Stone Station - 1Q02.

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Table II-A-15				
Comparison of Otter Tail Reply and BNSF Opening Variable Costs Belle Ayr to Big Stone Station - 1Q02 - Aluminum Cars				
<u>Cost Component Differences of Largest Magnitude (\$/Carload) ^{1/}</u>				
<u>Cost Component</u> (1)	<u>Otter Tail</u> <u>Reply ^{2/}</u> (2)	<u>BNSF</u> <u>Open ^{2/}</u> (3)	<u>Reply</u> <u>v. BNSF</u> (4)	<u>% of Total</u> (5)
1. Road Property Capital				44.3%
2. Loco Maintenance				20.0%
3. Loco Capital				15.7%
4. M of W				4.2%
5. Helpers				3.5%
6. Crew				1.0%
7. Switching				0.2%
8. Other	—	—	—	<u>1.1%</u>
9. Total				100.0%
^{1/} Otter Tail's Reply and BNSF's Opening costs reflect the agreed traffic and operating characteristics.				
^{2/} Source: Exhibit II-A-22, page 1 of 23 and electronic file "VC Difs Reply 1Q02 Belle Ayr.123".				

As shown in Table II-A-15, above, seven items account for 98.9 percent of the difference between Otter Tail's and BNSF's calculation of variable costs. In aggregate BNSF's calculation of variable costs for this sample move produce a result that is 16.0 percent, or _____ per carload higher than the variable costs calculated by Otter Tail.

2. Rate and Resulting R/VC Calculations

Otter Tail's Opening and Reply results and their impact on the Jurisdictional Threshold and R/VC ratios for Belle Ayr 1Q02 are shown in Table II-A-16 below.^{84/}

Table II-A-16 Comparison Of Otter Tail's Opening And Reply Calculation Of BNSF's Variable Costs And Jurisdictional Threshold For The Movement Of Coal From Belle Ayr To Big Stone Station – 1Q02				
<u>Time Period</u> (1)	<u>Opening</u> (2)	<u>Reply</u> (3)	<u>Difference</u> ^{1/} (4)	
A. Rate per Ton	\$13.49	\$13.49	\$0.00	
B. Variable Cost per Ton	\$4.72	\$5.00	\$0.28	
C. Jurisdictional Threshold per Ton	\$8.50	\$9.00	\$0.50	
D. Revenue to Variable Cost Ratios	286%	270%	(16%)	
^{1/} Column (3) - Column (2).				

Table II-A-17 below summarizes Otter Tail's Reply restatement of its evidence regarding variable costs per ton, and the resulting revenue-variable cost ratios, for the 1Q02 through 1Q03 time periods for all subject movements.

^{84/} The Opening variable costs shown in Table 16 are supported in Otter Tail Opening electronic file "VC Otter Tail Opening.123". The Reply variable costs are supported in Otter Tail Reply electronic file "VC Otter Tail Reply.123".

Table II-A-17
Summary of Otter Tail's Reply Rates, Variable Costs,
Jurisdictional Threshold, and Revenue/Variable Cost Ratios

<u>Quarter</u> (1)	<u>Origin</u> (2)	<u>Type of Cars</u> (3)	<u>Rate Per Ton</u> ^{1/} (4)	<u>Var Cost Per Ton</u> ^{2/} (5)	<u>J.T.</u> ^{3/} (6)	<u>R/VC Ratio</u> (6)
1Q02	Belle Ayr	Aluminum	\$13.49	\$5.00	\$9.00	270%
	Eagle Butte	Aluminum	13.49	4.87	8.77	277%
2Q02	Belle Ayr	Aluminum	13.49	5.04	9.07	268%
	Eagle Butte	Aluminum	13.49	4.95	8.91	273%
3Q02	Belle Ayr	Aluminum	13.49	5.04	9.07	268%
	Eagle Butte	Aluminum	13.49	4.98	8.96	271%
4Q02	Belle Ayr	Aluminum	13.49	5.14	9.25	262%
	Eagle Butte	Aluminum	13.49	5.00	9.00	270%
	Cordero	Aluminum	13.49	5.29	9.52	255%
	Caballo Rojo	Aluminum	13.49	5.00	9.00	270%
1Q03	Belle Ayr	Aluminum	13.76	5.39	9.70	255%
	Eagle Butte	Aluminum	13.76	5.39	9.70	255%
	Buckskin	Aluminum	13.76	5.23	9.41	263%
	Rawhide	Aluminum	13.76	5.22	9.40	264%
	Dry Fork	Aluminum	13.76	5.22	9.40	264%
	Fort Union	Aluminum	13.76	5.21	9.38	264%
	Clovis Point	Aluminum	13.76	5.20	9.36	265%
	Caballo	Aluminum	13.76	5.26	9.47	262%
	Cordero	Aluminum	13.76	5.47	9.85	252%
	Caballo Rojo	Aluminum	13.76	5.17	9.31	266%
	Coal Creek	Aluminum	13.76	5.26	9.47	262%
	Jacobs Ranch	Aluminum	13.76	5.36	9.65	257%
	Black Thunder	Aluminum	13.76	5.43	9.77	253%

^{1/} Common Carrier Pricing Authority BNSF 90062 and 90062-A.

^{2/} See Otter Tail Reply electronic file "vc Otter Tail Reply.123".

^{3/} Column (5) x 180%.

Table 17 shows that the common carrier rate at issue in this proceeding exceeds the 180% jurisdictional threshold set forth in 49 U.S.C. § 10707(d)(1)(A). The Board's jurisdiction to adjudicate the reasonableness of the rate established in BNSF's Pricing Authority No. 90062 and 90062-A clearly is established, as is BNSF's significant overstatements of its variable cost of providing service from the PRB to the Big Stone Station.

3. Other

a. BNSF's "Need For Revenues" Under 49 U.S.C. §§10704(a)(2) and 10704(d)(2), Has Little To Do With BNSF's Overall Financial Health

As presented in its opening section I,^{85/} BNSF's arguments based on its "need for revenues" under 49 U.S.C. §§10704(a)(2) and 10701(d)(2) are immaterial to a SAC determination of the maximum reasonable rates that BNSF can charge for transportation of coal from the PRB to the Big Stone Station. BNSF claims that its narrative demonstrates that the "challenged rates are well within the range of differential prices that is both permitted and expected under the Coal Rate Guidelines" because "Congress, the ICC and the Board have all recognized that railroads must be permitted to engage in differential pricing if they are to achieve and sustain revenue adequacy."^{86/} BNSF goes to great lengths to continuously reference and argue its interpretation of the Guidelines and its definition of revenue adequacy in an attempt to justify its monopolistic position and rates. The fact of the matter is that BNSF's financial position is sound and continually improving.

^{85/} BNSF Opening, p. I-6.

^{86/} BNSF Opening, p. I-3 and I-4.

(1) BNSF Is Not Revenue Inadequate From a Financial Market Perspective

BNSF attempts to portray itself as falling under the Guidelines' revenue "inadequacy" umbrella although a truer reflection of BNSF's financial health can be found in the capital markets' reactions to BNSF, and BNSF's expansions of its services and facilities.

(a) BNSF's Equity Has Outperformed The Market As A Whole

A primary indicator of a company's economic health is its stock price relative to stock prices in general. A company's stock price reflects the market's expectations as to future earnings and, therefore, is a forward-looking indicator of a company's relative financial health. Otter Tail Exhibit II-A-29 shows that the market believes, based on the BNSF's stock price, that the railroad is financially sound.

Page 1 of Exhibit II-A-29 shows that over the last three years, the total return on BNSF stock has increased by nearly 32% while the return on the Standard & Poor's Composite Index ("S&P 500") has declined by nearly 30%.^{87/} This indicates that the market views the future of BNSF as very strong. The optimism of the market is not new. As shown on Page 2 of Exhibit II-A-29, the BNSF, and its predecessor firms have realized returns on their stock that are over three times that of the market has as a whole over the last 20 years. Clearly, the market has had a positive view of BNSF's health for quite some time.

^{87/} The S&P 500 represents a portfolio of company stocks of 500 large firms. Because of its large size and diversity, its returns are commonly used to reflect the returns on the equity market as a whole.

(b) BNSF's Debt Rating Has Risen Since The BN and ATSF Merger^{88/}

The capital market's view of a company's financial health can also be judged from the ratings given by rating companies such as Moody's and Standard & Poor's to a company's traded debt. Bond ratings are judgments about firm's financial and business prospects, and as such, they provide a clear measure of the economic community's opinion about the firm. Once a bond rating company like Standard & Poor's rates a bond, the rating is not changed unless there is a significant shift in the company's financing or prospects. Any change in a bond's rating is therefore significant.

Since the close of the merger between BN and ATSF, BNSF has seen the ratings of its bonds improve, signaling the financial community's positive assessment of the company's health. In December, 1998, Standard & Poor increased its rating of BNSF debt from BBB, a low level investment-grade rating, to BBB+, a higher investment-grade rating, which is where it stands today.^{89/} While the change may appear to be minor, it signaled a positive shift in Standard & Poor's overall assessment of BNSF's well being. Generally, bonds with a Standard & Poor's rating of BBB are deemed to be "adequate" in terms of their capacity to pay interest and repay capital in the future,^{90/} while bonds rated BBB+ are deemed to be "good" in their perceived ability to pay interest

^{88/} The two predecessors to BNSF i.e., Burlington Northern Railroad Company ("BN") and Atchison, Topeka and Santa Fe Railway Company ("ATSF").

^{89/} Rating companies assign bonds one of nine primary ratings. Bonds rated AAA, AA, A and BBB by Standard & Poor's are considered investment grade bonds. Bonds rated BB, B, CCC, CC and C by Standard & Poor's are non-investment grade or "junk bonds," and are considered speculative in nature. Commercial banks, pension funds, and other financial institutions are not allowed to invest in bonds unless they are investment grade. Within each primary rating, Standard & Poor's will also provide further stratification by providing a secondary rating of positive (+) or negative (-). See Otter Tail Reply Workpapers Vol. 1, pp. 4953-4956.

^{90/} In comparison, junk bonds at best offer a moderate level of protection of interest and capital, and therefore are not well safeguarded during good and bad times in the future.

and repay capital, and represent a positive shift in the issuing company's financial prospects.^{91/}

(c) The BNSF Has Had No Difficulty Raising Capital

For a capital-intensive industry like rail transportation, it is crucial that there be willing lenders and stockholders who will help finance expansion and necessary capital improvements.^{92/} BNSF has plentiful sources of capital for its needed improvements.

In its 2002 SEC 10-K filing, BNSF stated that it has had no trouble obtaining financing when needed:

For 2003 and the foreseeable future, the Company expects that cash from operating activities, access to capital markets and bank revolving credit agreements will be sufficient to enable the Company to meet its obligations when due. The Company believes these sources of funds will also be sufficient to fund capital additions that are necessary to maintain its competitiveness and position the Company for future revenue growth.^{93/}

BNSF Chief Executive Officer Matthew Rose recently echoed the sentiments found in the 10-K filing. He remarked that BNSF has good access to the CP (commercial paper) markets and that "we review our capitalization regularly with our board" in order to find the "optimal cost of capital."^{94/} These statements by Mr. Rose reveal that BNSF has little difficulty obtaining required capital to fund

^{91/} See Otter Tail Reply Workpapers Vol. 1, pp. 4957-4961.

^{92/} See 49 U.S.C. §10704(a)(2)(B).

^{93/} BNSF 2002 Form 10K, at 18. See Otter Tail Reply Workpapers Vol. 1, p. 4965.

^{94/} Statement of BNSF Chief Executive Officer, Chairman and President Matthew K. Rose in his address to Duetsch Bank Securities, Inc.'s 13th Annual Global Transportation Conference on February 12, 2003.

its investments. In fact, Mr. Rose confidently stated that BNSF is “very happy” with its current capital position.^{95/}

An indication of BNSF’s overall financial health is that its primary source of capital has been its own internally generated funds. Since 1996, BNSF has expended over \$12.6 billion in capital projects on various investments.^{96/} During this time, BNSF’s long term debt increased by only \$2.1 billion, while BNSF issued no new equity.^{97/} This indicates that BNSF relied primarily on internally generated cash to fund its capital expenditures. From a financial management perspective, this fact is very telling. As a general rule, companies that fund investment through internally generated funds are more financially sound and profitable than firms that use other sources of capital.^{98/} BNSF’s use of internally generated cash to fund its capital projects is a sure sign that the railroad is in a very strong financial position and continues to get stronger.^{99/}

Even if BNSF were to shift its capital structure and turn to more external sources of capital, indications point to the fact that BNSF could easily do so given its low level of debt compared to other railroad companies. In the first quarter of 2003, BNSF had a Long Term Debt to Equity ratio

^{95/} Id.

^{96/} Otter Tail Reply electronic workpaper “Cap Ex Analysis.xls.”

^{97/} Otter Tail Reply Workpapers Vol. 1, pp. 4966-4969. In fact, as will be discussed later in this section, BNSF did just the opposite and repurchased its stock from the marketplace.

^{98/} Publically traded companies typically fund corporate investment in one of, or a combination of three ways: 1) through retaining cash generated from operating activities; 2) through issuances of stock in the equity market; and/or, 3) through assuming debt. Less profitable firms which do not generate enough internal funds will first look to the debt market to pay for investments. Only as a last resort will companies issue additional equity to fund investment. See Otter Tail Reply Workpapers Vol. 1, pp. 4991-4992.

^{99/} BNSF’s use of internally generated cash to fund capital expenditures also highlights the shortcomings of the STB’s revenue adequacy determination. As shown in Otter Tail Reply electronic workpaper “Cap Ex Analysis.xls,” over the 7-year period between 1996 and 2002, BNSF spent over \$12.6 billion in capital projects funded mainly by its own internally generated cash. During this same time period, the STB found the BNSF to be revenue inadequate in each of the seven years.

of 0.8, lower than the industry average of 0.9, and only slightly higher than the market as a whole.^{100/} Even more telling is that BNSF has a lower Long Term Debt to Total Capitalization ratio than all other U.S. based Class I railroads except the Norfolk Southern Railway.^{101/}

(d) Analysts Are Upbeat About BNSF and the Railroad Industry

Despite the weak and uncertain economy, the rail industry is doing well and has a promising future. Analysts agree: profits are strong, business is steady, and the use of technology continues to increase efficiency. Just this year, transportation analyst Anthony Hatch reminded investors that railroads have continued to earn healthy profits during this economic downturn.^{102/} In fact Mr. Hatch states that investors should seriously consider the dramatic upside potential of rail stocks: “the successes that railroads have had even in this uneven recovery gives me confidence that when the economy bounces back, the railroads’ earnings will be an exciting place to be, for investors - my constituency - and customers.”^{103/} Hatch mentions several reasons for the railroads’ successes, including labor peace, better than ever service, and increasing market share.^{104/}

Similarly, Standard & Poor’s transportation sector analyst Jim Corridore maintains that the “long-term outlook for railroads is favorable.”^{105/} He believes that the industry’s core traffic will increase at least as fast as the economy over the next decade and that margins can be expanded by

^{100/} Multex Fundamentals/ProVestor Plus Company Report, issued March 25, 2003. See Otter Tail Reply Workpapers at Vol. 1, pp. 4979-4980.

^{101/} Standard & Poor’s Stock Report For the BNSF, issued March 22, 2003. Otter Tail Reply Workpapers Vol. 1, p. 4981.

^{102/} Anthony Hatch, *On Track for Improvement*, THE JOURNAL OF COMMERCE at 92 (Jan. 2003). Otter Tail Reply Workpapers Vol. 1, pp. 4976-4978.

^{103/} Hatch, at 92.

^{104/} Hatch, at 93.

^{105/} Jim Corridore, *Sub-Industry Outlook*, STANDARD & POOR’S STOCK REPORTS (Feb. 1, 2003). Otter Tail Reply Workpapers Vol. 1, p. 4982.

“eliminating wasteful labor practices and applying technology in equipment and information management.”^{106/}

(2) BNSF Does Not Behave Like a Revenue Inadequate Company

As noted above, the recent leveling off of BNSF capital expenditures is due to the final completion of capital projects brought about by the BN and ATSF merger, and not because BNSF is revenue inadequate. BNSF continues to invest in new properties and services, and to pursue a capital structure indicative of a financially healthy firm.

(a) BNSF's Capital Expenditures Are Above Historic Spending Levels

As discussed above, BNSF's capital spending, on an inflation adjusted basis, has been 26% higher in the last three years than it was for 15 years preceding the merger. Between 1981 and 1995, the combined BN and ATSF expended an average \$519.6 million per year on capital projects on a real dollar basis.^{107/} However, since 2000, BNSF's capital expenditures have averaged over \$653 million per year on a real dollar basis.^{108/} BNSF has continued to invest in itself at levels well above what it did before the merger, even on an inflation-adjusted basis.^{109/}

^{106/} Id.

^{107/} Otter Tail Reply electronic workpaper “Cap Ex Analysis.xls,” worksheet “Cap Ex,” cell V21.

^{108/} Id. cell V28.

^{109/} In fact, BNSF's growth in capital expenditures is another sign of the company's financial health. As a matter of basic financial principle, a company should only invest in a project if that project will generate a sufficient risk-adjusted return. To apply this principle to actual practice, large companies will set a threshold return on investment (“ROI”) level on which potential projects are judged. Departments or committees within the company will then judge the individual projects against the threshold level ROI, and if above the required ROI, will recommend projects to senior management. Each year, BNSF makes hundred of millions, if not billions, of dollars in capital expenditures based on these recommendations. The BNSF continues to make these investments even though the company has been declared revenue inadequate under the STB's guidelines. In actuality a truly revenue inadequate company would not make these expenditures, since, from a financial perspective, they could generate higher returns elsewhere.

(b) BNSF Continues to Grow Its Properties and Business

In Guidelines, the ICC said that a healthy railroad, one earning adequate revenues, is able to “maintain, replace, modernize, and, where appropriate, expand its facilities and services.”^{110/} Numerous developments in the last few years show that BNSF is engaged in significant modernization and expansion of its transportation infrastructure.

In 2002, BNSF expanded and modernized its infrastructure in several ways. BNSF laid 685 new miles of track, inserted 2,248,000 new rail ties, and resurfaced 12,499 miles of track as part of its railway maintenance program.^{111/} BNSF has also just completed a new intermodal facility in the Chicago area, and expanded its intermodal capacity in the Los Angeles area by converting its automotive facility at Commerce, CA into an intermodal facility with a capacity of 180,000 lifts a year.^{112/} Finally, BNSF is benefitting from, and indirectly paying for through user fees, the new Alameda Corridor in Los Angeles. Overall, BNSF states in its most recent annual report to shareholders that BNSF has sufficient access to the funds necessary to maintain its competitiveness and position itself for future revenue growth.^{113/}

BNSF is also offering new products and services to its customers. For example, BNSF was the first railroad to offer 100% guaranteed on-time intermodal service.^{114/} For a premium price, BNSF offers a guaranteed arrival time between selected cities; the full transportation price will be refunded if the shipment arrives late. Recently, BNSF also became the first railroad to offer a similar

^{110/} Coal Rate Guidelines, 1 I.C.C. 2d at 535.

^{111/} BNSF 2002 10K, at p. 3. Otter Tail Reply Workpapers Vol. 1, p. 4963.

^{112/} BNSF 2002 Annual Report, at pp. *ii* and *iii*. Otter Tail Reply Workpapers Vol. 1, pp. 4974-4975.

^{113/} BNSF 2002 Form 10K, at p. 18. Otter Tail Reply Workpapers Vol. 1, p. 4965.

^{114/} BNSF 2002 Annual Report, at p. 2. Otter Tail Reply Workpapers Vol. 1, p. 4973.

product for carload service.^{115/} This service was so successful that it was expanded to more cities a few months later.^{116/}

In early 2003, BNSF Chief Financial Officer Thomas Hund asserted that BNSF has been a technology leader in and outside the transportation industry.^{117/} As an example, he mentioned the increasing use of the beltpack, a locomotive control device that allows one person to conduct locomotive yard switching where two were formerly required.^{118/} Similarly, CEO Matthew Rose believes that BNSF has taken the lead in conducting business transactions electronically on the internet.^{119/}

Mr. Hund and Mr. Rose are not alone in their assessment of BNSF's technological achievements. The marketing magazine *BtoB* put BNSF near the top of its Netmarketing 100, a list of the best business-to-business websites in marketing effectiveness.^{120/} Several publications in 2001 also lauded BNSF for its investments in and utilization of internet and e-commerce technology. *Interactive Week* ranked BNSF 13th out of 500 top companies for generating the most revenue from web operations; *InfoWorld* said that BNSF was one of the top 100 innovators in information technology; *eWeek* stated that BNSF was one of the top 500 companies using its website to connect to customers, suppliers, and partners; and *Smart Business* listed BNSF as one of the top 50 U.S.

^{115/} See *BNSF To Offer Industry's First Guaranteed On-Time Carload Service*, press release (Oct. 7, 2002). Otter Tail Reply Workpapers Vol. 1, pp. 4983-4984.

^{116/} *BNSF Expands Its Guaranteed On-Time Carload Service*, press release (Dec. 16, 2002). Otter Tail Reply Workpapers Vol. 1, p. 4985.

^{117/} Chief Financial Officer Thomas N. Hund, Address at Goldman Sachs 18th Annual Transportation Conference (Feb. 5, 2003).

^{118/} CFO Hund Address (Feb. 5, 2003).

^{119/} CEO Rose Address (Feb. 12, 2003).

^{120/} BNSF 2002 Annual Report, at 2. Otter Tail Reply Workpapers Vol. 1, p. 4973.

companies using the internet to enhance their business. In all these categories, BNSF ranked as the leading U.S. railroad.^{121/}

(c) BNSF's Dividend Policy Indicates It Expects to be Financially Sound in the Future

Companies are extremely judicious about the amount, and the frequency of distribution of cash to their shareholders due to the strong signaling power of dividend distributions. Changes in the timing and the amount of dividends paid are read by the financial markets as managements' expectations of fundamental shifts in the future earnings potential of firms. Increasing the amount of dividends paid usually indicates that a company expects higher future earnings, while decreasing the amount usually signals lower expected earnings. Because of this strong signaling power, companies will attempt to smooth dividend distributions, and only change dividend distributions when they are relatively certain about the direction of their future financial performance.^{122/}

Throughout most of the 1990's, BNSF steadily paid an annual dividend of 40 cents per share.^{123/} However, in the latter part of the decade, BNSF raised its dividend three times, so that BNSF now pays 60 cents a share annually.^{124/} In addition, BNSF instituted a stock repurchase program, which over the last five years, has spent over \$3.1 billion repurchasing 24% of its outstanding shares,^{125/} distributing an additional \$2.2 billion to its shareholders over the last three

^{121/} BNSF 2001 Annual Report, at 6. Otter Tail Reply Workpapers Vol. 1, p. 4971.

^{122/} Otter Tail Reply Workpapers Vol. 1, pp. 4989-4990.

^{123/} These figures reflect the fact that BNSF completed a 3-for-1 stock split in 1998.

^{124/} BNSF July 17, 2003 press release, stating "a 25 percent increase from its previous quarterly dividend of 12 cents per share, or an annualized 60 cents per share dividend." Otter Tail Reply Workpapers Vol 1, p. 4999.

^{125/} BNSF July 22, 2003 press release, stating BNSF repurchased "approximately 120 million shares as of June 30, 2003, at an average price of \$25.98 per share." Otter Tail Reply Workpapers Vol 1, pp. 5000-5002.

years.^{126/} Given the intense capital requirements of the railroad industry, one would not expect the BNSF to increase its dividend or repurchase its own stock if it required the distributed cash for needed capital projects. Both the larger dividend distributions and the stock repurchases signal the confidence BNSF has that its future earnings will be more than capable of funding the company's growth.

b. BNSF's "Need for Revenues" Does Not Allow It To Charge Confiscatory Rates

The ICC/STB have continuously held that a carrier's revenue inadequacy under regulatory standards is not a license to charge monopoly rates. Even though the STB/ICC have found the BNSF, at a system-wide level, to be revenue inadequate under existing guidelines, this point is irrelevant to the maximum reasonable rates for service to Otter Tail's Big Stone Station under the SAC constraint of CMP.

First, Otter Tail is not contesting rates for the entire BNSF system nor is it contesting rates for all commodities. Otter Tail is only contesting the unreasonable rates it pays for the movement of coal from mines in the Powder River Basin to its Big Stone Station in South Dakota. BNSF attempts to obscure the issue by directing the STB's attention towards ancillary issues such as the BNSF's revenue adequacy, but the fact remains that Otter Tail's rail rates are unreasonable under the SAC constraint, which already considers BNSF's revenue adequacy.

Second, the implicit rates of return on the rates Otter Tail has challenged are extraordinarily compensatory to BNSF, and represent confiscatory returns typically charged by a monopolist.

^{126/} BNSF 2002 10K, at 17-18. A stock repurchase program is an alternative method for a firm to distribute cash to their shareholders in lieu of directly paying dividends. Many shareholders prefer stock repurchases over dividend distributions due to the potentially beneficial tax advantages of stock repurchases. Otter Tail Reply Workpapers Vol. 1, pp. 4969-4970.

Specifically, the STB decided that the 2002 railroad cost of capital equaled 9.8 percent.^{127/} However, the rates of return implicit in BNSF's transportation rates to Otter Tail's Big Stone Station are over 4 times as high as the railroad industry's cost of capital. As shown in Exhibit II-A-30, BNSF is receiving after-tax returns on investment ("ROI") greater than 40 percent on the rates it established in Pricing Authority 90062. Given that the railroad industry's cost of capital is 9.8 percent, these extraordinarily high rates of return substantially overcompensate BNSF for any transportation services it provides to Otter Tail, and reflect BNSF's monopoly position for transportation services to the Big Stone Station.

c. BNSF's Defense of the Assailed Rates Does Not Address Points Relevant Under Guidelines

(1) Summary of BNSF's Rate Justification Argument

Much of BNSF's opening evidence consists of arguments, theories, and legal interpretations intended to justify the assailed rates. Among the rate justifications offered in BNSF's opening evidence are: its claim that Big Stone is demand-inelastic and is therefore subject to Ramsey pricing;^{128/} its claim that Otter Tail continues to sell its wholesale generation at "undiminished levels"^{129/} despite the transportation rate increases; its claim that the railroad must be allowed to engage in unfettered differential pricing in order to continue to move low-rated traffic in competitive markets and cover its fixed costs,^{130/} and its claim that the rate increases are actually trivial when

^{127/} Ex Parte No. 558 (Sub-No. 6), Railroad Cost of Capital – 2002, decided June 11, 2003 ("2002 Cost of Capital") at page 1. The 2002 decision is the most current cost of capital determination issued by the STB. See Otter Tail Reply Workpapers Vol. 1, pp. 5003-5012.

^{128/} See BNSF Opening Evidence, pp. I-4-5 and II-62.

^{129/} See BNSF Opening Evidence, pp. I-5 and II-61-62.

^{130/} See BNSF Opening Evidence, p. I-4.

viewed in the proper context (i.e. the majority of the increase in delivered fuel cost was caused by the increase in coal prices as opposed to increased transportation rates).^{131/}

(2) BNSF's Argument Is Irrelevant and Outside the Scope of STB Regulation

Simply stated, BNSF is attempting, in this proceeding, to defend rates on captive coal movements that earn BNSF excessive revenue. BNSF acknowledges that it has forced rates upon Big Stone's captive coal movements that represent enormous mark-ups over its costs, as confirmed by BNSF's own variable cost evidence.^{132/}

Unable to minimize the exorbitant revenues earned by BNSF, the railroad has instead chosen to try and explain them away in its evidence with a string of irrelevant rationalizations. These efforts to make its pricing seem less predatory actually serve to underscore the fact that the BNSF has no valid justification for its exploitive and monopolistic prices.

As its rationale for the challenged rates, BNSF has submitted evidence regarding matters such as Big Stone's monthly capacity factor calculation, Otter Tail's "surplus generation" and off-line power sales, the recent history of delivered fuel costs for Otter Tail coal traffic, BNSF's revenue needs and its need to recover unattributable costs from captive shippers. This evidence is unrelated to the market dominance issues (variable costs, the jurisdictional threshold and the existence of effective competitive options) that the defendant railroad is to address in its opening evidence under Ex Parte No. 527^{133/} and the procedural schedule adopted by the Board in this case.

^{131/} See BNSF Opening Evidence, pp. I-5 and II-71.

^{132/} BNSF Opening at p. II-60. Otter Tail maintains that BNSF's variable cost evidence substantially overstates costs of service as detailed at p. 48.

^{133/} Ex Parte No. 527, Expedited Procedures for Processing Rail Rate Reasonableness, Exemption and Revocation Proceedings (Decision served October 1, 1996); see, also, the format for evidentiary presentations set forth in Ex Parte No. 347 (Sub-No. 3), General procedures for Presenting Evidence in Stand-Alone Cost Rate Cases (Decision served March 12, 2001) and in particular the Appendix thereto.

BNSF's assertion that it should be allowed to charge whatever it wants because Big Stone has continued to generate and profit from power sold on the wholesale power market despite significant increases in the delivered cost of coal is clearly outside the scope of STB regulation, and utterly irrelevant under the Guidelines. It is not the STB's place to regulate utility power sales. This effort to establish a connection between the electricity market and rail transportation rates represents an attempt by BNSF to divert the Board's attention from that which is at issue in this proceeding.

In addition to the out-of-place comparison of Otter Tail's power sales to BNSF's rail coal rates, BNSF claims that most of the increase in delivered fuel costs to Big Stone in 2002 is a result of increased coal prices rather than increased rail transportation costs. As acknowledged by BNSF, coal prices are not regulated, while rail transportation rates are. The two have no bearing on one-another. BNSF's insistence that the delivered cost of coal, and not the coal transportation rate, is the metric that should be considered by the Board in establishing a maximum reasonable rate is clearly contradictory to Guidelines. BNSF's introduction of coal cost to this rate case is arbitrary and clearly intended to muddy the waters.

BNSF further asserts that because gas and oil are currently more expensive fuels than coal, only other coal-fired plants are competitive with Big Stone, so Big Stone's market position as a power supplier has not been altered as a result of higher delivered coal costs. BNSF believes that Otter Tail's continued profit from off-line power sales in the face of rail rate increases provides justification for the increases in rates. It seems as though BNSF's position is that the only entity that should profit from power sales is the railroad.

BNSF's Exhibit II-A-5 purports to "demonstrate" that, "...the only generation which can reasonably be expected to 'compete' with the coal-fired units owned by MDU, NWPS, and OTP is

other coal fired generation.”^{134/} It is curious that BNSF failed to make any assessment of whether or not Big Stone delivered fuel costs are competitive with those of other coal-fired power plants located in the same North American Electric Reliability Council (“NERC”) region as Big Stone (the Mid-continent Area Power Pool, or “MAPP”).

Exhibit II-A-31 is a summary of FERC Form-423 data for MAPP power plants, stratified by captive/competitive transportation status. The exhibit clearly demonstrates that on a mills per ton mile basis, Big Stone paid 29% more per ton-mile for delivered coal than the average delivered cost for other utility shippers in the region, and 19% more per ton-mile than the average delivered cost for other captive MAPP shippers in 2003.

Furthermore, BNSF’s argument that the only relevant fuel cost comparison is to other coal-burning utilities underscores the importance of the stand-alone cost test in determining reasonable rates for rail coal transportation, as the stand-alone cost test determines the maximum reasonable rate for the delivery of coal by rail to a shipper based on the actual demand of that shipper and other regional rail customers.

A stand-alone cost analysis, which was adopted at the express urging of the railroad industry as one of the mechanisms to meet railroad revenue needs while protecting shippers from cross-subsidization and other inefficiencies, along with the jurisdictional threshold, provides the Board’s definitive and complete answer to how much even a revenue inadequate carrier should be allowed to engage in differential pricing against a captive coal shipper such as Otter Tail. Guidelines is very

^{134/} BNSF Opening, p. II-68.

clear on this point: “[T]he pool of unattributable costs to which the shipper must contribute may be determined through a stand-alone cost analysis.”^{135/}

(3) Coal Rate Guidelines in Proper Context

The differences between the parties views on the purposes and objectives of the Guidelines lie at the root of this case. In its Opening Evidence, BNSF argues that the Board devised the Guidelines solely for the purpose of assisting the railroads in achieving revenue adequacy.^{136/} BNSF seems to be saying that if a railroad chooses to move competitive traffic at below-cost rates, the railroad is entitled to make up all of the revenue shortfall from its most captive shippers. In other words, the very principles in Guidelines that were created to protect captive shippers may be ignored. This position essentially relieves the railroad’s of the obligation to operate efficiently and to responsibly contract for competitive traffic. Under this scenario, BNSF (and other railroads) would not be held accountable for marketing and operational decisions that serve to spread their resources too thin.

In seeking to justify its excessive rates on the basis of unchecked differential pricing, BNSF ignores the fact that the Board’s governing rate standards fully account for differential pricing and revenue needs. In fact, the Guidelines were developed precisely for the purpose of setting a ceiling on rates paid by a railroad’s “most captive” customers at a level that still provides sufficient revenues to the rail carrier. Consequently, BNSF’s implication that its need to price differentially somehow should supersede the existing rate standards is entirely wrong.^{137/} As the ICC noted in its Guidelines decision:

^{135/} Guidelines, 1 I.C.C. 2d at 547, footnote omitted.

^{136/} BNSF Opening, p. I-4.

^{137/} Cf. BNSF Opening, at I-6 (arguing that it would have to charge its demand-inelastic shippers rates that -- on average -- are equal to 289% of variable costs under the 2002 Revenue Shortfall Allocation Methodology (“RSAM”) calculations which are a factor in Non-Coal Guidelines).

We are satisfied that CMP is an appropriate regulatory framework that will meet our dual objectives of providing railroads the real prospect of attaining revenue adequacy while protecting captive coal shippers from "monopolistic" pricing practices.^{138/}

BNSF's misrepresentation of the purposes of the Guidelines is transparent. As the Board's predecessor underscored, "Carriers are not permitted to charge unreasonable rates or immunize themselves from potential reparation payments merely because they are revenue inadequate ..."^{139/}

During the proceedings leading to the issuance of the Guidelines, rail carriers emphasized their understanding that even the most captive shipper should not be forced to cross-subsidize other traffic, as is evidenced by the following statement that Attorney R. Eden Martin, Esq. submitted on behalf of the "Western" rail carriers:

The Commission's proposed approach (except for the 15 percent constraint on increases) has everything to recommend it. It comports fully with the legal standards of the Act and has been sustained by reviewing courts. It takes into account both costs and demand for service. It promotes economic efficiency by allowing the needed capital to be raised in accordance with Ramsey pricing principles -- all prices cover short-term incremental costs, and the amount of the excess above cost varies inversely with elasticity of demand -- so that pricing signals and the allocation of scarce resources reflect, within the revenue-adequacy constraint, the ideal of the competitive marketplace. And no shipper or group of shippers is asked to pay rates above the level of costs necessary to serve those shippers alone -- so that no cross-subsidy is involved ...^{140/}

^{138/} Guidelines, 1 I.C.C.2d at 524-25.

^{139/} See Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada, 6 I.C.C.2d 1, 9 (1989).

^{140/} See Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines, Nationwide, Written Remarks to Accompany the Oral Argument of Mr. R. Eden Martin on behalf of the Western Railroads, at 52 (October 4, 1984).

Other carriers offered similar support for the balance struck by the ICC between protecting captive shippers and maintaining adequate carrier revenues:

Constrained Market Pricing is the only rational means of insuring both the railroads' right to cover their total costs and the shippers' right to be protected against monopoly prices. These guidelines are simple, and their implementation will be no more difficult than the traditional process of determining rate reasonableness in adjudication. Adoption of Constrained Market Pricing by this Commission will end nearly a century's effort to define the meaning of "reasonable rates" and limit the controversy over coal rates to legitimate disagreements over matters of fact.^{141/}

Given the fact that differential pricing principles were at the forefront of the ICC's analysis during the period in which the Guidelines were developed, and given the fact that the railroads strongly supported the Commission's proposed Guidelines, it is clear that differential pricing and revenue need are not unique to this case. There is nothing about BNSF's revenue levels, Big Stone's degree of captivity, or the excessive level of the monopoly rates at issue in this case that was not theoretically weighed by the ICC twenty years ago.

(4) The Revenue Shortfall Allocation Method is not Applicable to the Movement at Issue

BNSF's assertion that shippers with inelastic demand should pay relatively higher rates than shippers with elastic demand is not disputed by Otter Tail. However, rates equal to 180% of variable costs constitute significant contribution to BNSF's fixed cost recovery. Furthermore, BNSF has completely ignored the fact that the stand-alone cost test will determine whether the maximum reasonable rate is above the 180% jurisdictional threshold level. "An important feature of CMP is

^{141/} Id., Supplemental Comments of Five Railroads: Chessie System Railroads, Consolidated Rail Corporation, Norfolk and Western Railway Company, Seaboard System Railroad, Inc., and Southern Railway System, Written Statement of Attorney Paul A. Cunningham, Esq., at 36-37 (October 4, 1984).

that a captive shipper need not bear the costs of any facilities or services from which it derives no benefit.”^{142/}

In fact, BNSF cites Ex Parte 347 (Sub-No. 2), *Rate Guidelines – Non-Coal Proceedings*, as justification for their claim that rates to Big Stone are reasonable.^{143/} However, Ex Parte 347 (Sub-No. 2) clearly states that “CMP... is the preferred procedure for evaluating the reasonableness of challenged rates” and that Sub No. 2 guidelines are intended to be used by the Board in cases where CMP guidelines cannot be practicably applied. Such is not the case here.

BNSF’s use of the Board’s RSAM calculations under the Non-Coal Guidelines as purported justification for ignoring the stand-alone cost test in this case is fundamentally flawed. BNSF states that the Board has determined that “BNSF would need to earn average revenues of 289 percent of its variable cost on traffic that generates revenue in excess of 180% of variable cost in order to cover all of its costs”.^{144/} This statement is false on several levels. In the first place, the Non-Coal Guidelines rely on a combination of three revenue to variable cost ratios, each calculated in a different manner, to determine maximum reasonable rates for non-coal commodities. These include the RSAM ratio presented by BNSF, the Average Revenue to Variable Cost Ratio>180 (“R/VC”) and the Revenue to Variable Cost comp (“R/VCcomp”) ratio.^{145/} Nowhere in Non-Coal Guidelines does the Board indicate that use of RSAM by itself is an appropriate measure of rate reasonableness.

^{142/} Guidelines, 1 I.C.C.2d at 528.

^{143/} BNSF Opening, p. 1-6.

^{144/} BNSF Opening Evidence at I-6 citing Rate Guidelines - Non-Coal Proceedings, STB Ex Parte No. 347 (Sub-No. 2), served April 21, 2003.

^{145/} R/VC_{>180} “measures the average markup actually charged by the defendant carrier on its high-rated traffic (traffic moving at r/vc percentages above 180).” Ex Parte No. 347 (Sub-No. 2), Rate Guidelines - Non-Coal Proceedings, 1 STB 1004, 1011 (1996). BNSF’s four year average R/VC>180 ratio is 265 percent. The third benchmark considered by the Board in making a “simplified” rate determination, but not published by the Board annually, is the R/VC_{comp} benchmark, which compares the average R/VC ratio for traffic similar to that of the issue traffic that have ratios that exceed 180 percent. Id. at 1034.

Therefore, BNSF's selective use of only the RSAM ratio is clearly incorrect. Second, even if the Non-Coal Guidelines had any relevance to this case, the Board has specifically stated that RSAM presents a range of R/VC ratios, 213% to 289% for BNSF, and that neither the high nor the low limits of the range are correct and provide merely a starting point for any analysis of the reasonableness of a non-coal rail rate.^{146/} Indeed, the Board specifically stated that to use the full unadjusted RSAM number, as BNSF does in its Opening Evidence, "would overstate the revenues that should be borne by captive shippers."^{147/} As such, BNSF's claim that the 289% level is a specific requirement imposed by the STB is overreaching, to say the least.

Finally, the R/VCS produced by the Board's RSAM determination cannot be used for the purpose BNSF has attempted in its Opening Evidence, because they are not intended or expected to present an accurate calculation of a railroad's costs or a R/VC.^{148/} Rather, the Non-Coal Guidelines

^{146/} Id. at 1030.

^{147/} Id. at 1029. BNSF's claim finds no support in the Non-Coal Guidelines, and BNSF tellingly cites no authority whatsoever for this statement. Moreover, the Board publishes carriers' RSAM markup percentages with and without an "efficiency adjustment." The express purpose of publishing an adjusted RSAM is to protect shippers from cross-subsidizing non-contributory traffic moving below the carrier's URCS variable costs of service, and to encourage appropriate railroad management pricing practices. As described by the Board:

Because the statutory objective is for railroads to attain only the level of revenues that would be adequate 'under honest, economical, and efficient management,' RSAM was designed to include a managerial efficiency adjustment. This adjustment removes all of the revenue shortfall that results from a carrier's pricing of any of its traffic below the URCS variable costs of that traffic (the <100 traffic group). The objective of the adjustment is to relieve captive shippers from cross-subsidizing any traffic not covering its own (attributable) costs.

Id. at 1027.

As the annual STB calculation of the unadjusted RSAM does not incorporate the principles of providing for "honest, economical, and efficient management" and shipper protection from cross-subsidies, it is not an appropriate benchmark.

^{148/} Id. at 1008.

were developed for the purpose of trying to find a simpler, less expensive way than the development of a stand-alone cost case to assess rate reasonableness in small rate cases. In pursuing this venture, the Board recognized up front that "any simpler method will be cruder than CMP," and that "accuracy must be sacrificed for simplicity."^{149/} Moreover, the Board recognized that procedures other than stand-alone costs "will necessarily be very rough and imprecise."^{150/} For example, the R/VC's under the Non-Coal Guidelines are established using the URCS Phase III costing methodology unadjusted for any movement specific efficiencies. The URCS Phase III costing system utilizes generic Ex Parte 290 (Sub-No. 4) adjustments.^{151/} By contrast, when developing variable cost to determine the jurisdictional threshold in a maximum coal rate proceeding, such as this proceeding, the carrier's variable costs are based on movement specific costs rather than generalized adjustments to system average costs.

(5) BNSF's Demand Analysis Is Flawed and Incomplete

BNSF's reliance on (1) Big Stone's alleged status as a demand-inelastic shipper and (2) the presumption that BNSF has maximized its rates on competitive traffic is based on incomplete analyses and false assumptions.

First, the analyses BNSF has submitted as support for its claim that Big Stone is demand-inelastic are inconclusive and based on only five years of data.^{152/} The BNSF's alleged

^{149/} Id.

^{150/} Id. at 1021.

^{151/} These include: 1) a 75 percent reduction in origin and destination switching costs; 2) a 50 percent reduction in interchange switching costs, 3) the elimination of inter/intra-train switching; 4) a 50 percent reduction in railroad provided car ownership costs; and, 5) allocation of 75 percent of station clerical costs to the number of cars in the shipment and 25 percent to the entire shipment.

^{152/} See BNSF Exhibits II-A-6 and II-A-7.

“demonstration” of Big Stone’s “demand-inelasticity” is thus only a demonstration that in the short-run Otter Tail did not alter its operating plan in response to increased delivered fuel costs.

In its assessment of Big Stone’s recent coal burn trends, BNSF rightly recognized that Big Stone is a large generating unit and as such it does not possess the “operational flexibility to shut down during low load periods, such as some nights and weekends, and still be available for service during adjacent higher load periods.”^{153/} BNSF fails to mention that it is not easy for utilities to simply shut down large coal-fired plants in response to changes in fuel costs. BNSF offered no assessment of Big Stone’s long-run demand elasticity vis-a-vis changes in rail coal transportation rates. In fact, as discussed above, BNSF offers no assessment of historical rail rates to Big Stone, or of historical rail costs, choosing instead to offer analysis of delivered fuel prices.

BNSF’s assertion that despite significant increases in delivered coal cost in 2002, “...Big Stone has and still does operate at or close to its maximum capability, and that its operation has not been diminished due to the change in delivered coal costs”^{154/} is a misstatement. Not only does it ignore the fact that there are a myriad of factors (other than fuel cost) influencing a utility’s decision to generate power, but it also contradicts the short-term trend evident in Mr. Slater’s exhibits. As depicted in BNSF’s Opening Exhibit II-A-6, Big Stone annual capacity factors decreased from 1999 to 2002, falling ten percent from 2001 to 2002. Over the same time period, delivered coal cost increased, jumping 25 percent from 2001 to 2002. A graphical comparison of these two trends clearly show their diverging relationship, as shown in Exhibit II-A-32.

^{153/} BNSF Opening, p. II-70.

^{154/} BNSF Opening, p. II-69.

Mr. Slater also analyzes the forecasted increase in summer peak load for the MAPP region and the reported planned increases in base load generation capacity. Based on Mr. Slater's projection that MAPP power demand will increase more than MAPP base load generating capacity, BNSF makes the statement that, "There should be no reduction in demand for any surplus coal-fired energy that Big Stone can produce."^{155/} This statement does not address the fact that MAPP utilities seeking to buy power generated off-line can and will buy power from non-MAPP utilities as well as other MAPP utilities. In other words, BNSF has completely ignored the supply side of the economic equation. Therefore any assessment of the demand side is premature.

BNSF presented a summary of Mr. Slater's analysis of the forecasted increases in Summer native load and Summer peak generating capacity. As shown in BNSF's Table II.A-14, Otter Tail's customer demand is projected to increase from 586 MW in 2002 to 649 MW in 2011.^{156/} As further shown in BNSF's Table II.A-17, Otter Tail's generating capacity is projected to increase from 638 MW in 2002 to 675 MW in 2011.^{157/} From these figures BNSF concluded that, "Otter Tail Power's additions are insufficient to keep pace with projected native load growth,"^{158/} because peak native load is forecast to increase by 10.8 percent while summer peak generating capacity is forecast to increase by 5.8 percent. BNSF's statement is flatly incorrect. In 2002, Otter Tail's net Summer power generation surplus is 52 MW (638 MW-586 MW). In 2011 Otter Tail's net Summer generation surplus is projected to be 26 MW (675 MW-649 MW). Otter Tail's additional capacity

^{155/} BNSF Opening, p. II-66.

^{156/} BNSF Opening, p. II-64.

^{157/} BNSF Opening, p. II-67.

^{158/} BNSF Opening, p. II-66.

is indeed sufficient to keep pace with projected native load growth, as demonstrated by the projected surplus generation in 2011.

(6) Parties' Approach to Rate Negotiations

BNSF's justification for its pricing is based upon its arbitrary notions of revenue adequacy. In its Opening Evidence, BNSF argues that Big Stone is a demand-inelastic shipper whose traffic levels will not be affected by BNSF's rate increases, and as such Otter Tail will continue to operate Big Stone at near-capacity levels and will sell all generated power despite the recent increases to its delivered fuel costs. BNSF seems to believe that, because Otter Tail can withstand the rate increases imposed by BNSF, it should be made to cross-subsidize BNSF traffic groups regardless of whether or not that traffic shares facilities with Big Stone traffic.

This contention displays a complete disregard of the Guidelines. In promulgating the Guidelines, the agency stated:

... a benefit of these guidelines is to enable both the shipper and the railroad to estimate the maximum rate we would prescribe if the matter were brought to us for adjudication. We believe that this will encourage contract solutions which (as shown below) may often be more efficient and more beneficial to both parties than a prescribed rate.^{159/}

Otter Tail's decision to challenge the rates at issue was based on analysis of the Guidelines as applied to the facts and circumstances of BNSF's Big Stone coal transportation services. Indeed, Otter Tail's preliminary Guidelines analysis were used in its 2001 negotiations with BNSF for a new contract to replace the expiring one. Although those negotiations proved unsuccessful, Otter Tail

^{159/} Guidelines, 1 I.C.C.2d at 524.

strongly believes its decision to pursue a rate case will be vindicated by the Board's decision on the merits of this proceeding.

d. BNSF's Discussion About the Demand for Transportation at Big Stone Being "Highly Inelastic" Only Confirms the Obvious: That the Big Stone Station is Captive to BNSF and Must be Protected from Unfettered Monopoly Pricing

(1) Evidence Presented by Mr. Slater Directly Contradicts Any Notion that Otter Tail Could Exert Any Leverage over BNSF for Rates at Big Stone

BNSF devotes no fewer than 13 pages of its filing to a detailed explanation by Mr. Slater of an obvious, irrefutable fact for any captive coal shipper: that the Big Stone Station is wholly dependent upon BNSF for rail transportation of coal from the PRB. At a minimum, this discussion erases any doubt the Board might have had that it has jurisdiction to determine the reasonableness of the rates BNSF charges for coal transportation to the Big Stone Station.

Otter Tail does not dispute Mr. Slater's conclusions that the Big Stone Station's demand for PRB coal transportation is highly inelastic and that BNSF has market dominance over this movement that it would freely exploit absent the regulatory constraints imposed by Congress and the Guidelines. However, Otter Tail takes serious issue with the notion that it and its ratepayers have the capacity or should be required to pay BNSF rates that would exceed the maximum reasonable rates for this service as established under the stand-alone cost test of the Guidelines.

(2) The Common Carrier Rates Charged to Big Stone Far Exceed Those Charged to Other Captive Shippers on the OTRR

Table II-A-18 below provides data for OTRR non-issue captive utility coal traffic and data on the captive Big Stone coal moves. In this analysis "captive traffic" is defined as any destination served by only one railroad and no other mode. The variable service costs are calculated for 2002

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using the weighted average statistics for all captive coal traffic as inputs to the variable cost model^{160/} to provide a comparable costing basis.

Table II-A-18 Average Revenue per Ton-mile, Cost per Ton-mile and RVC Ratios For Captive Utility Coal Traffic Handled by the OTRR		
Item (1)	Captive ^{1/} (2)	Big Stone (3)
1. Revenue per ton ^{2/}		
2. Variable cost per ton ^{3/}		
3. Average Haul (miles)		
4. Variable Cost per ton-mile (mills)		
5. Revenue per ton-mile (mills)		
6. Ratio of Revenue to Variable Cost ^{4/}		
^{1/} Any destination served by only one railroad and no other mode. ^{2/} Source: Otter Tail Reply Electronic Workpapers "OTRR Captive.xls." ^{3/} Source: "VC Otter Tail Reply OTRR Captive.123." ^{4/} Line 5 / Line 4.		

This table shows that the average revenue/variable cost ratio for the non-issue captive utility coal traffic is while the average revenue/variable cost ratio for the Big Stone traffic using the same costing methodology and assuming the rate is left in place would be

Such rate differentials cannot possibly

reflect demand elasticities. It is not credible that demand elasticities for captive coal traffic, with the same (non)competitive circumstances, and with cost factors controlled for, could produce such dramatically different results.

The rate structure for OTRR issue and non-issue captive utility coal traffic is clearly not in line with market demand elasticities and Ramsey pricing principles. It follows that the contract rates for

^{160/} See electronic workpaper "VC Otter Tail Reply OTRR Captive.123."

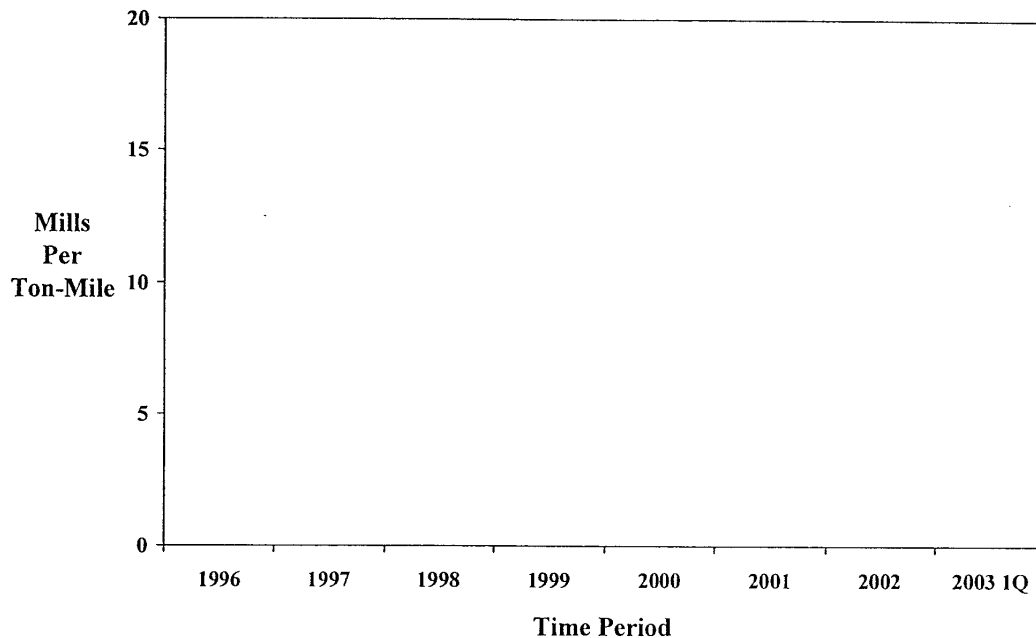
the non-issue captive traffic are in line with demand elasticities, while rates for the Big Stone traffic are far out-of-line with such forces. If the rates of the shipper group are all adjusted downward by a uniform percentage, the disparity between the rates charged to the issue traffic and other captive coal traffic on the OTRR will be retained. As a result, the final rate structure will be totally out of line with demand elasticities and the Board's objective in implementing CMP and constraining railroad monopoly power in a manner consistent with Ramsey pricing principles will be undone.

(a) Big Stone Transportation Rates Vastly Exceed BNSF's System Average Coal Rates

As addressed above, BNSF acknowledges that the challenged rates greatly exceed the jurisdictional threshold and it has attempted to justify such high rates by stating that railroads must be permitted to "achieve" and "sustain" revenue adequacy. Yet, for years BNSF has received annual revenues from Otter Tail's coal movements that well surpass its average coal revenues for all its coal movements. Table II-A-19 below shows the difference in revenues the BNSF receives from the Otter Tail coal movements on a mills per ton-mile basis compared to BNSF's total system coal traffic, also on a mills per ton-mile basis.

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Table II-A-19
Comparison of Otter Tail Transportation Rates to BNSF System Coal Rates
(Revenue per Ton-Mile)



Source: Exhibit II-A-33

As shown above, Otter Tail's revenue contribution to BNSF is considerably higher than the average BNSF coal movement of which approximately 90% of its entire system coal traffic originates in the PRB. In 1996, Otter Tail paid more in revenues to BNSF on a per ton-mile basis and pays approximately 50% more in 2003 than BNSF's average PRB coal shipper under the challenged tariff rate.

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(b) Big Stone Transportation Rates have Risen Steadily while BNSF's Costs have Declined

Clearly aware that its rates are out of line with Guidelines, BNSF falls back to an analysis of trends in Powder River Basin coal costs as justification for its unreasonable rail rates to Big Stone. BNSF states that, "Otter Tail paid, on average, only [redacted] more per ton for coal transported in aluminum cars in 2002 than it had under the contract with BNSF. ...this translates to an increase of only [redacted] [cents]/mmBTU due to increased transportation rates."^{161/}

BNSF's [redacted] per ton calculation is based on the difference between the 2002 tariff rates and the annual average 2001 contract rates [redacted] BNSF continues to try to downplay the increase in transportation rates by comparing it to greater increases in unregulated coal prices. The relevant comparison should be between rail rates and rail costs. The 1Q01-1Q02 increase in rail transportation rates to Big Stone was [redacted], while the RCAF-A change over the same period was a decrease of 3.5%. The change in the RCAF-U was also negative (-0.8%). The same is true for 2002-2003, i.e. the tariff rate increased while RCAF-A decreased.^{162/}

^{161/} BNSF Opening Evidence, p. II-71.

^{162/} See Exhibit II-A-34.

IV

Witness Qualifications

PART IV

WITNESS QUALIFICATIONS AND VERIFICATION

This part contains verifications by the witnesses who are sponsoring Otter Tail's Reply Evidence. These witnesses include Thomas D. Crowley and Joseph J. Plaistow of L. E. Peabody & Associates, Inc.

Statements of qualifications for those witnesses are set forth in Part IV of Otter Tail's Opening Evidence in this proceeding filed on June 13, 2003.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

THOMAS D. CROWLEY, being duly sworn, deposes and says that he is the same Thomas D. Crowley whose Statement of Qualifications appears in Part IV of the Narrative portion of Otter Tail's Opening Evidence in this proceeding; that he is responsible for the portion of Otter Tail's Reply Evidence in this proceeding related to market dominance (Reply Narrative Part II-A-3) and knows the contents thereof, and that the same are true as stated to the best of his knowledge, information and belief.


Thomas D. Crowley

Thomas D. Crowley

Sworn to and subscribed before
me this 2nd day of October, 2003.

Jeanne M. Nutton
Notary Public for the State of Virginia

~~Notary~~ Public for the State of Virginia

My Commission expires: 12/31/2003

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

JOSEPH J. PLAISTOW, being duly sworn, deposes and says that he is the same Joseph J. Plaistow whose Statement of Qualifications appears in Part IV of the Narrative portion of Otter Tail's Opening Evidence in this proceeding; that he is responsible for the portion of Otter Tail's Reply Evidence in this proceeding related to variable costs (Reply Narrative Part II-A-1 and II-A-2) and knows the contents thereof, and that the same are true as stated to the best of his knowledge, information and belief.

Joseph F. Plaistow

Joseph J. Plaistow

Sworn to and subscribed before
me this 2nd day of October, 2003.

Jane M. Voth
Notary Public for the State of Virginia

Notary Public for the State of Virginia

My Commission expires: 12/31/2003

EXHIBITS

LIST OF EXHIBITS

EXHIBIT
II-A-^{1/}
(1)

TITLE
(2)

1 ^{2/}	Schematic of Current BNSF Route of Movement from PRB, WY to Otter Tail's Big Stone Station.
21	Comparison of Rates, Variable Costs and Rate-To-Variable Cost Ratios for Otter Tail Coal Movements from PRB Origins to Big Stone Station as presented in Otter Tail's Reply and BNSF's Opening (Restated to Incorporate Agreed-Upon T&O)-- 1Q02 through 1Q03
22	Variable Cost Differences by Causal Factor - OTP Reply vs BNSF Open Revised to Include Agreed T&O -- 1Q02 through 1Q03
23	Summary of Otter Tail and BNSF Reply Traffic and Operating Characteristics for Movements from PRB to Otter Tail's Big Stone Station -- 1Q02 through 1Q03 (Based on Agreement at Technical Conference)
24	Otter Tail's Response to BNSF's Position on Road Property Ownership Costs
25	Verified Statement of Joseph J. Plaistow supporting Otter Tail's April 11, 2002 "Complainant's First Motion to Compel Production of Documents"
26	Reply Road Return and Depreciation for BNSF's Movement of Coal in Unit Trains from PRB, WY to Otter Tail's Big Stone Station
27	BNSF Locomotive Maintenance Contracts Covering Locomotives Used in Otter Tail Service Defining Spare Margin Requirements - 2002
28	Development of Reply Crew Wages for Otter Tail Coal Trains
29	Cumulative Percentage Change in Return on BNSF Stock and S&P 500 Composite (September 2000 - September 2003)

EXHIBIT**II-A-**^{1/}**(1)****TITLE****(2)**

30	Return on Investment In BNSF's Pricing Authority 90062 - Rates & Costs At 1Q2002 thru 1Q2003 Levels
31	Summary of MAPP Utilities Tons and \$/MMBTU 2000 through April 2003
32	Comparison of Annual Changes in Capacity and Delivered Coal Prices at Big Stone Plant
33	Comparison of Otter Tail Transportation Rates to BNSF System Coal Rates (Revenue per Thousand Ton-Miles)
34	Comparison of Changes in Big Stone Rates and the RCAF-U/RCAF-A

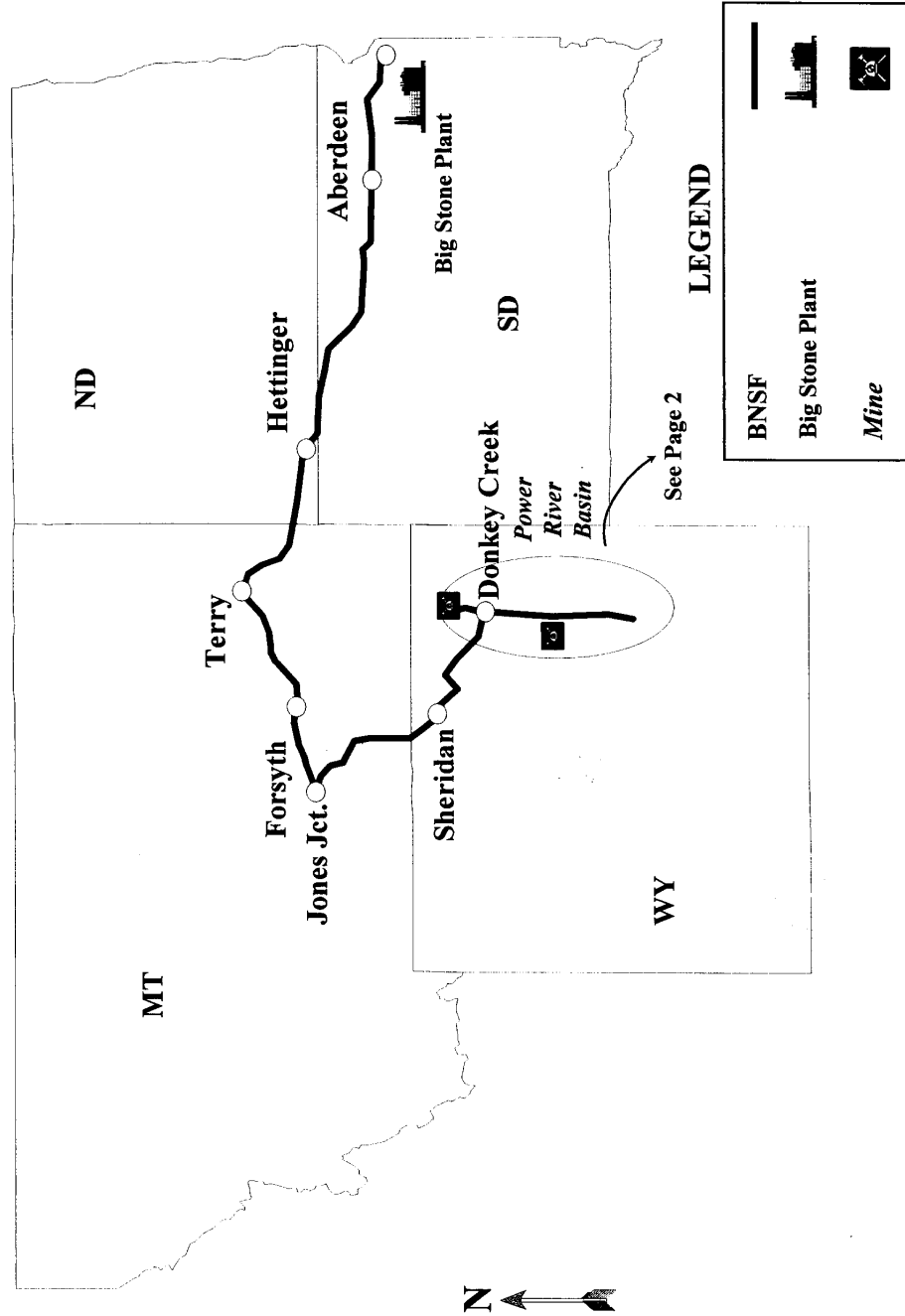
^{1/} Exhibit II.A-1 through Exhibit II.A-20 were included with Otter Tail's Opening evidence filed in this proceeding on June 13, 2003.

^{2/} Exhibit II.A-1 was previously filed with Otter Tail's opening statement of June 13, 2003.

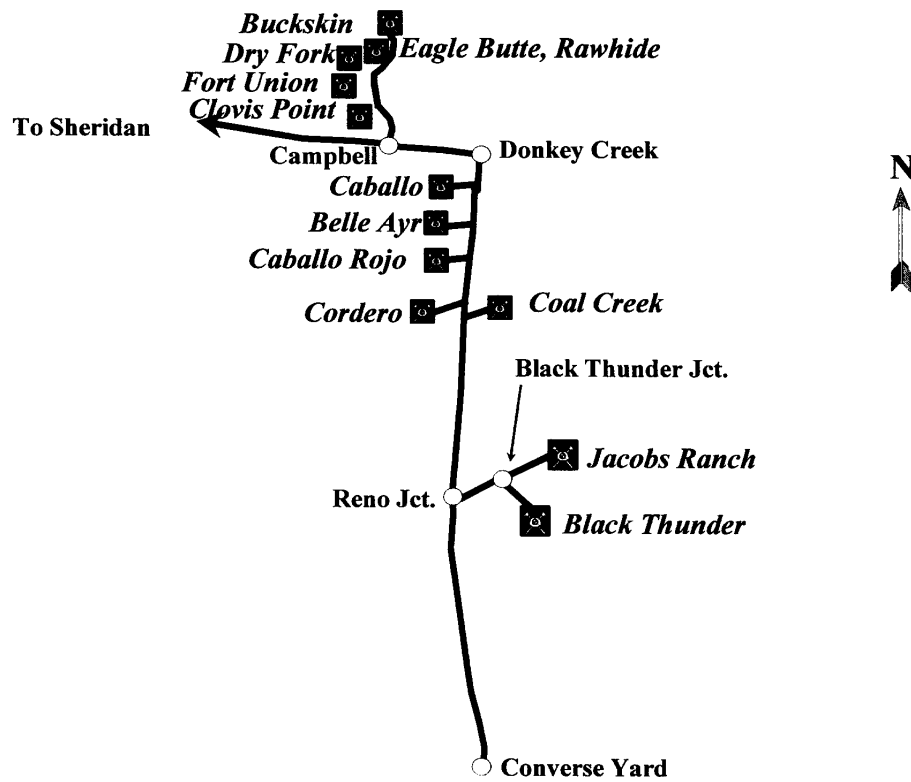
II-A

Quantitative Market Dominance

Schematic of Current BNSF Route from PRB, WY to Otter Tail's Big Stone Station



**Schematic of Current BNSF Route from
PRB, WY to Otter Tail's Big Stone Station**



LEGEND

BNSF	
Big Stone Plant	
Mine	

Exhibit II-A-21

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Exhibit II-A-22

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Exhibit II-A-23

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Otter Tail's Response to BNSF's Position on Road Property Ownership Costs

At page 24 of her verified statement, Ms. Elliott explains that some investments are assigned to specific line segments.¹ At page 25, Ms. Elliott explains that some investments that are in the Fixed Asset Data Base ("FADB") are not assigned to specific line segments. We see that BNSF places road property investments into two categories: 1) those that BNSF assigns to specific line segments and 2) those that BNSF does not assign to specific line segments. Otter Tail treats the first category on a line segment-specific basis assigning the costs associated with those investments to the traffic that uses those investments. Otter Tail treats the second category on a system average basis, the same way that Mr. Fisher treated all Road Property Investments.

Mr. Fisher references Ms. Elliott's objection to using BNSF's data for a segment-specific adjustment because some of the road property investment is not assigned to particular line segments. But Otter Tail does not make a segment-specific adjustment to road property investments not assigned to line segments.

Otter Tail anticipated and answered many of BNSF's objections to the use of BNSF's road property investment data in "Complainant's First Motion to Compel [BNSF's road property investment data]", April 11, 2002, which is incorporated herein by reference (see Otter Tail Reply Workpapers 4860-4877).

¹See page 24 of Cami Elliott's verified statement attached to the May 1, 2002 "Defendant's Reply to Complainant's First Motion to Compel Production of Documents".

Each of BNSF's objections to Otter Tail's use of BNSF's Road Property Ownership data to determine line segment-specific Road Property Investment Ownership Costs (hereinafter "Road Property Ownership Costs") will be addressed under the following headings:

- (a) Otter Tail's Road Property Investment Costing Procedure;
- (b) BNSF's Rationalization for Using System Average Road Property Ownership Costs;
- (c) BNSF's Cami Elliott's Invalid Objections to the Use of BNSF Data;
- (d) BNSF's John Klick's Invalid Objections to Reflecting the Economies of Unit Coal Train Transportation; and
- (e) Otter Tail's Compliance with WPL and TMPA.

(a) Otter Tail's Road Property Investment Costing Procedure

Otter Tail's Opening Exhibit II-A-4 detailed the procedures used to determine Road Property Ownership Costs. That exhibit lists the procedures Otter Tail used to assign line segment-specific road property investment costs to only the traffic that used those investments. The exhibit also lists the procedures Otter Tail used to determine system average road property investment costs for those investments that were not assigned to specific Big Stone line segments. These procedures are the same as those employed by the complainant in TMPA.²

²See TMPA at 58-60. While the information filed in TMPA was filed under seal, and the details of the Complainant's procedures used therein cannot be discussed in this proceeding, the Board staff may look at and compare the procedures used in TMPA with the procedures used by Otter Tail herein. Otter Tail urges the Board to make such a comparison.

**(b) BNSF's Rationalization for Using
System Average Road Property Ownership Costs**

BNSF takes no exception to Otter Tail's treatment of the portion of Road Property Ownership Costs that were based on system averages, since BNSF costed 100% of its Road Property Ownership Costs as system average. Otter Tail's cost calculations that are inconsistent with BNSF's are those based on a line segment-specific adjustment, that is, Adjusted Road Property Ownership Costs.

BNSF claims it is not possible to adjust Road Property Ownership Costs because the line segment-specific road investment and depreciation information needed to do so does not exist or is unavailable. During discovery, Otter Tail requested complete data regarding BNSF's road investment and depreciation on a line-segment basis, and BNSF produced a large volume of information in response. Mr. Fisher now claims that this data is inadequate for the purposes intended, and that because of this inadequacy, Otter Tail and the Board have no alternative but to apply system average costs.

BNSF's position in this case contradicts that which the carrier has taken on numerous occasions in the past, most notably in WTU, San Antonio, and OPPD, where BNSF (and the Board) relied on the same type of line segment-specific Adjusted Road Property Ownership Costs submitted here by Otter Tail, in lieu of system averages.

The WTU proceeding involved BNSF unit train coal service from the Powder River Basin to Texas. In WTU, BNSF and its expert witness Mr. John Klick³ were faced with evidence submitted by the complainant that showed, as here, that Adjusted Road Property Ownership Costs were substantially lower than system average. BNSF and Mr. Klick responded with line segment-specific Adjusted Road Property Ownership Costs based on the same type of information BNSF furnished to Otter Tail in discovery in this proceeding. As the Board summarized in its final WTU decision in 1996:

“To adjust system-average road property return on investment (ROI) cost, BN utilizes its 1994 road property investment database. BN identifies the actual book value of the road property and the annual depreciation associated with the issue traffic.” ...

“Our restatement utilizes the BN-developed unit cost for ROI.”⁴

In WTU, both the Complainant and BNSF presented Adjusted Road Property Ownership Costs as superior to and more accurate than system averages. Both parties calculated these costs using BNSF’s “...road property investment database ...,” and evidence based on that database was accepted by the Board as the best evidence of record. The same type of line segment-specific data used by the parties and accepted by the Board in WTU was produced by BNSF and relied upon by Otter Tail in this case.

³Mr. Klick appears as a witness in this proceeding as well. He and Mr. Fisher are colleagues in the same consulting firm.

⁴WTU, 1 S.T.B. at 724.

In this case BNSF claims that somehow it is no longer valid to make any adjustment to system average Road Depreciation and Return on Road. BNSF claims that its road property investment database is inadequate and incomplete as a source for the dollars invested in each valuation section on the Otter Tail route.

Mr. Fisher's system average Road Property Ownership Costs are representative of average traffic, but average traffic and average costs are irrelevant in this case, which is focused on highly efficient unit trains moving over heavy density coal routes – not “average traffic.” Economies of scale made possible by high volume coal traffic have allowed BNSF to realize greatly reduced costs relative to system average, which, in turn, have benefitted BNSF financially over the last several decades.

The Board's acceptance of adjustments to system average based on special studies belie the notion, and a contrary rule would allow market dominant railroads to ensure that all rates in all circumstances are evaluated solely against system average costs simply by modifying their internal account formats. As for the “plausibility” of road property unit costs on high density lines being significantly lower than system averages, one need only look at BNSF's highest density/highest investment line segments for confirmation.

BNSF has made its largest investments in the Powder River Basin. Those investments, therefore, can be used to illustrate why Mr. Fisher's conclusions are wrong regarding Adjusted Road Property Ownership Costs. Table II-A-1 below compares the PRB road investment with “system average” road investment:

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Table 1			
<u>Comparison of 2002 Fixed Investment on PRB Valuation Section vs. System</u>			
<u>Item</u>	<u>BNSF PRB^{1/}</u>	<u>System^{2/}</u>	<u>PRB Percent</u>
(1)	(2)	(3)	of System ^{3/}
			(4)
1. Gross Investment		\$20,694,294,000	
2. Accumulated Depreciation		\$3,080,415,000	
3. Net Investment		\$17,613,879,000	
4. Route Miles		40,996	
5. Gross Ton-Miles		872,837,824,000	
6. GTM's per Route Mile (Millions)		21.3	
7. Net Investment per Mile		\$429,649	
8. Net Investment per GTM		0.02018	
1/	Powder River line from Cordero Jct. to Shawnee Jct. Valuation Sec. WY18, Range 1862.		
2/	Source BNSF 2002 URCS and Annual Report Form R-1.		
3/	Column (2) / Column (3).		

Line 7, Column (2) of Table 1 shows BNSF's net investment per route mile in a major, high density portion of the PRB used by the Otter Tail coal trains. Consistent with Mr. Fisher's point, BNSF's investment per route mile in its PRB coal route is of BNSF's average investment in its system as a whole, as shown at Line 7, Column (4) of Table 1. BNSF obviously has invested heavily in its high density coal routes. However, BNSF also has realized enormous economies of scale in connection with those investments, a point which Mr. Fisher ignores. Line 6, Column (2) shows that traffic density stated in GTM's per route mile over the Otter Tail coal route is of the BNSF average density, as shown at Line 6, Column (4). Taking investment per route mile together with the higher traffic density per

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route mile demonstrates BNSF's economies of scale. Even though BNSF's coal route investments are of BNSF's average investments, its PRB investment per GTM is only of its average investment per GTM over its entire system (compare Line 8, Column (2) with Line 8, Column (3) of Table 1). These relationships are quite consistent with those observed using Otter Tail's Adjusted Road Property Ownership Costs, and contradict Mr. Fisher's implicit view that road property investment costs on a unit basis should be higher than system average for high investment/high density lines.

In spite of these dramatic differences in investment cost per GTM, Mr. Fisher still urges the Board to impute system average investment costs to the highly efficient, high-density coal routes used by the Otter Tail trains. His justification for his position is that BNSF did not provide Otter Tail the information needed to accurately determine line segment-specific route investment costs. This claim is discussed in the next sub-section.

(c) BNSF's Cami Elliott's Invalid Objections to the Use of BNSF Data

In one of BNSF's primary defenses against the use of line segment-specific data, BNSF attacks the validity of its own accounting data, which includes its Fixed Asset Database ("FADB") and Property in Service, Not Unitized ("PISNU") data.

The Board has recently addressed this claim in TMPA and found it to be unpersuasive.⁵ The Board's TMPA decision states at page 58, "BNSF argues that use of its FADB numbers is

⁵See TMPA, "Return on Road Property and Depreciation Expenses" section, pages 58-60.

inappropriate because those figures do not correlate to its R-1 annual report numbers, which are used as the basis for developing URCS system-average costs.” The Board went on to determine at page 59, “We find BNSF’s arguments against the use of its FADB unpersuasive. Contrary to BNSF’s arguments, FADB information appears to be compatible with the information in the R-1 reports.”⁶ The Board went on to state, “Indeed, BNSF has used the FADB data itself to propose adjustments to URCS system-average costs in prior cases.”⁷

In its Opening Evidence in this case Otter Tail used the FADB and PISNU data supplied by BNSF to adjust system average expenses for the Adjusted Road Capital Cost portion of road property investment/depreciation variable costs for the Big Stone coal movement.⁸

In Opening, BNSF’s Mr. Fisher and its witness, Ms. Elliott,⁹ insist , as BNSF had in the then-pending TMPA case,¹⁰ that the FADB data produced by BNSF is an inadequate tool to

⁶In the instant proceeding, Mr. Fisher incorporated Ms. Elliott’s verified statement by reference. Ms. Elliott’s statement included Table 1 comparing year 2000 FADB and R-1 dollars. Ms Elliott used Table 1 as a basis for questioning the compatibility of the FADB numbers and the R-1 numbers. In TMPA, the Board ruled that the FADB numbers correlate with the numbers in the R-1. In TMPA at page 59, the Board ruled, “Comparison of the FADB numbers used by TMPA to the corresponding 13 accounts in the R-1 report shows a close correspondence between the two sets of data.” The Board was dealing with year 2000 annual numbers in TMPA and had at its disposal sufficient FADB detail by account to confirm the compatibility of FADB and R-1 account data for the year 2000. Ms. Elliott’s verified statement in the instant proceeding also dealt with the year 2000. Therefore, the Board’s ruling in TMPA applies with equal force and effect to Ms. Elliott’s claims in the instant proceeding even though Ms. Elliott and BNSF did not submit system-wide FADB dollars by account in this proceeding. Ms. Elliott and BNSF have submitted no evidence regarding the compatibility of FADB and R-1 dollars for the year 2002 (both parties use year 2002 URCS to develop cost estimates in the instant proceeding).

⁷Id.

⁸See Otter Tail Opening Narrative at II-A-28 to 29.

⁹At page II-44, Mr. Fisher incorporates by reference Ms. Elliott’s May 1, 2002 verified statement. A copy of that statement is included in Otter Tail’s Reply Workpapers, pp. 4827-4840.

¹⁰See TMPA pp. 56, 57.

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calculate line-specific road property costs. Essentially, four (4) claims are raised in this regard:

1. The FADB data does not reflect all of BNSF's relevant road property investment (V.S. Elliott at 22-25);
2. the FADB gross investment data are not accurate when considered on a segment-specific level (V.S. Elliott at 25-26);
3. the FADB database provided by BNSF somehow overstates accumulated depreciation (R.V.S. Elliott at 27-31); and
4. BNSF makes only limited use of the FADB and the depreciation calculator in its normal course of business.

While this issue appears to have been settled in TMPA, Otter Tail nevertheless addresses each of these BNSF attacks on its own accounting records to ensure a complete record in this case.

**(1) The FADB Does Not Reflect All
of BNSF's Road Property Investment**

Ms. Elliott begins her statement with a chart (Table 1 on page 22) that claims to compare FADB and Form R-1 road asset totals for BNSF for the year ending December 31, 2000, and shows a net investment disparity between the two of some ¹¹ Based on this chart, BNSF claims that the FADB cannot be used as a basis for adjusting the R-1 data. As discussed below, BNSF provided data permitting Otter Tail to link the gross investment in the

¹¹See V.S. Elliott at 22, Reply Workpaper, pages 4828.

FADB to BNSF's R-1. Therefore, adjustments can be made to utilize the line-specific FADB data.

In an effort to explain her unsupported claim that the FADB generally understates actual BNSF road property investment, Ms. Elliott states, "It would take a considerable effort to accumulate the necessary listing of BN annual depreciation rates and to modify the depreciation calculator to incorporate two sets of historical depreciation rates (and to be able to determine whether a particular line segment was a former BN or former ATSF line)... There is no business reason for making these changes, and BNSF has not done so."¹² Otter Tail submits that the valid business reason for maintaining an accounting database that produces accurate net investment by line-segment is obvious when a corporation has invested \$23.9 billion dollars in road property, 83 % of its total investment¹³ (See BNSF's 2002 R-1, Schedule No. 352B). BNSF manages those assets intensively and specifically. Any capital intensive business husbands such large investments. Failure to do so jeopardizes the ability of the corporation to continue making such large investments. It strains credulity and logic that a company that depends on lucrative coal traffic for a significant share of its annual revenues

¹²V.S. Elliott at 30-31, Reply workpapers pages 4837-4838. Ms. Elliott's comment is not credible on its face. There cannot be a valid business reason for maintaining an investment database that is inaccurate. The Board knows that BNSF does maintain a line segment-specific accounting database, since BNSF produced information from that system in discovery in this proceeding. BNSF's reliance on the validity of the line segment-specific investments in WTU and other proceedings contradicts Ms. Elliott's claim that the system produces invalid line segment-specific information.

¹³As discussed below, Otter Tail recognizes that some investment monies may not be assigned to a particular valuation section because the project has not been completed or the investment covers a wide geographic area. Otter Tail's Rebuttal methodology accounts for these issues.

and profits does not monitor and accurately record its current investment in the assets that lie at the core of its business.

BNSF's witness Elliott claims that the FADB data understates road property investment concerning accounts for Property In Service Not Unitized ("PISNU"), and certain unspecified capital expenditures "that are included in the FADB are never assigned to particular line segments". Reply workpaper p. 4831 Ms. Elliott's assertion is simply a reprise of BNSF's effort to draw a parallel between BNSF's PISNU funds and the UP funds that prompted the Board in WPL to adopt system average Road Depreciation and Return on Road costs.¹⁴ In WPL the Board found:

In PMC, we accepted the procedure advocated by WPL here, because no evidence had been presented indicating that any of the unassigned costs related to the line segments at issue there. Here, by contrast, UP has clearly demonstrated that investment not specifically assigned on the books of the railroad to the line segments used by the WPL traffic was nevertheless investment needed to provide service to WPL.¹⁵

WPL involved UP road property investment, most of which was assigned to valuation sections. However, a portion of the road property investment that was claimed to be used in providing service to the complainant was assigned to a broader geographic area. The investments attributable to the broader geographic area were the investments upon which the

¹⁴It is reasonable to conclude that the Board's adoption of system average costs in WPL prompted BNSF to abandon its historical advocacy of movement-specific road property costs and take the opportunity to try to advance a drive toward system average costing for all major variable cost components, with the predictable result being higher thresholds for Board jurisdiction and higher regulated rate "floors" on captive coal traffic.

¹⁵Id. at 54.

Board based its exception, and prompted the Board to adopt system average Road Property Ownership Costs because the Board found "...both parties' adjustments flawed."¹⁶ This issue was also raised in TMPA and the Board found WPL to have no precedential value.¹⁷

**(2) The FADB Overstates
Accumulated Depreciation**

Ms. Elliot next claims that the FADB is not suitable as a basis for adjusting system average costs because its corporate depreciation calculations "significantly overstate the accumulated depreciation amounts reflected in the R-1 in cases..." where "...certain assets will be retired before the average service life of the group". V.S. Elliott at 27-28, Reply workpapers pp. 4833-4834. She purports to contrast a method of depreciation that she says applies to the FADB with the so-called "group depreciation" that BNSF generally employs.¹⁸ However, she never explains what method is used in the FADB, or demonstrates how or why depreciation applied to the FADB should result in an overstatement of accumulated depreciation relative to that reported in the Form R-1.

Ms. Elliott's Exhibit 1 includes two examples that she says illustrate an inconsistency between the FADB and the R-1. However, neither example uses real data, and no explanation is given regarding the source of or basis for the "FADB calculator," or the reason for its use in lieu of "group depreciation." Although the support for the differences between the FADB

¹⁶Id. at 55.

¹⁷See TMPA at p. 57.

¹⁸Ms. Elliott claims that when some assets are retired before their average service life, "group depreciation" balances that effect against other assets' retirement after their average service life. See V.S. Elliott at 28-29. While she goes on to say that the same thing doesn't happen to FADB asset values, she never explains how or why.

data and the R-1 data was not provided, Otter Tail's Road Capital Cost calculations eliminate this problem by adjusting for the difference between the FADB and the R-1, as discussed in Exhibit II-A-4.¹⁹

**(3) The Claimed Understated
Investment in High Density Lines**

Finally, BNSF and Ms. Elliott claim that the FADB data can understate investment in high density lines. As part of Ms. Elliott's denigration of BNSF's accounting records, Ms. Elliott criticizes the procedures BNSF uses to allocate charges to specific line segments and states, "This approach to maintaining investment records is in accordance with recent STB practice and BNSF cost cutting initiatives, and it is a particularly critical tool given downsizing of clerical personnel." See V.S. Elliott at 25-26, Reply workpaper pp. 4831-4832. Again, however, no evidence or explanation is offered indicating any specific effect on the measure of investment used to provide service to Otter Tail, nor does BNSF explain why this alleged defect was not of any consequence when BNSF was relying on line-specific data in WTU. Ms. Elliott provides no evidence quantifying the effect of her criticism of BNSF's accounting on Otter Tail's Adjusted Road Property Ownership Costs as presented in this proceeding.

The point of Ms. Elliott's discussion of this issue -- other than to justify reliance on system average costs -- is difficult to fathom. She appears to be saying that BNSF deliberately follows an arbitrary and inaccurate road property cost accounting system in the

¹⁹Exhibit II-A-4 explains the procedures Otter Tail used to reconcile the numbers BNSF provided in discovery to URCS.

interests of cutting clerical costs, and that “there is no reason for BNSF to attempt to maintain more accurate line-specific records that reflect relative traffic densities.” V.S. Elliot at 26.

Such a laissez-faire approach is simply not credible in light of BNSF’s publicly-stated efficiency goals:

Keep BNSF’s cost per GTM at the lowest level in the industry without degradation to our infrastructure or service quality. This will be accomplished by optimizing our fleet size, velocity and facility capacity, as well as through disciplined execution of each car’s service plan.²⁰

Absent a showing that her various, unquantified objections relate to assets used to provide service to Otter Tail, and that they give rise to costs that are otherwise accounted for in Otter Tail’s system average allocation of certain fixed plant investments, Ms. Elliott’s abstract references cannot support abandonment by the Board of its (and BNSF’s) established practice of determining variable Road Property Ownership Costs on a movement-specific basis using BNSF’s own valuation data base. Certainly a default to system averages -- with an attendant increase of \$0.47 per ton in the variable cost calculation for the Big Stone movement -- cannot be justified.

**(d) BNSF’s John Klick’s Invalid Objections to Reflecting
the Economies of Unit Coal Train Transportation**

In its Opening Evidence, BNSF argues that a movement-specific adjustment cannot be made to its system average road property investment and depreciation because “economies of

²⁰BNSF 2000 Annual Report at 7 (Reply Workpaper, p. 4802).

density ... have no effect on variable costs,” which BNSF claims is a fundamental principle underlying URCS. According to BNSF average variable costs should not decrease as density increases. Rather, the variable portion of total costs should increase as density increases.²¹

These claims were made in a verified statement authored by Klick that was attached to BNSF's reply to the First Motion of Otter Tail Power Company to Compel Production of Documents, filed in this proceeding, on April 11, 2002 and incorporated by reference into BNSF's Opening Evidence at II-44. In its decision dated November 15, 2002 granting Otter Tail's motion to compel, the Board ruled that "...BNSF should disclose information on road property investment costs and depreciation".²² However, in light of BNSF's attempt to resuscitate Mr. Klick's arguments in this proceeding, Otter Tail provides additional rebuttal to certain points raised by Mr. Klick.

BNSF's Mr. Klick argues that Otter Tail's approach ignores the relationship between density and variability. Mr. Klick's verified statement attacks, solely through unsubstantiated assumptions and analogies, the URCS 50% variability factor in the determination of Road Capital Costs. BNSF made the same argument in TMPA.²³ At page 56 of TMPA, the Board rejected BNSF's position "because it is not fully supported" and because the complainant did not have an opportunity to respond to this argument, which BNSF had raised for the first time on

²¹See V.S. Klick at 38, Reply Workpaper, p. 4844. ("The second consequence of the use of linear cost functions in URCS is that as density increases . . . the proportion of total cost that is variable increases.")

²²STB Docket No. 42071, Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, served November 15, 2002 at 9.

²³See TMPA, page 56, footnote 94.

rebuttal. Although BNSF has made a timely presentation of its argument in the instant proceeding, it still has not presented any evidence to support its position. Instead, BNSF continues to resort to the same unsubstantiated assumptions and analogies rejected in TMPA.

Road property variability is perhaps the longest standing “settled issue” in rail cost accounting, inasmuch as the 50% variability factor has been applied since the 1940's and has been re-affirmed several times since its establishment. The most recent re-affirmation followed an exhaustive, critical econometric review by the Commission and its expert Dr. M. Daniel Westbrook, Assistant Professor of Economics, Georgetown University.²⁴ Yet, in spite of the Board's admonition not to relitigate “settled issues,” BNSF urges the Board to reject the 50% variability factor. BNSF makes the same arguments that the Board rejected in Adoption of the Uniform Railroad Costing System As A General Purpose Costing System For All Regulatory Costing Purposes, Ex Parte No. 431 (Sub-No. 1) (“Adoption of URCS”), without submitting any evidence whatsoever.

In Adoption of URCS, the Commission stated that it is “...our intention to adopt URCS, as proposed here, in lieu of Rail Form A, for all regulatory costing purposes where such costs are appropriate.” (See page 3) The Commission included in its decision a proposal “...to continue to rely on Rail Form A variability for road and equipment return...” (see page 10) because unlike most cost components for which Dr. Westbrook was able to develop regression equations with strong regression statistics and explanatory power,²⁵ Dr. Westbrook (or any other party for that

²⁴See Adoption of the Uniform Railroad Costing System as a General Purpose Costing System for all Regulatory Costing Purposes (“Adoption of URCS”), served January 26, 1989.

²⁵See Adoption of URCS, page 7.

matter) was unable to develop a functional relationship for Road Capital Costs superior to Rail Form A's 50% variability assumption.

BNSF's witnesses Klick and Fisher did not carry out the rigorous econometric analyses performed by Dr. Westbrook. In Adoption of URCS, Dr. Westbrook set out the following econometric techniques for the development of acceptable cost relationships for application in URCS:

Specification and estimation of an econometric model depends upon three things: (i) a clear definition of the theoretical construct that is to be estimated; (ii) a theoretical model, including clearly stated assumptions, that relates the object of interest to an appropriate data set in a meaningful way; and (iii) an appropriate data set with which to carry out the estimation.²⁶

In contrast, Messrs. Klick and Fisher do not even refer to a "data set with which to carry out the estimation." Mr. Klick instead relies on assumptions and hypothetical "data sets".

Although Mr. Klick acknowledges that the 50% variability factor was not established by a regression equation, he nonetheless assumes, without any econometric foundation, that the 50% factor applies only at the average density :

²⁶Dr. M. Daniel Westbrook, PhD, "Research Report on URCS Regression Equations", October 17, 1988, page 2.

Although the 50-percent variability for road property depreciation and investment was not established directly on the basis of a regression equation, it is nonetheless appropriate to treat this as the proportion of road property ownership costs that the Board would deem to be variable at the average density of the railroad that year, based on a linear cost function.²⁷

Mr. Klick proceeds to assert, based on his assumed regression relationship, that "...it would be impermissible for Otter Tail to make line segment-specific adjustments on the denser-than-average line segments its movements traverse without also increasing the variability ratios."²⁸

But, Mr. Klick's assertion is contrary to the long-established application of the 50% variability factor to road property costs at all densities.²⁹ By contrast, Mr. Klick's basis for his claim is a hypothetical "data set" that he discloses at pages 37-39 of his verified statement. In general, BNSF's argument that economies of scale, scope and density do not exist in the rail industry is unsupported by Board precedent or by any evidence.³⁰

During Adoption of URCS, the railroad industry, including Burlington Northern and The Atchison Topeka and the Santa Fe, through The Association of American Railroads ("AAR") used analogies and urged the ICC to adopt a variability factor higher than 50%. The

²⁷See Verified Statement of John C. Klick, page 38.

²⁸Id., page 42.

²⁹See, for example, both parties' URCS in Opening, that is, Otter Tail's Opening electronic file "UBNSF02.zip" and BNSF's Opening electronic file "BNSF_02.zip", worktable D1, part 2, line 235-249, showing column (H) variability percentage of 50%. This variability percentage was used in TMPA and in all the coal rate cases referred to in the instant proceeding by either BNSF or Otter Tail.

³⁰In response to Otter Tail's request for workpapers supporting Mr. Klick's "Variability Example" graph at page 39 of Mr. Klick's Verified Statement, BNSF responded that there was no evidence supporting Mr. Klick's graph and that the graph was "...hypothetical in nature...". See BNSF's Responses to Complainant's Fourth Request for Workpapers, September 18, 2003, page 7.

railroads urged the Commission to overturn the long-standing application of the 50% road property variability factor using analogies to relationships between variable costs and density for other cost components. See "Comments of Association of American Railroads", March 20, 1989, page 8 and V.S. of Rawert, page 17. At pages 8 and 9, the AAR argued:

Use of the Rail Form A variability ratio, 50 percent, as a default value significantly understates true variability, because the economic depreciation of investment represented by those accounts is far more variable with volume than indicated by the Rail Form A coefficient.

* * *

The Commission has proposed to default to the Rail Form A variability ratio, 50 percent, for return on capital invested in road property. This approach would significantly understate actual variability. The cost of capital invested in physical assets is as volume-variable as the physical stock of the assets themselves. Better default values would be the variabilities determined by URCS for each railroad for roadway and switching maintenance.

See also Id., Rawert V.S. at 17-18 (recommending application of the same variability ratios developed for running track maintenance).

But the relationships urged upon the Commission by BNSF and the railroads do not involve Road Capital Costs, so those analogies are not relevant. To be granted any weight whatsoever, BNSF and the railroads must base its arguments on an accepted relationship for Road Capital Costs, which BNSF has not done. The Commission rejected such comparisons then and BNSF has not provided any evidence for the Board to accept them now.

If the Board were to reopen this long-settled issue, Otter Tail believes that the variability of road property assets and the capital cost of the road property assets is significantly less than

50%. By definition, road property assets are fixed assets.³¹ The railroad industry is noted for having particularly long-lived assets with the average life of the assets included in Otter Tail's Road Capital Costs adjustment factor being greater than 30 years. Because road property assets are not fungible³² nor easy to sell like equipment, once railroads make road property investments those assets are a sunk investment. If volume disappears, there is little a railroad can do to liquidate those assets. The lack of liquidity results, in part, from the assets' lack of fungibility and from regulations requiring railroads to go through abandonment proceedings before they are allowed to dis-invest in road property. Costs related to road property investments are step functions in which, once invested, the road property is capable of handling enormous traffic volume increases before the next capacity expanding road property investments have to be made.

The variability of road property investments bears no resemblance to the variability of equipment investments, since equipment investments are fungible, are shorter-lived, and can be made in much smaller increments than road property investments. For example, BN had to invest billions of dollars in road property in the Powder River Basin in order to develop the coal proposed to be mined and brought to the electric utility markets across the nation. That was a huge sunk investment. By contrast, BN could increase its equipment capacity by a train at-a-time or even by a car at-a-time. This suggests that the variability of road property investment costs is far less than the variability of equipment investments.

³¹Fixed assets are "...tangible property used in the operation of a business, but not expected to be consumed or converted into cash in the ordinary course of events." See Dictionary of Finance and Investment Terms, third edition, copyright 1991 by Barron's Educational Services, Inc. Library of Congress Catalog Card No. 90-48232, page 152.

³²Webster's defines fungible as "...being of such nature or kind as to be freely exchangeable or replaceable, in whole or in part, for another of like nature or kind." See Webster's Encyclopedic Unabridged Dictionary of the English Language, copyright 1994 by dilithium Press, Ltd. page 574.

Otter Tail believes that the variability of Road Capital Costs is much closer to 0% than it is to 100%. But, unfortunately, nobody has ever successfully documented the functional relationship between variable costs and road property investment return and depreciation. Nor is it appropriate for Otter Tail or BNSF to challenge the long-settled 50% variability factor for road property investment and depreciation without such evidence.

URCS has always applied a 50% variability factor to road property investment return and depreciation. BNSF's and Mr. Klick's proposals for something other than a 50% variability factor were rejected during Adoption of URCS and the Board should reject them now.

(e) Otter Tail's Compliance with Wisconsin and TMPA

Otter Tail has demonstrated that its line segment-specific Road Capital Cost calculations meet the requirements set out in WPL.³³ Otter Tail has also showed above that its Road Capital Cost calculations are consistent with the Board's TMPA ruling. Otter Tail's special study of BNSF's road property investment return and depreciation costs is based on specific investment data for those investments needed to provide service to Otter Tail. Most of that cost is based on the actual investments and gross ton-miles over the valuation section milepost ranges traversed by the Otter Tail train. Otter Tail's road property investment return and depreciation costs are more movement-specific (and hence more accurate) than BNSF's system average calculation, and should be accepted as the best evidence of record.

³³See Exhibit II-A-25, pp 9-10.

BEFORE THE
SURFACE TRANSPORTATION BOARD

OTTER TAIL POWER COMPANY

Complainant,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY

Defendant.

Docket No. NOR 42071

VERIFIED STATEMENT OF JOSEPH J. PLAISTOW

My name is Joseph J. Plaistow, I am a Vice President of L.E. Peabody & Associates, Inc. located at 1501 Duke Street, Suite 200, Alexandria, VA 22314. I graduated in 1967 from Michigan Technological University with a Bachelor of Science Degree in Metallurgical Engineering. In 1972 I graduated from the University of Minnesota with a Masters Degree in Business Administration.

I was employed by Burlington Northern Railroad Company, a predecessor of defendant The Burlington Northern and Santa Fe Railway Company ("BNSF"), for 15 years as Director of Costs and Economic Analyses in the Finance Department, as Director of Equipment and Service, and Director of Planning and Equipment in the Food and Manufactured Products Business Unit of the Marketing Department from 1972 to 1987. In 1987 and 1988, I was Vice President, FMI, Inc where I was responsible for managing the efficient operation of refrigerated boxcars. In 1988, I joined Snively King & Associates, an economic consulting

firm that provides services to clients on railroad matters. In 1998, I became a Vice President of L.E. Peabody & Associates, Inc.

I am a Past President of the Washington Chapter of the Transportation Research Forum. I am also the national Secretary of the Cost Analysis Chapter of the Transportation Research Forum.

In 1976, I was admitted to practice before the Interstate Commerce Commission ("ICC") as a non-attorney practitioner. I am a member of the Association for Transportation Law, Logistics and Policy. I am familiar with practices and procedures before the ICC and its successor the Surface Transportation Board ("STB"). I have testified before the STB and the ICC many times on cost and economic issues. Throughout my 30-year career in transportation, I have studied the economics of providing transportation services by private and public transportation companies.

As a Burlington Northern employee I was familiar with Burlington Northern's efforts to improve management of its assets. Key to the better management of assets was the development of information systems, databases and software capable of efficiently using information gathered in the accounting systems in the normal course of business. The guiding adage was, "What you don't measure, you can't manage." Today BNSF has over \$19 billion invested in road property assets. Crucial to the effective, profitable management of that road property asset base are the related detailed accounting records.

I have been asked by Otter Tail to address BNSF's recent refusal in this proceeding to produce movement-specific road property investment data to Otter Tail. According to Otter Tail, BNSF has stated its reason for this position to be that the movement-specific data it keeps is not useful for the purpose for which Otter Tail seeks to use it, which is to propose adjustments to BNSF's system average variable costs. This pronouncement on its face conflicts with the "measure and manage" principle. I will show that BNSF's refusal to

provide this critical road property information to Otter Tail has no validity and that it would significantly affect Otter Tail's ability to accurately determine the economics associated with BNSF's provision of coal unit train service to Otter Tail's Big Stone Generating Station ("Big Stone") near Milbank, SD. My testimony is grouped under the following headings:

- A. The Board's Preference for Line-Specific Over System Average Road Property Capital Costs;
- B. BNSF's Past Use of Movement-Specific Adjustments to System Average Costs;
- C. The Significance of Line-Specific Road Capital Costing to Otter Tail;
- D. The Evidentiary Anomalies That Led to the Board's Decision in *Wisconsin*¹ Are Not Present in This Case; and
- E. BNSF's Claim That Its Road Investment Data is Not Relevant to or Useful For URCS-based Calculations of Variable Costs is Invalid

A. The Board's Preference For Line-Specific Over System Average Road Property Capital Costs

In *Ex Parte No. 347*(Sub-No. 3) (*Evidence*)², the Board standardized and simplified the process of presenting and critiquing evidence in maximum coal rate proceedings. However, nothing in *Evidence* suggested a relaxation of the Board's preference for movement-specific over system average cost evidence or the expectation expressed in *Coal Rate Guidelines* that shippers such as Otter Tail will receive timely and adequate discovery of the information needed to present a case under Constrained Market Pricing ("CMP"). *Coal Rate Guidelines*, 1 I.C.C. 2d at 548.

¹ STB Docket No. 42051, *Wisconsin Power and Light Company v Union Pacific Railroad Company* ("Wisconsin"), slip opinion served September 13, 2001.

²See *Evidence*, decided March 12, 2001.

In its decision in Ex Parte No. 431 (Sub-No. 1) *Adoption of the Uniform Railroad Costing System As A General Purpose Costing System For All Regulatory Costing Purposes* ("Adoption of URCS" 894, 5 ICC 2d), the ICC established the principles for the post-Rail Form A era by stating that URCS was:

"...not intended to foreclose the use of demonstrably superior cost estimating procedures in those situations where the Commission has traditionally accepted alternative evidence. For example, in situations where engineering analysis has produced demonstrably better maintenance costs for specified movements in the rate reasonableness phase of a maximum rate case, the Commission has preferred the engineering analysis over the RFA-produced estimates. The Commission intends, in such situations, to continue to rely on whichever estimating process produces the best evidence of record." (See 898 5 ICC 2d, *Adoption of URCS*)

The *Adoption of URCS* proceeding embraced linear cost functions as the basis for determining system average unit costs, but it encouraged movement-specific adjustments replacing the general purpose system average costs whenever a party could show the superiority of such movement- or line-specific costs.³ Both shippers and railroads (including Burlington Northern and the Atchison Topeka and the Santa Fe - BNSF's predecessors) supported the acceptance of movement-specific costs when a party is able to demonstrate the superiority of such costs.⁴

The railroads are the sole repository of most of the movement-specific road property information required to calculate road property investment return and depreciation costs (collectively, "Road Capital Costs") in coal maximum rate cases. Shippers such as Otter Tail gather that information from the railroad's responses to discovery requests.

The Board has consistently permitted adjustments to a defendant carrier's system-average costs to reflect the economies and efficiencies that are associated with high-volume

³See *Adoption of URCS*, pages 894 and 904.

⁴Comments of Association of American Railroads, March 20, 1989, page 33, in Ex Parte No. 431 (Sub-No. 1).

unit train coal movements. Costs tailored to the transportation characteristics of a particular movement (*i.e.*, movement-specific costs) generally are preferred over system average costs, because those costs long have been recognized by the Board as being more accurate than system-average costs. Significant economies of scale are realized on BNSF's coal lines in general, and the PRB-to-Big Stone Station coal line in particular. While BNSF has made substantial road property investments in coal lines, the carrier also has been able to increase traffic volumes over those lines to such an extent that the cost per unit is much less than it is on the routes used by general freight or system average traffic. There is no justification for failure to reflect these economies of scale.

In conformance with the Board's preference for movement-specific variable costs, Otter Tail intends to calculate Road Capital Costs for the specific line segments traversed by Otter Tail trains based on BNSF's valuation records. Otter Tail proposes to include all URCS road investments in its Road Depreciation and Return on Road costs. Otter Tail's URCS road investments will be divided into two categories: (1) road investments that receive a line-specific adjustment (that is, Adjusted Road Capital Costs); and (2) those that will remain in Otter Tail's costs on a system average basis.⁵

For the Adjusted Road Capital Costs portion, Otter Tail will calculate return on road property investment and depreciation expenses attributable to the Big Stone Station coal movements using BNSF's recorded line segment-specific gross investment and depreciation data by valuation section, which Otter Tail has requested be provided in response to Otter

⁵The property investment accounts that will be assigned on a specific basis will be determined by the accounts flowing into the URCS unit costs for road depreciation (D1L234C10) and road return (D1L251C10). Those accounts are 2 Land, 3 Grading, 4 Other ROW, 5 Tunnels and Subways, 6 Bridges, Trestles & Culverts, 7 Elevated Structures, 8 Ties, 9 Rails & OTM, 11 Ballast, 13 Fences, Snow Sheds & Signs, 17 Roadway Buildings, 27 Signals & Interlockers, 37 Roadway Machines and 39 Public Improvements. All other road property accounts will be included in Otter Tail's line-specific Road Capital Costs in the overheads allocated to the Otter Tail movement.

Tail's discovery requests.⁶ This is the same approach approved by the Board in other recent rate cases, including *FMC*,⁷ and that BNSF used (and the Board approved) in *West Texas Utilities*.⁸

B. BNSF's Past Use of Movement-Specific Adjustments to System Average Costs

BNSF's refusal to provide the requested road property investment and depreciation information to Otter Tail contradicts the position that BNSF took on numerous occasions in the past, most notably in *West Texas Utilities*, *San Antonio*, and *OPPD*, where BNSF (and the Board) relied on the same type of line segment-specific Adjusted Road Capital Costs that Otter Tail proposes to submit in this proceeding, in lieu of system averages.

The *West Texas Utilities* proceeding involved BNSF unit train coal service from the Powder River Basin to Texas. In *West Texas Utilities*, BNSF was faced with evidence submitted by the complainant which showed, as Otter Tail would expect to show in this proceeding, that Adjusted Road Capital Costs for the rail lines traversed by the West Texas Utilities' trains were substantially lower than system average. BNSF responded with line segment-specific Adjusted Road Capital Costs based on the same type of information that Otter Tail has requested of BNSF in this proceeding. As the Board summarized in its final decision in 1996:

"To adjust system-average road property return on investment (ROI) cost, BN utilizes its 1994 road property investment database. BN identifies the actual

⁶See Otter Tail RFP's 12, 13, 14, and 109-112.

⁷STB Docket No. 42022, *FMC Wyoming Corporation and FMC Corporation v. Union Pacific Railroad Company* ("FMC"), slip opinion, served May 12, 2000.

⁸See *West Texas Utilities*, slip opinion, served May 3, 1996, page 82.

book value of the road property and the annual depreciation associated with the issue traffic." ...

"Our restatement utilizes the BN-developed unit cost for ROI."⁹

In *West Texas Utilities*, both the Complainant and BNSF presented Adjusted Road Capital Costs as superior to and more accurate than system averages. Both parties calculated those costs using BNSF's "...road property investment database ..." and a 50% URCS variability factor. BNSF's line-specific analysis was accepted by the Board as the best evidence of record. The same type of data used by the parties and accepted by the Board in *West Texas Utilities* should be produced by BNSF in this proceeding. It is that line segment-specific information that Otter Tail proposes to rely upon in this case.

In my opinion and based on my experience in coal rate reasonableness proceedings, BNSF has no valid grounds for refusing to provide Otter Tail the line segment-specific road property investment and depreciation information needed to properly determine Big Stone movement-specific Road Capital Costs. BNSF should provide (1) the line segment-specific information it maintains in the ordinary course of business, and (2) non-line segment-specific information for all other investments, and let the Board select the best evidence of record after both sides have made fully documented presentations. If the Board acquiesces to BNSF's efforts to force Otter Tail and the Board to rely on system average Road Capital Costs, those costs will be substantially overstated for the route at issue in this proceeding, and will fail to protect Otter Tail's right to a fairly determined maximum reasonable rate.

⁹*West Texas Utilities*, 1 S.T.B. at 724.

C. The Significance of Line-Specific Road Property Capital Costing to Otter Tail

With access to the BNSF road property investment information sought in this motion to compel, I expect to demonstrate that Road Capital Costs associated with the Otter Tail route are significantly below system average. That has been the case in many previous maximum rate proceedings. Unfortunately, most of the STB's maximum rate decisions do not disclose the results of road capital costing in sufficient detail to support my conclusion with publicly available information. The *West Texas Utilities* and *FMC* decisions, however, did report sufficient detail. The *West Texas Utilities* decision allows me to support my conclusion both as to return on road property investment and annual road property depreciation expense. (Recall from the previous Section B, above, that in *West Texas Utilities*, the Board relied upon BNSF cost witnesses Klick and Kent's Road Capital Cost evidence.) The *FMC* decision¹⁰ only discloses enough information to support my conclusion regarding annual road property depreciation expense.

Exhibit __ (JJP-1) shows that line-specific road property depreciation from the *West Texas Utilities* decision was \$39.33 per car (74.6% of system average) and return on road property was \$53.93 per car (45.0% of system average). Total *West Texas Utilities* line-specific Road Capital Costs were \$93.26 per car or \$0.84 per ton. If system averages had been used, Road Capital Costs would have been reported as \$1.55 per ton, an overstatement of \$0.71 per ton. At the jurisdictional threshold level, this difference amounts to \$1.28 per ton (\$0.71 times 1.80). Assuming West Texas received 2 million tons of coal each year, then the

¹⁰ See *FMC*, pages 77 and 78.

jurisdictional threshold would be overstated by \$2.6 million dollars per year. (Otter Tail expects to burn 2,029,000 tons of coal in 2002.)

Exhibit __ (JJP-2) shows that line-specific *FMC* annual road property depreciation expense varied from 46.6% to 74.2% of system average, all of which are lower than *West Texas Utilities'* 74.8%.¹¹

If the Board compels BNSF to produce the required road property investment information, I expect to be able to demonstrate that Road Capital Costs for the Otter Tail route are significantly below system average costs. If the Board does not compel BNSF to produce the required information, I may not be able to demonstrate this fact, but the conclusion that Otter Tail line-specific Road Capital Costs are significantly less than system average Road Capital Costs will remain unaltered.

D. The Evidentiary Anomalies That Led to the Board's Decision in *Wisconsin* are Not Present in This Case

In *Wisconsin*, the Board declined to accept either Union Pacific's or Wisconsin Power and Light's line-specific road property investment and depreciation costs and defaulted to system average costs, because Union Pacific Railroad Company ("UP") had shown that a

¹¹ *Wisconsin* also reported favorably on a movement-specific adjustment to Road Capital Costs. In *Wisconsin* with regard to Return on Investment and Depreciation for Road Property, the STB stated, "In *FMC*, we accepted the procedure advocated by WPL here, because no evidence had been presented indicating that any of the unassigned costs related to the line segments at issue there." (See *Wisconsin*, page 53)

portion of its investment that was assigned to a general (default) account and not to specific line segments was needed to provide service to the complainant.

The Board selected system average costs as the best evidence of record even though "Both parties adjusted the URCS system-average return on investment and depreciation expenses for road property by a ratio of UP's investment in the route used for the WPL traffic (on a per-GTM basis) to system-average investment on a per-GTM basis."¹² The unique problem that led the Board to default to system average in *Wisconsin* does not exist here, since it is Otter Tail's intention to include system average costs for all road property investments shown to be used by the Otter Tail movement, but not directly assigned to the movement. For road property investments that BNSF has assigned directly to the Otter Tail Big Stone line segments, it is Otter Tail's intention to charge the related Road Capital Costs directly to the traffic using those investments.

E. BNSF's Claim That Its Road Investment Data is Not Relevant to or Useful for URCS-based Calculations of Variable Costs is Invalid

After decades of making movement-specific adjustments to its system average Road Capital Costs, BNSF now claims that its road property investment database is no longer useful for this purpose. BNSF's denigration of its own records appears to be another part of its larger effort to reverse the Board's longstanding and correct policy of preferring movement-specific costs in unit train coal cases,¹³ and to revive the position unsuccessfully urged by

¹² See *Wisconsin*, pages 53-54.

¹³ See *Adoption of URCS*, page 898.

railroad defendants in the past to base variable cost determinations on much higher system average costs.

System average Road Capital Costs are representative of average traffic, but average traffic and average costs are irrelevant in this case, which is focused on highly efficient unit trains moving over a heavy density coal route – not “average traffic.” Economies of scale made possible by high volume coal traffic have allowed BNSF to realize greatly reduced costs relative to system average, which, in turn, have benefitted BNSF financially over the last several decades.

The fact that a database for a line or movement-specific adjustment may not correspond directly to a railroad's individual R-1 accounts cannot be a valid basis to reject movement-specific costs.¹⁴ The Board's routine acceptance of adjustments to system averages based on special studies belie the notion, and a contrary rule would allow market dominant railroads to ensure that all rates in all circumstances are evaluated solely against system average costs simply by modifying their internal account formats. As for the “plausibility” of road property unit costs on high density lines being significantly lower than system averages, one need only look at BNSF's highest density/highest investment line segments for confirmation of this fact.

BNSF's claim that its movement-specific data is not useful for making adjustments to URCS-based costs is preposterous. URCS is based on the books and records of BNSF as filed

¹⁴Any movement-specific or line-specific refinement to system average costs must be based upon that portion of accounting and operating records that pertain to that specific movement or line. The refinement cannot be based upon an entire R-1 account or operating statistic. If it were based on the entire account or statistic, it would not constitute a refinement to system average costs, it would constitute system average costs.

in its Annual Report Form R-1. It is a regulatory requirement that BNSF file this information each year, and BNSF complies with that regulatory requirement. BNSF cannot keep two sets of books and records for regulatory purposes, so BNSF's R-1 data has to be consistent with URCS-based calculations of variable costs. Alternatively, what BNSF must be claiming is that they do not maintain their road property investment and depreciation records on a line-segment specific basis. However, this cannot be true because until recently, BNSF itself has been relying on such line-segment specific investment information for its own determinations of Road Capital Costs.¹⁵

If BNSF has discontinued maintenance of all its line-segment specific road property investment databases, then BNSF should provide that information to Otter Tail for the latest time period for which that data is available. BNSF should be required to provide all categories of road property investments whether the category is assigned to the line segments used by the Otter Tail Big Stone traffic or whether they are unassigned. This data, if provided, will allow Otter Tail to determine Road Capital Costs that are more representative than system average costs. It is not within BNSF's authority to make the regulatory decision that the data should not be provided because it supposedly is inconsistent with URCS-based variable cost determinations. Only the Board has the authority to make that determination.

If BNSF still maintains a portion of its road property investment and depreciation information by line segment and a portion of that information unassigned to specific line

¹⁵BNSF also needs this line segment-specific road property data for state tax purposes. Several states assess property taxes on the actual value of real property. For example, Wyoming, which contains the bulk of the Powder River Basin, assesses taxes on the basis of the value of each mile of main track. See *2001 State Tax Handbook*, page 215, published by CCH Incorporated, Chicago, IL.

segments, then BNSF should provide that information and let the Board determine whether or not Otter Tail Big Stone route Road Capital Costs determined as described earlier are consistent with URCS-based variable cost determinations.

I submit that BNSF may be maintaining detailed and accurate net investment by line-segment. BNSF may be measuring and managing its \$19 billion dollars investment in fixed, road property assets.¹⁶ BNSF should be managing those assets intensively and specifically. Any capital intensive business husbands such large investments. Failure to do so jeopardizes the ability of the corporation to continue making such large investments. It strains credulity and logic that a company that depends on lucrative coal traffic for a significant share of its annual revenues and profits does not monitor and accurately record its current investment in the assets that lie at the core of its business.

I believe that most road property investments can be assigned to individual line segments, but failing to assign 100% of the investments does not invalidate the movement-specific adjustment of the portion that is directly assigned. I further believe that the appropriate treatment of the unassigned portion is to treat it on a system-average basis, that is, to allocate the Road Capital Costs associated with the unassigned investment to all traffic moving on the system. I also believe that failure to assign 100% of road property investments to individual line segments does not change the fact that movement-specific Road Capital Costs for high-

¹⁶Some investment monies may not be assigned to a particular valuation section because the project has not been completed or the investment covers a wide geographic area. The methodology used in past cases will account for these issues.

volume coal unit train service are likely to be lower than system average Road Capital Costs and that those reduced costs arise because of the economies and efficiencies that are associated with high-volume, repetitive movements such as the Otter Tail Big Stone unit-train service. Failure to measure those reduced costs does nothing to alter this Board-recognized cost relationship.¹⁷

CONCLUSIONS

The methodology that Otter Tail intends to use to determine the Big Stone movement's Adjusted Road Capital Costs will be based on BNSF-provided line-specific investment data for those investments needed to provide service to Otter Tail's Big Stone Station. Most of that cost will be based on the actual investments and gross ton-miles over the valuation sections traversed by the Otter Tail trains. Appropriate adjustments will be made to reflect the issues of unallocated monies. These annual Road Depreciation expenses and Return on Road costs will be more movement-specific (and far more accurate) than the system average calculation.

BNSF has no valid grounds for refusing to provide Otter Tail the line segment-specific road property investment and depreciation information that Otter Tail needs to properly determine the Big Stone movement's Road Capital Costs. BNSF should provide the line segment-specific information it maintains in the ordinary course of business, non-line segment-specific information for all other investments, and let the Board select the best evidence of record after both sides have made fully documented presentations.

¹⁷ See the Board's February 9, 2001 decision in *TPPA*, page 3.

Exhibit_(JJP-1)
Page 1 of 1

DEPRECIATION AND RETURN - WTU VS SYSTEM AVERAGE

Item (1)	Source (2)	BNSF 1994 Amount (3)
1. Traffic and Operating		
a. Miles	WTU Decision, p. 19 1/	1,113.2
b. Tons per Car	WTU Decision, p. 76	110.48
c. Tare	WTU Decision, p. 79	21.66
d. Gross ton-miles per Car	$L1a * (1b + 1c * 2)$	171,210.160
2. Depreciation		
a. Road track maint & ownership	D1L234C10 2/	\$0.00027302
b. General Overhead Ratio	D8L608C01 2/	1.10311
c. Road incl GOH	$L2a * 2b$	\$0.00030117
d. GTM's per Car	L1d	171,210.160
e. Road Depr per Car	$L2c * 2d$	\$51.56
f. Index		1.02285
g. Road per car indexed	$L2e * 2f$	\$52.74
h. WTU depreciation per Car	WTU Decision, p. 81	\$39.33
i. WTU percent of System	$L2h + 2g$	74.6%
3. Return		
a. Road track maint & ownership	D1L251C10 2/	\$0.00064673
b. General Overhead Ratio	D8L609C01 2/	1.08266
c. Road incl GOH	$L3a * 3b$	\$0.00070019
d. GTM's per Car	L1d	171,210.160
e. Road Return per Car	$L3c * 3d$	\$119.88
f. WTU Road Return per Car	WTU Decision, p. 81	\$53.93
g. WTU percent of System	$L3f + 3e$	45.0%
h. BNSF system Road & Depreciation	$L2g + 3e$	\$172.62
i. WTU Line Specific Road & Depreciation	$L2h + 3f$	\$93.26
j. Total Variable Costs	WTU Decision, p. 76	\$845.16
k. URCS Linking Factor	STB	0.9934
l. BNSF system Road & Depreciation/Ton	$L3h + 1b * 3k$	\$1.55
m. WTU Line Specific Road & Depreciation/Ton	$L3i + 1b * 3k$	\$0.84
n. Total Variable Costs/Ton	$L3j + 1b * 3k$	\$7.60

1/ Miles from Eagle Butte to Oklaunion.

2/ From BNSF 1994 URCS formula produced by the STB and used in WTU.

DEPRECIATION - FMC VS. SYSTEM AVERAGE UNION PACIFIC 1998

Item (1)	Source (2)	Moves A-G (3)	Moves H-J (4)	Moves K (5)	Moves L (6)	Moves M (7)	Moves N (8)	Moves O (9)	Moves P (10)
Depreciation									
a. Road track maint & ownership	D1L234C10	\$0.00029147	\$0.00029147	\$0.00029147	\$0.00029147	\$0.00029147	\$0.00029147	\$0.00029147	\$0.00029147
b. S&E - Depr - Work - R	D1L222 C10	\$0.00000110	\$0.00000110	\$0.00000110	\$0.00000110	\$0.00000110	\$0.00000110	\$0.00000110	\$0.00000110
c. S&E - LR - Work - R	D1L223C10	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
d. Work Equip - Depr - R	D1L230C10	0.00000551	0.00000551	0.00000551	0.00000551	0.00000551	0.00000551	0.00000551	0.00000551
e. Work Equip - LR - R	D1L231C10	0.00000039	0.00000039	0.00000039	0.00000039	0.00000039	0.00000039	0.00000039	0.00000039
f. OE Shop Machinery - Depr - R	D1L232C10	0.00000005	0.00000005	0.00000005	0.00000005	0.00000005	0.00000005	0.00000005	0.00000005
g. OE Shop Machinery - LR - R	D1L233C10	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
h. Total Work and other Equip	Sum Lines b thru g	\$0.00000705	\$0.00000705	\$0.00000705	\$0.00000705	\$0.00000705	\$0.00000705	\$0.00000705	\$0.00000705
i. System Depr & Lease Less Work E	L1a - 1h	\$0.00028442	\$0.00028442	\$0.00028442	\$0.00028442	\$0.00028442	\$0.00028442	\$0.00028442	\$0.00028442
j. FMC Deprec Cost/GTM	FMC Decision, p.78	\$0.00013959	\$0.00014101	\$0.00021800	\$0.00017088	\$0.00014414	\$0.00014272	\$0.00019590	\$0.00018879
k. FMC Deprec less Work Eq	L1j - 1h	\$0.00013254	\$0.00013396	\$0.00021095	\$0.00016383	\$0.00013709	\$0.00013567	\$0.00018885	\$0.00018174
l. FMC Deprec percent of System	L1k - 1i	46.6%	47.1%	74.2%	57.6%	48.2%	47.7%	66.4%	63.9%

Source: FMC, slip opinion, decision served May 12, 2000, pages 77 and 78.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

JOSEPH J. PLAISTOW, being duly sworn, deposes and says that he has read the foregoing statement, knows the contents thereof and that the same are true as stated.

Joseph J. Plaistow
Joseph J. Plaistow

Sworn to and subscribed)
before me this 14th day
of April, 2002.

Witness my hand and official seal.

Carol J. Francis
My Commission Expires July 31, 2006

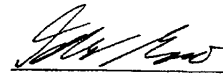
CERTIFICATE OF SERVICE

I hereby certify that this 11th day of April, 2002, I served a copy of the foregoing "Complainant's First Motion to Compel Production of Documents" on Defendant, The Burlington Northern and Santa Fe Railway Company by hand-delivery upon counsel for Defendant at the following address:

Samuel M. Sipe
Steptoe & Johnson LLP
1330 Connecticut Avenue, N.W.
Washington, D.C. 20026

and by overnight mail:

Michael Roper
Senior General Counsel
The Burlington Northern and Santa Fe Railway Company
2500 Lou Menk Drive
P.O. Box 961057
Fort Worth, TX 76161-0057



Jeffrey O. Moreno

Exhibit II-A-26
(Pages 1-8)

REDACTED

**REPLY REVISIONS TO THE TREATMENT
OF ROAD PROPERTY INVESTMENT RETURN AND DEPRECIATION**

(a) Otter Tail's Rebuttal Road Property Investment Costing Procedure

Otter Tail road property and depreciation expense calculations at the system level, described in Exhibit II-A-4, pages 6-11, have been revised for this Reply filing to incorporate BNSF's Responses to Workpaper Requests filed on September 18, 2003. The road property workpapers just received were FADB 2000 totals by ICC account for gross investment and accumulated depreciation. System road property investment reported in the R-1 combines FADB gross investment, Projects in Service Not Unitized ("PISNU"), property accounts not assigned at the valuation section level, and the ATSF purchase accounting write-up. Discussion of procedures used in calculation of Reply road property investment return and depreciation is separated into the following categories:.

- i. System Average Return and Depreciation
 - Gross Investment and Reconciliation to the R-1 and URCS
 - a. FADB Gross Investment
 - b. PISNU
 - c. Unassigned FMA
 - d. ATSF Purchase Accounting Write-up
 - e. Reconciliation to URCS
 - Adjusted Net Investment
 - Adjusted Annual Depreciation
 - URCS System GTM
 - Adjusted Net Investment and Depreciation Costs per GTM
- ii Valuation Sections Traversed by Otter Tail (no change from Opening)
- iii Otter Tail Route Specific Average Investment and Depreciation Weighted on Otter Tail GTM's
- iv. Reply Ratio of Otter Tail Route Specific Investment and Depreciation to System Average Return and Depreciation

**REPLY REVISIONS TO THE TREATMENT
OF ROAD PROPERTY INVESTMENT RETURN AND DEPRECIATION**

i. System Average Return and Depreciation

URCS Gross Investment and Reconciliation to the R-1 and URCS - gross road property investment reported in the R-1 consists of amounts in the FADB (Fixed Asset Data Base, called “FMA” in the data received), PISNU, unassigned FMA, and write-up for the ATSF purchase accounting adjustment. Otter Tail’s Opening and Reply road return calculations adjusted gross investment for PISNU and unassigned FMA but were missing the FADB account totals to enable reconciliation to the R-1.

a. **FADB Gross Investment** - BNSF has just now provided the 2000 FADB data but not the 2002 data requested. We have estimated the 2002 FADB by applying the ratio of URCS gross investment in 2002 to URCS gross investment in 2000 to the 2000 FADB gross investment. as shown on page 7 of 14 of this Exhibit and electronic file “Road Inv Otter Tail Reply.123”, sheet ‘2000 System’. This ratio is then applied to the 2000 FADB gross investment to arrive at the 2002 Gross Investment at FADB level, shown on page 7 of 14, column (3) of the “2002 Reconciliation to URCS Gross Investment in Road Property” table and level ‘Reconciliation’.

b. **PISNU - Projects In Service Not Unitized** - PISNU expenses shown in column (5) of the “2001 Reconciliation to URCS” table were described and incorporated in Otter Tail’s opening road return calculations.

c. **Unassigned FMA - Fixed Assets not assigned to a specific line segment** - These expenses shown in column (6) of the “2002 Reconciliation to URCS Gross Investment in Road Property” table were described and incorporated in Otter Tail’s opening road return calculations.

**REPLY REVISIONS TO THE TREATMENT
OF ROAD PROPERTY INVESTMENT RETURN AND DEPRECIATION**

d. ATSF Purchase Accounting Write-up - BNSF provided ATSF purchase accounting data in discovery. The ATSF purchase accountings costs are used to reconcile to the R-1 and are included in Reply workpapers. (Purchase accounting costs by account would be applied to the valuation sections formerly belonging to the ATSF on a cost per track-mile basis rather than removing them at the system level. There are no former ATSF valuation sections on the Otter Tail route.)

e. Reconciliation to URCS - FADB, PISNU, unassigned FMA, and the ATSF write-up were combined and compared to the totals reported in the R-1 and used in URCS. This total "URCS equivalent" was less than the 2002 URCS gross investment. We assumed that the FADB, unassigned FMA and ATSF write-up were correct and adjusted the PISNU account totals to reconcile to the URCS. The gross investment at FMA Level shown on Page 5 of 14, column (7) of the "Reply Development of BNSF System Road Property Investment per GTM at the Line Specific Val Sec Level" (electronic file "Road Inv Otter Tail Reply.123", sheet 'URCS Inv') was then calculated by subtracting the adjusted PISNU and unassigned_FMA to put the gross investment on an equivalent level with the line specific valuation section FADB net investment.

Adjusted Net Investment - We first calculated the 2002 FADB accumulated depreciation by calculating the ratio of the 2002 URCS accumulated depreciation to the 2000 URCS accumulated depreciation. We then applied this ratio to the 2002 FADB accumulated depreciation to calculate the equivalent 2002 FADB accumulated depreciation. The 2002 FADB accumulated depreciation is then substituted at Page 5 of 14, column (10) of this Exhibit for the URCS accumulated

**REPLY REVISIONS TO THE TREATMENT
OF ROAD PROPERTY INVESTMENT RETURN AND DEPRECIATION**

depreciation used in Otter Tail's opening road investment calculations. The Net Investment at the valuation section level is then calculated by subtracting the 2002 FADB accumulated depreciation from the 2002 gross investment at the valuation section (or FMA) level to put the net investment on an equivalent level with the valuation section FMA net investment.

Adjusted Annual Depreciation - 2002 FADB annual depreciation shown on Page 6 of 14, column (7), is then calculated for the gross investment at the line specific val sec level using the R-1 Schedule 332 depreciation rates.

URCS System GTM - GTM for Car, Contents, & Caboose - no change from opening.

Calculation of Adj Investment and Depreciation per GTM - Net investment and depreciation, as adjusted to account for FADB accumulated depreciation, adjusted PISNU and Unassigned FMA costs, are divided by the GTM service units in URCS to derive system net investment and depreciation expenses per gross ton-mile. All adjustments have been made to the system level net investment and depreciation to make it equivalent to the net investment and depreciation at the line specific valuation section (or FMA) level.

ii Valuation Sections Traversed by Otter Tail

This section is the same for Reply as calculated and described in Opening.

iii Otter Tail Route Specific Average Investment and Depreciation Weighted on Otter Tail GTM's

In Opening Otter Tail inadvertently included GTM for the Jones Jet to Moran Jet in the divisor used to calculate costs per gross ton-mile even though BNSF provided no investment data for this

**REPLY REVISIONS TO THE TREATMENT
OF ROAD PROPERTY INVESTMENT RETURN AND DEPRECIATION**

segment. Otter Tail has removed this segment from its Reply calculation of weighted investment per GTM.

iv. **Reply Ratio of Otter Tail Route Specific Investment and Depreciation to System Average Return and Depreciation**

This ratio is automatically recalculated by dividing Otter Tail's weighted average investment and depreciation cost per gtm by the revised system average net investment and depreciation per gtm which has been adjusted to exclude the adjusted PISNU and Unassigned expenses not included at the valuation section level. The calculation of system net investment also incorporates the FADB accumulated depreciation to be consistent with the route specific investment. The route specific investment has been corrected to exclude gross ton-miles related to the Jones Jct to Moran Jct segment.

Other than variability which is addressed elsewhere in this filing, Otter Tail's Reply calculation of road return and depreciation responds to all criticisms regarding FADB reporting of accumulated depreciation put forth by Mr. Fisher and Ms. Elliott. Otter Tail's procedures are consistent with those accepted by the STB in TMPA¹ and should be accepted by the STB here as the best evidence of record.

¹ In TMPA, at page 60, footnote 100, the STB describes the adjustment (correction) they made to depreciation to incorporate the running portion. Otter Tail believes that adjustment was inappropriate. The investment and depreciation amounts used for the ratio are total both at the system level and the valuation section level. Those system totals are allocated between running and switching in URCS Worktable B5 so that the road return and depreciation unit costs in Worktable D1, column 10 to which the ratios are applied are at the variable running level.

Exhibit II-A-27

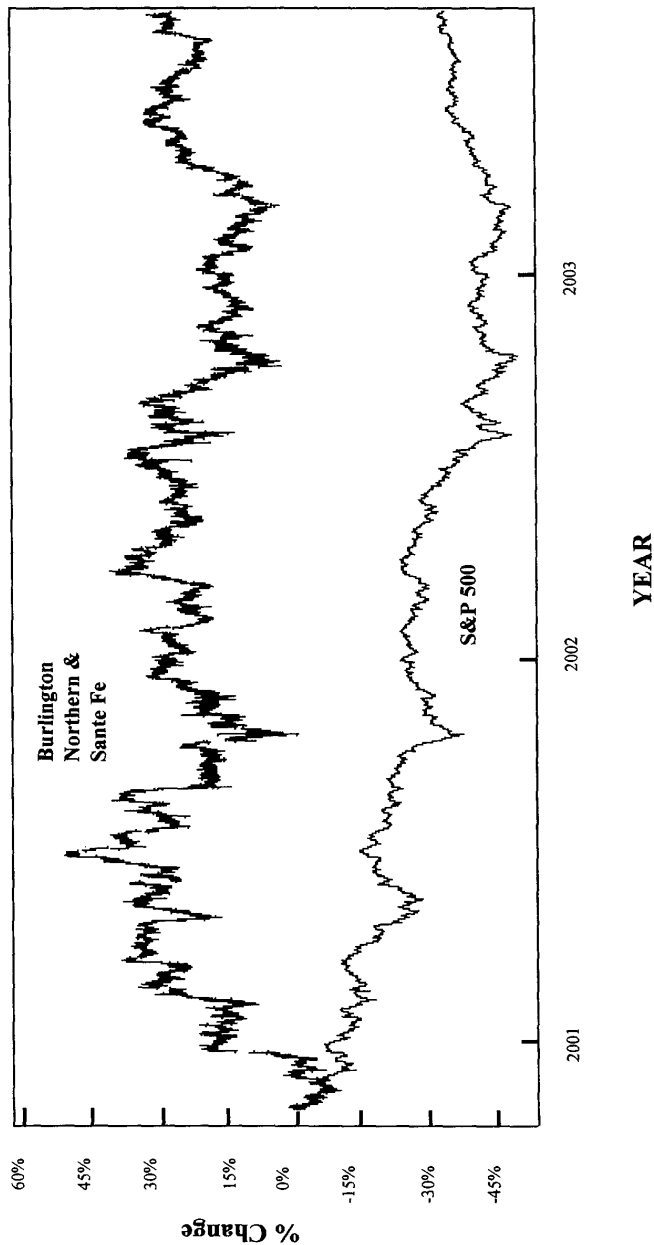
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Exhibit II-A-28

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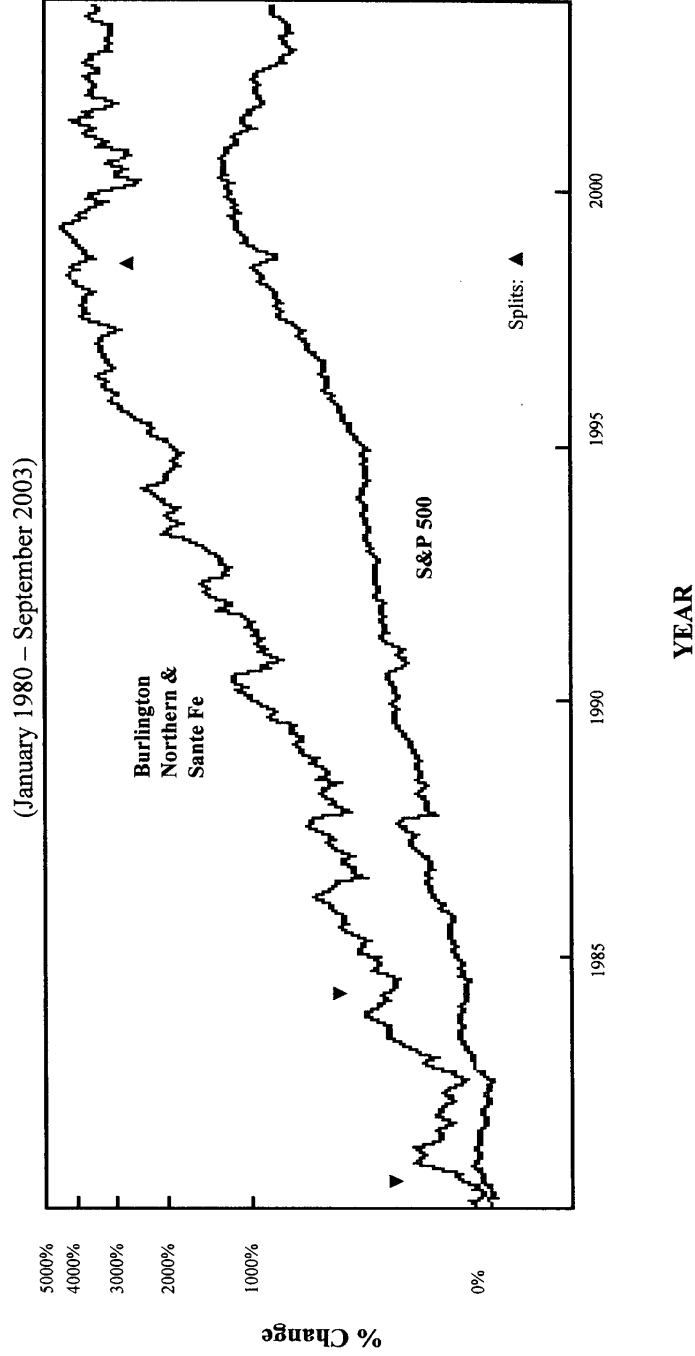
Cumulative Percentage Change in Return on BNSF Stock and Return on S&P 500 Composite

(September 2000 – September 2003)



Source: Big Charts.com

Cumulative Percentage Change in Return on BNSF Stock and Return on S&P 500 Composite



Note: Vertical Axis on Logarithmic scale

Source: Commodity Systems, Inc. as found on finance.yahoo.com

Exhibit II-A-30

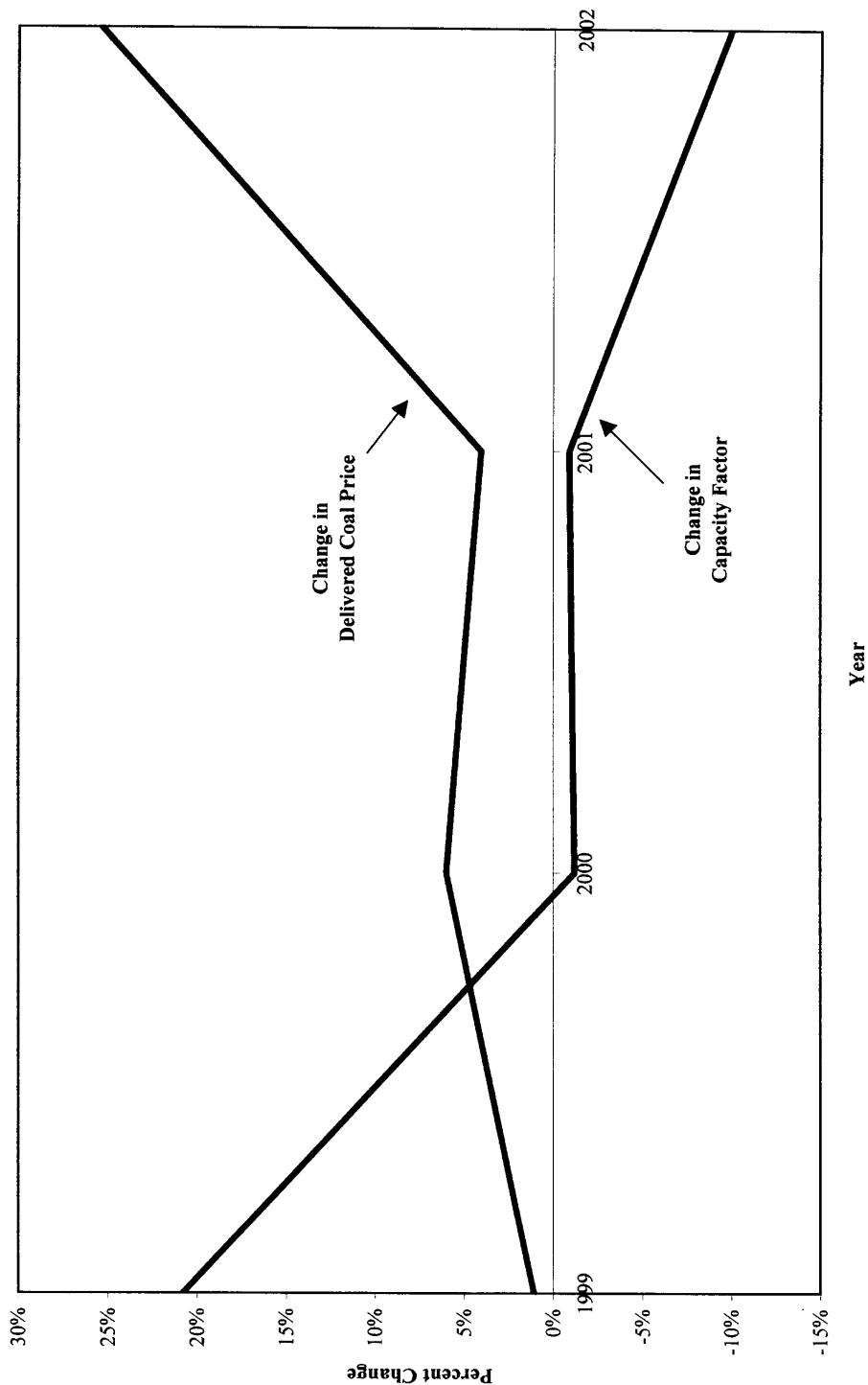
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Summary of MAPP Utilities Tons and S/MMBTU 2000 through April 2003

Utility (1)	Plant (2)	Route/Carrier (3)	Competitor (4)	Rail Miles (5)	2000			2001			2002			2003 1/			Mills Per ton-mile (15)
					Tons (6)	\$/Mmbtu (7)	Tons (8)	\$/Mmbtu (9)	Tons (10)	\$/Mmbtu (11)	Tons (12)	\$/Mmbtu (13)	Tons (14)	\$/Mmbtu (15)			
Issue Movement																	
1 Otter Tail Power	Big Stone	BNSF	N/A	911	2,003,000	\$0.99	2,182,000	\$1.03	1,872,000	\$1.30	667,000	\$1.34	\$23.03	25.29			
Captive Movements																	
2 IES Utilities, Inc	Orinville	BNSF	N/A	865	3,272,313	\$0.83	2,953,920	\$0.88	2,609,461	\$0.71	922,260	\$0.75	\$12.69	14.66			
3 Northern States Power	Sherburne County	BNSF	N/A	1,092	3,519,900	1.16	3,351,216	0.93	3,508,697	0.93	825,640	0.95	16.72	15.31			
4 Mid-American Energy	George Neal 1-4	UP	N/A	741	5,603,410	0.75	6,512,610	0.74	6,221,460	0.76	2,161,040	0.77	13.22	17.83			
5 Nebraska Public Power District	Sheldon	UP	N/A	643	871,327	0.64	898,910	0.65	854,682	0.65	339,139	0.67	11.6	18.03			
6 Northern States Power	King	UP	N/A	1,049	1,301,100	1.01	1,219,756	1.00	1,362,448	1.16	298,489	1.31	23.38	22.30			
7 Northern States Power	Black Dog	UP	N/A	1,039	898,200	1.01	661,306	1.01	874,317	1.17	371,981	1.34	23.39	22.51			
8 Fremont Dept of Public Utilities	Wright	UP	N/A	640	240,300	0.95	323,500	0.98	289,600	1.11	13,400	0.92	15.95	24.94			
9 IES Utilities, Inc	Sutherland	UP	N/A	836	527,181	0.78	509,288	0.75	523,434	1.00	131,790	1.08	21.43	25.64			
10 Grand Island Utilities	Platte	UP	N/A	533	337,000	0.68	449,000	0.72	360,000	0.73	147,000	0.82	14.06	26.36			
11 Ames, City of	Anes	UP	N/A	802	233,000	1.32	228,230	1.44	281,000	1.46	89,000	1.50	26.12	32.56			
12 Basin Electric Power Coop	Laramie River 1-3	BNSF	N/A	198	5,233,500	0.48	7,748,100	0.47	7,802,000	0.48	2,697,800	0.58	9.63	48.76			
13 Montana-Dakota Utilities	Heskett	BNSF	N/A	xxx	2,134	0.68	xxx	xxx	1,100	0.70	xxx	xxx	xxx	xxx			
14 Basin Electric Power Coop	Leland Olds 1 & 2	BNSF	N/A	xxx	xxx	xxx	544,500	0.67	703,000	0.87	xxx	xxx	xxx	xxx			
15 Total/Weighted Average				628	22,039,365	\$0.79	25,400,336	\$0.72	25,391,199	\$0.74	7,997,539	\$0.78	\$13.39	21.33			
Competitive Movements																	
16 Mid-American Energy	Riverside	UP	BNSF	1,100	406,564	\$0.90	432,850	\$0.82	503,930	\$0.95	189,990	\$0.82	\$14.40	13.10			
17 Muscatine Power and Water	Muscatine	BNSF	UP	945	847,480	0.81	950,535	0.81	1,186,304	0.79	272,375	0.87	14.57	15.41			
18 Mid-American Energy	Louis	BNSF	BNSF	1,015	2,736,488	0.86	2,759,962	0.92	2,968,180	0.93	899,760	0.91	15.94	15.70			
19 Hastings Utilities	Hastings	UP	BNSF	693	297,900	0.65	332,100	0.67	342,999	0.70	109,821	0.66	10.99	15.85			
20 Omaha Public Power District	Nebraska City	UP	BNSF	652	2,356,400	0.56	2,975,400	0.55	2,438,700	0.60	880,300	0.60	10.51	16.11			
21 IES Utilities, Inc	Burlington	BNSF	UP/barge	934	878,587	0.80	756,922	0.85	850,896	0.92	228,810	0.91	15.2	16.27			
22 Daryland Power Coop	Alma	BNSF/barge	UP	1,128	1,432,500	0.99	1,492,100	1.02	1,411,600	1.21	416,600	1.09	19.02	16.86			
23 Daryland Power Coop	Genoa No. 3	UP/barge	BNSF/barge	1,278	291,220	1.16	259,400	1.20	439,600	1.48	65,000	1.24	21.62	16.92			
24 Mid-American Energy	Council Bluffs	UP	BNSF	681	3,529,060	0.60	3,668,290	0.60	3,539,745	0.71	1,244,880	0.69	11.83	17.38			
25 Omaha Public Power District	North Omaha	UP	BNSF	652	1,879,200	0.63	2,263,300	0.61	2,095,100	0.64	709,900	0.65	11.41	17.49			
26 IES Utilities, Inc	Prairie Creek 1-4	UP	BNSF	949	905,302	0.89	763,033	0.86	823,438	1.09	142,750	1.00	16.79	17.69			
27 Interstate Power	Lansing	BNSF/barge	UP/barge	1,221	996,240	1.03	801,471	0.80 2/	765,813	1.22	104,840	1.29	21.65	17.73			
28 Interstate Power	Dubuque	BNSF/barge	UP/barge	1,116	41,170	1.10	6,850	0.47	xxx	xxx	8,830	1.23	20.46	18.33			
29 Northern States Power	High Bridge	BNSF	UP	1,053	757,200	1.01	781,136	0.92	783,823	1.08	265,786	1.20	21.36	20.28			
30 Northern States Power	Riverside	BNSF	UP	1,042	1,306,700	0.97	1,309,937	0.94	1,352,569	1.07	489,222	1.23	21.86	20.98			
31 IES Utilities, Inc	6th Street	UP	BNSF	903	xxx	xxx	xxx	xxx	85,172	0.93	14,310	1.12	19.74	21.85			
32 Nebraska Public Power District	Gerald Gentleman	UP	BNSF	382	4,753,084	0.48	5,707,028	0.50	5,959,688	0.50	1,855,751	0.52	8.98	23.49			
33 Interstate Power	M. L. Kapp	BNSF/barge	UP/barge	983	717,403	0.92	669,349	0.69 2/	702,590	1.32	121,640	1.43	25.31	25.75			
34 Total/Weighted Average				750	24,092,498	\$0.73	25,929,663	\$0.70	26,249,849	\$0.80	8,020,565	\$0.78	\$13.51	18.03			
Grand Total/Weighted Average				689	46,131,863	\$0.76	51,329,999	\$0.71	51,641,048	\$0.77	16,018,104	\$0.78	\$13.45	19.53			

Source: FERC Form 423 data
1/ January through April 2003
2/ FERC data contains errors

Comparison of Annual Change in Capacity and Delivered Coal Prices at Big Stone Plant



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Exhibit II-A-33
Page 1 of 1

Comparison of Otter Tail Transportation Rates to BNSF System Coal Rates
(Revenue per Thousand Ton-Miles)

<u>Year</u>	<u>Otter Tail 1/</u>	<u>BNSF 2/</u>	<u>Percent</u>
(1)	(2)	(3)	<u>Difference</u>
			(4)
1996		11.65	
1997		11.62	
1998		11.10	
1999		10.64	
2000		10.43	
2001		9.96	
2002	14.89	9.89	50.6%
1Q2003	15.19	10.13	49.9%

1/ See Otter Tail Reply electronic workpapers, "exh 33 96to99.123", "exh 33 00to01.xls", "exh 33 wtd miles.123", Reply Workpaper Vol I. pp. 5021-5022.

2/ BNSF Annual Investor's Reports. Otter Tail Reply Workpapers Vol. I, pp. 5013-5020.

REDACTED

Exhibit II-A-34
Page 1 of 1

Comparison of Changes in Big Stone Rates and the RCAF-U / RCAF-A

<u>Period</u> (1)	Group D (Gillette) Rate to <u>Big Stone</u> (2)	<u>RCAF-U 1/</u> (3)	<u>RCAF-A 1/</u> (4)
1. 1Q 2000		0.941	0.536
2. 1Q 2001		0.979	0.539
3. 1Q 2002	\$13.49	0.971	0.520
4. 1Q 2003	\$13.76	0.996	0.512
Annual Change			
5. 1Q00-1Q01		0.038	0.003
6. 1Q01-1Q02		(0.008)	(0.019)
7. 1Q02-1Q03	\$0.27	0.025	(0.008)
Annual Percent Change			
8. 1Q00-1Q01		4.0%	0.5%
9. 1Q01-1Q02		-0.8%	-3.5%
10. 1Q02-1Q03	2.0%	2.6%	-1.5%
Cumulative Percent Change			
11. 1Q00-1Q01		4.0%	0.5%
12. 1Q00-1Q02		3.2%	-3.0%
13. 1Q00-1Q03	10.3%	5.8%	-4.5%

1/ 4Q2002 RCAF-U = 1.000

WORKPAPERS

**II-A OTTER TAIL REPLY
HARD-COPY WORKPAPER
INDEX**

	Pages
1. Variable Costs	
BNSF Statements Regarding Sound Financial Statements	4793-4805
Road Return and Depreciation	4806-4877
Locomotive and Spare Margin	4878-4905
Helpers	4906-4917
Aberdeen Road Switch Crew Train Activity Reports	4918-4952
3. Other	
BNSF's Financial Health	4953-5022
Revenue Shortfall Allocation Method	5023-5026
RCAF	5027-5050

II-A

Quantitative Market Dominance

II-A
Reply
Quantitative
Evidence

II-A-1

REPLY VARIABLE COSTS

BNSF STATEMENTS
REGARDING SOUND
FINANCIAL STATEMENTS

10-Q 1 d10q.htm FORM 10-Q (Q.E. 9/30/02)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2002

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission file number 1-11535

BURLINGTON NORTHERN SANTA FE CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)

41-1884964
(I.R.S. Employer
Identification No.)

2650 Lou Menk Drive
Fort Worth, Texas
(Address of principal executive offices)

76131
(Zip Code)

(800) 795-2673
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class
Common stock, \$.01 par value

Shares
Outstanding at
October 31, 2002
377,475,697 shares

CERTIFICATIONS

Page 1 of 1

EX-99.1 4 dex991.htm CERTIFICATIONS

Exhibit 99.1

Certification Pursuant to 18 U.S.C. §1350
(Section 906 of Sarbanes-Oxley Act of 2002)

Burlington Northern Santa Fe Corporation

In connection with the Quarterly Report of Burlington Northern Santa Fe Corporation (the "Company") on Form 10-Q for the period ending September 30, 2002 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Matthew K. Rose, Chairman, President and Chief Executive Officer of the Company, and Thomas N. Hund, Executive Vice President and Chief Financial Officer of the Company, each hereby certifies that, to his knowledge on the date hereof:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 13, 2002

/s/ MATTHEW K. ROSE
Matthew K. Rose
Chairman, President and Chief Executive Officer

/s/ THOMAS N. HUND
Thomas N. Hund
Executive Vice President and Chief Financial Officer

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<PAGE>

SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

Current Report Pursuant
to Section 13 or 15(d) of the
Securities Exchange Act

Date of Report (Date of earliest event reported): August 9, 2002

Burlington Northern Santa Fe Corporation
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of Incorporation)

1-11535
(Commission File Number)

41-1304964
(I.R.S. Employer
Identification No.)

2650 Lou Menk Drive, Fort Worth, Texas 76131-2630
(Address of Principal Executive Offices) (Zip Code)

(817) 352-4813
(Registrant's Telephone Number, Including Area Code)

(Not Applicable)
(Former Name or Former Address, If Changed Since Last Report)

<PAGE>

INFORMATION TO BE INCLUDED IN THE REPORT

Item 7. Financial Statements and Exhibits.

(c) Exhibits

See Exhibits Index included herewith.

Item 9. Regulation FD Disclosure.

On August 9, 2002, each of the principal executive officer and the principal financial officer of Burlington Northern Santa Fe Corporation submitted to the Securities and Exchange Commission a statement under oath in

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the Form of Exhibit A to Commission Order No. 4-460 issued June 27, 2002. The sworn statements are attached as Exhibits 99.1 and 99.2 and are incorporated by reference.

<PAGE>

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

BURLINGTON NORTHERN SANTA FE
CORPORATION
(Registrant)

Date: August 9, 2002

By: /s/ Thomas N. Hund
(Signature)
Thomas N. Hund
Executive Vice President and
Chief Financial Officer

<PAGE>

BURLINGTON NORTHERN SANTA FE CORPORATION

INDEX OF EXHIBITS

<TABLE>	
<CAPTION>	
Exhibit	
Number	Description
-----	-----
<S>	<C>
99.1	Statement Under Oath of Principal Executive Officer dated August 9, 2002.
99.2	Statement Under Oath of Principal Financial Officer dated August 9, 2002.
</TABLE>	
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<DOCUMENT>
<TYPE>EX-99.1
<SEQUENCE>3
<FILENAME>dex991.txt
<DESCRIPTION>STATEMENT OF PRINCIPAL EXECUTIVE OFFICER
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Exhibit 99.1

STATEMENT UNDER OATH OF
PRINCIPAL EXECUTIVE OFFICER
REGARDING FACTS AND CIRCUMSTANCES RELATING
TO EXCHANGE ACT FILINGS

I, Matthew K. Rose, state and attest that:

- (1) To the best of my knowledge, based upon a review of the covered reports of Burlington Northern Santa Fe ("BNSF" or the "Company"), and, except as corrected or supplemented in a subsequent covered report:

No covered report contained an untrue statement of a material fact as of the end of the period covered by such report (or in the case of a report on Form 8-K or definitive proxy materials, as of the date on which it was filed); and

No covered report omitted to state a material fact necessary to make the statements in the covered report, in light of the circumstances under which they were made, not misleading as of the end of the period covered by such report (or in the case of a report on Form 8-K or definitive proxy materials, as of the date on which it was filed).

- (2) I have reviewed the contents of this statement with the Company's Audit Committee.

- (3) In this statement under oath, each of the following, if filed on or before the date of this statement, is a "covered report":

2001 Annual Report on Form 10-K of BNSF filed with the Securities and Exchange Commission;

All reports on Form 10-Q, all reports on Form 8-K and all definitive proxy materials of BNSF filed with the Commission subsequent to the filing of the Form 10-K identified above; and any amendments to any of the foregoing.

/s/ Matthew K. Rose
Matthew K. Rose
Chairman, President and Chief Executive Officer
Burlington Northern Santa Fe Corporation
Date: August 9, 2002

Subscribed and sworn to
before me this 9th day
of August, 2002

Kaaran Frank
Notary Public
My Commission Expires: 9-29-05

</TEXT>
</DOCUMENT>

4798

Exhibit 99.1

STATEMENT UNDER OATH OF
PRINCIPAL EXECUTIVE OFFICER
REGARDING FACTS AND CIRCUMSTANCES RELATING
TO EXCHANGE ACT FILINGS

I, Matthew K. Rose, state and attest that:

(1) To the best of my knowledge, based upon a review of the covered reports of Burlington Northern Santa Fe ("BNSF" or the "Company"), and, except as corrected or supplemented in a subsequent covered report:

. No covered report contained an untrue statement of a material fact as of the end of the period covered by such report (or in the case of a report on Form 8-K or definitive proxy materials, as of the date on which it was filed); and

. No covered report omitted to state a material fact necessary to make the statements in the covered report, in light of the circumstances under which they were made, not misleading as of the end of the period covered by such report (or in the case of a report on Form 8-K or definitive proxy materials, as of the date on which it was filed).

(2) I have reviewed the contents of this statement with the Company's Audit Committee.

(3) In this statement under oath, each of the following, if filed on or before the date of this statement, is a "covered report":

. 2 1 Annual Report on Form 1 -K of BNSF filed with the Securities and Exchange Commission;

. All reports on Form 1 -Q, all reports on Form 8-K and all definitive proxy materials of BNSF filed with the Commission subsequent to the filing of the Form 1 -K identified above; and any amendments to any of the foregoing.

/s/ Matthew K. Rose
Matthew K. Rose
Chairman, President and Chief Executive Officer
Burlington Northern Santa Fe Corporation
Date: August 9, 2002

Subscribed and sworn to
before me this 9th day
of August, 2002

Kaaran Frank
Notary Public
My Commission Expires: 9-29-05

Exhibit 99.1

STATEMENT UNDER OATH OF
PRINCIPAL FINANCIAL OFFICER
REGARDING FACTS AND CIRCUMSTANCES RELATING
TO EXCHANGE ACT FILINGS

I, Thomas N. Hund, state and attest that:

(1) To the best of my knowledge, based upon a review of the covered reports of Burlington Northern Santa Fe ("BNSF" or the "Company"), and, except as corrected or supplemented in a subsequent covered report:

. No covered report contained an untrue statement of a material fact as of the end of the period covered by such report (or in the case of a report on Form 8-K or definitive proxy materials, as of the date on which it was filed); and

. No covered report omitted to state a material fact necessary to make the statements in the covered report, in light of the circumstances under which they were made, not misleading as of the end of the period covered by such report (or in the case of a report on Form 8-K or definitive proxy materials, as of the date on which it was filed).

(2) I have reviewed the contents of this statement with the Company's Audit Committee.

(3) In this statement under oath, each of the following, if filed on or before the date of this statement, is a "covered report":

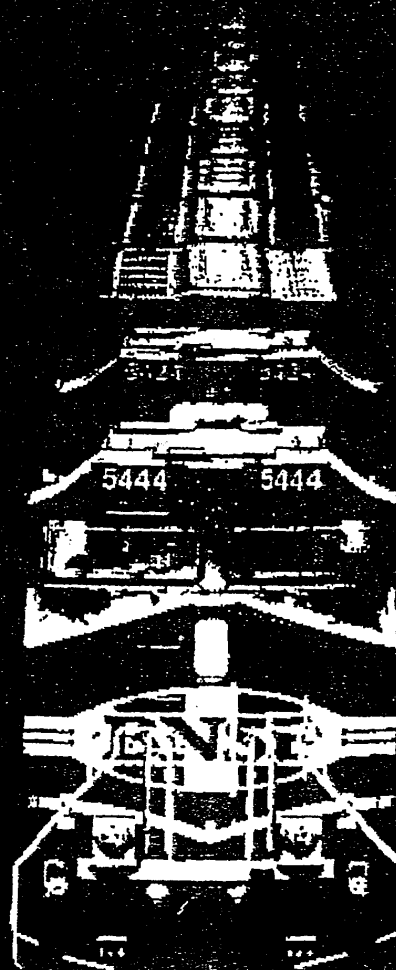
. 1 Annual Report on Form 1-K of BNSF filed with the Securities and Exchange Commission;

. All reports on Form 1-Q, all reports on Form 8-K and all definitive proxy materials of BNSF filed with the Commission subsequent to the filing of the Form 1-K identified above; and any amendments to any of the foregoing.

/s/Thomas N. Hund
Thomas N. Hund
Executive Vice President and
Chief Financial Officer
Burlington Northern Santa Fe Corporation
Date: August 9, 2002

Subscribed and sworn to
before me this 9th day
of August, 2002

/s/ Leslie H. Flores
Notary Public
My Commission Expires: 04/27/03



Burlington Northern Santa Fe Corporation
2000 Annual Report to Shareholders

through better design and execution of each car's service plan. We will continue to reset our service goals as we approach 2005. For our coal customers, our goal is to improve train cycle times from the mine to the utility and return to the mine. For our grain customers, our goal is to meet their request dates for hopper cars at the elevators and train delivery requirements to the ports and other receivers.

- *Ease of Doing Business* – Play a larger role in our customers' supply chains by reducing the number of customer touch points within BNSF and by expanding web-based transactions to cover all needs of our customers.
- *Efficiency* – Keep BNSF's cost per GTM at the lowest level in the industry without degradation to our infrastructure or service quality. This will be accomplished by optimizing our fleet size, velocity and facility capacity, as well as through disciplined execution of each car's service plan.
- *BNSF People* – Retain and hire a well-qualified and diverse workforce for BNSF. We will continue to improve safety performance and workforce development through training, an enhanced performance management system and adherence to BNSF's Vision and Values (see page 18).



This is a large undertaking that requires marshalling the ideas and commitment of all 40,000 BNSF employees. We believe it is the right course of action for our Company at this time, and we are confident that we can achieve these goals.

Our management team recognizes the importance of creating a positive and enthusiastic workplace environment, as expressed in one of our core shared values: "Empowering employees and showing concern for their well-being, and respect for their talent and achievements."

We have made progress since 1995 thanks, in part, to the quality of our management team and the support and trust of our Board of Directors. Three of our directors will not be standing for reelection at our annual shareholders meeting. Joseph F. Alibrandi and George Deukmejian served on the boards of predecessor companies since 1982 and 1991, respectively, and have reached

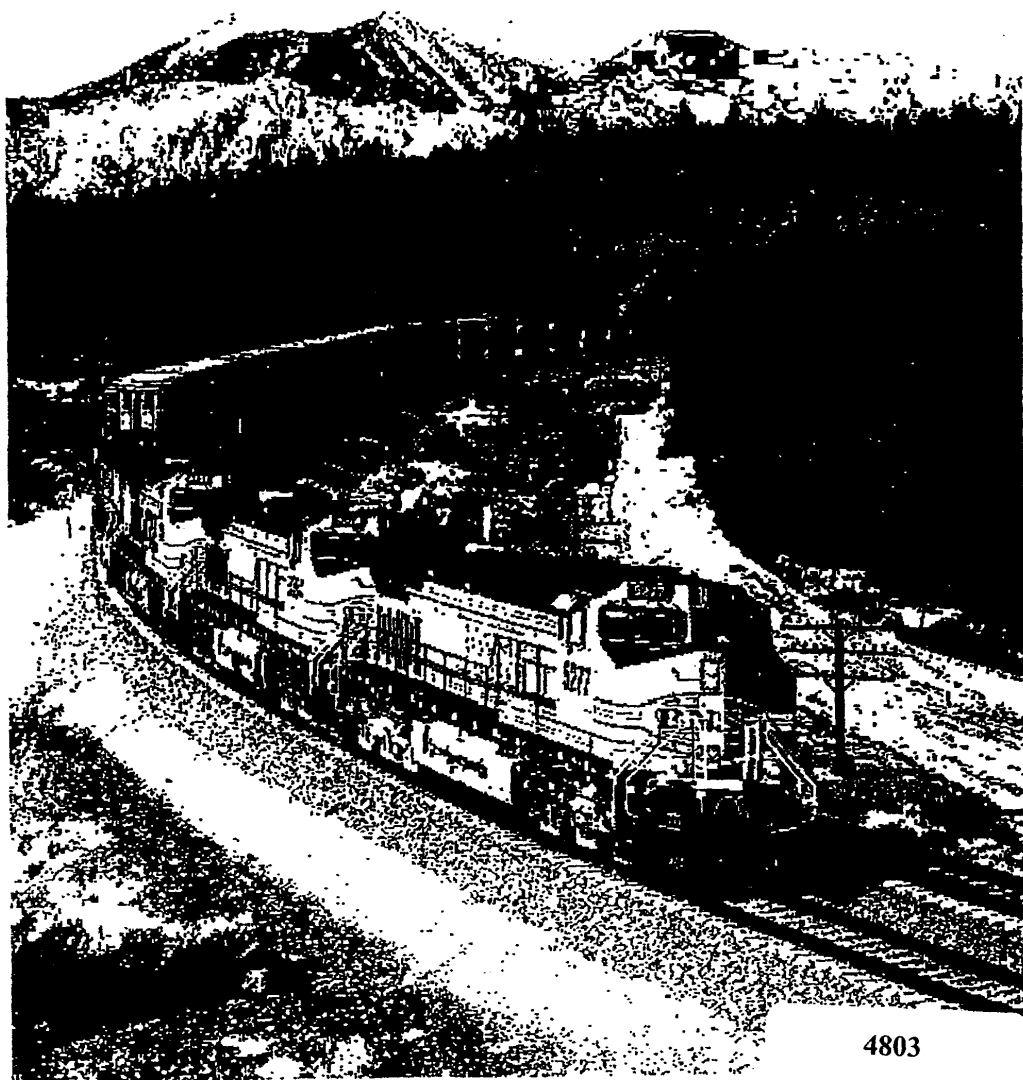
mandatory retirement age. Ronald Woodard joined the BNSF board at the time of the merger in 1995. All three directors have contributed significantly to shaping BNSF, and we extend our appreciation and thanks to them.

Finally, we wouldn't have achieved any of the successes described in this letter and on the subsequent pages of this report without the commitment, innovation and enthusiasm of our employees; the confidence and trust of the thousands of customers who do business with us, and the even larger number of shareholders who have invested in our future. To all of you, thank you very much.

Robert D. Krebs
Chairman

Matthew K. Rose
President and
Chief Executive Officer

Burlington Northern Santa Fe Corporation
2002 Annual Report to Shareholders



4803

Shareholder Information

Shares Listed

New York Stock Exchange,
Chicago Stock Exchange,
Pacific Exchange,
Ticker Symbol: BNI

Principal Corporate Office

2650 Lou Menk Drive,
Fort Worth, Texas 76131-2830
(800) 795-2673
www.bnsf.com

Stock Transfer Agent and Registrar

Via first class/registered mail:
EquiServe Trust Company, N.A.
P.O. Box 43069
Providence, Rhode Island 02940-3069

Via private mail carrier:
EquiServe Trust Company, N.A.
150 Royall Street
Canton, Massachusetts 02021

(800) 526-5673
<http://www.equiserve.com>

Shareholders

As of January 31, 2003, there
were approximately 42,000
shareholders of record.

Shareholder Services

You are encouraged to contact our
Transfer Agent directly for the
shareholder services listed below:

Change in Certificate Registration,
Dividend Reinvestment Service,
Change of Mailing Address, Lost
or Stolen Certificates, Replacement
of Dividend Checks, Direct Deposit
of Dividends, Consolidation of
Multiple Accounts, Elimination
of Duplicate Report Mailings,
Replacement of Form 1099-DIV.

Dividend Reinvestment Plan

A dividend reinvestment plan is
provided for registered shareholders
as a convenient way to purchase
more shares through investment of
dividends or voluntary cash payments.
A booklet describing the plan is
available from the Transfer Agent.

Form 10-K

The Company's Annual Report on
Form 10-K filed with the Securities
and Exchange Commission (SEC)
is posted on the Company's website,
www.bnsf.com. A copy of the
Annual Report on Form 10-K is
also available to shareholders free
of charge upon request to the
Company's Investor Relations
Department at 2500 Lou Menk
Drive, Fort Worth, Texas 76131-
2828. The Company's filings on
Form 10-K, Form 10-Q and Form
8-K are posted on the Company's
website as soon as reasonably
practicable after the reports are
electronically filed with the SEC.

Institutional Investors

Inquiries from security analysts and
investment professionals should be
directed to the Company's investor
relations contact:

Ms. Maisha K. Morgan,
Vice President - Investor Relations,
(817) 352-6452

Annual Meeting

The Annual Meeting of Shareholders
will be held at the Fort Worth Club,
306 West 7th Street, Fort Worth,
Texas, on Wednesday, April 16,
2003, at 2:00 p.m.

**Certification Pursuant to 18 U.S.C. § 1350
(Section 906 of Sarbanes-Oxley Act of 2002)**

Burlington Northern Santa Fe Corporation

In connection with the Annual Report of Burlington Northern Santa Fe Corporation (the "Company") on Form 10-K for the period ending December 31, 2002 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Matthew K. Rose, Chairman, President and Chief Executive Officer of the Company, and Thomas N. Hund, Executive Vice President and Chief Financial Officer of the Company, each hereby certifies that, to his knowledge on the date hereof:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 14, 2003

/s/ Matthew K. Rose

/s/ Thomas N. Hund

Matthew K. Rose
Chairman, President and Chief Executive Officer

Thomas N. Hund
Executive Vice President and Chief Financial Officer

II-A-1

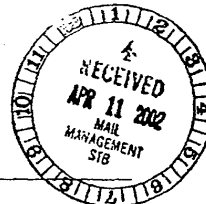
REPLY
VARIABLE COSTS

ROAD RETURN
AND DEPRECIATION

Pages 4807-4859

REDACTED

BEFORE
THE SURFACE TRANSPORTATION BOARD



OTTER TAIL POWER COMPANY,

Complainant,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY

Defendant.

Docket No. NOR 42071

ENTERED
Office of the Secretary

APR 11 2002

Part of
Public Record

COMPLAINANT'S
FIRST MOTION TO COMPEL PRODUCTION OF DOCUMENTS

Complainant, Otter Tail Power Company ("Otter Tail") hereby moves for an order compelling Defendant, The Burlington Northern and Santa Fe Railway Company ("BNSF"), to produce information sought in "Complainant's First Set of Interrogatories and Requests for Production of Documents" and in Complainant's "Third Set of Requests for Production of Documents," which were served on January 17, 2002 and on March 8, 2002, respectively. Otter Tail's Motion addresses two specific areas of discovery. First, this Motion asks the Board to order BNSF to respond to certain discovery on road property investment and depreciation costs, which is covered by Requests for Production ("RFP") Nos. 12, 13, 14, 109, 110 and 112. Second, this Motion asks the Board to order BNSF to respond to RFP-47, which encompasses forecasts of revenue and traffic volumes. Copies of these Requests and BNSF's responses and objections are attached hereto as Exhibits "A" and "B."

This Motion is supported by the Verified Statement of Joseph J. Plaistow ("Plaistow V.S."), a Vice President of L.E. Peabody & Associates, Inc. and a former employee of BNSF for

15 years. Mr. Plaistow explains the critical importance of road property investment information to accurately develop variable cost of providing rail service; states how Otter Tail intends to use that information in this proceeding; and describes how BNSF's refusal to provide this information will substantially impair Otter Tail's case. Mr. Plaistow's Verified Statement is attached as Exhibit "C."

I. BACKGROUND

Otter Tail filed its Complaint on January 2, 2002. The Complaint alleges that BNSF's common carrier rates for unit train transportation of coal from various mines in the Powder River Basin to Otter Tail's Big Stone Generating Station, located near Milbank, South Dakota ("Otter Tail movement"), are unreasonably high and therefore unlawful.

On January 17, 2002, shortly after filing its Complaint, Otter Tail served "Complainant's First Set of Interrogatories and Requests for Production of Documents." In RFP Nos. 12, 13 and 14, Otter Tail requested standard information on road property investment and depreciation. This information, which is routinely sought in stand-alone rate cases, will enable Otter Tail to calculate movement-specific variable costs. In RFP-47, Otter Tail requested forecasts or projections of future traffic volumes and revenues for both coal and non-coal traffic in the Stand-Alone Railroad ("SARR") states and along the Otter Tail route.

BNSF served its responses and objections to Otter Tail's first discovery requests on February 19, 2002. See Exhibit "A." In response to RFP Nos. 12, 13, and 14, requesting line-specific road property investment and depreciation, BNSF asserted the following identical objections:

BNSF objects to this Request on grounds that it is overly broad and unduly burdensome to the extent it seeks information that is not maintained by BNSF in the normal course of business, that is not maintained by BNSF in the format requested, or that would require

a special study to compile or to report in the format requested. BNSF further objects to this Request on grounds that the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable costs.

[emphasis added] The first sentence simply is a rote objection that BNSF asserted in response to virtually every Otter Tail document request, including those to which BNSF responded that it will produce documents. For RFP Nos. 12, 13 and 14, however, BNSF has refused to produce any documents for the reason stated in the underlined text.

On March 8, 2002, in an attempt to address BNSF's objections to RFP Nos. 12, 13, and 14, Otter Tail served additional road property investment and depreciation discovery requests in its third set of discovery requests to BNSF. Those requests included RFP Nos. 109, 110 and 112.¹ Nevertheless, BNSF repeated verbatim the same objections it asserted to RFP Nos. 12, 13, and 14 and added objections to specific subparts.² See Exhibit "B." Though BNSF indicated that it would provide Otter Tail with a more detailed written explanation of its objection, it has not done so.

In response to RFP-47, on projections and forecasts, BNSF asserted a series of confusing and convoluted objections without clearly stating whether it would produce any documents and, if so, what types of documents. In subsequent discussions between the parties, BNSF clarified that the following sentence from its objections defines the scope of what BNSF is willing to produce:

BNSF further objects to this Request to the extent it seeks any projections or forecasts other than BNSF's official traffic volume and revenue projections.

¹ Otter Tail believes that the information requested in RFP Nos. 109, 110 and 112 also are encompassed by RFP-12. Nevertheless, Otter Tail served the more narrowly tailored RFP Nos. 109, 110 and 112 in order to avoid any dispute over this fact.

² Although BNSF responded that it would produce documents in response to RFP-112, its willingness to do so is subject to its objection that "the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable costs." Because Otter Tail is unsure what, if anything, BNSF will produce in light of that objection, this Motion to Compel encompasses RFP-112.

[emphasis added] BNSF subsequently explained that its "official" forecasts consist of selected 2-3 year projections. Although BNSF has not denied the existence of longer term forecasts, it has classified those forecasts as "unofficial" and thus beyond the scope of what BNSF is willing to produce. BNSF has not explained its criteria for distinguishing "official" from "unofficial" forecasts, which remains unclear.

BNSF has made plain that it will not produce to Otter Tail the vast majority of the information requested on road property investment and depreciation or on traffic volume and revenue projections. Because this information is critical to Otter Tail's calculation of variable costs (and investment) and its calculation of stand-alone costs (forecasts), Otter Tail has filed this Motion to Compel.

II. ARGUMENT

Since the Interstate Commerce Commission ("ICC") adopted Constrained Market Pricing ("CMP") in Coal Rate Guidelines, Nationwide, 5 I.C.C. 2d 520 (1985), both the ICC and the Board have recognized the need for broad discovery by shippers and have granted such discovery. In Coal Rate Guidelines at 548, the ICC stated "We recognize that shippers may require substantial discovery to litigate a case under CMP, and we are prepared to make that discovery available to them." The Board's Rules of Practice promote this policy by permitting "discovery . . . regarding any matter, not privileged, which is relevant to the subject matter involved in a proceeding . . ." 49 C.F.R. § 1114.21(a).

The information that Otter Tail seeks from BNSF through this Motion to Compel is well within the broad scope of discovery in rate reasonableness proceedings. Moreover, this information is essential to Otter Tail's ability to calculate variable costs and stand-alone costs. In the following sections, Otter Tail demonstrates its real and practical need for discovery of

BNSF's (1) road property investment and depreciation costs and (2) revenue and traffic volume forecasts.

A. Road Property Investment and Depreciation Costs.

1. Otter Tail has a real and practical need to discover BNSF's road property investment and depreciation costs.

The relevance of road property investment and depreciation cost data to variable cost calculations is unquestioned because the information is needed to make line-specific adjustments to system average costs. The Board repeatedly has recognized that "[b]ecause a carrier's systemwide average costs are not necessarily representative of the costs of providing a particular service, [], appropriate adjustments are made in individual rate cases to determine as nearly as possible the costs attributable to providing the service at issue." Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry. Co., STB Docket No. 42038, 2000 STB Lexis 126, at *6 (served Mar. 6, 2000); see also West Texas Utils. v. Burlington Northern R.R., 1 S.T.B. 638, 717 (1996); Arizona Pub. Serv. Co. & PacifiCorp v. The Atchison, Topeka and Santa Fe Ry. Co., STB Docket No. 41185, 1997 STB Lexis 169 (served July 29, 1997). The Board has concluded that such adjustments are particularly appropriate "to reflect the economies and efficiencies that are associated with high-volume, repetitive movements such as . . . unit train service." Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry. Co., STB Docket No. 42056, 2001 STB Lexis 125, at *6 (served Feb. 9, 2001) ("TMPA"); see also, PPL Montana, LLC v. The Burlington Northern and Santa Fe Ry. Co., STB Docket No. 42054, 2000 STB Lexis 657, at *5 and n.8 (served Nov. 9, 2000); FMC Wyoming Corp. v. Union Pac. R.R. Co., STB Docket No. 42022, 2000 STB Lexis 269, at *89 (served May 12, 2000) ("FMC").

Otter Tail's discovery requests seek line-specific valuation data that will enable Otter Tail to make appropriate adjustments to BNSF's system average road property investment and

depreciation costs. In Iowa Pub. Serv. Co. v. Burlington Northern R.R. Co., No. 37029, 1985 ICC Lexis 542, at *8-9 (March 11, 1985) ("IPS"), the ICC held that

Line-specific valuation data are necessary to determine a railroad's investment base, the consideration of which is dispensable [sic] to any analysis of its cost of doing business. An inability to gain access to such data would substantially impair a rate complainant's opportunity to develop its case before the Commission. Thus, the information is clearly relevant.

[emphasis added] The ICC ordered BN to produce the same type of information that Otter Tail has requested in RFP-12. Moreover, the ICC considered the information so important that it required BN to perform a special study, if necessary, or to allow IPS to conduct its own study using BN's records. Id.; see also Platte River Power Authority v. Burlington Northern R.R. Co., No. 39687, slip op. at 2 (served Oct. 3, 1984).

Without discovery of BNSF on road property investment and depreciation costs, Otter Tail will be forced to rely upon system average costs, which almost certainly will overstate BNSF's variable costs for the Otter Tail movement. The Board recognizes that such an overstatement of variable costs, by not making a proper adjustment to system average costs, "would result in an understatement of the revenue-to-variable cost ratio of the transportation at issue, which could in turn affect whether we have authority under 49 U.S.C. 10707(d)(1) to review the rates or the extent to which we can afford relief if the rates are found to be unreasonable." TPMA at *10, note 10.

Otter Tail Witness Plaistow describes the impact that reliance on system average road property investment and depreciation costs would have had on past rate cases absent discovery of the railroad. Plaistow V.S. at 8-9. For example, in West Texas Utilities, the line specific road property depreciation was 74.6% of system average and the return on road property was 45.0% of system average. Id. at 8. At the jurisdictional threshold, the difference equaled \$1.28 per ton,

which amounts to \$2.6 million per year on West Texas' 2 million ton annual coal movement. Id. Otter Tail almost certainly would suffer a similar adverse impact without discovery of BNSF sufficient to enable Otter Tail to make appropriate movement-specific adjustments to system average costs. Clearly, BNSF's goal is to force such a result in this case and all future rate cases.

2. Otter Tail's discovery requests are reasonably tailored to permit movement-specific adjustments to BNSF's system average road property investment and depreciation costs.

Otter Tail's discovery requests on road property investment and depreciation costs are intended to permit Otter Tail to make the same kinds of adjustments to BNSF's system average data that have been made by both shippers and railroads, including BNSF's predecessors, and accepted by the Board for over fifteen years. Specifically, in order to calculate movement-specific variable costs, Otter Tail intends to determine road property investment and depreciation costs for the specific line segments traversed by Otter Tail trains based on BNSF's valuation records obtained through discovery. This is the same approach approved by the Board in other recent rate cases, including FMC Wyoming Corp. v. Union Pacific Railroad Co., STB Docket No. 42022, 2000 STB Lexis 269 (served May 12, 2000), and that BNSF itself used with Board approval in West Texas Utilities Co. v. Burlington Northern R.R., 1 S.T.B. 638, 724 (1996); see also San Antonio, Texas v. Burlington Northern R.R., 1 I.C.C. 2d 561 (1986); Omaha Pub. Power Dist. v. Burlington Northern R.R., 3 I.C.C. 2d 123 (1986), aff'd, 3 I.C.C. 2d 853 (1987).

As described by Otter Tail Witness Plaistow, Otter Tail intends to include all URCS road investments in its road depreciation and return on road costs. Otter Tail will accomplish this by dividing URCS road investments into two categories: (1) road investments that receive a line-specific adjustment, and (2) road investment that will remain in Otter Tail's costs on a system average basis. Plaistow V.S. at 5. In the first category, Otter Tail will calculate return on road property investment and annual depreciation expenses attributable to the Otter Tail movement

using BNSF's recorded line segment-specific investment and depreciation data by valuation section, which Otter Tail has requested in RFP Nos. 12, 13, and 14. Otter Tail also will use the information from these requests and RFP Nos. 109, 110 and 112 to determine what portion of non-line-specific road investment should be included in Otter Tail's movement costs on a system average basis.

What little explanation BNSF has provided to Otter Tail as the basis for its objection that "the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable costs" appears to be premised on an assertion that the line-specific data does not add up to the total road property investment in BNSF's Annual Report Form R-1. As a result, BNSF concludes that its own data is inconsistent with URCS. But, as Otter Tail Witness Plaistow explains, this assertion is nonsense, because BNSF cannot keep two sets of books on road property. Plaistow V.S. at 11. The data that is recorded on BNSF's line-specific records on road property must be the same information that was used as inputs to total the road property figures recorded on BNSF's R-1.³

It appears that BNSF is claiming that some, but not all, of its road property investment and depreciation costs are recorded on a line-specific basis, and that the failure to record 100% of these costs by line segment renders the line-specific cost elements inconsistent with URCS. This argument appears to be tied to the Board's recent decision in Wisconsin Power and Light Co. v. Union Pacific R.R. Co., STB Docket No. 42051, 2001 STB Lexis 740 (served Sept. 12, 2001) ("WPL"), where the Board declined to accept either party's line-specific adjustments to road property investment and depreciation costs and, instead, defaulted to system average costs. The Board used system average costs as the best evidence of record in that case because neither

³ The Board has ruled that, even if a particular costing procedure or formula is not discoverable because it is inconsistent with URCS, the data inputs are relevant and discoverable. Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry. Co., STB Docket No. 42038, 1999 STB Lexis 244, at *21-22 (served May 11, 1999).

of the adjustments proposed by WPL or UP accounted for unassigned costs. Id., at *84-86. But, the Board did not state, as BNSF seems to believe, that the existence of unallocated road investment and depreciation costs renders the data unreliable and requires the Board to "default" to system average. In fact, Otter Tail has formulated its discovery requests to address the WPL concerns by eliciting information that will allow Otter Tail to make line-specific adjustments that will account for all road property costs, both assigned and unassigned, that are used by the Otter Tail traffic. Plaistow V.S. at 10, 12, 13.

Specifically, there are methods by which the parties can determine whether certain unassigned or shared system costs could be assigned to the Otter Tail movement. For example, BNSF's unallocated costs may fall within the following three categories: (1) costs that ultimately will be, but have not yet been, allocated due to a time lag between the recording of costs on BNSF's books and the allocation of those costs to specific line segments; (2) costs attributable to write-ups of assets as a result of the merger of The Burlington Northern Railroad Company with The Atchison, Topeka & Santa Fe Railway; and (3) shared system costs that typically are not allocated to specific line segments. Otter Tail intends to address the first category through RFP-110, which would provide Otter Tail with the same information that BNSF eventually would use to allocate the investment among specific line segments. Otter Tail intends to address the second category through RFP Nos. 13 and 14, which attempt to identify merger-related write-ups.⁴ Finally, through RFP-109, Otter Tail attempts to identify the third category of unallocated costs, so that Otter Tail can evaluate and assign those costs that are used,

⁴ This reference to merger-related write-ups should not be confused with the argument rejected by the Board in FMG, at *11-12 and note 7, that UP should have used book value, rather than the acquisition value, for assets acquired from other railroads. In FMG, the Complainant attempted to exclude the acquisition premium paid for lines over which the issue-traffic moved. In this proceeding, since the Otter Tail movement does not traverse any former ATSF line, there is no basis to attribute any portion of the ATSF write-up of road property assets to the Otter Tail line segments.

in part, by the Otter Tail traffic. By including all URCS-related road investments in its road depreciation and return on road costs, both assigned and unassigned, Otter Tail would address both BNSF's relevance objection and the deficiencies that the Board found in the WPL parties' adjustments to system average costs.

BNSF, however, would deny Otter Tail the discovery that it needs to make these line-specific adjustments to system average road property investment and depreciation costs. If, after seeing Otter Tail's evidence and argument, BNSF still believes that the data used and/or adjustments made by Otter Tail are inconsistent with URCS, it can make that argument in its evidentiary submission. For now, BNSF should produce (1) the line-specific information that it maintains in the ordinary course of business, and (2) the non-line specific information for all other investments. The Board then will select the best evidence of record after both parties have made fully documented evidentiary submissions.

3. BNSF's objections go to the probative weight of the data, not to its discoverability.

The Board may easily dispense with BNSF's objections to Otter Tail's road property investment and depreciation discovery requests because BNSF's objections go to the probative weight of the evidence, not its discoverability. At the heart of BNSF's refusal to produce any information is its objection "on grounds that the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable costs." But, as demonstrated in the preceding section, the requested information is the same information that both the Board and BNSF have used to make movement-specific adjustments to road property investment and depreciation costs in numerous prior proceedings. Therefore, the relevance of this information has been long-established.

BNSF's objection does not provide Otter Tail or the Board with any explanation as to why the requested information no longer is consistent with URCS. Rather, Otter Tail is expected to accept BNSF's conclusion without question or any opportunity to make its own assessment. In fact, BNSF's refusal to produce responsive material denies Otter Tail access to the very data that is necessary either to verify or refute the accuracy of BNSF's conclusory objection. More importantly, the objection usurps the Board's responsibility to make that determination for itself based on the evidence and arguments presented by the parties.

BNSF's only explanation of its objection, which was provided orally to Otter Tail's counsel, is that the line valuation data is "unreliable" because it does not correspond with BNSF's R-1 totals.⁵ But, as previously demonstrated in Part II.A.2, *supra*, even if true, this assertion does not render the data inconsistent with URCS. Moreover, numerous ICC and STB decisions uniformly hold that the alleged unreliability of data is not grounds for withholding that data from discovery.

For example, in *IPS*, 1985 ICC Lexis 542, IPS sought to compel BN to produce system track information to calculate maintenance of way costs using the "Speed Factored Gross Ton" formula that the ICC had approved in prior cases. BN asserted a relevance objection based upon the reliability of the data. In ordering BN to produce the data, the ICC held:

BN's objection to the production of its track data goes to the probative weight that the information may have and not to its relevance. Although BN and IPS each cite conflicting initial decisions by [ALJs] to support their positions regarding the validity of the SFGT formula in determining maintenance-of-way costs, BN does not deny that such costs are a significant portion of a railroad's variable costs or that expenditures for maintenance-of-way are relevant in this proceeding. Thus, we cannot find that discovery would not lead to introduction of relevant evidence.

⁵ BNSF provided this explanation at a discovery conference held on March 7, 2002. BNSF also indicated that it would provide Otter Tail with a more detailed written explanation of BNSF's objections, but it has not done so.

Challenges to the reliability of the data are more properly raised if or when the data are offered in evidence.

Id. at *6-7 [emphasis added].

Similarly, in The Kansas Power & Light Co. v. Burlington Northern R.R., No. 39386, 1984 ICC Lexis 423 (June 22, 1984), the ICC ordered BN to produce its computerized accounts system, which was designed to provide expenditures for maintenance-of-way and structures over BN line segments. BN argued that "this system is unaudited, not fully developed, and not used or relied upon by BN personnel for any purpose." Id. at *6. In overruling BN's objections, the ICC determined that:

Data pertaining to MOW is relevant in determining the cost of service. Relevance, and not probative weight, is the test for determining the discoverability of information. 49 C.F.R. 1114.21(a)(1). Moreover, information is discoverable if it is "reasonably calculated to lead to the discovery of admissible evidence." 49 C.F.R. 1114.21(a)(2). The weight to be accorded to this information may be determined subsequently.

Id. [emphasis added]. See also Utility Fuels, Inc. v. Burlington Northern R.R., No. 39002, 1984 ICC Lexis 407, at *9 (June 29, 1984), in which the ICC concluded that "BN's arguments that it should not be required to produce the documents because they consist of either simulations or isolated test results, all of which are out of date, go to their substantive or probative weight and not to their admissibility or relevance."

Finally, in Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Railway Co., STB Docket No. 42038, 1999 STB Lexis 244 (served May 11, 1999), the Board overruled DMIR's objections to producing line-specific joint facility cost calculations:

DMIR contends that such documents are not relevant because they rely on derived, not actual, gross tons or mileages. Nevertheless, MPI avers that it cannot calculate line-specific joint facility costs without the missing items. Accordingly, MPI's motion to compel ... will be granted. DMIR is free to challenge the probative value of the derived data in the evidentiary phase of this proceeding.

Id. at *18 [emphasis added].

In each of the cases discussed above, the railroads' objections closely resemble BNSF's objections to producing road property investment and depreciation cost data in this proceeding. Just like the costs in those cases, road property investment and depreciation costs are a significant component of variable costs and thus are relevant to this proceeding. BNSF has not contended otherwise. Rather, BNSF has challenged the reliability of its data by challenging its consistency with URCS-based variable cost calculations. That, however, does not render the data irrelevant, as BNSF alleges in its objection. At the very least, the data is discoverable because it is "reasonably calculated to lead to the discovery of admissible evidence." 49 C.F.R. § 1114.21(a)(2).

BNSF's objections to the reliability of its data go to the data's probative weight, not its relevance. Such arguments, as the above-cited cases make abundantly clear, are more properly raised if or when Otter Tail offers the data in evidence. Otherwise, Otter Tail "may be deprived of a meaningful opportunity to prepare and file its opening evidentiary statement, since it has not yet reviewed the material." Utility Fuels, Inc. at *10.

4. The Board should overrule BNSF's objections for lack of specificity.

BNSF's failure to adequately explain its objections, in and of itself, provides an adequate basis to overrule its objections. BNSF's response to RFP Nos. 12, 13, 14, 109, 110 and 112 each contain the following identical language:⁶

⁶ BNSF adds further objections to specific subparts in RFP Nos. 109 and 110. In RFP-109, BNSF appears to be playing word games. It states that the depreciation data requested in subparts (b)-(e) is not available in the database that includes some of the Otter Tail line segment investment data. This response suggests that the data does exist in another database, but BNSF does not agree to produce that database even though it also would be responsive to RFP-12. BNSF objects to subpart (f) because the data requested has not been allocated to a specific line segment. But, Otter Tail has requested the data precisely because it is unallocated, so that it may evaluate whether any portion does in fact relate to the Otter Tail line segments.

(footnote cont'd on page 14)

BNSF objects to this Request to the extent that it is overly broad and unduly burdensome, that it seeks information that is not maintained by BNSF in the normal course of business, that is not maintained by BNSF in the format requested, or that would require a special study to compile or to report in the format requested. BNSF further objects to this Request on grounds that the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable costs.

These objections do not even assert that a request actually is overly broad or unduly burdensome, whether the information is maintained by BNSF in the normal course of business, whether the information is maintained in the format requested, or whether a special study would be required. As a consequence, Otter Tail cannot determine whether, or even how, to address these objections in this Motion to Compel. Also, as previously discussed in this Motion, BNSF has provided very little explanation of its objection "on grounds that the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable costs."

The rules governing discovery in STB proceedings are modeled on the discovery rules contained in the Federal Rules of Civil Procedure and the STB frequently has looked to judicial interpretations of those rules for guidance. *E.g., Potomac Elec. Power Co. v. CSX Transp., Inc.*, STB Docket No. 41989, 1997 STB Lexis 121, at *2 and n.5 (1997) ("Our discovery rules ... follow generally those in the Federal Rules of Civil Procedure."); *Arizona Electric Power Coop., Inc. v. The Atchison, Topeka, and Santa Fe Ry. Co.*, No. 37437, 1986 ICC Lexis 104, at *31 (Oct. 16, 1986) (referring to Fed. R. Civ. P. 26(b)(4) to determine application of the work-product doctrine); *Westinghouse Elec. Corp. v. The Alton & Southern Ry.*, 1 I.C.C. 2d 182, 185-86 (1984). Under the Federal Rules, "The resisting party must make a particular and specific demonstration of fact and cannot rely on simple conclusory assertions about the difficulty of

In RFP-110, BNSF objects to subpart (c) "on the ground that BNSF does not maintain data at the level of detail that would permit BNSF to respond to this Request." BNSF proceeds to state, however, that it will allocate these investments to particular accounts "at some point in time." Otter Tail simply asks that BNSF produce the same information that it will rely upon to make this future allocation, so that Otter Tail can make that allocation itself.

complying with a discovery request." Coker v. Duke & Co., 177 F.R.D. 682, 686 (M.D. Ala. 1998); see also McLeod, Alexander, Powel, and Apffel v. Quarles, 894 F.2d 1482, 1485 (5th Cir. 1990) (boilerplate objections to document requests as "overly broad, burdensome, and oppressive" are insufficient); Swift v. First USA Bank, No. 98 C 8238, 1999 U.S. Dist. Lexis 19474, at *18 (N.D. Ill. 1999) (failure to cite a basis for boilerplate objections violates the Federal Rules' requirement to specifically state the grounds and legal basis for each objection). Accordingly, under the Federal standard, the Board must reject BNSF's "litany" objections as legitimate bases for refusing Otter Tail's document requests.

The second part of BNSF's objection fails for the same reason. BNSF objects on the unexplained grounds that "the data maintained by BNSF would not be relevant to or consistent with URCS-based calculation of variable cost." BNSF's assertion is nothing more than an impermissible, conclusory allegation. As such, it fails to supply a valid basis for BNSF's refusal to produce responsive documents. See Burns v. Imagine Films Entertainment, Inc., 164 F.R.D. 589, 593 (W.D.N.Y. 1996) ("Defendants did not meet their burden under Rule 33(a) of making a specific showing of reasons why the interrogatories should not be answered or documents not produced where they merely made conclusory objections."). Accordingly, the Board should order BNSF to produce documents responsive to Otter Tail's road property investment and depreciation discovery requests.

A very practical reason for requiring objections to be raised with specificity is the need to have sufficient information upon which to base a Motion to Compel. Without an adequate explanation, the proposer of discovery often will find it difficult to prepare a Motion to Compel, particularly when, as here, the facts relied upon to support an objection are not readily apparent. In this proceeding, Otter Tail is left without any knowledge as to whether BNSF's "litany"

objections even apply to a particular Request. In addition, Otter Tail must divine the basis for BNSF's assertion that its road property investment and depreciation data is inconsistent with URCS-based variable cost calculations. The Board must not permit BNSF to "sand-bag" Otter Tail by holding arguments until its opposition that it should have made initially, thereby depriving Otter Tail of the opportunity to address the objection in its Motion to Compel.

B. Traffic Volume and Revenue Forecasts.

RFP-47 asks BNSF to produce "all forecasts or projections prepared by or for BNSF from 1999 through the present, or in BNSF's possession, of future traffic volumes and/or revenues" for both coal and non-coal traffic that use BNSF lines in the SARR states and any portion of the BNSF lines along the Otter Tail route. Otter Tail requires this information in order to develop appropriate traffic volumes and revenues over the life of the stand-alone railroad.

BNSF has agreed only to produce its "official" traffic volume and revenue projections, which BNSF has told Otter Tail make only 2-3 year projections. BNSF does not deny the existence of other, longer term, forecasts. Nor does BNSF explain why the production of such forecasts would be overly broad, unduly burdensome, or irrelevant. BNSF also has not explained what distinguishes an "official" forecast from an "unofficial" forecast, except to issue vague utterances that it does not rely on forecasts longer than three years. Instead, BNSF makes conclusory allegations and characterizations that should be rejected on the same precedent cited in Part II.A.4., supra.

The ICC and the STB long have held the production of traffic volume and revenue forecasts to be relevant. The ICC ordered ATSF to produce such information in Arizona Electric Power Cooperative, Inc. V. The Atchison, Topeka, & Santa Fe Railway Co., No. 37437, 1986 ICC Lexis 104 (Oct. 16, 1986), finding that "[t]he requested information is integral to the stand-

alone cost constraint under 1985 Guidelines . . . where we determined that the stand-alone cost constraint is a long-term concept involving traffic projections." Id. at *20-21, citing Ex Parte No. 347, slip op. at 30-31; see also The Kansas Power & Light Co. v. Burlington Northern R.R., No. 39386, 1984 ICC Lexis 423, at *4-5 (June 22, 1984); San Antonio, Texas v. Burlington Northern R.R., No. 36180, 1986 ICC Lexis 56, at *10 (Nov. 24, 1986) (ordering production of coal and non-coal traffic volume projections over BN claims of imprecision and unreliability).

In West Texas Utilities Co. v. Burlington Northern Railroad, 1 S.T.B. 638, 662-63 (1996), the Board found that BN's own traffic forecasts prepared in the ordinary course of business, and not for purposes of litigation, to be persuasive evidence of traffic growth. Similarly, in McCarty Farms, Inc. v. Burlington Northern Railroad, 2 S.T.B. 460, 474 (1997), the STB declared its preference for normal business forecasts made by the carrier serving a particular market over a projection that merely assumes historical trends will continue in the future. The Board reached the same conclusion as to forecasts for both traffic volumes and revenues in FMC, at *57 and 66-67.

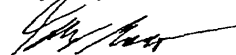
Because BNSF's long-term forecasts clearly are relevant and BNSF has not supported its claims of burden and overbreadth, the Board should order BNSF to produce documents that respond fully to RFP-47.

III. CONCLUSION

WHEREFORE, for the foregoing reasons, Otter Tail respectfully requests the Board to issue an order compelling BNSF immediately to produce to Otter Tail the following data and information:

1. Information on road property investment and depreciation that is requested in RFP Nos. 12, 13, 14, 109, 110 and 112; and
2. All traffic volume and revenue forecasts that are requested in RFP-47.

Respectfully submitted,



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Attorneys for Complainant

April 11, 2002

II-A-1

REPLY
VARIABLE COSTS -

LOCOMOTIVE
AND SPARE MARGIN

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 SERVICE DATE
 APR 11 1986

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This decision will be included in the bound volumes of the ICC printed reports at a later date.

INTERSTATE COMMERCE COMMISSION

No. 36180

SAN ANTONIO, TEXAS, ACTING BY AND THROUGH ITS CITY PUBLIC SERVICE BOARD

v.

BURLINGTON NORTHERN RAILROAD COMPANY, ET AL.

Decided: March 26, 1986

Certain post-Staggers Act rate increases on coal movements to San Antonio's electric generating facility found to have exceeded the 162 percent revenue-to-variable cost standard of Section 203(c)(1)(A) of the Staggers Rail Act of 1980, and refunds plus interest awarded.

Donald G. Avery, Kelvin J. Dowd, John H. LeSeur, C. Michael Loftus, and William L. Slover for complainant.

James C. Dechane, Ronald S. Flagg, R. Eden Martin, Thomas W. Merrill, Thorndund A. Miller, Nicholas P. Moros, Donal L. Turkal, and Stuart E. Vaughn for defendants.

DECISION

BY THE COMMISSION:

This proceeding concerns the lawfulness of the rates charged on movements of coal in unit trains by Burlington Northern Railroad Company (BN) from the Powder River Basin of Wyoming to an interchange point with Southern Pacific Transportation Company (SP) near Fort Worth, TX, then by SP to the Elmendorf, TX electric generating plant operated by the City of San Antonio, TX (San Antonio).

BACKGROUND

The San Antonio coal rate dispute has a long and complicated history. It is divided into two distinct phases. Phase I rates, involving the tariff rates from the effective date of the so-called San Antonio II tariff [see San Antonio, Texas v. Burlington Northern Inc., 359 I.C.C. 1 (1978)] to the effective date of the Staggers Rail Act of 1980 (Staggers Act), are not at issue in this decision, although phase I is still pending before the Commission.^{1/} Phase 2, to which this decision is addressed, involves the lawfulness of the rates from the effective date of the Staggers Act to October 1, 1987, which is governed by Section 203(c) of the Staggers Act.^{2/}

In this decision we interpret the reach of Section 203(c)(1)(A), find that it is applicable to this San Antonio traffic, award appropriate refunds for the period from October 1, 1980 through March 31, 1984, and establish a schedule for the submission of updated cost evidence relating to subsequent movements.

1/ Phase I was held in abeyance pending the establishment of final standards governing maximum rates for the transportation of coal. On October 1, 1985, shortly after the Commission issued its decision in Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines Nationwide, 1 I.C.C. 2d 520 (1985), phase I was reopened.

2/ Section 203(c), which is reproduced in full below, creates a special cap on rate increases on coal movements that meet specified qualifications. It provides for applicable movements beginning on October 1, 1980 and continuing until October 1, 1987. Coal rates may be increased only if the resulting rate coal revenue-to-variable cost ratio of more than 162 percent.

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 Level 2
 62% Staggers

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Appendix C

Equipment Costs

Complainant's Position

In its calculation of variable costs for the subject movement, the Complainant (or San Antonio) included the costs associated with the acquisition of locomotives, cars and cabooses. These equipment costs, stated on an annualized basis, were developed as of each quarter from the fourth quarter of 1980 through the second quarter of 1984. The Complainant developed a separate cost for each type of equipment each quarter. The methodology used by the Complainant to develop each of those separate costs was the same for each of the 15 quarters. Any differences in costs between quarters resulted entirely from the Complainant's use of different methodological inputs (equipment costs, embedded debt rates, service lives, etc.). For example, San Antonio developed BN's locomotive costs for each of the first five quarters (4th quarter 1980 - 4th quarter 1981) based on costs and other data for locomotives in BN's Alliance Pool as of June, 1981. For each of the next four quarters (1st quarter 1982 - 4th quarter 1982) those locomotive costs were based on data for locomotives in the Alliance Pool as of March, 1982.

In developing locomotive costs, the Complainant divided the locomotive pool into three categories: those purchased, those acquired under operating lease, and those acquired under capital lease.^{1/} For costing purposes, San Antonio treated operating lease locomotives different from those purchased or acquired under capital lease. In the case of the former, the Complainant's cost calculations provided for recovery by the railroad of rent expense. In the case of purchased and capital lease locomotives, San Antonio's cost calculations provided for recovery by the carriers of both cost of capital and depreciation expense. In arriving at overall locomotive costs, San Antonio determined a separate cost for purchased locomotives, operating lease locomotives and capital lease locomotives and then weighted those costs according to the proportion of each type of locomotive in the pool.^{2/}

Unlike locomotives, the Complainant treated all cars and cabooses the same for costing purposes. San Antonio's car and caboose cost calculations provided for recovery by the railroads of both cost of capital and depreciation expense.

^{1/} According to the Complainant, only the BN acquired locomotives under capital lease. All of SP's locomotives were either purchased or acquired under operating lease.

^{2/} In arriving at a single cost for BN's capital lease locomotives, the Complainant determined a separate cost and 18 year lease life locomotives and then weighted the costs according to the proportion of each in the capital lease pool.

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INTERSTATE COMMERCE COMMISSION

DECISION

SERVICE DATE

JAN 15 1986

No. 39783

OMAHA PUBLIC POWER DISTRICT
v.
BURLINGTON NORTHERN RAILROAD COMPANY

Decided: January 10, 1986

By complaint filed February 1, 1982,¹ as amended 28 months later on June 27, 1984, Omaha Public Power District (OPPD or complainant) a public corporation, and political subdivision of Nebraska, contends that defendant's charges² for the transportation of unit trains of coal³ over its lines from Caballo Junction and Rawhide Junction, WY to OPPD's generating stations at Arbor, NE were, are and will be unreasonable. OPPD seeks reparation and relief for the future.

The parties submitted voluminous evidence. A limited hearing for the purpose of cross-examination was conducted in Washington, DC, on April 15, 1985. Briefs were filed by the parties.

OPPD is engaged in the generation, transmission, distribution and sale at retail of electrical energy in southeastern Nebraska to approximately 225,000 customers. It owns and operates the Nebraska City Power Station (NCPS) which is a coal-fired electrical generating station located at Nebraska City, NE. OPPD receives its coal for NCPS at Arbor, NE, in defendant Burlington Northern Railroad Company's (BN) single line service.

Upon advice of counsel OPPD had a trainload moved from and to the involved points on or after July 1, 1982 at the trainload or multiple-car, non annual volume tariff rate of \$17.05. The history of the section 22 quotations pursuant to which all the traffic has moved since that time appears next.

¹ The initial complaint was dismissed on June 1, 1982 but reinstated on December 30, 1982. By order served October 11, 1983 this proceeding was held in abeyance pending a final decision in Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines - Nationwide. By order served June 30, 1984, this proceeding was moved forward to enable the submission of evidence by the parties.

² Rates, charges and Section 22 "quotations" or "advices" are in amounts per net ton.

³ Unit trains consist of 100 to 120 hopper cars.

ultimately the related accounting charges for depreciation. Use of a 100 percent variability factor to compute locomotive depreciation expense requires adjustment of the variability factor for the many other expenses included in the RPA subdivision which contains locomotive depreciation expense which BN has not done. In view of BN's failure adequately to support its position with probative evidence the restatement uses the supported RPA variability factor of 75 percent.

4. Number of locomotives

OPPD calculated the average number of locomotives used to provide the service at issue based on the miles run by segment. BN apparently relied upon cycle hours by segment to calculate the requisite number of locomotives. However, BN's analysis is defective in that BN's workpapers do not contain the data necessary to determine whether actual or planned cycle hours per segment were used and in fact contain two cycle time sources producing differing results. OPPD's substantiated analysis is the best evidence of record.

5. Cost of capital

The essential difference between the cost of capital for locomotives as computed by OPPD and by BN lies in the treatment accorded to locomotives secured under operating leases.

OPPD disaggregated the locomotives in BN's Alliance Pool (from which all locomotives used in OPPD service are drawn) into three acquisition vehicles. An appropriate rate of return was accorded locomotives obtained by purchase or through a capital lease.

However, for locomotives secured under operating leases, OPPD considered the annual lease payments of such locomotives to be equal to BN's capital cost on those locomotives. BN contends that the operating leases on the locomotives used to transport OPPD traffic are long-term, non-cancellable, full-payout financial instruments. It urges that they should be treated as capital leases citing an initial decision of former Judge McGrail in No. 39082, Arkansas Power and Light v. Burlington Northern, decided June 26, 1984 (AP&L) which stated that if the BN leases are long-term, non-cancellable full-payout financial instruments as alleged, they would have the characteristics of a capitalized lease and should be included in the investment base. However, since the lease documents were not in that record (No. 39082) a positive determination could not be made.

The Commission's Uniform System of Accounts provides instructions for Accounting for Leases in 49 C.F.R. § 1200 2-20.

2-20 Accounting for Leases. (a) Leases shall be accounted for as capital leases whenever the lease meets one or more of the following four criteria:

(1) The lease transfers ownership of the property to the lessee by the end of the lease term.

(2) The lease contains a bargain purchase option.

(3) The lease term is equal to 75 percent or more of the estimated economic life of the property, and,

(4) The present value at the beginning of the lease term of the minimum lease payments equals or exceeds 90 percent of the fair value of the leased property to the lessor at the inception of the lease less any related investment tax credit retained by the lessor.

(b) If the lease does not meet any of the four criteria, the lease shall be classified and accounted for as an operating lease.

(c) The criteria specified in paragraph (a) should be applied to all leases regardless of the relationship between the lessor and the lessee unless it is clear that the terms of the lease transaction

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BEFORE THE
INTERSTATE COMMERCE COMMISSION

DOCKET NO. 38783

OMAHA PUBLIC POWER DISTRICT

V.

BURLINGTON NORTHERN RAILROAD COMPANY

DEFENDANT'S VERIFIED STATEMENTS

VARIABLE COSTS

VOLUME I

Part 2

Witnesses:

Thomas R. Hackney
Andrew J. Spurlock
Roger S. Wells

Donald E. Engle
Edmund W. Burke
Nicholas P. Moros
Mark E. Southerst
Donald L. Turkal
Attorneys for Burlington
Northern Railroad Company

3300 Continental Plaza
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(817) 678-2360

Due Date: February 14, 1985

COAL POOL LOCOMOTIVES

The locomotives assigned to the coal power pools are units of 3000 horsepower (high horsepower locomotives), with six axles. There is a major difference when comparing coal assigned units and those used in general freight service - the latter of which are usually less than 3000 horsepower, with four axles. The horsepower and axle difference gives the coal assigned units the capacity to handle heavier loads with better traction and at lower speeds. Also, the coal assigned units are equipped with specialized pacesetter equipment to control the speed of the train to a speed as low as 0.4 miles per hour for coal train loading operations. Pacesetter equipment is not necessary on general service locomotives since locomotives in general service have no need for continuous commodity loading which requires slow movement of cars under loading tipples.

COAL POOL CREATION & USER ALLOCATION

Locomotive requirements for all of BN's western unit coal trains are met from BN's coal locomotive pools. The pool size is determined by the locomotives required by the users (i.e., the utilities receiving the coal). The number of locomotives that are in a pool is based on the number of car sets in service required to transport the amount of coal demanded by all the users. The entire fleet of locomotives making up the pools must be allocated to each user in an

Burlington Northern has established locomotive "pools" to efficiently meet the motive power needs of unit train coal operations:

Locomotive pools...

- Are assigned to specific locations for scheduled maintenance
 - Allow each user to share in the pool efficiencies
 - Are managed by a centrally located power control team
 - Carefully monitored on a minute by minute basis and ***all activities recorded***
-

Since locomotive requirements for all unit coal trains are met from locomotive "pools" the entire fleet of locomotives making up the "pools" must be allocated to each user in an accurate and equitable manner



1 The pools are dynamic and constantly changing to meet overall user needs

2 Certain pool activities are not specific to any user and yet must be shared by all

This decision will be included in the bound volumes of
Printed Reports at a later date

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SURFACE TRANSPORTATION BOARD

DECISION

No. 41151

WEST TEXAS UTILITIES COMPANY
v.
BURLINGTON NORTHERN RAILROAD COMPANY

Decided: April 25, 1996

The Board finds that the defendant railroad has market dominance over the traffic at issue and that the rate charged by the defendant on that traffic is unreasonable. A maximum reasonable rate limit is set and reparations are ordered.

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powered by SD70MAC locomotives, we reject WTU's use of average costs for a variety of types of engines.

b. Original value. WTU uses \$1.9 million as the original value of SD70MAC locomotives, while BN uses \$2.0 million. However, BN's records indicate that the average original cost of SD70MAC locomotives was \$1.9 million.¹³⁴ Consequently, we accept WTU's \$1.9 million figure.

c. Spare margin. BN assumes that WTU's service requires a spare margin of 31.22%. WTU applies a 10% spare margin factor.

BN's figure is developed from a study of locomotive service at its Alliance shop during the first 6 months of 1994. BN acknowledges, however, that the Alliance pool does not include data for SD70MAC locomotives. With the exception of the SD60 series locomotives, the average age of Alliance locomotives ranges between 15 and 19 years. This compares to the average age of the SD70MAC locomotives of 1.26 years. The impact of locomotive age on spare margin is shown in BN's study.¹³⁵ The spare-margin ratio for the newer SD60 series locomotives is significantly lower than for the older locomotives in the pool, and the percentage of bad-order time for SD60s is less than for the remainder of the Alliance Pool. There are no data representative of the newer SD70MAC locomotives that substantiate the use of a spare margin different from the 10% accepted in past cases.

d. Cycle time. As discussed previously, this proceeding focuses on the reasonableness of rates from Rawhide only. WTU's cycle time is based on aggregate data from various origin mines, and we are unable to disaggregate the data. BN relied on actual Rawhide-to-Oklahoma cycle time. Consequently, we accept BN's cycle time as the best evidence of record for calculating locomotive and car requirements.

e. Equipment hours per year. BN's calculations assume an 8,760-hour year (365 days x 24 hours). WTU develops its cost using 8,766 hours or 365.25 days per year. Because WTU's estimate gives effect to leap years, it is slightly more accurate, and we accept it.

Based on the above discussed elements, we calculate locomotive ownership costs at \$96.51 per carload.

13. Locomotive Operating Expense.

BN develops its LUM expense by adjusting system-average costs for SD70MAC locomotive fuel efficiency and repair cost. BN develops LUMs of 57.3724 per car corresponding to an operating cost of \$120.80 per car.

WTU uses the same general method as BN. WTU calculates the LUMs per car at 69.1438 using a mixture of locomotive types. WTU calculates LUM operating expense to be \$110.53 per car.

As discussed supra, Section 4, we disallow the adjustment factors developed by both parties for locomotive repairs and fuel expense. However, we accept BN's calculation of 57.3724 LUMs per car, because it is based on the actual number of SD70MAC locomotives used to provide service to WTU. Therefore, our

¹³⁴ WTU Rebuttal, O'Connor Workpaper K000549.

¹³⁵ BN Reply, Workpapers KX000042 through KX000053.

SERVICE DATE

MAY 13 1987

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This decision will be included in the bound volumes of the ICC printed reports at a later date.

INTERSTATE COMMERCE COMMISSION

No. 36719

ARKANSAS POWER & LIGHT COMPANY, ET AL.^{1/}
v.
BURLINGTON NORTHERN RAILROAD COMPANY, ET AL.^{2/}

No. 37456

ARKANSAS POWER & LIGHT COMPANY, ET AL.
v.
BURLINGTON NORTHERN RAILROAD COMPANY, ET AL.

No. 39082

ARKANSAS POWER & LIGHT COMPANY, ET AL.
v.
BURLINGTON NORTHERN RAILROAD COMPANY, ET AL.

No. 39668

ARKANSAS POWER & LIGHT COMPANY, ET AL.
v.
BURLINGTON NORTHERN RAILROAD COMPANY

Decided: May 7, 1987

Upon application of coal rate guidelines, unit train rates on coal from the Powder River Basin of Wyoming found to exceed a maximum reasonable level for certain coal movements to Redfield, AR, in 1982, and for all coal movements to Kansas City, MO, in 1983 and 1984, and found not shown to exceed a maximum reasonable level for all coal movements to Newark, AP, in 1982 and 1983. Reparations with interest ordered.

J. Raymond Clark and Mary Todd Foldes for complainant.

Douglas J. Bebb, Robert B. Satchelder, Edmund W. Burke, Donald E. Smith, Kathleen M. Flanagan, Nicholas P. Moros, William R. Power, Louise A. Kinn, Mark E. Southerst, James G. Stroe, and Donald L. Turkel for defendants.

^{1/} The other complainant is System Fuels, Inc., a jointly owned subsidiary of four electric utilities (including AP&L) that is organized for the purpose of acquiring, transporting, and storing fuel for the generating plants of its parent utility companies.

^{2/} Burlington Northern Railroad Company (BN) is a defendant in all four proceedings. Missouri Pacific Railroad Company (MP) is a defendant in only three of the proceedings: No. 36719, No. 37456, and No. 39082.

As in Omaha, supra (2 I.C.C.2d at 31), however, the real dispute here concerns the proper treatment of locomotives acquired by operating lease (which are not included as assets on the books of the railroad) and whether those locomotives should receive a return on capital or be expensed. APL used the lease payments of the locomotives whose leases have been designated as operating leases to develop the charges associated with leasing this equipment. BN countered, arguing that those lease payments understate the actual cost associated with the equipment since the leases were not actually operating leases. BN contends that if the leases were true operating leases, the annual rental payment would be higher.

We have examined the complete lease documents of those locomotives in the Alliance Pool characterized as operating leases. Clearly BN chose to classify the leases as operating leases for reporting purposes. Although the leases in question could arguably be considered as capital leases, we believe it is appropriate to hold BN to the basis on which it reported the leases in this context as well. Moreover, as in Omaha, 2 I.C.C.2d at 31, it appears that BN's exhibits are themselves styled "Operating" leases.

2. The second locomotive ownership issue is whether the defendant carriers have justified substituting a 100 percent variable factor in lieu of the 79 percent variability factor applied by APL to locomotive depreciation. BN's 100 percent variability factor implicitly assumes that the size of the locomotive fleet increased at the outset of the subject movement in direct proportion to the number of units handling APL traffic, and that it would commensurately decrease in direct proportion upon cessation of the service. BN contends that its direct costing approach already includes the constant portion of system locomotive depreciation expenses and to apply the variability factor would result in including the constant portion twice. BN cites two Commission decisions^{1/} to support its use of 100 percent depreciation variability.

There is no basis in these records for distinguishing between average freight locomotives and those dispatched in unit train coal service from the Alliance Pool. Since the variability factor measures, in effect, changes in fleet size arising from fluctuations in traffic levels, any departure from the RFA 79 percent average can be justified only if the substitute percentage is shown to provide a more accurate measure. BN simply has not provided evidence to support its 100 percent variability factor.

Moreover, the cases cited by BN do not invalidate use of the 79 percent variability factor. The assertion in Arizona dealt with non-dedicated locomotives at a fully allocated (not variable) level, while the Arkansas citation arose from a misinterpretation of the decision in Docket No. 37667S, Central Louisiana Electric Company v. Burlington Northern Inc. and Missouri Pacific Railroad Company, served February 25, 1983, wherein variability was properly permitted for coal pool locomotives. See Omaha, supra, at 30-31. Thus, APL's 79 percent factor is appropriate for use here.

Locomotive Cost

3. APL used a 10 percent spare margin for locomotives. The 10 percent margin is the figure usually applied in Commission proceedings (see, e.g., Omaha, supra, 2 I.C.C.2d at 36 n.51 and authorities cited there.) Moreover, here, BN itself used a 10 percent spare margin in developing capital costs for its own SAC railroad (see Exhibit No. 15, Appendix A in Kansas City). However, BN challenges

^{1/} Docket No. 37437, Arizona Electric Power Cooperative, Inc. v. Tucson, Topeka and Santa Fe Railway and Southern Pacific Transportation Company, served August 14, 1981. Docket No. 39408, Arkansas Power and Light Company, et al. v. Burlington Northern Railroad Company, et al.

the 10 percent figure, arguing that a spare margin of approximately 30 percent is a more accurate estimate for the APL movements based upon studies from its Alliance Pool. As in Omaha, supra, we conclude that BN's studies are not sufficiently reliable to depart from the 10 percent figure applied by APL.

One issue in this context concerns whether the spare margin should include all locomotives that are not in active service. According to BN, the Commission has confused the concept of inactive locomotives with a narrower category of spare locomotives for which bad order units were reported in Form OS-C, Motive Power and Car Equipment. In this report, units were classified as bad order only if held in such status for periods exceeding 24 hours. BN states that its study results reflect all non-cycle hours in functions supporting in-cycle operations.

There is a problem with including all non-cycle hours from the Alliance Pool, as BN has done, and attributing that figure to the APL movements. The non-cycle factor appropriate to coal pool locomotives may reflect not only the traffic patterns of the various coal movements which draw power from the pool, but also the overall level of line congestion influenced by non-coal movements. For example, a decline in non-coal movements may have the effect of decreasing coal train running times. Whether such decrease would translate into a reduction in pool locomotive units would depend upon the ability of the mine or utility to handle the train at the origin or destination terminal upon arrival. However, the record does not disclose whether trains involved in the APL movements that arrive at a terminal ahead of schedule are handled immediately or must await scheduled loading/unloading times.

It should also be recognized that investment costs of maintaining BN's power pool do not equally affect all of the coal traffic drawing power from the pool. For example, BN states that coal trains originating on its Gillette-Orin line destined for points south of Northport, Nebraska do not pass through the Alliance locomotive heavy repair complex. Hence, locomotives handling such trains must be shuttled 33.8 miles in each direction at a minimum for maintenance. A BN average non-cycle factor weighted to reflect this shuttling would, if applied to APL trains operating via Alliance, overstate the non-cycle ratio.

In sum, applying to an individual movement the average cycle experience for a pool serving numerous coal movements may result in significant distortion. For example, when an individual movement experiences an increase in cycle times, with no such increase occurring generally, the likelihood is that the relatively fixed number of non-cycle hours identifiable with that movement would constitute a smaller than average proportion of total cycle hours. Hence, in the absence of compelling reasons otherwise, the pool non-cycle factor would be inappropriately high for such a movement. Here, we cannot test the BN study's reliability as applied to the pool as a whole or to the subject movement.

In order to justify applying the BN pool studies to individual movements, at a minimum, the count of non-cycle hours should be allocated and applied on at least three separate bases: (1) per locomotive unit-mile (distance related), (2) per locomotive unit-hour (time related) and (3) per locomotive unit dispatched (neither distance nor time related). Such an approach would tend to eliminate existing distortions in BN's procedure, whereby individual coal movements having widely varying characteristics are nevertheless charged with coal pool average non-cycle experience expressed on a time basis only. Absent such an approach, we believe the 10 percent spare margin to be preferable.

Finally, in the Redfield case, APL uses a utility method (rental payment) for developing locomotive Ownership Cost for the WP portion of the joint-line movement. In addition, APL did not apply a non-revenue factor in developing the cost stating that 100 percent of the actual cost is already included.

We agree that the utility method used by APL may not account for the time value of money and may thus produce an average annual capital charge which has a present value less than the original cost of the investment. Therefore, where the record permits it, we have used the annuity method in developing locomotive ownership cost.

The purpose of applying a non-revenue factor is to assure that the railroad recovers those operating costs incurred in carrying company materials and supplies without charge. MP's application of a non-revenue factor is entirely appropriate.

Locomotive Maintenance

For the BN portion of the movements, APL developed factors for adjusting BN's RFA system average locomotive maintenance expense, using BN's own SMD-510 report (Service Locomotive Repair Cost) and LCP-003 (Locomotive Condition of Power -- Mileage Summary Report). From these reports, APL segregated the direct expense dollars and mileages operated by all model types in the Alliance Pool and for the entire system. Then, APL calculated an average direct cost per locomotive unit-mile for each model type. The costs per mile were weighted by the percentages of the various model types, thus creating an average Alliance Pool locomotive unit-mile direct expense. A comparison of this Alliance Pool average with the system average unit-mile direct expense produced the various adjustment factors used by APL.

BN's principal criticism of APL's locomotive maintenance adjustment factors, based on the Alliance Pool study results, is that they result in an underallocation of indirect expenses to coal locomotives. According to BN, the studies upon which APL relied do not reflect the total repair expenses by individual locomotive unit.

APL's locomotive maintenance expense evidence, based upon its special studies, has been adequately justified to support its adjustment to BN's RFA average cost. While total indirect expenses may be higher for coal locomotives, they will tend to be less than system average on a mileage basis, due to the coal locomotives' higher degree of utilization. APL's methodology gives recognition to such experience and accordingly we have used it as the best evidence of record.

With respect to the MP portion of the movement in the Redfield case, both APL and MP developed average repair cost for MP coal locomotives derived from another case. Both parties converted these average costs to a unit-mile basis and compared the results with MP's system average locomotive repair cost per mile to produce a locomotive adjustment factor. This adjustment factor was used to reduce the RFA system average cost. However, in converting these costs to a unit-mile basis, MP used only the annual line-haul miles in the subject service, whereas APL used both the annual line-haul miles and the annual road train switching miles in the subject service.

Because the subject movement incurs road train switching service on MP's portion of the movement, the related mileages should be included in the coal locomotive repair cost on a unit-mile basis. Accordingly, APL's adjustment factors have been utilized in our restatement.

Yard Switching

Two issues arose concerning the appropriate cost of yard switching time for use in Redfield and Kansas City. Both BN and APL based their estimates on special BN switching studies conducted at Alliance, Lincoln, and Guernsey. In Kansas City, APL excluded from its total switching minutes at Guernsey, the time attributed to handling certain coal and hopper train power. The adjustment was proper because the time was not associated with APL traffic. Second, in Redfield, APL did not use the BN yard switching studies for the years

ORIGINAL

BEFORE THE
INTERSTATE COMMERCE COMMISSION

ICC DOCKET NO. 39386
THE KANSAS POWER & LIGHT COMPANY
V.

BURLINGTON NORTHERN INC., ET AL.

ICC DOCKET NO. 39405

THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS
V.

BURLINGTON NORTHERN INC., ET AL.

DEFENDANT'S REPLY EVIDENCE
VOLUME II--VARIABLE COSTS

PART 1

Verified Statement

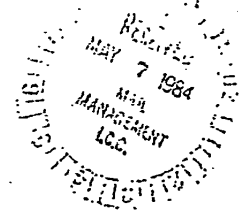
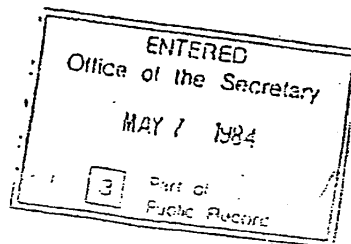
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Due Date: May 7, 1984



The data found in these reports account for about 40 percent of BN's total locomotive maintenance expenditures. Thus, about 60 percent of BN's annual locomotive maintenance expenses are not directly assigned to specific types or categories of locomotive units.

Because of the limitations of locomotive specific maintenance data, I believe that my use of system average Rail Form A unit costs more properly reflects the best estimate of BN's locomotive maintenance cost attributable to the KP&L traffic. Certainly, system average Rail Form A unit costs is the best estimate of UP locomotive maintenance costs and not costs from a study made of BN records as Mr. Crowley has used.

8. Locomotive Capital Costs

BN locomotive capital costs are based upon the actual average value and age of the locomotives used in the Alliance Coal Locomotive Pool. UP locomotive capital costs are based upon the average value of locomotives in their coal pool as shown by Mr. Kauders in ICC Docket No. 39082, Arkansas Power and Light Company v. Burlington Northern Railroad Co., et al and Missouri Pacific Railroad Company.

The development of the locomotive capital cost simply calculates the locomotive depreciation based upon the rate of depreciation of 4.05% as prescribed by the Commission for use in filing BN's R-1 Report for 1982, a 22 year useful life and an average

BEFORE THE
INTERSTATE COMMERCE COMMISSION

OMAHA PUBLIC POWER DISTRICT)
Complainant,)
v.) I.C.C. Docket No.
BURLINGTON NORTHERN RAILROAD COMPANY) 38783
Defendant.)

COMPLAINANT'S REBUTTAL EVIDENCE

submitted by

OMAHA PUBLIC POWER DISTRICT

VERIFIED STATEMENTS OF
THOMAS D. CROWLEY
ROGER C. PRESCOTT
GLENN L. DOWNING
KENNETH L. LAWSON
E. Q. JOHNSON

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Dated: March 28, 1985

BEFORE THE
INTERSTATE COMMERCE COMMISSION

OMAHA PUBLIC POWER DISTRICT)

v.)

BURLINGTON NORTHERN)
RAILROAD COMPANY)

Docket No. 38783

Rebuttal
Verified Statement
(Variable Costs)

of

Thomas D. Crowley
Vice President

and

Roger C. Prescott
Assistant Vice President

of

L. E. Peabody & Associates, Inc.

On Behalf
of
Omaha Public Power District

Due Date: March 25, 1936

Each of the differences listed in Table 40 is discussed below.

a. Cycle Time — Mr. Hill utilized a 122.9 hour cycle time for his calculation of locomotive capital costs at 4Q84 levels. This cycle time purportedly represents the cycle time of OPPD trains moving during the October 1983 through September 1984 time period. In our opening evidence, we relied on a cycle time of 103.1 hours which equalled the weighted average of the cycle time of all OPPD trains moving between June 1982 through September 1984.

In our restatement of this cost item we have calculated the OPPD cycle time for all trains moving in each calendar year 1982 through 1984. For our 1982 cost studies, cycle time equalled 88.3 hours; for our 1983 cost studies, cycle time equalled 101.1 hours; and for our 1984 cost studies, cycle time equalled 123.0 hours.

b. Spare Margin — A difference of \$8.26 per carload between Mr. Hill's calculation of locomotive capital cost and our initial locomotive capital cost is caused by the use of different locomotive spare margins. Mr. Hill used 30.27 percent while we relied on a 10 percent spare margin.

The number of locomotives required for a given unit coal train service is a function of: (1) the number of diesel units per train; (2) cycle time; (3) annual volume; and (4) spare margin. The number of units per train and location in the train (head end or mid-train) can be determined by actual observation or a review of the records covering an existing movement. Cycle times and annual volumes are also available from actual railroad records. Spare margin requirements cannot be identified from observations of existing operations, but must be based on other study data.

The BN has utilized a number of different spare margins in recent coal rate cases before the Commission. In the first San Antonio case,^{1/} a spare margin of 15 percent for the San Antonio service was claimed by the BN in developing locomotive investment costs. This figure was in direct conflict with the required spare margin which BN had at that time reported to the Association of American Railroads ("AAR") in terms of a "bad order" ratio. That ratio for the BN was approximately 8 percent at the time. In the decision in that proceeding, the Commission recognized the BN's attempted overstatement of the spare margin and the Commission found:

"...the spare margin allowance used (by BN) is approximately twice that of the BN system average." (Decision, Appendix, page 13)

The Commission accepted instead the 8 percent spare margin for the locomotives based on railroads' reports to the AAR which San Antonio had presented.

In more recent proceedings, the BN has tried to use a spare locomotive margin of 30 percent which they say is conservative because the alleged actual ratio is 34.1 percent. The Commission has rejected the BN's attempted use of a 30 percent spare margin in recent unit coal train cases. In Minnesota,^{2/} the Commission stated:

^{1/}ICC Docket No. 36180, San Antonio, Texas Acting By and Through Its City Public Service Board v. Burlington Northern Railroad Company, et al.

^{2/}Interstate Commerce Commission, Docket No. 37135, Increased Rates on Coal, BN, Montana to Superior, Wisconsin.

"...there is no demonstration of record to support defendant's use of a 30 percent spare margin. Defendant's discussion of the need for spare motive power deemed necessary to meet scheduling requirements is not persuasive. Therefore, we have accepted complainants' spare margin estimate of 10 percent." (362 I.C.C. 525, 551)

In CLECO,^{1/} the BN used a 30 percent spare margin for locomotives and the Commission rejected it stating:

"The restatement adheres to the traditional use of the actual number of locomotives used increased by a 10 percent spare factor to represent the bad-order ratio for both road locomotives and cabooses. BN's statistical data and operating testimony supporting a 30 percent spare margin lack sufficient probative value to warrant acceptance on this record in the absence of a study reflecting both normalized repair and maintenance experience and demand factors."

In Sergeant Bluff,^{2/} the BN, through Messrs. Thomas R. Hackney and Mark E. Becker, presented yet another spare margin requirement. The BN claimed in that case the spare margin requirement was 26.85 percent.

In this case, the BN, through Mr. Thomas R. Hackney, has presented still another claimed spare margin requirement for BN. The BN now claims that its spare margin requirement is 30.27 percent, the last in a long line of spare margins. We have reviewed the workpapers in connection with this spare margin calculation and find it to be unsupported.

The 30.27 percent spare margin is a weighted average of BN's alleged spare margin for its locomotives (31.2 percent) and the alleged spare margin for foreign coal units on its lines (25.2 percent). The procedure for calculating the two portions of the BN's overall spare margin are the same. For ease of understanding, we will confine our discussion to the BN coal units or the 31.2 percent spare margin.

^{1/}I.C.C. Docket No. 378673, Central Louisiana Electric Company v. Burlington Northern Railroad Company and Missouri Pacific Railroad Company, served February 16, 1933.

^{2/}I.C.C. Docket No. 37021 in the consolidated case Docket No. 37019, Annual Volume Rates on Coal - Rawhide Jet., Wyoming to Sergeant Bluff, Iowa, filed August 14, 1931.

Our discussion of the BN's spare margin calculations is set forth under the following topics:

- 1) BN Coal Versus General Freight
- 2) BN Coal Traffic Pensitized
- 3) BN Unrealistic Spare Margin
- 4) Restatement

1) BN Coal Versus General Freight - The newest BN spare margin study presented in this case is based on a review of utilization of its coal fleet for a twelve-month period (August 1981 - July 1982). During this twelve-month period 6.9 million coal pool locomotive unit hours were generated. ^{1/} Coal pool locomotives are used in coal service 75 percent of the time, general service 17 percent of the time, and are unserviceable 8 percent of the time as shown in Mr. Hackney's testimony and summarized below:

Table 41
Separation of BN's Coal Pool Locomotive Hours

Service (1)	Unit Hours (Million) (2)	Percent (3)
1. Coal service	5.14	75 %
2. General service	1.21	17 .
3. Unserviceable	0.55	8
4. Total	6.90	100 %

Source: Hackney verified statement and workpapers.

^{1/}Of this total, 6.2 million hours were generated on-line and 0.7 million hours were generated off-line.

Coal pool locomotive unit-hours generated in general service trains were inexplicably ignored by BN witnesses in developing the spare-margin requirement for OPPD trains except for those hours generated in the movement between general service and coal pool service (only 12.2 percent of the general service hours or approximately 155,000 hours). The arbitrary exclusion of general service hours creates an unquantifiable bias in Mr. Hackney's spare margin analysis.

2) BN Coal Traffic Penalized - Mr. Hackney calculates his spare margin requirements by dividing non-cycle time by in-cycle time. The single largest component (57 percent) of non-cycle time is what Mr. Hackney calls "redispatching". Redispatching time is synonymous with the time a serviceable locomotive is placed on a holding track waiting for management to find a use for it. To the extent this waiting time increases, the spare margin ratio will also increase.

The following hypothetical example demonstrates this point. Assume a railroad has one unit train movement which is powered by five locomotives and it takes 200 hours to complete a cycle and 35 trips per year will deliver the annual volume requirement. Following Mr. Hackney's procedures, a 25.1 percent spare would be necessary as demonstrated in Table 42 below.

Table 42
Impact of Waiting Time on Hackney's Cycle Procedures

Item (1)	Amount (2)
1. Number of locomotives per train	5
2. Cycle hours per train	200
3. Trips per year	35
4. Locomotive in-cycle hours per year (1x2x3)	35,000
5. Total locomotive hours per year (4 x 3,760 hrs)	43,800
6. Locomotive non-cycle hours per year (5-4)	8,800
7. Spare margin following Mr. Hackney's procedures (6-4)	25.1 %

Next, assume that the railroad's business other than coal is reduced because of recessionary pressures. As a result, cycle time for the unit coal train was reduced because of the elimination of interference by other traffic on the involved line segments. However, following Mr. Hackney's procedures, the reduced cycle time would create an increased spare margin requirement as shown in the tabulation below. Because of the elimination of congestion of the line segments, the cycle time for the unit coal train dropped by 10 hours from 200 to 190 hours. Changing this one component and applying Mr. Hackney's spare margin procedures increases the spare margin from 25.1 percent to 31.7 percent as shown below.

Table 43
Demonstration of Bias in Hackney's Spare Margin Calculations

Item (1)	Amount (2)
1. Number of locomotives per train	5
2. Cycle hours per train	190
3. Trips per year	35
4. Locomotive in-cycle hours per year (L1xL2xL3)	33,250
5. Total locomotive hours per year (L1 x 8,760 hours)	43,800
6. Locomotive non-cycle hours per year (L5-L4)	10,550
7. Spare margin following Mr. Hackney's procedures (L6 ÷ L4)	31.7 %

Implicit in Mr. Hackney's method is the unwarranted assumption that if the coal designated units are not used in coal service or general service or are in between services, the spare margin assigned to coal traffic will increase proportionately. This results because all coal locomotive unit-hours not accounted for are considered non-cycle hours following Mr. Hackney's procedures (the numerator in BN's spare margin equation). As non-cycle hours increase so does Mr. Hackney's spare margin.

3) BN Unrealistic Spare Margin - Another way to underscore the error in Mr. Hackney's alleged spare margin requirement is through its conversion to actual locomotives. Mr. Hackney is saying here that for every locomotive on a coal train, the BN is purchasing an additional 0.312 locomotives, or approximately every fourth locomotive purchased (in the coal pool) is a support or spare margin unit.

In order to test the soundness of this approach, we developed the spare margin required for the BN's road locomotive fleet (excluding coal) following the Hackney procedures. First, we identified the total number of BN locomotives from information filed in the BN 1982 Annual Report. Applying the historical percentage of road freight to total locomotive units, we obtained the number of road freight locomotives (Line 1 below). Next, the BN road locomotive units were converted to annual locomotive unit-hours for the total fleet (Line 2, Column (2)). Deducting annual coal unit-hours (Line 2, Column (3)) from the total results in annual unit hours for the BN's road fleet excluding the coal pool. The active (productive or in-cycle) unit-hours were developed for the entire BN road fleet from information contained in its Annual Report. The active (productive or in-cycle) unit-hours for the BN's road fleet excluding the coal pool were calculated by deducting Mr. Hackney's active (productive or in-cycle) coal pool unit-hours from the total (Line 3). Next, we deducted the active unit-hours from the total unit-hours resulting in inactive or margin hours (Line 4). Following Mr. Hackney's procedures, the spare margin required is calculated by dividing the inactive unit-hours by the active unit-hours (Line 5).

Table 44
Spare Margin Needed for All BN Locomotives Following Hackney Procedures

Item (1)	Road Fleet (2)	Coal Pool (3)	Road Fleet Less Coal Pool (4)
1. Total road freight locomotives ^{1/}	2,566	xxx	xxx
2. Annual locomotive unit-hours (000)	22,478 ^{2/}	4,853	17,625
3. Active (productive or in-cycle) unit hours (000)	9,513 ^{4/}	3,700 ^{3/}	5,813
4. Inactive (margin) hours (000)	12,965	1,153 ^{3/}	11,812
5. BN's spare margin (L4 ÷ L3)	136.29%	31.2%	293.2

^{1/} (BN Annual Report 1982, Schedule 710, Line 10, Col.(j) minus Line 2, Col.(j)) x (AAR "Operating and Traffic Statistics - Calendar Year 1979," Line" Burlington Northern, " Col. (38) ÷ (Col. (36) ÷ Col. (38)))

^{2/} Line 1 x 365 days x 24 hours

^{3/} Hackney Testimony, pages 13 and 19.

^{4/} Train hours (road and switching)* x locomotives per train**

* 1982 Annual Report, Schedule 755, Line 115, Col. (b) + Line 116, Col. (b)

** 1982 Annual Report, Schedule 755, (Line 11, Col.(b) ÷ Line 12, Col.(b)) ÷ Line 5, Col.(b)

As noted above, Mr. Hackney's analysis suggests that every coal pool locomotive requires 0.312 locomotives as support (Line 5, Column (3), or Mr. Hackney's spare margin). When these procedures are applied to the BN's entire road fleet excluding coal, Mr. Hackney would claim that for every active road locomotive (other than coal), two additional units are needed as support (spare margin) - Line 5, Column (4). Clearly, the actual application of Mr. Hackney's OPD methodology to the entire system shows its error.

4) OPPD Restatement — In our restatement, we have continued to use a 10 percent spare margin. In the BN's 1983 10-K Report, the locomotive bad order ratio was less than 6 percent — less than 60 percent of the spare margin used here.

c. Depreciation Variability — In his reply verified statement, Mr. Hill states that "[n]o adjustment is required to eliminate the system average constant costs from the direct costs which I calculated because no constant costs were included in the direct costs." (Hill, p. 37)

Mr. Hill is of the opinion that because he identified locomotive capital costs on a direct basis, the results are 100 percent variable with OPPD traffic. If locomotive depreciation were truly 100 percent variable with OPPD traffic, as Mr. Hill postulates, then the absence of OPPD's traffic would cause the BN's locomotive depreciation expense allocable to the portion of the Alliance pool used to serve OPPD to disappear altogether. As the ICC's regression analyses prove, this is clearly not the case.

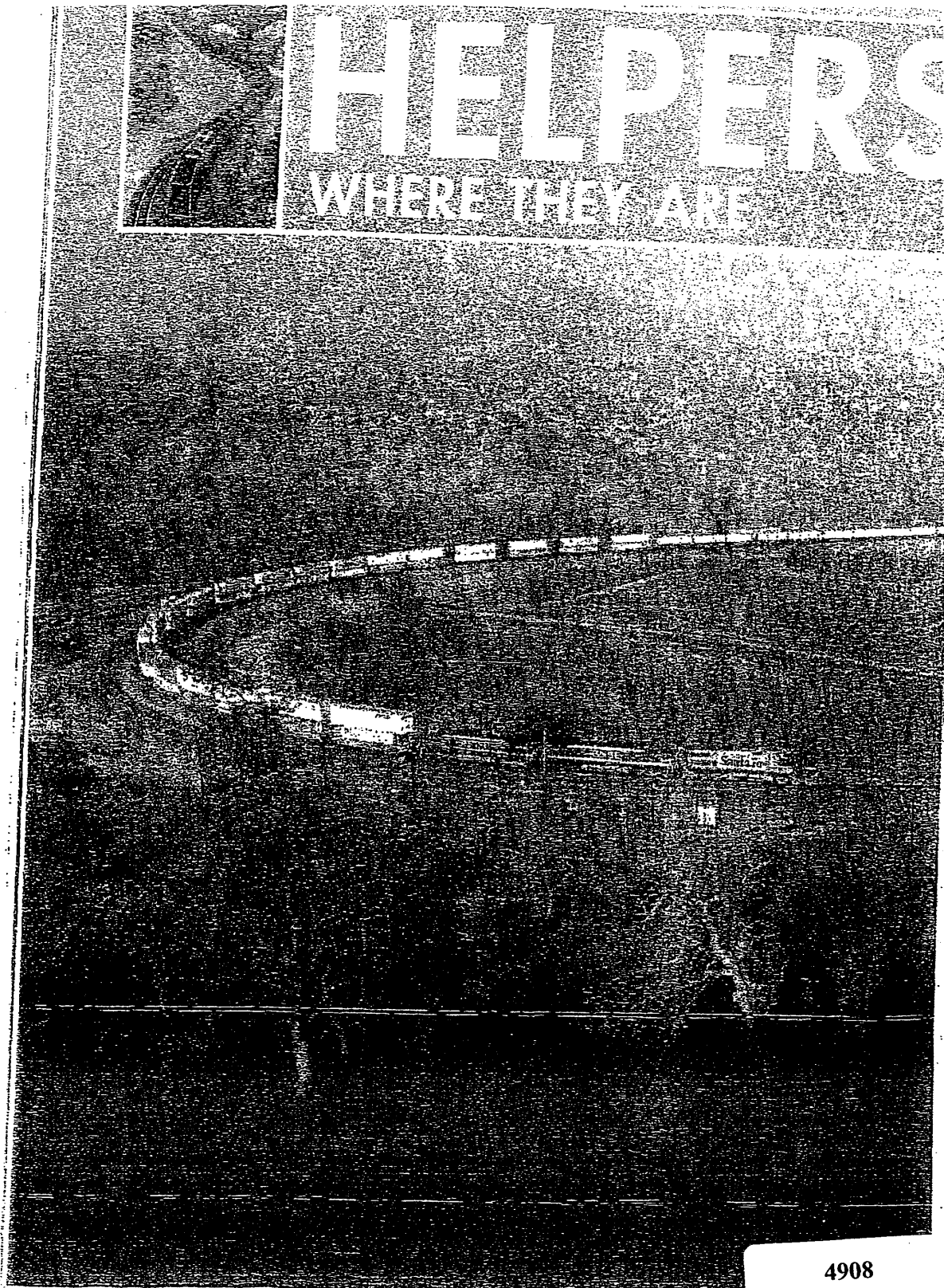
In the crew wage and fuel studies discussed herein, total expenses were calculated first and then converted to a variable level through application of Rail Form A variability factors. Following Rail Form A procedures, total locomotive depreciation has been placed on a variable level. Rail Form A treats locomotive depreciation as 79 percent variable. The 79 percent variability factor was derived by the Commission's Section of Cost and Valuation utilizing multiple regression techniques. The subdivision which includes locomotive depreciation also

II-A-1
REPLY
VARIABLE COSTS

HELPERS

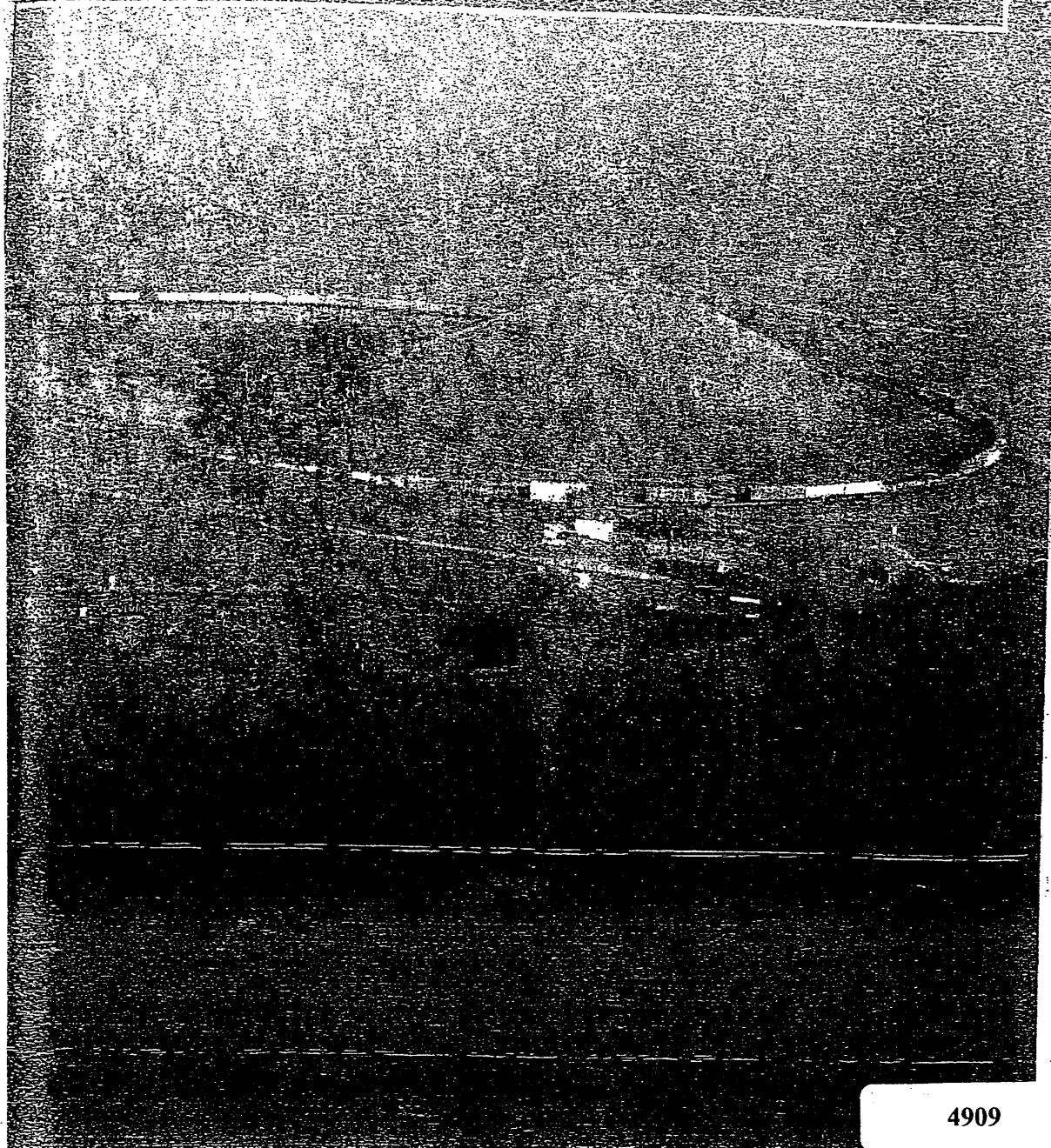
HELPERS

WHERE THEY ARE



MANINED HELPERS VS. DISTRIBUTED POWER

by TCM Kuznetsov





SPEND CAPITAL DOLLARS today to save operating dollars tomorrow, next year, and for many years into the future. That's a formula that's at least as old as "The Economic Theory of Railway Location," the 1887 classic on railroad engineering by A.M. Wellington.

Over the past two generations, railroads have applied the formula in ways of which Wellington would have approved: Dieselization. Centralized traffic control. Mechanization of track maintenance. Computerization of accounting and clerical functions.

In each case, railroads determined that over time the investment would pay for itself through reduced operating expenses. Railroads have found another

way to reduce operating expenses, by reducing their use of manned helpers. They're doing this by investing in distributed power (DP), which enables one engineer to operate multiple locomotive consists in a train from the cab of the lead locomotive.

WELLINGTON, though writing over a century ago, would have understood the economics of helpers versus distributed power. He noted mountain grades have two negative effects on railroad economics: the first is extra expense per train mile, and the second is the limit that grades impose on train length and weight.

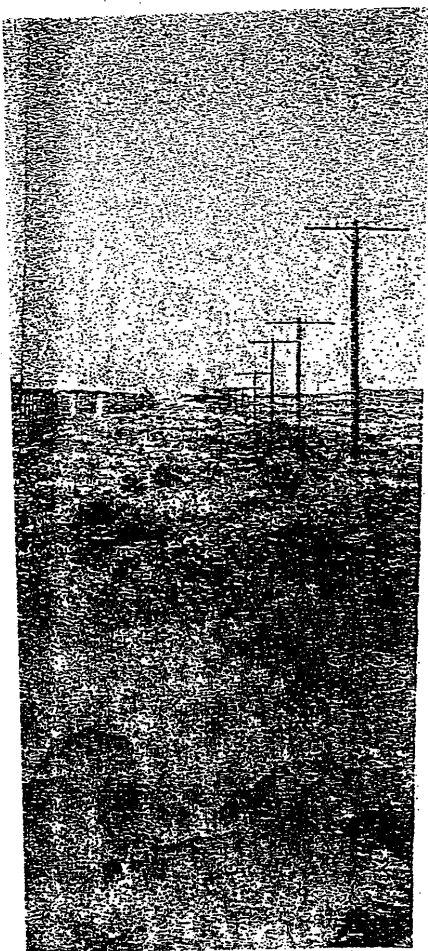
There's no single rule of thumb for where helper districts are used, but most

involve grades of 1.5% or more (i.e., a rise of a 1.5 feet for every 100 feet traveled). Other factors that play a role in establishing a helper district include the length of the grade, the amount of curvature—since this adds resistance to the movement of a train—and achieving the desired horsepower-per-ton ratio.

Where distributed power has been implemented, one of its most striking effects has been to reduce the number of manned helper districts in mountain territory. In 1995, Union Pacific used distributed power to eliminate manned helpers in the Blue Mountains or eastern Oregon. About the same time, the Southern Pacific began using distributed power in place of manned helpers on its former Denver & Rio Grande Western Moffat Tunnel Route.

More recently, DP has replaced or eliminated manned helpers on UP and Burlington Northern Santa Fe in California's Tehachapi Mountains and on

Previous pages: A manned helper using two SD40-2's (far right in photo) helps an eastward Burlington Northern Santa Fe doublestack/telegear train climbing California's Tehachapi Loop on February 27, 1999. On Tehachapi's 2.5% eastward grade, BNSF's trains run single (no helper), or use manned helpers or distributed power, depending upon each train's tonnage and priority. Photo by Bruno Lawrence.



JIM GRIFFITHS

the Kansas City Southern across the Ozark Mountains between Neosho, Mo., and Hatton, Ark. Other major North American users of DP are the Canadian Pacific, Ferromex, and Transportación Ferroviaria Mexicana (TFM).

DP has not yet won universal acceptance on Class 1 lines. Canadian National, CSX, and Norfolk Southern have so far not adopted distributed power.

WHAT BENEFITS does DP generate? Major advantages cited by GE Harris Harmon, which dominates the North American DP market with its Locotrol system, are:

- Better distribution of power and braking, allowing for longer trains and reduced in-train forces
- Faster acceleration and deceleration, which permits trains to get over the road faster and with much less risk of train separations
- Reduced rolling resistance in terri-

Union Pacific tried Lococtrl in the late 1980's in 37 SD45's and one pair of double-diesels. In 1988 installing it in DD358 81 and DD358 818. On September 27, 1988, an eastward manifest, mostly lumber, blasts up the Snake River Plain near Shoshone, Idaho, led by the 81 and assisted primarily by remote 825 and 820 875. Too unreliable and unusual, the Lococtrl was removed a few years later.

ories with many curves, which provides better fuel efficiency.

GE Harris Harmon says that fuel savings of 5% can be achieved with DP operations. In fact, GEHH says that fuel savings are the number one reason for a railroad to implement DP. In 2000, for example, Norfolk Southern spent \$473 million on fuel and CSX spent \$577 million. If GEHH's 5% figure is reasonable, and if both railroads were able to implement DP on 10% of their total operations, NS's annual savings would be \$2.4 million and CSX's \$2.9 million, if fuel stays at 2000 prices. The 10% figure is based on the fact that in many road-service applications DP isn't advantageous, and fuel is consumed by yard engines and locals where DP isn't applicable.

Since Lococtrl equipment costs approximately \$100,000 per locomotive—the exact price depends on optional features included—does fuel savings alone justify equipping much of a railroad's fleet for DP operation? We can do a back-of-the-envelope economic analysis using these assumptions:

- Annual fuel savings from DP operations: \$2.5 million
- Useful life of DP-equipped locomotives: 20 years
- Hurdle rate (i.e., the rate of return that justifies a capital investment): 20%
- Cost per locomotive for DP hardware: \$100,000

Based on this scenario, the present value of 20 years' worth of fuel savings is about \$16 million, which would allow a railroad the size of CSX or NS to purchase 160 DP-equipped locomotives. With CSX having about 3550 locomotives and NS about 3500, that's probably not enough DP units to generate the required fuel economies, so CSX and NS would have to look for other savings that DP would provide, in order to justify DP on a purely financial basis.

However, GEHH's estimate of 5% fuel savings may be conservative. Mike Volkmar, director of operating practices at Union Pacific, reported his company found fuel savings on specific coal trains using DP as high as 10 to 11%, compared to non-DP power. The reason is on a train with all its power on the head

end, there is a stringlining effect in which cars try to follow the path of the locomotive by the shortest route available, causing a high degree of resistance in curves. With DP, a portion of the train is always being pushed rather than pulled through the curves. Engineers, said Volkmar, often comment on how well a DP train rolls compared to a conventional train.

The most obvious economy from using DP is that the helper crew, generally an engineer and a conductor, can be eliminated. On a Class 1 railroad with standard labor agreements, the cost of a two-person crew starts at about \$400 per tour of duty, inclusive of fringe benefits.

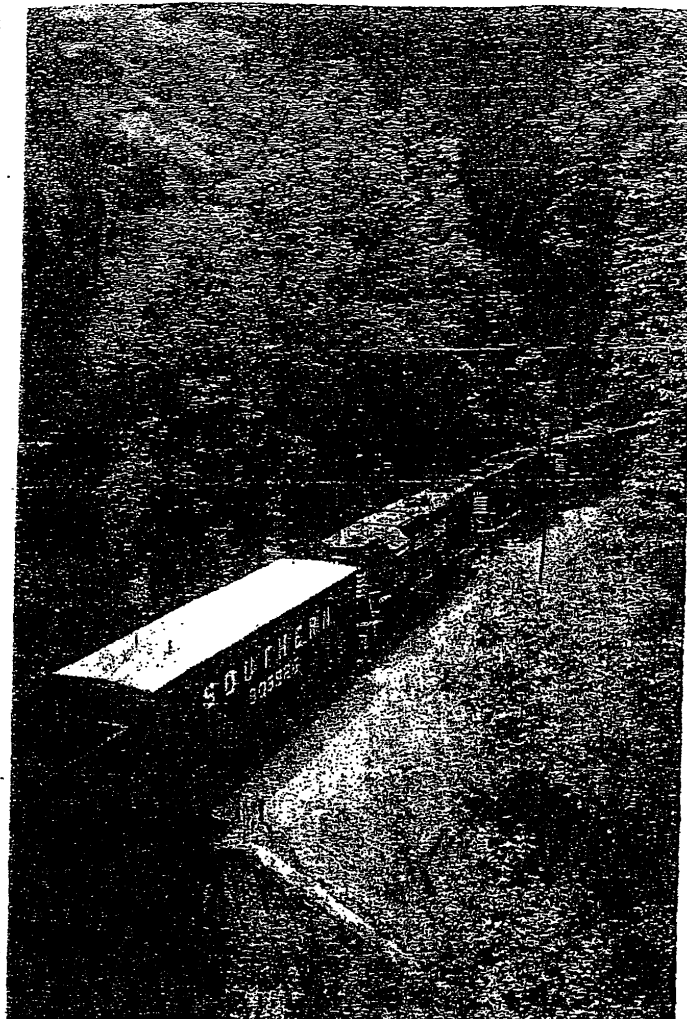
However, DP often requires more locomotives to move the same number of trains. Manned helpers can cut in or out almost anywhere, but it's impractical to add DP units except at major terminals. Labor costs saved by eliminating manned helpers are offset by the cost of using DP locomotives over line segments where they are not needed.

On the Kansas City Southern, for instance, two EMD SD70MAC's or GE AC4400CW's are enough to take a coal train from Kansas City 175 miles south to Neosho, Mo. That's where the mountain grades begin, and that's where KCS usually added manned helpers.

After converting to DP, KCS's practice has been to link-up the DP units in Kansas City, using three of the big A.C. traction units on the point of coal trains and two on the rear—meaning that for every coal train running south of Neosho, three 4000- or 4400-h.p. locomotives run 350 unproductive miles. Owning and maintaining a six-axle, high-horsepower locomotive is an expensive proposition, \$600 or more per day, depending on its age, horsepower, type of service, and other factors.

Where mainline capacity is limited, DP can reduce congestion compared to manned helpers. A helper returning to the bottom of a grade takes up line capacity—it might be only 200 feet long instead of 7000 feet long, but a manned helper returning to the bottom of the hill for its next assist is still a train moving against opposing traffic. Maximizing line

**DISTRIBUTED POWER SAVES LABOR AND FUEL,
BUT OFTEN IT NEEDS MORE LOCOMOTIVES.**



RON FLANARY

After its creation in 1982, Norfolk Southern continued Southern Railway's practice of using mid-train remote helpers with radio receiver cars on loaded coal trains of its Appalachia (Va.) District. NS now favors manned helpers on the rear. Before this change, on June 16, 1987, an eastward "C" train (for "consolidated") eases through Natural Tunnel, Va., at 15 mph, the permanent speed limit here.

capacity was a factor in the decision to convert to DP on the KCS and in UP's Blue Mountains.

Train length and tonnage can be increased with DP. By using DP, and putting one locomotive on the rear instead of the head end, train length can be increased because drawbar forces are reduced and brake applications and releases can be made more quickly.

By using DP, BNSF increased some of its coal trains from a standard length of 115 cars and 16,500 tons to 123 cars and 18,200 tons. These trains don't have

any more power than before. On the KCS, DP allowed it to increase coal trains from 116 cars to 120 cars.

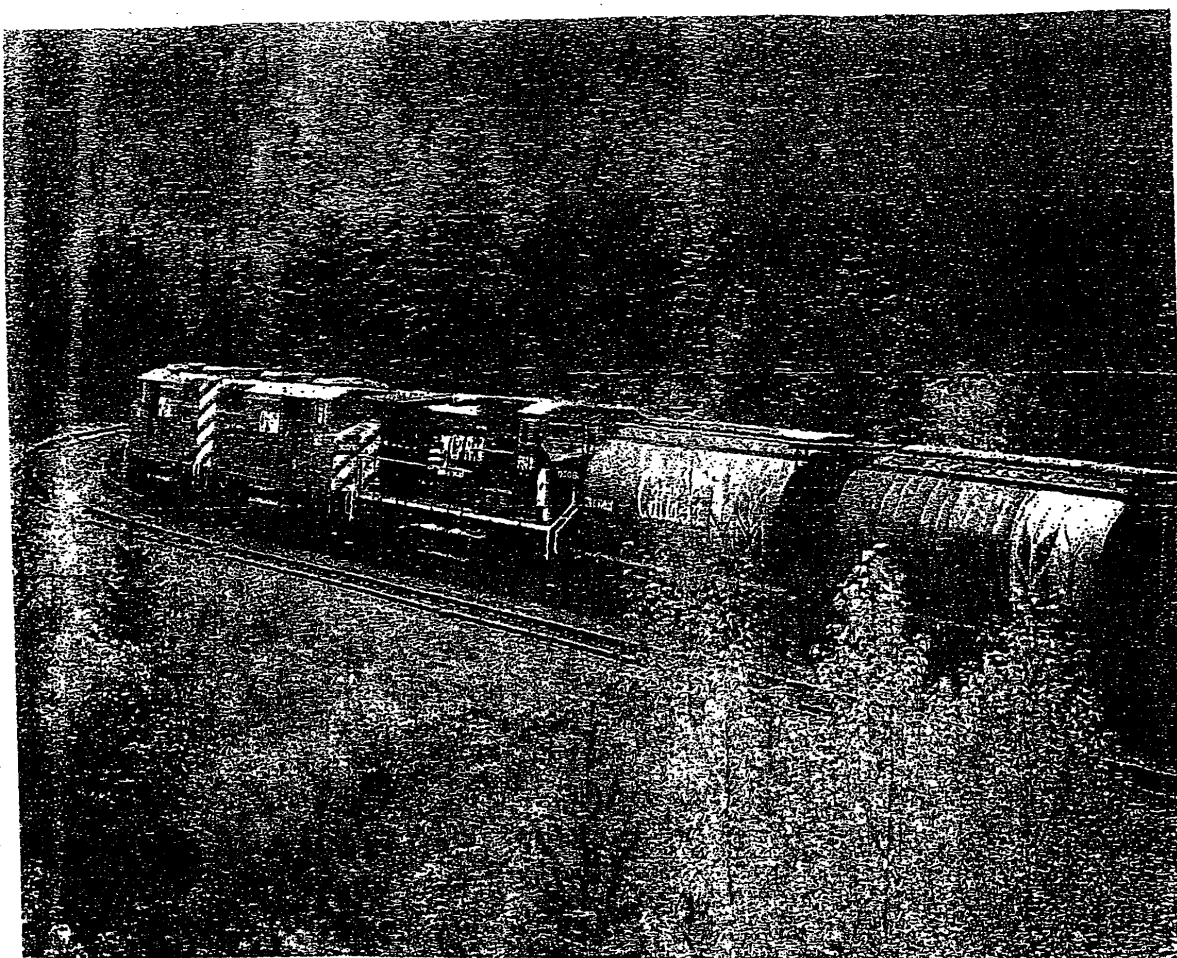
BNSF practice is to continue using manned helpers where there is a relatively short grade to overcome that is the only significant grade the train will encounter. According to John Quilty, BNSF's assistant vice president of operating practices, BNSF prefers DP where it can make use of the additional power over a relatively long distance.

Helper operations can also complicate the flow of trains on a subdivision,

particularly where there are inconsistencies in train length and type of service, such as unit coal and grain trains mixed with manifest and hotshot intermodal trains. On BNSF, the highest-priority trains will usually have enough power to not require helpers.

At Union Pacific, Volkmar said that eliminating train separations has been one of the most significant benefits of DP. In a recent month, for example, UP originated 1056 trains from Powder River Basin coal mines. Of these, 819 were DP and 237 were non-DP. Of the non-DP trains, 7% experienced a train separation such as a broken knuckle. Of the DP trains, only 0.5% experienced a separation. Each separation typically causes delay not only to the train on which it occurs but to others.

WHEN CSX and NS are asked why they haven't been won over to DP, what they usually talk about is geogra-



DAVID BRADY

phy. "The engineering of the Western railroads is different than it is in the East," said John Kissinger, CSX's general manager of locomotive planning. The geography and engineering of Western roads often favors DP in place of manned helpers.

According to Larry Shughart, CSX's former general director, locomotives, helper trips on CSX tend to be shorter than those in the West. Most Western helper districts are so long that a given helper crew can only assist one train per tour of duty; in the East, it's more likely that a helper crew will assist at least two trains. The greater productivity of Eastern helper operations makes DP less attractive relative to helpers.

"A lot of people have the perception that helpers cause train delays but we believe that the extra horsepower we get with helpers actually improves train performance by keeping trains moving at track speed," said Shughart. "The alter-

The two great Canadian transcontinentals, Canadian Pacific and Canadian National, have common end-points but utterly different routes through the Canadian Rockies. Built by hand through an unmapped wilderness for ends political and monetary, the CP when completed in 1885 had a tortuous alignment that for a century required manned helpers on the 2.2% grades of Rogers Pass, B.C. In 1989 the Mount Macdonald Tunnel and its approaches reduced CP's westward grade to 1% (at a cost of C\$600 million); however, much of CP's alignment is still 1885-vintage and almost requires distributed power for heavy trains. Canadian National, completed to Vancouver with the assistance of power shovels at the late date of 1915, was engineered to minimize operating costs and thus achieved a mainline ruling grade of 0.5%. It's a route that didn't require helpers and has little need for distributed power today.

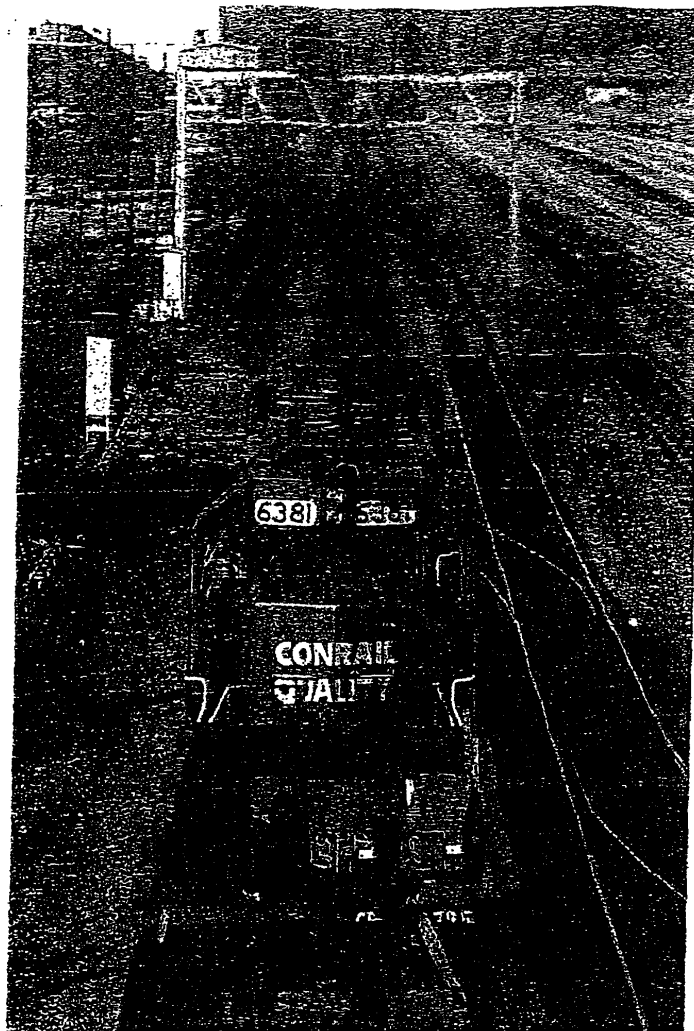
native is to run power through from terminal to terminal, which would require a far greater number of locomotives."

Also, whereas Western roads often must cut helpers into a train to avoid stringlining and derailing the train on sharp curves, it's more common in the East that helpers are simply pushers, meaning they can cut off with little or no delay to the trains they assist.

Kissinger said CSX is always looking for opportunities to make DP equipment viable on its system but hasn't found any yet. "We haven't cast DP aside. In fact,

we are currently looking at one specific operation as a possible pilot project."

One factor that could influence Eastern roads and Canadian National to take a closer look at DP is the extension of DP-equipped Powder River Basin coal trains into Eastern markets. For example, UP currently sends DP trains to a Georgia Power generating station on NS, and BNSF interchanges DP trains with CN at Chicago, en route to a Monroe, Mich., power plant. The BNSF-CN operation has allowed the utility to receive larger trains than previously possible.



BRIAN SOLOMON

As many as a dozen manned helper sets frequent Norfolk Southern's former Pennsylvania Railroad main line over the Allegheny Mountains in Pennsylvania. On September 6, 1997, a two-unit helper shoves on a westward train at Altoona. The gondolas loaded with steel billets are destined for a rolling mill.

LOCOTROL-EQUIPPED LOCOMOTIVES IN SERVICE IN NORTH AMERICA

BNSF	1451	Note: An additional 50 SD80MACs of former Conrail ownership are equipped with Locotrol. At the time of the Conrail split-up, these locomotives were divided between CSX (15 units) and NS (17).
UP	1422	
CP Rail	336	Neither road is currently using these units in DP service. NS also has 68 former Southern Railway units in its fleet equipped with an earlier version of Locotrol.
TFM	150	
Ferromex	60	Sources: GE Harris-Panmon; Burlington Northern Santa Fe; Canadian Pacific; Norfolk Southern; Union Pacific
KCS	50	
Ferrovir	15	
QNSRL	11	
BO Rail	10	

Another reason DP doesn't work well in the East, according to Norfolk Southern, is that coal loading in West can usually be accommodated loop tracks, which by reason of narrow valleys are rare in NS territory.

GEHH continues to work with CSX and NS to find potential pilot projects for the application of Locotrol. Gil Corry, GEHH's Locotrol Product Manager, put it this way: "The value story of any railroad needs to be tailored to specific operating considerations." In other words, one size does not fit all.

WHEN LOOKING at the specific operating considerations of the major railroads where DP is in use today, we see they've found different ways to use DP technology to reduce operating costs. Burlington Northern Santa Fe Powder River Basin coal traffic represents the biggest single application of DP on this railroad. Other places where it has found a home include heavy double stack and manifest trains on its transcontinental main line, and the Tehachapi Mountains of southern California. Within the past year, DP has replaced some helper operations on eastward trains out of Bakersfield.

Defying the conventional wisdom that DP makes sense only over long distances, some eastward trains pick up their DP units in the yard at Bakersfield and shed them between Mojave and Barstow for a westward train to pick up and return to Bakersfield. This makes for a total DP run of less than 90 miles, though power swaps on the main line can result in significant train delays. BNSF still runs manned helpers on some eastward trains out of Bakersfield, in part because adding DP to a train is more time-consuming than cutting in a manned helper.

Another BNSF helper district affected by DP lies between Denver and Palmer Lake, Colo., on the Joint Line, formerly shared by Santa Fe, BN, and Rio Grande, and now by BNSF and UP. Helpers still tie onto southward coal trains, but if the train has a DP unit on the rear, the helper engineer m.u.'s his power with the DP unit. This keeps all units under the road engineer's control.

Distributed power has helped BNSF cut back on manned helper operations but has by no means eliminated helpers. The railroad's biggest helper operations are based at Crawford, Neb.; Sheridan, Wyo.; and San Bernardino, Calif., for Cajon Pass.

Union Pacific. Most of UP's early operations (after successful implementation of DP in Oregon's Blue Mount-

RIDING A TEHACHAPI HELPER



BRIAN JENNINGS

FOR A FIRSTHAND LOOK at a manned helper operation, we'll ride with a BNSF helper crew operating out of Bakersfield, Calif., over the Tehachapi Mountains. The helper will assist eastward train Q-RICALT1, which originated at Richmond, Calif., and is destined for the BNSF yard at Alliance, Texas. The consist is largely containers owned by J.B. Hunt Transport moving in double-stack equipment, plus some spine cars and conventional piggyback flatcars. Our train weighs 5538 tons and is 6681 feet long.

BNSF special instructions require lighter-weight intermodal cars to be placed toward the rear of trains in order to prevent stringlining, the tendency of a lightweight car to be pulled toward the center of a curve if it has substantial tonnage behind it. Since it's not desirable to shove against lightweight cars, either, helpers are placed mid-train or somewhat to the rear of mid-train, depending on the train's tonnage and the total number of axes on the helper units.

Here's why helper sets—of any type—quickly turn black on grades with tunnels. On April 19, 1986, notoriously smoky Tunnel 5 in California's Tehachapi Mountains belches the sooty black smoke of partially combusted diesel fuel as a seven-unit helper set emerges with a 10,000-ton unit crude oil train. The helpers are passing the west switch of Cliff, at the east portal of the 1175-foot tunnel.

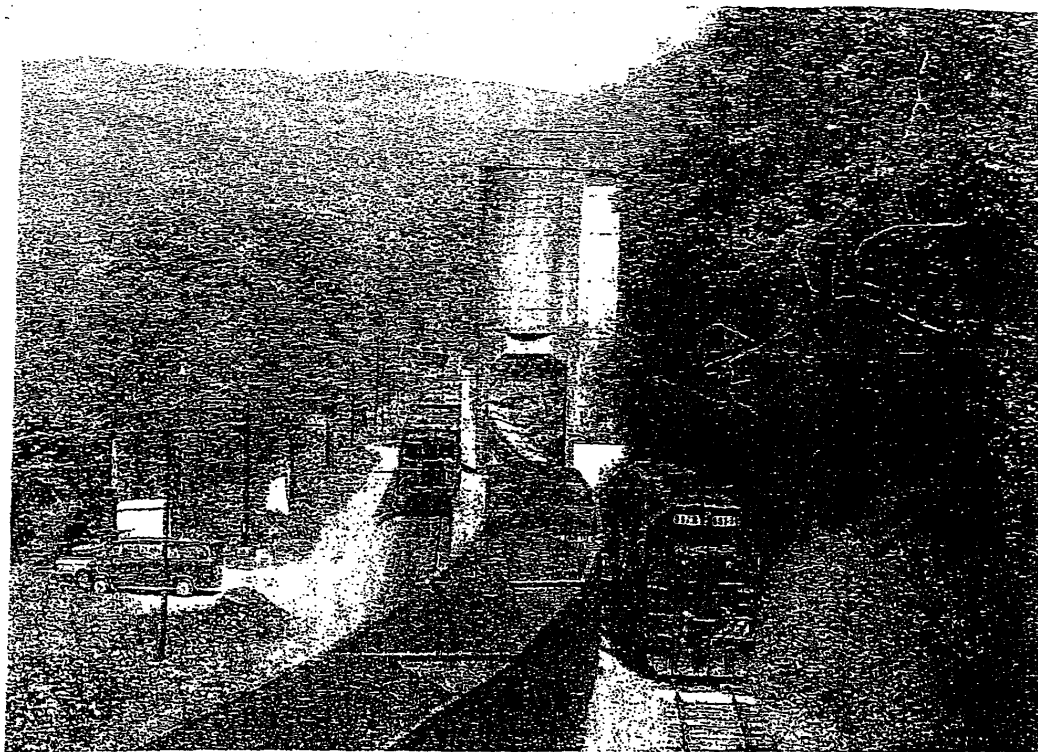
An hour after leaving Bakersfield, and after a few brief waits for westward trains to pass us at Bena and Caliente, we're ready to tackle Tehachapi's 2.52% helper grade. Our engineer starts out in Run 4 in order to keep the slack bunched on the portion of the train he's pushing, and as the train starts to move he works up to full power, Run 8.

Although the road engineer calls the signals to the helper engineer over the radio, it's equally important for the helper engineer to keep an eye on the ammeter (or, on an A.C. locomotive, the tractive-effort gauge). Our engineer on the helper attempts to keep the needle on 900 amps. When he sees the amperage go above that point, he knows that the road engineer is backing off on the throttle, and he backs off the power on the helper accordingly. When the amperage dips below 900,

he knows he needs to increase the throttle position on the helper.

We make brief stops to meet westward trains at Cliff and Woodford, and reach the summit and cut out of our train just over three hours after leaving Bakersfield. We'll return light to Bakersfield. The crew counts this as a good run—no major delays, and no unexpected incidents with our train.

Critical to helper operation on Tehachapi is placing the helper in the right place in the train, and alertness on the part of the helper engineer. Smooth train handling prevents train separations and derailments. It also plays a major role in reducing damage to cargo. This may not be a big consideration for coal or grain trains, but it's certainly a factor in keeping high-value intermodal business on the railroad.—TOM MURRAY



DAVID ORSINI

At Chaska, Tenn., on CSX's former Louisville & Nashville Cincinnati-Atlanta main line, a helper set backs out of the pocket to couple to a southward coal train on September 13, 1987. In the meantime, a northward coal empty with a former Seaboard caboose passes the old coal dock (still standing today). This is a former L&N helper district from Chaska to Duhi, Tenn., up Duff Mountain, about 10 miles.

tains) involved Powder River coal. But it has gradually extended DP to include other major corridors including Salt Lake City-Los Angeles and Roseville-West Colton, Calif. In 2001, DP was implemented on Soldier Summit in Utah and on California's Donner Pass.

UP maintains significant manned helper operations over Beaumont Hill on the Sunset Route in Southern California, and on Cascade Summit in Oregon, but the latter may fall to DP soon.

Canadian Pacific. At one time CP had two major passes on its route through the Rocky Mountains which required helpers. The last of these fell to modern civil engineering with the 1989 completion of a new line over Rogers Pass, including the 9.1-mile Mount Macdonald Tunnel. Today, CP has no manned helpers on its main lines.

CP's distributed power is focused on westward coal trains from southern British Columbia to the Roberts Bank coal port near Vancouver, and bulk mineral and grain trains running westward from Calgary and Moose Jaw, Sask. An eastward lumber train uses DP from Revelstoke to Golden, B.C.

CP may expand its use of DP. Candidate corridors include Toronto, Ont., to Winnipeg, Man. According to Bob Reynolds, CP's manager of locomotive systems, this will allow CP to run longer trains and eliminate air brake repeater cars now needed in the extreme winter weather of Ontario and Manitoba.

One of CP's more interesting distributed power operations is a potash movement destined for Portland, Ore., via the Kingsgate, B.C.-Eastport, Idaho, interchange with UP. Until recently, the

loaded train arrived Kingsgate with a CP unit in the lead and a UP unit trailing. Cut into the train was another pair of locomotives, one CP and one UP, operating under remote control.

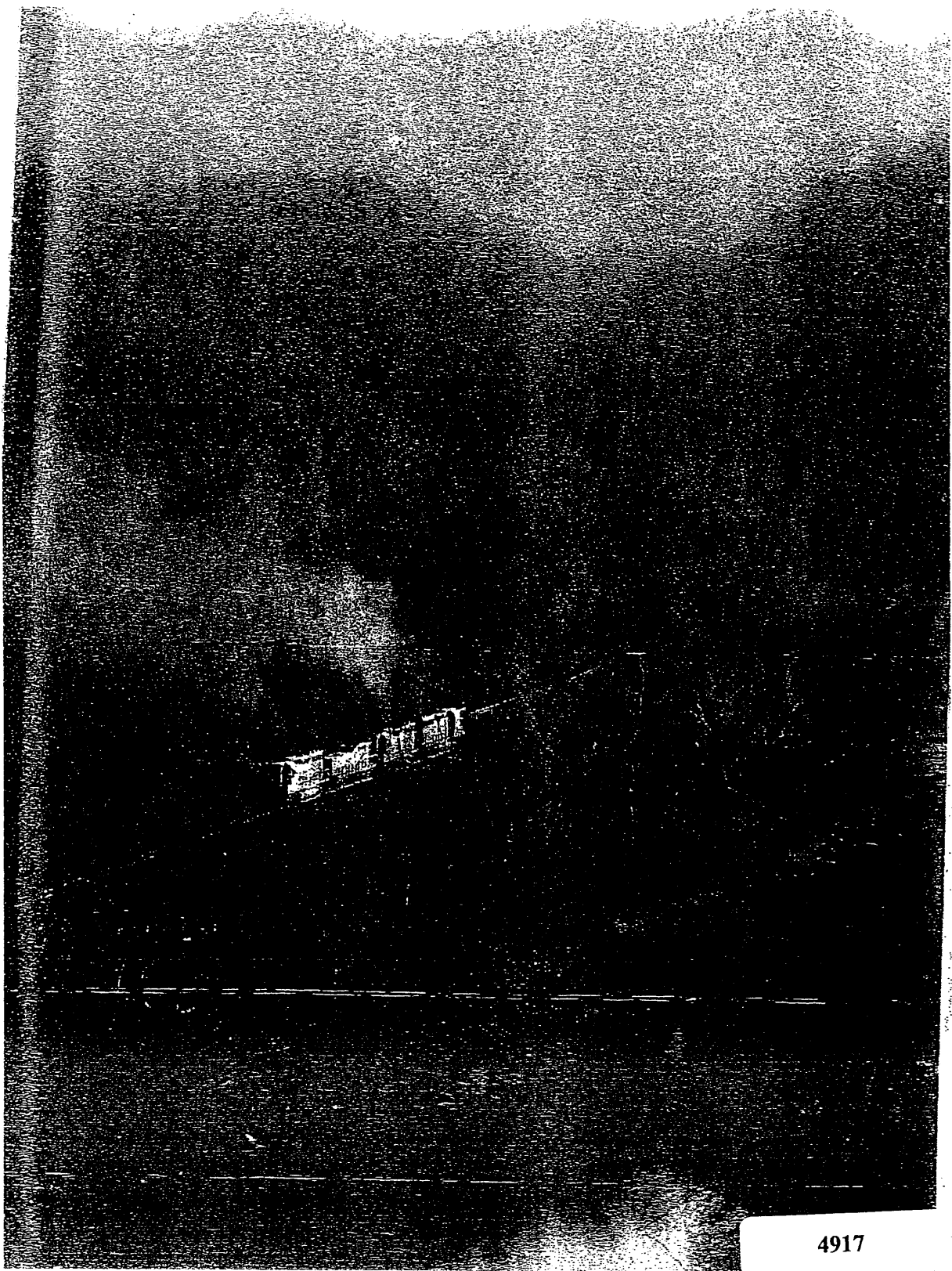
Because DP radio communications use a different portion of the radio spectrum in Canada than in the U.S., and because of other equipment requirements unique to each carrier, upon interchange the lead units were physically swapped and the train left Eastport with the UP unit in the lead. Now, each railroad contributes SD9045MACs to a pool of "international leaders" dedicated to joint CP-UP service. These units can operate in DP mode on both Canadian and U.S. radio frequencies. ■

TOM MURRAY, a transportation consultant and publisher of RailStockWatch, lives in northern California. He has worked in the rail industry since 1970 and has had management positions with Soo Line, CSX, and Southern Pacific. This is his first TRAINS byline.

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Lines built heavily in rough terrain trade construction costs for operating costs. That pays off in manned helpers or distributed power for heavy trains. Viewed from the north, southeast of CSX's Cooper Creek Wye just near Sasser's Farm, Va., a four-unit helper (including one plug unit) helps the stack punch on a 14,000-ton eastward NS coal train during November 1994. While CSX's modern exciton field route across Cooper Creek rises at less than 0.2%, the NS route below climbs the same mile at a rough 1.7%.



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the railroad are based in various degrees, on the following considerations:

Understand of default capacity and willingness of the obligor as to the timely payment of interest and redemption of principal in accordance with the terms of the collection;

the comparison,
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Protection afforded by, and real live position of, the obligation in the event of bankruptcy, reorganization of other arrangement under the laws of bankruptcy and other laws affecting creditor's rights.

AAA Debt rated 'AAA' has the highest rating assigned by Standard & Poor's, and carries the highest credit rating.

A Debt noted 'AA' has a very strong capacity to pay interest and repay principal and capacity to pay interest and repay principal as the company is strong.

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B, B, CCC, CC, C Debt rated 'BB', 'B', 'CCC', 'CC' and 'C' is required, on average, as predominantly speculative with respect to capacity to pay interest and very principal in accordance with the terms of the obligation. 'BB' indicates the lowest degree of speculation and 'C' the highest degree of speculation. While such debt will have some quality and protective characteristics, these are outweighed by large potential losses on liquidation due to adverse conditions.

Debt rated 'BB' has less near-term vulnerability to default than other speculative 'junk' debt. However, it faces major ongoing uncertainties or exposure to adverse circumstances or major risk exposures to adverse conditions.

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debt that is assigned an actual or implied "B" rating.

C rating "C" is typically applied to debt subordinated to senior debt which is assigned an actual or implied "BBB" debt rating. The "C" rating may be used to cover assigned an actual or implied "BBB" debt rating. The "C" rating may be used to cover a situation where a bankruptcy petition has been filed, but debt service payments are continued.

C) The rating 'C' is reserved for Income Bonds in which no interest is being paid.

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Q

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A-1 This highest category indicates that the de-
payment is strong. Those issues determined
valuable characteristics are denoted with a plus (+).

A-2 Capacity for timely payment on issues will vary. However, the relative degree of safety is categorized 'A-1'.

A-3 Issues carrying this designation have side effect. They are, however, more vulnerable to the in circumstances than obligations carrying the A

3 Issues noted are regarded as having only ^{limited} relevance

c. This rating is assigned to short-term debt readily for payment.

Debt rated 'D' is in payment default. The 'D' interest payments or principal payments are not made. The applicable grace period has not expired, in which case the interest payments will be made during such grace period.

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Burlington Northern Santa Fe Corp.	BBB+/Negative/A-2	BBB+/Negative/A-2		ICR
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¹ ICR = Issuer Credit Ratings
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Good	A, A1, A2, A3	A, A-, BBB+
Adequate	Baa, Baa1, Baa2, Baa3	BBB, BBB-, BB+
Speculative Grade:		
Questionable	Ba, Ba1, Ba2, Ba3	BB, BB-, B+
Poor	B, B1, B2, B3	B, B-, CCC+
Very Poor	Caa, Caa1, Caa2, Caa3	CCC, CCC-, CC+
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Lowest	C	C

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Claims-paying ability ratings are based on current information furnished by the insurance company or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any rating and may, on occasion, rely on unaudited financial information. The ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information or based on other circumstances.

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Claims-paying ability ratings are divided into two broad classifications. Rating categories from 'AAA' to 'BBB' are classified as "secure" claims-paying ability ratings and are used to indicate insurers whose financial capacity to meet policyholder obligations is viewed on balance as sound. Among factors considered in placing insurers within the spectrum of "secure" rating categories is the time frame within which policyholder security could be damaged by adverse economic and underwriting conditions. That time frame grows shorter as ratings move down the "secure" rating scale.

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A 'q' subscript indicates that the rating is based solely on quantitative analysis of publicly available financial data. In the case of claims-paying ability ratings, this is the statutory financial data filed with the National Association of Insurance Commissioners. These ratings are issued for each insurer on a standalone basis without consideration for strength or weakness that might be added by a parent or affiliated companies.

Secure Range: AAA to BBB

AAA Superior financial security on an absolute and relative basis. Capacity to meet policyholder obligations is overwhelming under a variety of economic and underwriting conditions.

AA Excellent financial security. Capacity to meet policyholder obligations is strong under a variety of economic and underwriting conditions.

A Good financial security, but capacity to meet policyholder obligations is somewhat susceptible to adverse economic and underwriting conditions.

BBB Adequate financial security, but capacity to meet policyholder obligations is susceptible to adverse economic and underwriting conditions.

Vulnerable Range: BB TO CCC

BB Financial security may be adequate, but capacity to meet policyholder obligations, particularly with respect to long-term or "long-tail" policies, is vulnerable to adverse economic and underwriting conditions.

B Vulnerable financial security. Currently able to meet policyholder obligations, but capacity to meet policyholder obligations is particularly vulnerable to adverse economic and underwriting conditions.

CCC Extremely vulnerable financial security. Continued capacity to meet policyholder obligations is highly questionable unless favorable economic and underwriting conditions prevail.

R Regulatory action. As of the date indicated, the insurer is under supervision of insurance regulators following rehabilitation, receivership, liquidation, or any other action that reflects regulatory concern about the insurer's financial condition. Information on this status is provided by the National Association of Insurance Commissioners and other regulatory bodies. Although believed to be accurate, this information is not guaranteed. The 'R' rating does not apply to insurers subject only to nonfinancial actions such as market conduct violations.

Plus (+) or minus (-): The ratings from 'AA' to 'B' may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories. Standard & Poor's ratings and other assessments of creditworthiness and financial strength are not a recommendation to purchase or discontinue any policy or contract issues by an insurer or to buy, hold, or sell any security issued by an insurer. In addition, neither a rating nor an assessment is a guaranty of an insurer's financial strength.

Notes:

NR = Not Rated. The insurer is not rated by Standard & Poor's. The issue has not yet been evaluated by the respective credit rating agency. It is no indication as to the merits of the issue.

Moody's ratings use numbers with their ratings between AAA & C, whilst S&P use positive and negative symbols with their alphabetical codes.

 [Home Page of Standard & Poors & Moody's Properties](#)

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2002

OR
☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission File Number: 1-11535

Burlington Northern Santa Fe Corporation
(Exact name of registrant as specified in its charter)

Delaware 41-1804964
(State of Incorporation) (I.R.S. Employer Identification No.)

2650 Lou Menk Drive
Fort Worth, Texas 76131-2830
(Address of principal executive offices, including zip code)
(800) 795-2673
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$0.01 par value	New York Stock Exchange Chicago Stock Exchange Pacific Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirement for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is an accelerated filer (as defined by Rule 12b-2 of the Act). Yes ☒ No ☐

The aggregate market value of the voting stock held by non-affiliates of the registrant was approximately \$11.486 billion on June 30, 2002. For purposes of this calculation only, the registrant has excluded stock beneficially owned by directors and officers. By doing so, the registrant does not admit that such persons are affiliates within the meaning of Rule 405 under the Securities Act of 1933 or for any other purpose.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date:

Common Stock, \$0.01 par value, 374,898,045 shares outstanding as of January 31, 2003.

DOCUMENTS INCORPORATED BY REFERENCE

List hereunder the documents from which parts thereof have been incorporated by reference and the part of the Form 10-K into which such information is incorporated:

Burlington Northern Santa Fe Corporation's definitive Proxy Statement, to be filed
not later than 120 days after the end of the fiscal year covered by this report PART III

As of December 31, 2002, General Electric Company and the Electro-Motive Division of General Motors Corporation performed locomotive maintenance and overhauls for BNSF Railway under various maintenance agreements that covered approximately 2,600 locomotives. These agreements require the work to be done at BNSF Railway's facilities using BNSF Railway employees. In addition, the Company entered into a locomotive maintenance contract with Alstom Transportation, Inc. (Alstom) in the fourth quarter of 2002. Alstom will begin performing maintenance on a portion of the Company's locomotives in 2003.

The majority of maintenance of way expenditures for track has been for rail and tie refurbishment and track resurfacing. The extent of the BNSF Railway track maintenance program is depicted in the following table:

Year Ended December 31,	2002	2001	2000
Track miles of rail laid ^(a)	685	891	738
Cross ties inserted (thousands) ^(a)	2,248	2,704	2,527
Track resurfaced (miles)	12,499	11,011	11,228

^(a) Includes expenditures for both maintenance of existing route system and expansion projects. These expenditures are primarily capitalized.

BNSF Railway's planned 2003 track maintenance of way program will result in the installation of approximately 700 track miles of rail, the replacement of about 2.2 million ties, and the resurfacing of approximately 11,000 miles of track.

Property and Facilities

BNSF Railway operates various facilities and equipment to support its transportation system, including its infrastructure and locomotives and freight cars as described above. It also owns or leases other equipment to support rail operations, including highway trailers, containers and vehicles. Support facilities for rail operations include yards and terminals throughout its rail network, system locomotive shops to perform locomotive servicing and maintenance, a centralized network operations center for train dispatching and network operations monitoring and management in Fort Worth, Texas, computers, telecommunications equipment, signal systems, and other support systems. Transfer facilities are maintained for rail-to-rail as well as intermodal transfer of containers, trailers and other freight traffic. These facilities include 36 major intermodal hubs located across the system and three intermodal hub centers off-line used in connection with haulage agreements with other railroads. BNSF Railway's largest intermodal facilities in terms of 2002 volume were:

Intermodal Facilities	Lifts
Hobart Yard (California)	1,086,000
Corwith Yard (Illinois)	713,000
Willow Springs (Illinois)	674,000
Cicero (Illinois)	455,000
San Bernardino (California)	450,000
Alliance (Texas)	438,000
Argentine (Kansas)	252,000

BNSF Railway owns 26 automotive distribution facilities where automobiles are loaded or unloaded from multi-level rail cars and serves eight port facilities in the United States and Canada.

BNSF Railway's largest freight car classification yards based on the average daily number of cars processed (excluding cars that do not change trains at the terminal and intermodal and coal cars) are shown below:

Classification Yard	Daily Average Cars Processed
Argentine (Kansas)	1,728
Galesburg (Illinois)	1,524
Barstow (California)	1,276
Pasco (Washington)	1,175
Memphis (Tennessee)	1,078

As of December 31, 2002, certain BNSF Railway properties and other assets are subject to liens securing \$422 million of mortgage debt. Certain locomotives and rolling stock of BNSF Railway are subject to equipment obligations and leases, as referred to in Notes 9 and 10 to the Consolidated Financial Statements.

capital or operating leases, and debt issuances. The decision on the method used for particular acquisition financings will depend upon then current market conditions and other factors.

In January 2003, BNSF purchased another 50 locomotives under the commitment discussed above. The additional locomotives were initially funded with cash from operations, and the Company will consider various financing alternatives, with financing, if appropriate, expected to be completed in 2003.

Financing Activities

Net cash used for financing activities during 2002 was \$587 million primarily related to common stock repurchases of \$353 million, a net reduction in borrowings of \$90 million and dividend payments of \$183 million, partially offset by proceeds of \$40 million resulting from the exercise of 2.3 million stock options.

Aggregate debt to mature in 2003 is \$173 million. BNSF's ratio of total net debt to total capital (net debt is calculated as total debt less cash) was 46.1 percent at December 31, 2002, compared with 45.8 percent at December 31, 2001, and 47.7 percent at December 31, 2000.

2003

In January, the Company exercised an option to call \$29 million of 2.63 percent mortgage bonds issued by a predecessor company and due January 1, 2010. Cash generated from operations was used to fund the call.

2002

The Company financed the construction of an intermodal facility by a third party and entered into an agreement to lease the intermodal facility for 20 years. This lease transaction is accounted for as a financing and has a purchase option. The Company recorded an asset in Property and equipment, net and a liability in Long-term debt and commercial paper of \$138 million which represents the fair market value at lease inception.

BNSF issued \$300 million of 5.90 percent notes due July 1, 2012. The net proceeds of the debt issuance were used for general corporate purposes including the repayment of outstanding commercial paper.

The Company increased the amount of debt securities available under its shelf registration, enabling it to issue new debt securities in one or more series at an aggregate offering price not to exceed \$1 billion. At December 31, 2002, the entire \$1 billion was still available for future debt issuances.

2001

BNSF issued \$400 million of 6.75 percent notes due July 15, 2011. The net proceeds of the debt issuance were used for general corporate purposes including the repayment of outstanding commercial paper.

Remarketable 33-year bonds totaling \$100 million issued in 1998 were called by the holder of the call option. BNSF subsequently purchased the option from the holder and retired the bonds and, as a result, incurred an expense of \$9 million. Additionally, BNSF issued a \$12 million, 5.96 percent note due April 2004.

Free Cash Flow

BNSF generated free cash flow (calculated as cash flow from operations less capital expenditures, other investing activities and dividends paid) of \$406 million, \$443 million and \$431 million during 2002, 2001 and 2000, respectively.

Dividends

Common stock dividends declared were \$0.48 per share annually for 2002, 2001 and 2000. Dividends paid on common stock were \$183 million, \$190 million and \$206 million during 2002, 2001 and 2000, respectively. On January 16, 2003, the Board of Directors (the Board) declared a quarterly dividend of \$0.12 per share on outstanding shares of common stock, \$0.01 par value, payable April 1, 2003, to stockholders of record on March 11, 2003.

Common Stock Repurchase Program

In July 1997, the Board authorized the repurchase of up to 30 million shares of the Company's common stock from time to time in the open market. In December 1999, April 2000, September 2000 and January 2003, the Board authorized

extensions of the BNSF share repurchase program, adding 30 million shares at each date to the total shares previously authorized bringing BNSF's share repurchase program to 150 million shares. During 2002, 2001 and 2000, the Company repurchased approximately 13 million, 11 million and 65 million shares, respectively, of its common stock at average prices of \$27.85 per share, \$27.76 per share and \$23.16 per share, respectively. Total repurchases through December 31, 2002, were 116 million shares at a total average cost of \$25.97 per share, leaving 34 million shares available for repurchase out of the 150 million shares presently authorized.

Long-Term Debt and Other Obligations

The Company's business is capital intensive. BNSF has historically generated a significant amount of cash from operating activities which it uses to fund capital additions, service debt, repurchase shares and pay dividends. Additionally, the Company relies on access to the debt and leasing markets to finance a portion of capital additions on a long-term basis.

The Company utilizes a commercial paper program backed by bank revolving credit agreements to manage liquidity needs. The information below summarizes the more significant obligations of the Company at December 31, 2002. For 2003 and the foreseeable future, the Company expects that cash from operating activities, access to capital markets and bank revolving credit agreements will be sufficient to enable the Company to meet its obligations when due. The Company believes these sources of funds will also be sufficient to fund capital additions that are necessary to maintain its competitiveness and position the Company for future revenue growth.

The Company's ratio of earnings to fixed charges was 2.93 times for the year ended December 31, 2002. Additionally, the Company's ratio of net cash provided by operating activities divided by total average debt was 31 percent for the year ended December 31, 2002.

The following table summarizes the Company's obligations under long-term debt and other contractual commitments at December 31, 2002:

Long-Term Commitments	Total	Payments Due by Period			
		1 Year or Less	2 - 3 Years	4 - 5 Years	There- after
		(in millions)			
Long-term debt ^(a)	\$ 6,168	\$ 101	\$ 882	\$ 735	\$ 4,450
Capital lease obligations	646	72	158	162	254
Operating leases ^(b)	5,537	425	826	701	3,585
Employee merger and separation payments	210	40	55	40	75
Other long-term commitments ^(c)	6,013	528	1,031	786	3,668
Total Long-Term Commitments	\$ 18,574	\$ 1,166	\$ 2,952	\$ 2,424	\$ 12,032

^(a) Excludes capital lease obligations

^(b) Gross payments due which include an interest component

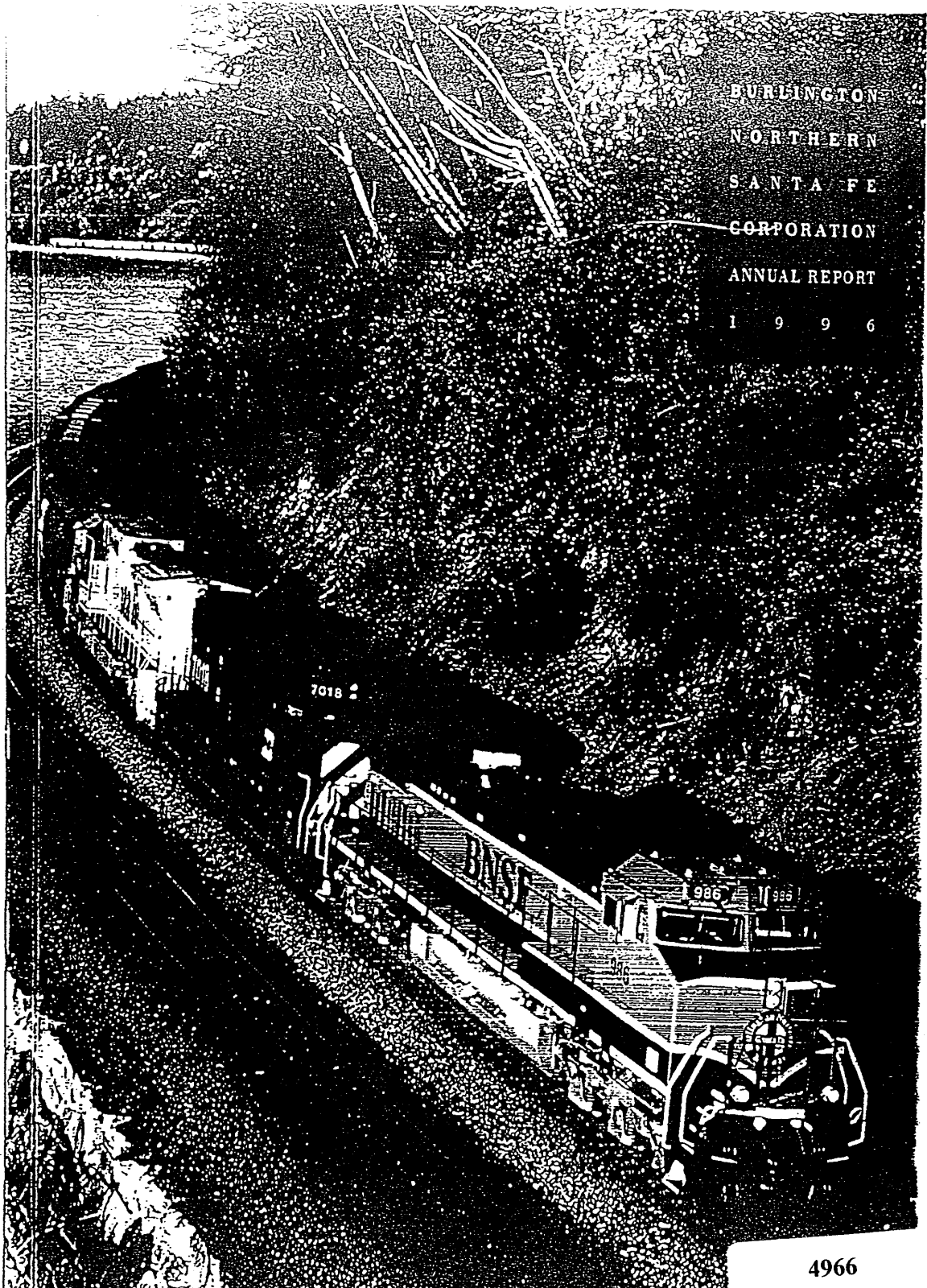
^(c) Includes short-line minimum usage commitments, asset maintenance and other purchase commitments

In August 2002, BNSF entered into a 10-year agreement to outsource the management of a large portion of its computing infrastructure. The agreement is designed to reduce the cost of infrastructure services while maintaining or improving service levels and expertise. The agreement is expected to result in slightly higher operating expenses for the next two fiscal years; although, over the term of the agreement, it is expected to slightly lower operating expenses and to reduce capital spending which in total is expected to generate positive cash flow. The resulting minimum payments from this agreement are included in other long-term commitments in the table above.

In addition to the obligations described above, the Company acts as guarantor for certain debt and lease obligations of others. BNSF does not expect performance under these guarantees to have a material adverse effect on the Company's liquidity in the foreseeable future. See Note 9 to the Consolidated Financial Statements.

In the normal course of business, the Company enters into long-term contractual requirements for future goods and services needed for the operations of the business. Such commitments are not in excess of expected requirements and are not reasonably likely to result in performance penalties or payments that would have a material adverse effect on the Company's liquidity.

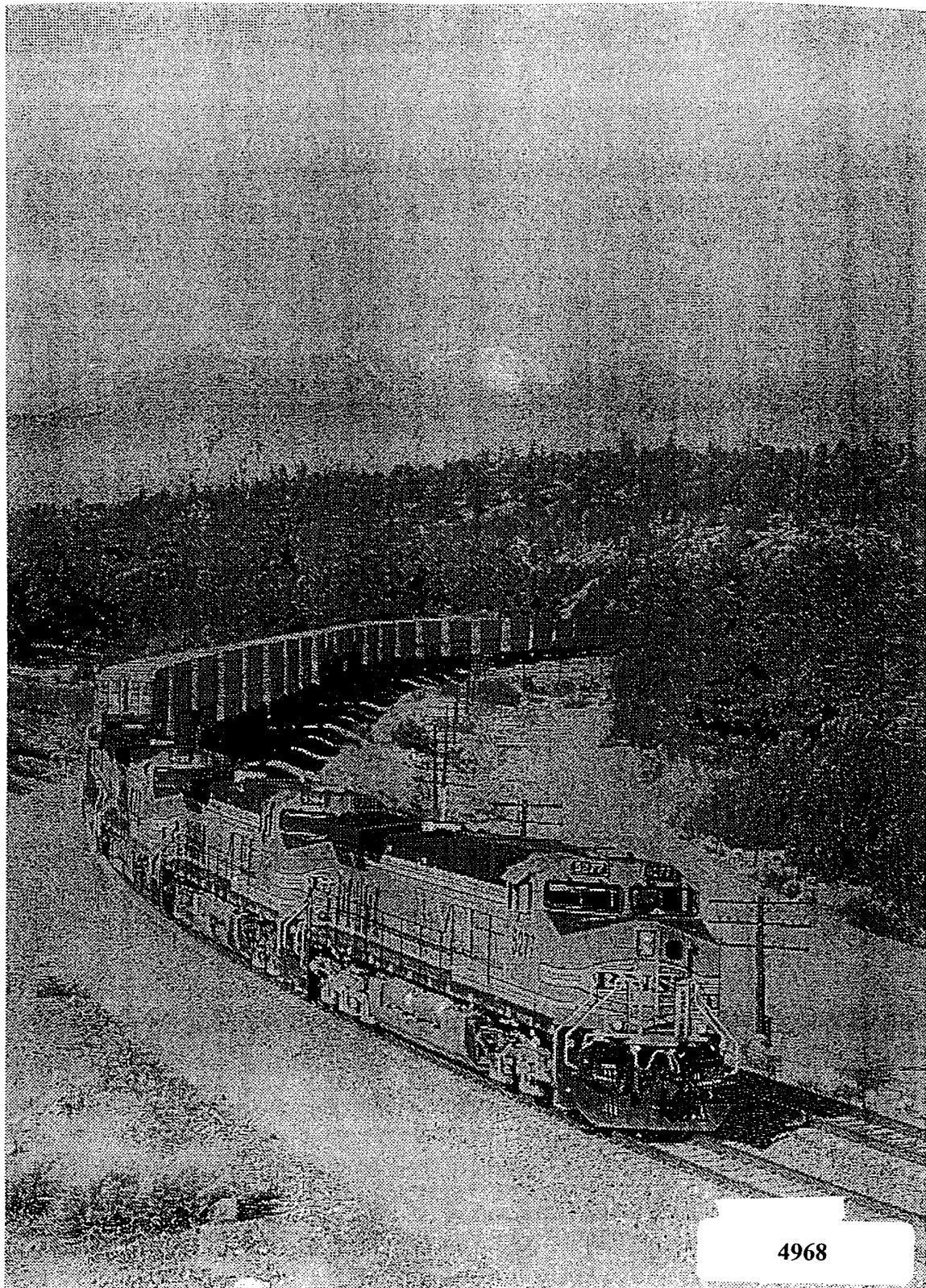
BURLINGTON
NORTHERN
SANTA FE
CORPORATION
ANNUAL REPORT
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Burlington Northern Santa Fe Corporation and Subsidiaries
(Dollars in millions)

1996	December 31,	1996	1995
\$4,976	ASSETS		
	Current assets:		
1,766	Cash and cash equivalents	\$ 47	\$ 50
524	Accounts receivable, net	711	620
36	Materials and supplies	222	220
42	Current portion of deferred income taxes	307	320
36	Other current assets	44	54
66	Total current assets	1,331	1,264
4,123	Property and equipment, net	17,633	16,001
85	Other assets	882	1,004
153	Total assets	\$19,846	\$18,269
	LIABILITIES AND STOCKHOLDERS' EQUITY		
69	Current liabilities:		
26	Accounts payable and other current liabilities	\$ 2,146	\$ 2,289
42	Long-term debt due within one year	165	80
	Total current liabilities	2,311	2,369
	Long-term debt and commercial paper	4,546	4,153
42	Deferred income taxes	4,729	4,233
(1)	Casualty and environmental liabilities	543	626
\$ 41	Employee merger and separation costs	466	530
	Other liabilities	1,270	1,321
\$ 46	Total liabilities	13,865	13,232
	Commitments and contingencies (see Notes 3, 12 and 13)		
(1)	Stockholders' equity:		
\$ 43	Common stock, \$.01 par value, 300,000,000 shares authorized; 154,198,088 shares and 149,649,930 shares issued, respectively	2	1
90	Additional paid-in capital	4,838	4,606
	Retained earnings	1,165	459
\$ 43	Treasury stock, at cost, 196,122 shares and 44,713 shares, respectively	(16)	(3)
(1)	Other	(8)	(26)
	Total stockholders' equity	5,981	5,037
\$ 43	Total liabilities and stockholders' equity	\$19,846	\$18,269

See accompanying notes to consolidated financial statements.



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BURLINGTON NORTHERN SANTA FE CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(Dollars in millions, shares in thousands)

December 31,	2002	2001
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 28	\$ 26
Accounts receivable, net	141	172
Materials and supplies	226	191
Current portion of deferred income taxes	314	306
Other current assets	82	28
Total current assets	791	723
Property and equipment, net	24,022	23,110
Other assets	954	888
Total assets	\$ 25,767	\$ 24,721
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and other current liabilities	\$ 1,918	\$ 1,873
Long-term debt due within one year	173	288
Total current liabilities	2,091	2,161
Long-term debt and commercial paper	6,641	6,363
Deferred income taxes	6,975	6,731
Casualty and environmental liabilities	444	423
Minimum pension liability	368	12
Employee merger and separation costs	170	216
Other liabilities	1,146	966
Total liabilities	17,835	16,872
Commitments and contingencies (see Notes 3, 9 and 10)		
Stockholders' equity:		
Common stock, \$0.01 par value 600,000 shares authorized; 496,683 shares and 492,818 shares issued, respectively	5	5
Additional paid-in-capital	5,664	5,584
Retained earnings	5,625	5,048
Treasury stock, at cost, 120,905 shares and 107,041 shares, respectively	(3,114)	(2,745)
Unearned compensation	(39)	(34)
Accumulated other comprehensive loss	(209)	(9)
Total stockholders' equity	7,932	7,849
Total liabilities and stockholders' equity	\$ 25,767	\$ 24,721

See accompanying Notes to Consolidated Financial Statements.

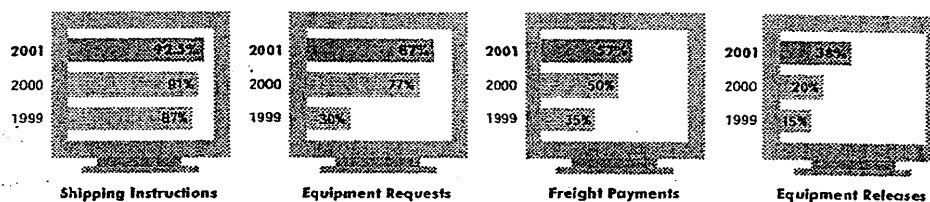
Burlington Northern Santa Fe Corporation
—2001 Annual Report to Shareholders—

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DOING BUSINESS

Some BNSF eBusiness tools attract new business. Other eBusiness tools improve "ease of doing business" by enabling customers to transact business electronically. In 2001, BNSF continued to increase the percentage of major transactions completed electronically, as well as the percentage of freight payment dollars received electronically and through other automated processes.

Electronic Transactions 1999-2001 (percent of total)



BNSF was ranked as the leading U.S. railroad and one of the leaders in U.S. industry for its Website technology and eCommerce capabilities by the following publications in 2001:

Magazine	Rank	Description
Interactive Week	BNSF ranked 13th out of 500 top companies for generating the most revenue from Web operations	
InfoWorld	BNSF ranked as one of the top 100 companies cited as innovators in information technology	
eWeek	BNSF ranked as one of the top 500 companies using its Website to connect with customers, suppliers and partners	
Smart Business	BNSF listed as one of the top 50 U.S. companies using the Internet to enhance and expand their business	

per month in its first three months of operation, including loads from customers who had never shipped by rail before, and it continues to establish new monthly loading records.

We opened our Stockton intermodal facility in April, which increases our intermodal capacity in northern California by 50 percent to more than 500,000 lifts annually, and expedites movement of all types of freight on our West Coast routes. On the eastern end of our network, construction started on our Joliet Multimodal Facility, scheduled to open this fall, which will offer our fourth intermodal facility in the Chicago area.

For *Industrial Products*, in addition to achieving record high revenue for several commodities

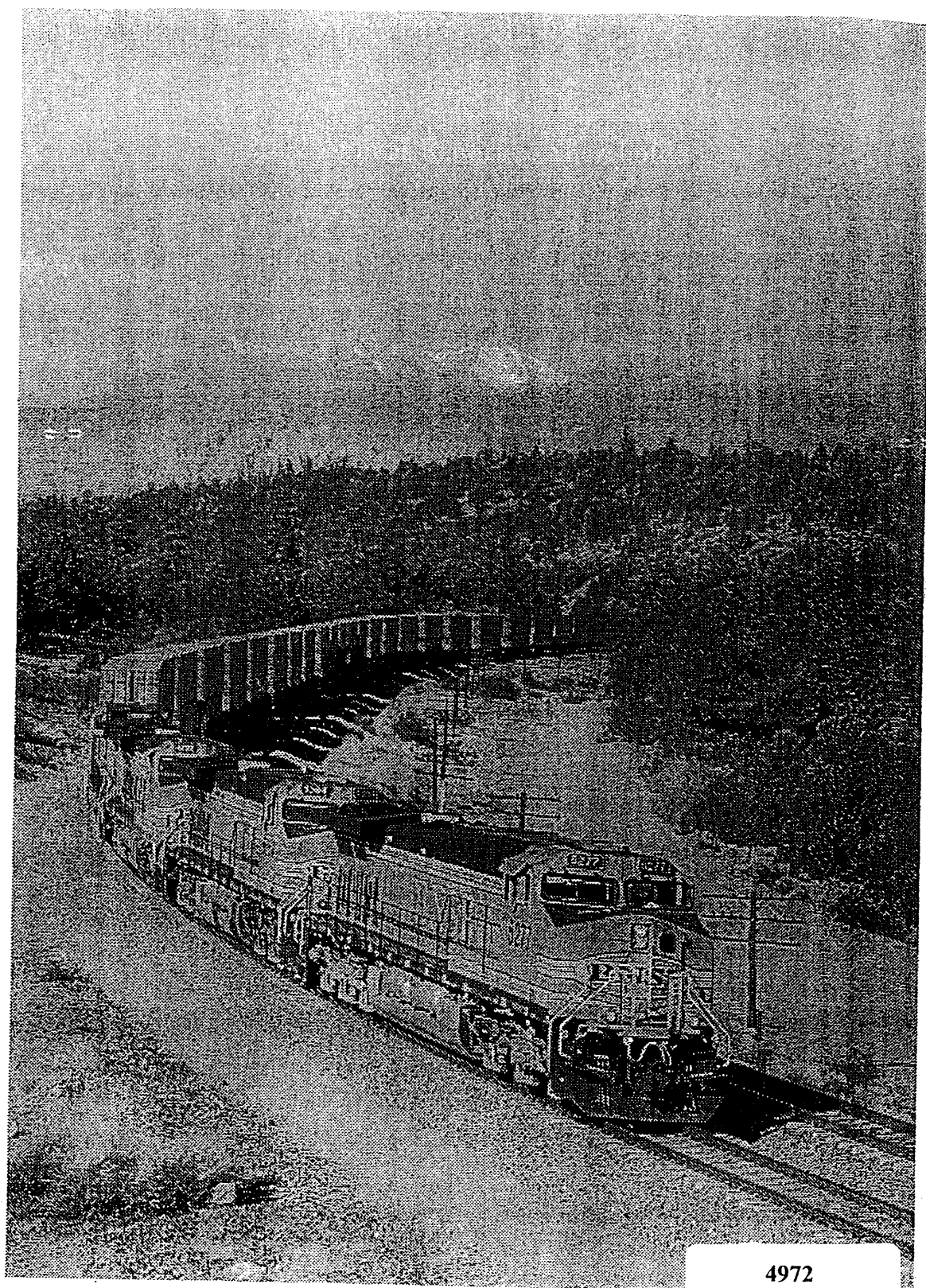
we made a number of changes to improve the focus on our customers, products and markets. We reorganized this work team into marketing and sales groups to simplify our customer interactions. We also worked to streamline pricing administration by moving toward public pricing. This initiative reduced the number of pricing documents the group handles by 30 percent, enabling the group to focus more of their time on customer service and revenue growth.

We are also exploring ways to improve the interchange process with other carriers and transportation providers to improve overall transit performance. This is important because about one-fourth of all carload shipments moving on our network interchange at another railroad's

terminal at least once before they reach their final destination. In 2001, we worked with CSX, for instance, to reduce transit times for interline carload service through Chicago.

BNSF's Loading Origin Guarantees (LOGS) program, an online auction that allows customers to secure boxcar and centerbeam rail car capacity in advance, was expanded to include refrigerated boxcars in 2001. More than 43,000 loads have now been handled through our LOGS program, with a success rate that exceeds 99.9 percent.

Our *Ease of Doing Business* initiative is closely tied to revenue growth. To make it easier for customers to transact business with us, we've put a tremendous



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To Our Shareholders,
Customers and Colleagues,

Despite the economic challenges TEAM BNSF faced in 2002, we achieved many record performances, outpacing most other transportation companies in service and efficiency. Over the past two years, we have laid an excellent foundation for revenue and earnings growth when America's economy picks up steam.

In service, value and customer satisfaction, 2002 was a banner year for BNSF. Successes include:

- Record on-time service;
 - One of the best safety performances in our history;
 - Significant growth in International and other intermodal business sectors;
 - Receipt of several industry and customer awards.
- (See list this page.)

We also set the industry standard for efficiency and innovation in Engineering, Mechanical and web-based applications.

Before reviewing our year, I'll touch on a topic in the news throughout 2002 – corporate integrity and trust. At BNSF, we believe in full disclosure and transparency in all financial dealings, and we take seriously regulations and recommendations to tighten reporting. This is why we chose to include in this Annual Report our Form 10-K, the document we file with the Securities and Exchange Commission.

Two years ago, I introduced our five strategic initiatives to you – Service, Efficiency, Ease of Doing Business, Growth and People. These initiatives

continue to shape our company, and they are the pillars supporting our 2003-2007 strategic plan.

Service

Our service in 2002 was unquestionably the best in our history. On-time performance across all commodities was 92 percent. One service highlight, as we finished the year, was our Peak Season for United Parcel Service, one of our largest customers. Between Thanksgiving and Christmas 2002, we handled more than 26,400 trailers in 25 days without a service failure, completing a record-setting year in our UPS service.

In May 2000, we were the first railroad to introduce a guaranteed service product, offering a money-back service guarantee for high-priority intermodal shipments. We now offer this guaranteed intermodal product on 19 lanes. Since the program's inception, we've moved more than 10,000 shipments with a 97 percent success rate. In October 2002, we announced a similar product for our carload service, now available in seven lanes – another industry first.

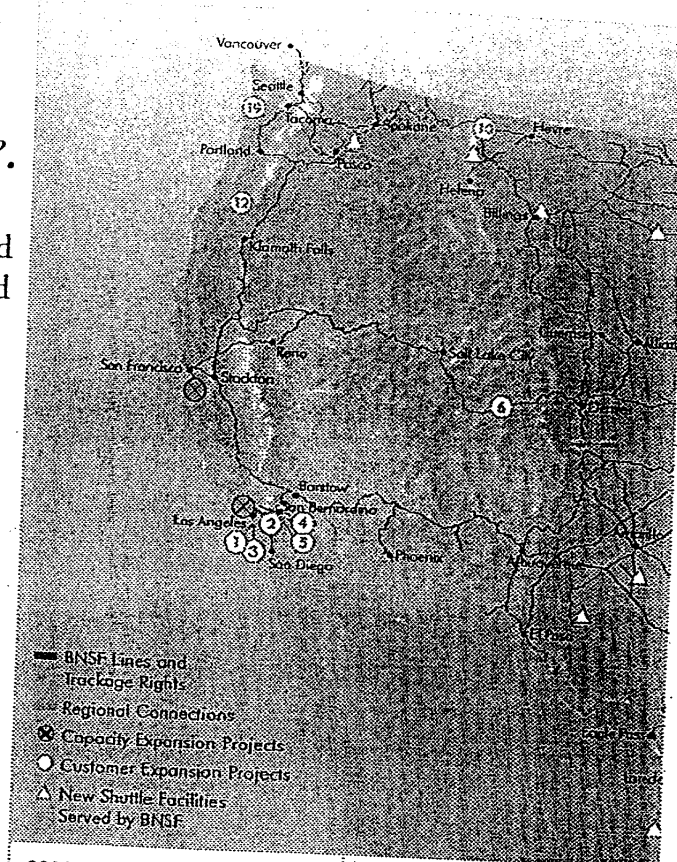
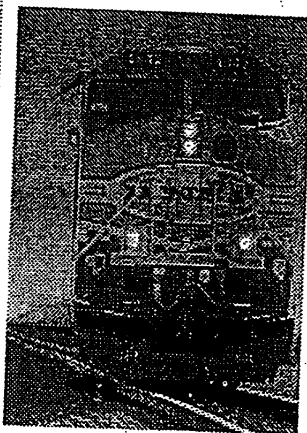
To ensure excellent service after winning significant contracts from international steamship companies, we opened several facilities in 2002 at key locations for this business – at Commerce, Calif.; the Port of Oakland, Calif.; and near Chicago. These facilities increase our intermodal annual lift capacity by about 900,000, bringing the system total to 8 million.

Significant Recognition Received by BNSF in 2002

Premier Partner	American Honda Motor Co., Inc. (fifth consecutive year)
Logistics Supplier Award	Coors Brewing Company
Cornet of the Year	KIA Motors Inc.
Cornet of the Year	Naxen Chemicals
Cornet of the Year	Wal-Mart Stores, Inc. (fourth consecutive year)
Industry Advancement Award	Transportation Intermediaries Association
Cornet of the Year	Railway Industrial Clearance Association (second consecutive year)
Latino Style 50	One of 50 top U.S. corporations providing best career opportunities for Hispanic women
BtoB's NetMarketing 100	One of the best business-to-business websites in marketing effectiveness

BNSF at a Glance.

In 2002, BNSF customers constructed a number of new and expanded facilities served by BNSF, including transload and distribution centers, grain shuttle stations, and new manufacturing plants. In preparation for significant volume growth on its southern transcontinental main line, BNSF also completed several major expansion projects in California and Chicago.



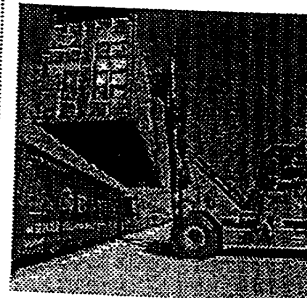
2002 BNSF Capacity Expansion Projects

⊗ Port of Oakland

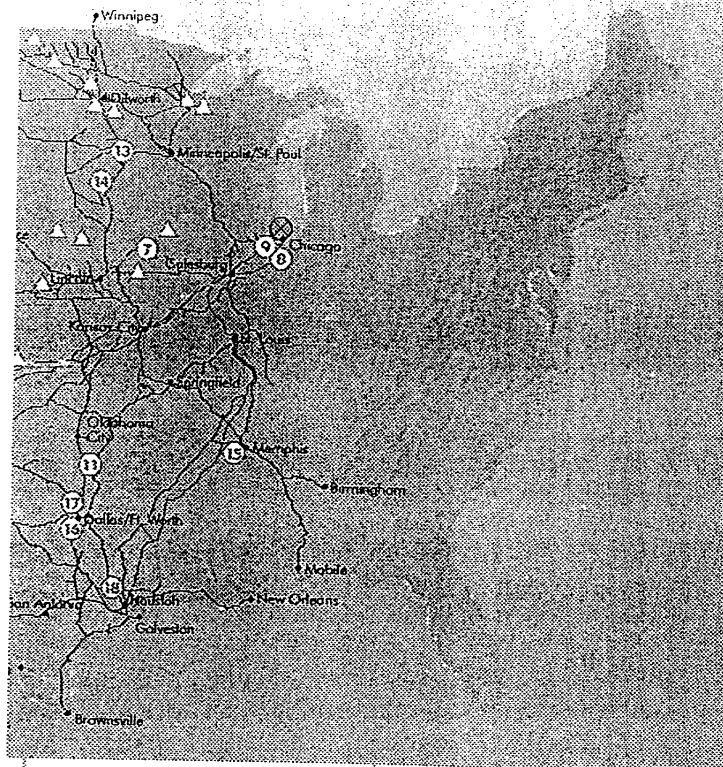
BNSF operates the Port's Joint Intermodal Terminal, known as the Oakland International Gateway, which opened in March 2002. This 85-acre, near-dock facility can handle 250,000 containers annually, with room for expansion. It provides convenient BNSF rail access to shippers at the Port of Oakland, the fourth largest container port in the country. More than half the facility's funding came from federal ISTEA and TEA-21 grants.

⊗ BNSF Logistics Park - Chicago

This 621-acre multi-modal



facility, which opened in October 2002, serves intermodal, automotive and multi-commodity shippers and offers rail, truck, and transload services with distribution and warehousing at one location. Located on BNSF's premier route between Chicago and the West Coast and convenient



to interstate highways southwest of Chicago, the intermodal facility increases BNSF's Chicago intermodal capacity to a total of nearly 3 million annual lifts, with room for additional expansion.

The automotive facility at BNSF's Logistics Park - Chicago, allows for quick, efficient building of automotive trains for Western markets.

⊗ **Commerce Intermodal Facility**
To expand capacity in the Los Angeles area and improve container service to and from Chicago, BNSF converted its automotive facility at Commerce, Calif., into an intermodal facility with a capacity of 180,000 lifts a year.

2002 Customer Expansion Projects Served by BNSF

The following list highlights several new and expanded customer facilities constructed in 2002 to be served by BNSF.

- ① Long Beach, California
Hanjin Shipping Pier T,
International container terminal
- ② Ontario, California
Coors Brewing Co., Brewery
- ③ Port of Los Angeles, California
Maersk Sealand Pier 400,
International container terminal
- ④ Rancho Cucamonga, California
GM Service Parts Operations,
Auto parts distribution
- ⑤ Riverside, California
Quebecor, Inc.,
Printing paper distribution

- ⑥ Parachute, Colorado
American Soda LLP, Soda ash
(expansion)
- ⑦ Coon Rapids, Iowa
Tall Corn Ethanol, LLC; Ethanol
- ⑧ Elwood, Illinois
Partners Warehouse, Transloading
- ⑨ Elwood, Illinois
Potlatch Corp., Paper
- ⑩ Shelby, Montana
Mountain View Reload, Inc.,
Lumber transloading
- ⑪ Mill Creek, Oklahoma
TXI, Crushed stone
- ⑫ Awbrey, Oregon
Lafarge Canada, Inc., Cement
- ⑬ Big Stone City, South Dakota
Northern Lights Ethanol, LLC,
Ethanol
- ⑭ Watertown, South Dakota
Glacial Lakes Energy, LLC, Ethanol
- ⑮ Memphis, Tennessee
Ford Motor Co., Auto parts distribution
- ⑯ Irving, Texas
Desticon Transportation Services, Inc.,
Lumber transloading
- ⑰ Saginaw, Texas
Saddle Creek Corp., Consumer
product transloading
- ⑱ Somerville, Texas
Vulcan Materials Co., Inc.,
Crushed stone
- ⑲ Aberdeen, Washington
Sierra Pacific Industries, Inc.,
Lumber and forest products



Forecasts by 166
industry leaders

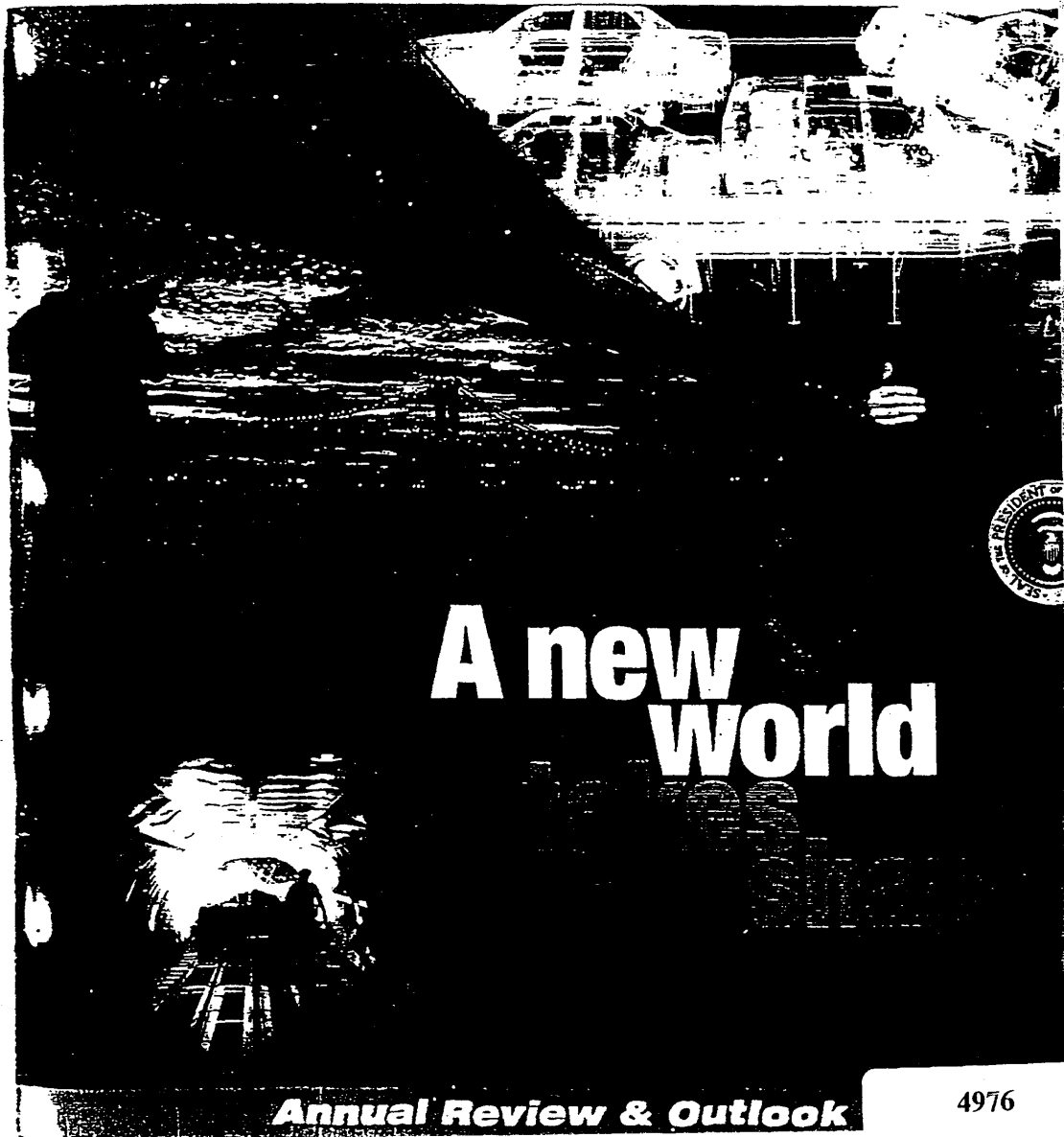
Tony Hatch on railroads'
resurgence

Mark Kadar on carriers'
financials

Can
enough?

The Journal of Commerce

SUPPLEMENT TO THE JOURNAL OF COMMERCE, JANUARY 13, 2003



A new world

Annual Review & Outlook

4976

Anthony M. Hatch

On track for improvement



This should be a fine year for the North American rail system. After the trial by fire of the past several years, complete with recession, post-merger problems, port shutdowns, weakness in the mainstay bulk commodities of coal and grain and stock market gyrations, 2003 should be a breeze. Although I am being somewhat facetious — there will always be challenges — it is clear to most observers that railroads passed a series of tests between 1999 and 2002, and have emerged in terrific condition and ready for the new challenges ahead.

Anthony M. Hatch is an independent transportation analyst based in New York. He can be reached at (212) 595-0457, or by e-mail abh18@mind-spring.com.

Overly optimistic? I don't think so. Sure, the modal competition from trucks will remain intense — so will the partnerships — as customer demands to raise the bar continue. But the successes that railroads have had even in this uneven recovery gives me confidence that when the economy bounces back, the railroads' earnings will be an exciting place to be, for investors — my constituency — and customers. There are several key issues for railroads to face over the long term, and how they approach them in 2003 will go a long way toward telling if my confidence is misplaced or not.

The economy, of course, remains critical. Railroads proved in the 1990-91 recession that they could handle economic adversity and match reduced freight levels with cost reductions. Over the last few years the rails did it again

— while emerging from consolidation issues, instituting new information systems, bringing in innovative new services while performing at all-time high levels.

They earned a pretty decent amount of money during this period, too, improving overall earnings and margins (compare this with other transport modes over the last few years). At the third-quarter analyst meetings in October, railroad executives expressed fear over the sustainability of the already-shaky economic recovery as auto and housing related shipments — not to mention the West Coast port situation — looked to be unstable.

Traffic through October was still down a percentage point in carloads, though up 4 percent in intermodal. The durability and velocity of the economy is surely the No. 1 issue for the railroad



Intermodal in the next 12 to 18 months is expected to overtake coal as the largest single commodity for U.S. railroads.

industry in 2003, as another challenge or a terrific opportunity.

Rail service has never been better, and is on an upward trajectory. In fact, although the economy is the biggest short-term issue, service capability is clearly the No. 1 issue over the long term. And, unlike the past, it is a winner for rail. Fueled by new management mindset, past successes, better information and alliances — not to mention ever-increasing customer demands — railroads are measurably better each quarter in on-time percentage, velocity, ease of doing business and innovative offerings.

The marked change has been noticed, as shown by a series of customer polls and surveys, and by gains in new business and increasing market share. Investors know that railroads can no longer save their way to prosperity, and that railroads must grow through general economic expansion and increased market share. With rails riding high, the Association of American Railroads has launched an important new branding awareness program to tell the world that things have changed.

Perhaps nowhere is this better shown than in the intermodal business. As Tom Brown and I expressed in our white paper published in September, "Rail Intermodal: on the Fast Track" (see <http://www.tomorrow'srailroads.org>), intermodal growth is back and should continue conservatively at a 5 percent rate — which will make it the largest rail commodity in the next 12 to 18 months, over King Coal, for decades the largest rail commodity. Intermodal serves the most demanding customers with the tightest schedules and delivery windows. Railroads increasingly are guaranteeing this service, and charging premiums for it.

The successes in intermodal have led rails to recognize new opportunities in traditional, oft-neglected carload business in products such as food and perishables, paper and auto parts. Clearly this is no longer your (grand)father's railroad industry.

A key question remains unanswered:

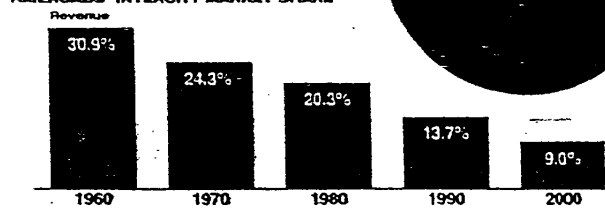
U.S. INTERCITY FREIGHT MARKET SHARE IN 2000

81% Trucks 9% Railroads 7% Other Pipeline 1% Water

Prospect for a reversal?

Match looks to see railroads' share of intercity freight revenue reverse its decades-long decline in the next few years. The reason: Having improved their finances and recovered from 1990s service failures, railroads have never been in a better position to improve their market share by handling more manufactured and consumer goods.

RAILROADS' INTERCITY MARKET SHARE



Is growth affordable? Railroads remain highly capital-intensive, even after reducing capital outlays recently from the high-water mark of 1999 when one in every 5 revenue dollars went to capital spending.

And, strictly speaking, the returns don't justify the expenditure, as the industry as a whole does not earn back its cost of capital. Railroads must grow to capture investor interest and to remain viable. To do that, they must offer better service, which is expensive on an operating and capital basis.

The solution is twofold. One, good service is actually good business. By that, I mean it is actually more efficient than traditional business. Returns are improving, and the trend line will dramatically increase after the economic recovery. Another possible source of help is government funding, via public-private partnerships, of intermodal projects; the societal benefits of rail transportation are clear and well-known. Investors are well aware of other modal subsidies in highways and waterways.

Railroads will have their usual handful of issues in Washington in 2003, fighting off the regular if ill-advised threat of re-regulation, etc., but the so-

called T-3 (TEA-21 reauthorization) process comes with the real opportunity for a paradigm shift and a follow-up on the success of Southern California's Alameda Corridor for more intermodal projects that help multiple modes and the nation in general and relieve the enormous capital burden on rail.

Finally, no talk about the railroading's future can avoid talk of mergers and transcontinental systems. Alliances, between carriers by geography or product, have been one of the biggest success stories of the past few years, aided by better information technology and better individual service levels. I have been a long-term believer in these sets of "virtual mergers."

The service disruptions that rolled across almost every merged region in the late 1990s are still well-remembered by customers, investors and Washington. That being said, the lure of single-line service remains strong, and most of my peers see two transcontinental systems in the intermediate future. There would be much to risk as well as gain, so we shall see. In the shorter term, with labor peace, available capacity, and better-than-ever service, the rails are waiting to make hay when the economic sun shines. ♦

multexFundamentals...

Multex Fundamentals / ProVestor Plus Company Report
Burlington Northern Santa

Tuesday, March 25, 2003

Data Provided by Multex.com Inc.
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Burlington Northern
Santa (NYSE:BN)

		BN	Industry Average	Industry High	Industry Low	S&P 500
Financial Strength	Quick Ratio (MRQ)	0.1	0.4	2.1	0.1	1.2
	Current Ratio (MRQ)	0.4	0.8	4.3	0.4	1.7
	LT Debt/Equity (MRQ)	0.8	0.9	3.3	0.0	0.7
	Total Debt/Equity (MRQ)	0.9	0.9	3.9	0.0	1.0
	Interest Coverage (TTM)	3.9	3.1	1,966.1	(1.3)	11.4
Management Effectiveness	Return On Assets (TTM)	3.0%	3.1%	19.6%	(1.0)%	6.4%
	Return On Assets - 5 Yr. Avg.	4.0%	2.6%	6.5%	0.9%	7.6%
	Return On Investment (TTM)	3.3%	3.4%	39.3%	(3.4)%	10.3%
	Return On Investment - 5 Yr. Avg.	4.4%	2.9%	10.1%	1.0%	12.1%
	Return On Equity (TTM)	9.5%	9.7%	89.7%	(1.9)%	18.5%
	Return On Equity - 5 Yr. Avg.	12.4%	8.0%	21.6%	2.2%	21.0%

Industry Comparison of Total Debt to Total Capitalization and Return on Equity

Companies with high ROE and low total debt to capitalization are exceptional.

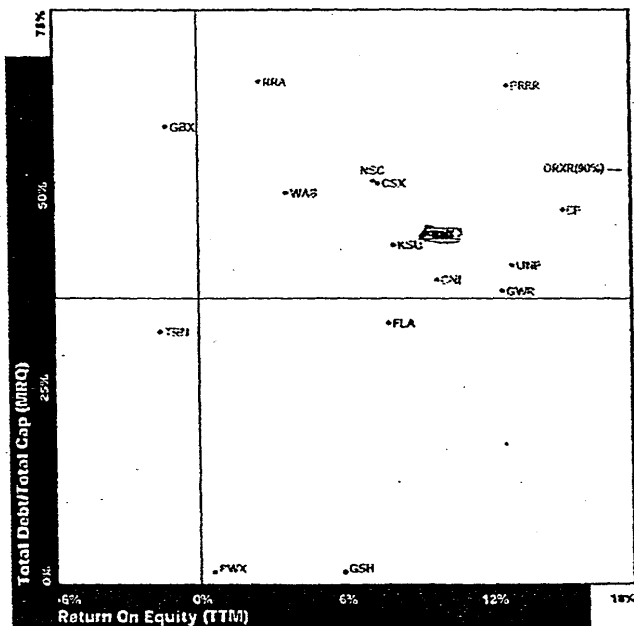
Companies with high debt to capitalization and low ROE are taking a lot of risk and not getting a satisfactory return.

Companies for this scatter plot have a market capitalization up to \$15 billion. Companies with NA or NM values do not appear.

TMM has been excluded because of Return On Equity greater than 18%.
TMM has been excluded because of Total Debt/Total Cap greater than 75%.

TTM Revenue Quintile

81-100%	> \$4.13 billion
61-80%	\$1.01-4.13 billion
41-60%	\$331-1,009 million
21-40%	\$287-331 million
0-20%	< \$287 million



SUB-INDUSTRY OUTLOOK

Our investment outlook for the railroad industry is positive. Year to date through February 21, 2003, the S&P Railroads Index fell 4.7%, versus a 3.8% decline for the S&P 1500. In 2002, the industry index dropped 3.9%, outpacing the 22.5% slide for the S&P 1500. Coal demand, weak in 2002, should start to strengthen due to a harsh winter and efforts to work down stockpiles at power producers. We also expect volumes to benefit from a rise in manufacturing output as the economy starts to strengthen. The industry has made major strides in taking costs out, improving efficiencies and reducing overcapacity, which should allow it to benefit more during both future upcycles and downswings. In June 2001, the Surface Transportation Board (STB) issued new industry guidelines that will make future rail mergers less likely. It must now be proven that any future combination will increase competition, not simply preserve it. As a result, many railroads are exploring partnerships, rather than mergers.

Traffic in ton miles (weight times distance) increased about 0.5% in 2002, according to preliminary estimates by

the Association of American Railroads, equal to the gain the industry saw in 2001. Coal carloadings fell by 3.4% in 2002, but we see strength in carloadings for 2003 in several sectors, notably motor vehicles, which should benefit from strong inventory stocking after record sales in 2002, as well as chemicals and metals. Freight rates were higher in 2002 and should be again in 2003, as shipping via rail, which is a lower-cost transportation alternative, becomes more attractive to customers. Industry profits were expected to show strong improvement in 2002 and again in 2003 after increasing about 5% in 2001 and 8.6% in 2000.

The long-term outlook for railroads is favorable. The industry's core traffic base — coal, grain, chemicals, and intermodal — is expected to increase at least as fast as the economy over the next decade. In addition, there remains room to expand margins by eliminating wasteful labor practices and applying technology in equipment and information management.

—Jim Conidore

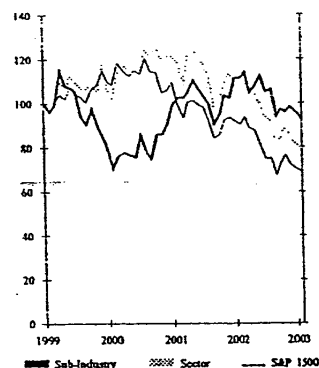
STOCK PERFORMANCE

GICS SECTOR: Industrials

SUB-INDUSTRY: Railroads

Based on S&P 1500 Indexes

Month-end Price Performance
As of 02/28/03



NOTE: All Sector & Sub-Industry Information is based on the Global Industry Classification Standard (GICS)

SUB-INDUSTRY: RAILROADS

*PEER GROUP: RAILROADS (U.S.) - MAJOR

Peer Group	Stock Symbol	Recent Stock Price	P/E Ratio	12-mth. Trail. EPS	30-day Price Chg %	1-year Price Chg. %	Beta	Yield %	Quality Ranking	Stk. Mkt. Cap. (mil. \$)	Ret. on Equity %	Pretax Margin %	LTD to Cap. %
Burlington Northern Santa Fe	BNI	26.49	13	2.00	5%	-12%	0.48	1.8	NR	9,931	18.5	11.5	30.8
CSX Corp.	CSX	29.99	14	2.19	11%	-20%	0.50	1.3	B	6,438	6.6	8.9	38.0
Kansas City Southern	KSU	12.07	14	0.87	-1%	-23%	1.47	Nil	B	736	4.7	5.9	36.8
Norfolk Southern	NSC	19.92	17	1.18	6%	-15%	0.40	1.4	B+	7,750	7.3	11.3	Nil
Union Pacific	UNP	58.26	12	5.05	5%	-4%	0.44	1.6	B	14,788	13.3	16.1	31.8

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SUB-INDUSTRY OUTLOOK

Our investment outlook for the railroad industry is positive. Year to date through January 24, 2003, the S&P Railroads Index declined 5.9% versus a 2.2% decline for the S&P 1500. In 2002, the industry index dropped 3.0%, outpacing the 22.5% decline for the S&P 1500. Coal demand, weak in 2002, should start to strengthen due to a harsh winter and efforts to work down stockpiles at power producers. We also expect volumes to benefit from a rise in manufacturing output as the economy starts to strengthen. The industry has made major strides in taking costs out, improving efficiencies and reducing overcapacity, which should allow it to benefit more during both future upcycles and downswings. In June 2001, the Surface Transportation Board (STB) issued new industry guidelines that will make future rail mergers less likely. It must now be proven that any future combination will increase competition, not simply preserve it. As a result, many railroads are exploring partnerships, rather than mergers.

Traffic in ton miles (weight times distance) increased about 0.5% in 2002, according to preliminary estimates by the Association of American Railroads,

equal to the gain the industry saw in 2001. Coal carloadings fell by 3.8% in 2001, reflecting high inventory levels and a mild 2001-02 winter season. We see strength in carloadings for 2003 in several sectors, notably motor vehicles, which should benefit from strong inventory stocking after record sales in 2002, as well as chemicals and metals. Freight rates were higher in 2002 and should be again in 2003, as shipping via rail, which is a lower-cost transportation alternative, becomes more attractive to customers. Industry profits were expected to show strong improvement in 2002 and again in 2003 after increasing about 5% in 2001 and 8.6% in 2000.

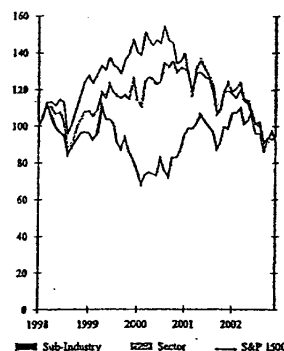
Our investment outlook for railroads is favorable. The industry's core traffic base — coal, grain, chemicals, and intermodal — is expected to increase at least as fast as the economy over the next decade. In addition, there remains room to expand margins by eliminating wasteful labor practices and applying technology in equipment and information management.

—Jim Corridore

STOCK PERFORMANCE

GICS SECTOR: Industrials
SUB-INDUSTRY: Railroads
Based on S&P 1500 Indexes

Month-end Price Performance
As of 01/31/03



NOTE: All Sector & Sub-Industry Information is based on the Global Industry Classification Standard (GICS)

SUB-INDUSTRY: RAILROADS

PEER GROUP: RAILROADS (U.S.) - MAJOR

Peer Group	Stock Symbol	Recent Stock Price	P/E Ratio	12-mth. Trail EPS	30-day Price Chg %	1-year Price Chg %	Beta	Yield %	Quality Ranking	Stk. Mkt. Cap. (mil. \$)	Ret. on Equity %	Pretax Marg'n %	LTD to Cap. %
Burlington Northern Santa Fe	BNF	25.97	13	2.00	0%	-8%	0.52	1.8	NR	9,803	9.6	12.8	30.4
CSX Corp.	CSX	28.03	15	1.86	-1%	-30%	0.50	1.4	B	5,971	4.2	5.5	35.3
Kansas City Southern	KSU	12.75	15	0.87	6%	-8%	1.52	Nil	B	777	4.7	5.9	36.8
Norfolk Southern	NSC	19.70	17	1.18	-1%	-13%	0.43	1.4	B+	7,656	6.1	9.0	44.1
Union Pacific	UNP	57.06	11	5.05	-5%	-8%	0.36	1.6	B	14,452	10.6	12.8	35.0

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News Release

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BNSF To Offer Industry's First Guaranteed On-Time Carload Service

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Customer Updates

Initially to link Pacific Northwest to the Midwest and Texas markets

FORT WORTH, Texas, October 7, 2002 -- The Burlington Northern and Santa Fe Railway Company (BNSF) today began offering the industry's first full-money-back guarantee for carload rail service.

Shippers will have the option to purchase, for a premium, a guarantee for on-time carload rail service in select lanes. With the guarantee, BNSF will offer a 100-percent refund for each load that arrives after the agreed-upon transit time at the customer's location. BNSF measures on-time performance from the time a customer releases the car to the time it is spotted at the customer's dock.

BNSF plans to offer guaranteed carload rail service linking key production and consumption markets including the Pacific Northwest, Northern/Southern California, the Midwest, and Texas. Initially, the on-time guarantee will be available for all commodities moving in carload equipment from the Pacific Northwest to the Midwest and Texas. In December 2002, BNSF plans to expand the guarantee to include service from the Pacific Northwest to Northern California, Southern California and Arizona. BNSF is also working to develop on-time guaranteed carload rail services that include short-line and interline partners throughout North America.

"Our efforts to redesign the carload network have resulted in our improved ability to provide customers with a more consistent and reliable service product," says Dave Garin, group vice president, BNSF Industrial Products Marketing. "BNSF's on-time intermodal guarantee has given new customers the confidence to try rail intermodal shipping. Given this success, and the fact that we've continued to meet goals for system-wide on-time performance, we simply felt it was time to offer customers a risk-free transportation alternative for carload rail service."

BNSF was the first freight railroad to launch a full-money-back guarantee for intermodal rail service in May 2000, which has continued to run 98-percent on time. BNSF also offers the industry's only guaranteed equipment program, which allows customers to secure the supply and placement of different railcar types, including the Centerbeam Flatcar, Boxcar, Refrigerated Boxcar, Gondola, and Bulkhead Flatcar.

A subsidiary of Burlington Northern Santa Fe Corporation (NYSE:BNI), BNSF operates one of the largest railroad networks in North America, with 33,000 route miles covering 28 states and two Canadian provinces. BNSF is an industry leader in Web-enabling a variety of customer transactions at www.bnsf.com. The railway moves more intermodal traffic than any other rail system in the world, is America's largest grain-hauling railroad, transports the

mineral components of many of the products we depend on daily, and hauls enough coal to generate more than 10 percent of the electricity produced in the United States.

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News Release

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 Media Contacts
 Customer Updates

BNSF Expands Its Guaranteed On-Time Carload Service

FORT WORTH, Texas, December 16, 2002 -- The Burlington Northern and Santa Fe Railway Company (BNSF) today announced it has expanded its guaranteed on-time carload rail service to seven lanes, including three additional lanes from the Pacific Northwest to Arizona and northern/southern California, and two from northern/southern California to the Midwest.

BNSF now offers guaranteed on-time carload rail service in the following lanes:

- Pacific Northwest to Arizona (NEW)
- Pacific Northwest to the Midwest (October 2002)
- Pacific Northwest to northern California (NEW)
- Pacific Northwest to southern California (NEW)
- Pacific Northwest to Texas (October 2002)
- Northern California to the Midwest (NEW)
- Southern California to the Midwest (NEW)

The guarantee allows shippers to purchase, for a premium, a guarantee for on-time carload rail service in any of these lanes. With the guarantee, BNSF will offer a 100-percent refund for each load that arrives after the agreed-upon transit time at the customer's location. BNSF measures on-time performance from the time a customer releases the car to the time it is spotted at the customer's dock.

A subsidiary of Burlington Northern Santa Fe Corporation (NYSE:BNI), BNSF operates one of the largest railroad networks in North America, with 33,000 route miles covering 28 states and two Canadian provinces. BNSF is an industry leader in Web-enabling a variety of customer transactions at www.bnsf.com. The railway moves more intermodal traffic than any other rail system in the world, is America's largest grain-hauling railroad, transports the mineral components of many of the products we depend on daily, and hauls enough coal to generate more than 10 percent of the electricity produced in the United States.

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of Washington

in Contracts

t of Multinational

and Portfolio

PRINCIPLES OF CORPORATE FINANCE

FOURTH EDITION

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Massachusetts Institute of Technology*

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7

Introduction to Risk, Return, and the Opportunity Cost of Capital

We have managed to go through six chapters without directly addressing the problem of risk, but now the jig is up. We can no longer be satisfied with vague statements like "The opportunity cost of capital depends on the risk of the project." We need to know how risk is defined, what the links are between risk and the opportunity cost of capital, and how the financial manager can cope with risk in practical situations.

In this chapter we concentrate on the first of these issues and leave the other two to Chapters 8 and 9. We start by summarizing more than 60 years of evidence on rates of return in capital markets. Then we take a first look at investment risks and show how they can be reduced by portfolio diversification. We introduce you to beta, the standard risk measure for individual securities.

The themes of this chapter, then, are portfolio risk, security risk, and diversification. For the most part, we take the view of the individual investor. But at the end of the chapter we turn the problem around and ask whether diversification makes sense as a *corporate* objective.

7-1 SIXTY-THREE YEARS OF CAPITAL MARKET HISTORY IN ONE EASY LESSON

Financial analysts are blessed with an enormous quantity of data on security prices and returns. For example, the University of Chicago's Center for Research in Security Prices (CRSP) has developed a file of prices and dividends for each month since 1926 for every stock that has been listed on the New York Stock Exchange (NYSE). Other files give data for stocks that are traded on the American Stock Exchange and the over-the-counter market; data for bonds, for options, and so on. But this is supposed to be one easy lesson. We, therefore, concentrate on a study by Ibbotson Associates which measures the historical performance of four portfolios of securities:

1. A portfolio of Treasury bills, i.e., United States government debt securities maturing in less than 1 year
2. A portfolio of long-term United States government bonds
3. A portfolio of long-term corporate bonds¹

¹ The two bond portfolios were revised each year in order to maintain a constant maturity.

4. Standard and Poor's Composite Index, which represents a portfolio of common stocks of 500 large firms

These portfolios offer different degrees of risk. Treasury bills are about as safe an investment as you can make. There is no risk of default, and their short maturity means that the prices of Treasury bills are relatively stable. In fact, an investor who wishes to lend money for, say, 3 months can achieve a perfectly certain payoff by purchasing a Treasury bill maturing in 3 months. However, the investor cannot lock in a *real* rate of return: There is still some uncertainty about inflation.

By switching to long-term government bonds, the investor acquires an asset whose prices fluctuate as interest rates vary. (Bond prices fall when interest rates rise and rise when interest rates fall.) An investor who switches from government to corporate bonds accepts an additional *default* risk. An investor who shifts from corporate bonds to common stocks has a direct share in the risks of the enterprise.

Ibbotson Associates calculated a rate of return for each of these portfolios for each year from 1926 to 1988. This rate of return reflects both cash receipts—dividends or interest—and the capital gain realized during the year. Averages of the 63 annual rates of return for each portfolio are shown in Table 7-1.² You can see that these returns coincide with our intuitive risk ranking. The safest investment, Treasury bills, also gave the lowest rate of return—3.6 percent a year in *nominal* terms and .5 percent in *real* terms. In other words, the average rate of inflation over this period was just over 3 percent a year.

Long-term government bonds gave slightly higher returns than Treasury bills. Corporate bonds gave still higher returns. Common stocks were in a class by themselves. Investors who accepted the extra risk of common stocks received on average a premium of 8.4 percent a year over the return on Treasury bills.

You may ask why we look back over such a long period to measure average rates of return. The reason is that annual rates of return for common stocks fluctuate so much that averages taken over short periods are meaningless. Our only hope of gaining insights from historical rates of return is to look at a very long period.³

Using Historical Evidence to Evaluate Today's Cost of Capital. Suppose there is an investment project which you *know*—don't ask how—has the same risk as Standard and Poor's Composite Index. We will say that it has the same degree of risk as the *market portfolio*, although this is speaking somewhat loosely, because the index does not include all risky securities. What rate should you use to discount this project's forecasted cash flows?

² These are arithmetic averages. Ibbotson Associates simply added the 63 annual returns and divided by 63. The arithmetic average return is higher than the compound annual return over the period. For example, suppose the market doubles in value one year and halves the next. Since you are back where you started, the compound annual return is zero. But the arithmetic average return is $(+100 - 50)/2 = +25$ percent. When estimating discount rates, you are interested in the arithmetic average return.

³ Even with 63 years of data we cannot be sure that this period is truly representative and that the average is not distorted by a few unusually high or low returns. The reliability of an estimate of the average is usually measured by its *standard error*. For example, the standard error of our estimate of the average risk premium on common stocks is 2.6 percent. There is a 95 percent chance that the *true* average is within plus or minus 2 standard errors of the 12.1 percent estimate. In other words, if you said that the true average was between 6.9 and 17.3 percent, you would have a 95 percent chance of being right. (Technical note: The standard error of the mean is equal to the standard deviation divided by the square root of the number of observations. In our case the standard deviation is 20.9 percent, and therefore the standard error is $20.9/\sqrt{63} = 2.6$.)

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The Information Content of Dividends

Lintner developed a simple model which is consistent with these facts and explains dividend payments well. Here it is: Suppose that a firm always stuck to its target payout ratio. Then the dividend payment in the coming year (DIV_1) would equal a constant proportion of earnings per share (EPS_1):

$$\begin{aligned} DIV_1 &= \text{target dividend} \\ &= \text{target ratio} \times EPS_1 \end{aligned}$$

The dividend *change* would equal

$$\begin{aligned} DIV_1 - DIV_0 &= \text{target change} \\ &= \text{target ratio} \times EPS_1 - DIV_0 \end{aligned}$$

A firm that always stuck to its payout ratio would have to change its dividend whenever earnings changed. But the managers in Lintner's survey were reluctant to do this. They believed that shareholders prefer a steady progression in dividends. Therefore even if circumstances appeared to warrant a large increase in their company's dividend, they would move only partway toward their target payment. Their dividend changes therefore seemed to conform to the following model:

$$\begin{aligned} DIV_1 - DIV_0 &= \text{adjustment rate} \times \text{target change} \\ &= \text{adjustment rate} \times (\text{target ratio} \times EPS_1 - DIV_0) \end{aligned}$$

The more conservative the company, the more slowly it would move toward its target and, therefore, the *lower* would be its adjustment rate.

Lintner's simple model suggests that the dividend depends in part on the firm's current earnings and in part on the dividend for the previous year, which in turn depends on that year's earnings and the dividend in the year before. Therefore if Lintner is correct, we should be able to describe dividends in terms of a weighted average of current and past earnings.⁸ The probability of an increase in the dividend rate should be greatest when *current* earnings have increased; it should be somewhat less when only the earnings from the previous year have increased and so on. An extensive study by Fama and Babiak confirmed this hypothesis.⁹

We have suggested above that the dividend payment depends on both last year's dividend and this year's earnings. This simple model seems to provide a fairly good explanation of how companies decide on the dividend rate, but it is unlikely to be the whole story. We would also expect managers to take future prospects into account when setting the payment. And that is what we find.

⁸ This can be demonstrated as follows: Dividends per share in time t are

$$DIV_t = aT(EPS_t) + (1 - a)DIV_{t-1} \quad (1)$$

where a is the adjustment rate and T the target payout ratio. But the same relationship holds in $t - 1$:

$$DIV_{t-1} = aT(EPS_{t-1}) + (1 - a)DIV_{t-2} \quad (2)$$

Substitute for DIV_{t-1} in (1):

$$DIV_t = aT(EPS_t) + aT(1 - a)(EPS_{t-1}) + (1 - a)^2DIV_{t-2}$$

We can make similar substitutions for DIV_{t-2} , DIV_{t-3} , etc., thereby obtaining

$$DIV_t = aT(EPS_t) + aT(1 - a)(EPS_{t-1}) + aT(1 - a)^2(EPS_{t-2}) + \dots + aT(1 - a)^n(EPS_{t-n})$$

⁹ E. F. Fama and H. Babiak, "Dividend Policy: An Empirical Analysis," *Journal of the American Statistical Association*, 63: 1132-1161 (December 1968), p. 1134.

For example, Healy and Palepu report that between 1970 and 1979 companies that made a dividend payment for the first time experienced relatively flat earnings growth until the year before the announcement.¹⁰ In that year earnings grew by an average 43 percent. If managers thought that this was a temporary windfall, they might have been cautious about committing themselves to paying out cash. But it looks as if they had good reason to be confident about prospects, for over the next 4 years earnings grew by a further 164 percent.

Since dividends anticipate future earnings, it is no surprise to find that announcements of dividend cuts are usually taken as bad news (stock price typically falls) and that dividend increases are good news (stock price rises). In the case of the dividend initiations studied by Healy and Palepu, the announcement of the dividend resulted in an abnormal rise of 4 percent in the stock price.¹¹ It's important not to jump to the conclusion that this shows that investors like higher dividends for their own sake. The dividend may be welcomed only as a sign of higher future earnings.

Do you remember from Chapter 13 that stock splits lead to stock price increases? That is not because splits create value, but because they signal future prosperity, specifically increased dividends. Now we see that dividend increases in turn may be important mostly as signals of future earnings. (Finally, we could say that *earnings* are important because they tell investors something about the *true* measures of corporate prosperity: cash flow and the extent of positive-NPV capital investment opportunities.)

Market efficiency means that all information available to investors is quickly and accurately impounded in stock prices. It does not imply that fundamental information about a company's operations or prospects is always cheaply or easily obtained. Investors therefore seize on any clue. That is why stock prices respond to stock splits, dividend changes, and other actions or announcements which reveal managements' optimism or pessimism about their firms' futures.

16-3 CONTROVERSY ABOUT DIVIDEND POLICY

Now we turn to the controversial question of how dividend policy affects value. One endearing feature of economics is that it can always accommodate not just two, but three opposing points of view. And so it is with the controversy about dividend policy. On the right there is a conservative group which believes that an increase in dividend payout increases firm value. On the left, there is a radical group which believes that an increase in payout reduces value. And in the center there is a middle-of-the-road party which claims that dividend policy makes no difference.

The middle-of-the-road party was founded in 1961 by Miller and Modigliani (always referred to as *MM* or *M* and *M*), when they published a theoretical paper showing the irrelevance of dividend policy in a world without taxes, transaction costs, or other market imperfections.¹² By the standards of 1961 *MM* were leftist

¹⁰ See P. Healy and K. Palepu, "Earnings Information Conveyed by Dividend Initiations and Omissions," *Journal of Financial Economics*, 21: 149-175 (1988).

¹¹ Stock price changes were corrected for market movements by the methods explained in Chapter 13. Healy and Palepu also looked at companies that *stopped* paying a dividend. In this case the stock price on average declined by an abnormal 9.5 percent on the announcement, and earnings fell over the next four quarters.

¹² M. H. Miller and F. Modigliani, "Dividend Policy, Growth and the Valuation of Shares," *Journal of Business*, 34: 411-433 (October 1961).

On the "no" side, there are other things the trade-off theory cannot explain. It cannot explain why some of the most successful companies thrive with little debt. Think of Merck, which as Table 18-3a shows, is basically all-equity-financed. Granted, Merck's most valuable assets are intangible, the fruits of its pharmaceutical research and development. We know that intangible assets and conservative capital structures tend to go together. But Merck also has a very large corporate income tax bill (\$360 million in 1986) and the highest possible credit rating. It could borrow enough to save tens of millions of tax dollars without raising a whisker of concern about possible financial distress.

Merck illustrates an odd fact about real-life capital structures: The most profitable companies generally borrow the least.²⁷ Here the trade-off theory fails, for it predicts exactly the reverse: Under the trade-off theory, high profits should mean more debt-servicing capacity and more taxable income to shield and should give a higher target debt ratio.²⁸

A Pecking Order Theory

There is an alternative story which could explain the inverse relationship between profitability and debt ratios. It goes like this.²⁹

1. Firms prefer internal finance.
2. They adapt their target dividend payout ratios to their investment opportunities, while trying to avoid sudden changes in dividends.
3. Sticky dividend policies, plus unpredictable fluctuations in profitability and investment opportunities, mean that internally generated cash flow is sometimes more than capital expenditures and at other times less. If it is more, the firm pays off debt or invests in marketable securities. If it is less, the firm first draws down its cash balance or sells its marketable securities.
4. If external finance is required, firms issue the safest security first. That is, they start with debt, then possibly hybrid securities such as convertible bonds, then perhaps equity as a last resort.

In this story, there is no well-defined target debt-equity mix, because there are two kinds of equity, internal and external, one at the top of the pecking order and one at the bottom. Each firm's observed debt ratio reflects its cumulative requirements for external finance.

The pecking order explains why the most profitable firms generally borrow less—not because they have low target debt ratios, but because they don't need outside money. Less profitable firms issue debt because they do not have internal funds sufficient for their capital investment program, and because debt financing is first on the pecking order of external financing.

The pecking order theory rests on (1) sticky dividend policy, (2) a preference for internal funds, and (3) an aversion to issuing equity. We will not revisit divi-

²⁷ For example, Carl Kester, in a study of the financing policies of firms in the United States and in Japan, found that in each country, high book profitability was the most statistically significant variable distinguishing low- from high-debt companies. See "Capital and Ownership Structure: A Comparison of United States and Japanese Manufacturing Corporations," *Financial Management*, 15: 5-16 (Spring 1986).

²⁸ Here we mean debt as a fraction of the book or replacement value of the company's assets. Profitable companies might not borrow a greater fraction of their market value. Higher profits imply higher asset value as well as stronger incentives to borrow.

²⁹ The description is paraphrased from S. C. Myers, "The Capital Structure Puzzle," *Journal of Finance*, 39: 581-582 (July 1984). For the most part, this section follows Myers's arguments.

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dend policy, which occupied Chapter 16, but items (2) plus (3) deserve a further word.

Some think that financial managers do not strive for optimal financing decisions, but simply finance by the line of least resistance. If so, internal funds would be their first choice. Internal funds relieve financial managers of contact with outside investors and the "disciplining influences of the securities market." If these comfortable people have to seek external financing, debt is next on the line of least resistance. Who wants to face "the glare of publicity and public attention" generated by a stock issue?³⁰

However, a pecking order might also spring from fully rational economic motives, for example, from differences in *issue costs*. Internal funds of course have no issue costs, but if outside money is needed, issue costs are less for debt than for equity. Thus, it makes sense to use retained earnings, rather than external equity and to build up *financial slack*, in the form of cash, marketable securities, or unused debt capacity, to reduce the odds that a future stock issue will be necessary.

Financial managers also worry about the adverse *signal* transmitted to investors when equity is issued. Remember from Chapter 15 that stock issues are bad news to investors: The announcement of a stock issue drives down stock price. Issuing debt, on the other hand, seems to be no news at all, or at worst a trifling disappointment.³¹ You can appreciate why financial managers, who would rather not see stock price fall, would put debt ahead of equity in the pecking order.³²

18-5 CHOOSING THE FIRM'S DEBT-EQUITY RATIO

A Checklist

It should be clear that there are no simple answers to the capital structure decision. For example, we can't say that more debt is always better. Debt may be better than equity in some cases, worse in others. We suggest, however, that you use a four-dimensional checklist when thinking about capital structure. These dimensions are taxes, risk, asset type, and the need for financial slack.

1. **Taxes:** If your company is in a taxpaying position, an increase in leverage reduces the income tax paid by the company and increases the tax paid by investors. If the company has large accumulated losses, an increase in leverage cannot reduce corporate taxes but does increase personal taxes.

Of course you are not just interested in whether the company is currently paying taxes but whether it will do so throughout the life of the debt. Firms with high and stable income streams are more likely to remain in a taxpaying position, but even they may be unable to take full advantage of the interest tax shields if they borrow too much; hence our recommendation that there is a tax advantage to borrowing for companies that are reasonably sure that they can use the interest tax shields and a disadvantage for those that are unlikely to use them.

Remember also that borrowing is not the only way to shield income. For example, accelerated write-offs of plant and equipment can be used to reduce corporate taxes.

³⁰ G. Donaldson, *Corporate Debt Capacity*, Division of Research, Graduate School of Business Administration, Harvard University, Cambridge, Mass., 1961, p. 54.

³¹ For example, see B. E. Eckbo, "Valuation Effects of Corporate Debt Offerings," *Journal of Financial Economics*, 13: 119-151 (January-February 1986).

³² We have not given a full account of the theoretical underpinnings of the pecking order theory. There is more to it than "managers who would rather not see stock price fall." The theory was developed in S. C. Myers and N. S. Majluf, "Corporate Financing and Investment Decisions When Firms Have Information Investors Do Not Have," *Journal of Financial Economics*, 13: 187-222 (June 1984).

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$$PV \text{ of notes} = \frac{\$1000 + 90}{1.09} = \$1000$$

Suppose instead that there is a 20 percent chance that Backwoods will default. If default does occur, holders of its notes receive nothing. In this case, the possible payoffs to the noteholder are:

	Payoff	Probability
Full payment	\$1,090	.8
No payment	0	.2

The expected payment is $.8(\$1090) + .2(\$0) = \$872$.

We can value the Backwoods notes like any other risky asset, by discounting their expected payoff (\$872) at the appropriate opportunity cost of capital. We might discount at the risk-free interest rate (9 percent) if Backwoods's possible default is totally unrelated to other events in the economy. In this case the default risk is wholly diversifiable, and the beta of the notes is zero. The notes would sell for

$$PV \text{ of notes} = \frac{\$872}{1.09} = \$800$$

An investor who purchased these notes for \$800 would receive a *promised* yield of about 36 percent:

$$\text{Promised yield} = \frac{\$1090}{\$800} - 1 = .363$$

That is, an investor who purchased the notes for \$800 would earn a 36.3 percent rate of return *if* Backwoods does not default. Bond traders therefore might say that the Backwoods notes "yield 36 percent." But the smart investor would realize that the notes' *expected* yield is only 9 percent, the same as on risk-free bonds.

This of course assumes that risk of default with these notes is wholly diversifiable, so that they have no market risk. In general, risky bonds do have market risk (that is, positive betas) because default is more likely to occur in recessions when all businesses are doing poorly. Suppose that investors demand a 2 percent risk premium and an 11 percent expected rate of return. Then the Backwoods notes will sell for $872/1.11 = \$785.59$ and offer a promised yield of $(1090/785.59) - 1 = .388$, or about 39 percent.

You rarely see traded bonds offering 39 percent yields, although we will soon encounter an example of one company's bonds that had a promised yield of 50 percent.

Bond Ratings

The relative quality of most traded bonds can be judged from bond ratings given by Moody's and Standard and Poor's. For example, Moody's classifies several thousand bond issues into the categories described in Table 23-5.

Bonds rated Baa or above are known as *investment-grade* bonds. Commercial banks and many pension funds and other financial institutions are not allowed to invest in bonds unless they are investment-grade.²⁵

²⁵ Investment-grade bonds can usually be entered at face value on the books of banks and life insurance companies.

Historical Prices - BNI (BURLINGTON NORTHERN SANTA FE CO)

As of Sep-15-03

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Start: Mar 1 1995	☐ Daily
End: Sep 16 2003	☐ Weekly
	☒ Monthly
	☐ Dividends
Ticker Symbol: bni GOOG	

Date	Open	High	Low	Close	Volume	Adj. Close*
Sep 03	\$0.15 Cash Dividend					
Sep 03	28.35	29.50	28.16	28.36	1,371,310	28.36
Aug 03	27.45	28.45	26.58	28.35	1,429,380	28.20
Jul 03	28.39	29.57	27.12	27.56	1,252,463	27.42
Jun 03	\$0.12 Cash Dividend					
Jun 03	29.70	29.96	27.65	28.44	1,391,909	28.29
May 03	28.17	29.65	27.45	29.51	1,279,223	29.24
Apr 03	25.00	28.38	24.60	28.16	1,452,390	27.90
Mar 03	\$0.12 Cash Dividend					
Mar 03	25.24	26.49	23.29	24.90	1,330,828	24.67
Feb 03	26.00	26.50	24.16	25.00	986,200	24.65
Jan 03	26.33	27.33	24.58	25.97	1,252,300	25.60
Dec 02	\$0.12 Cash Dividend					
Dec 02	25.50	27.00	25.02	26.01	1,000,925	25.64
Nov 02	25.73	27.36	24.56	25.33	1,198,090	24.86
Oct 02	24.15	27.20	23.28	25.73	1,633,169	25.25
Sep 02	\$0.12 Cash Dividend					
Sep 02	28.20	28.51	23.18	23.92	1,430,900	23.47
Aug 02	29.35	30.25	27.06	28.76	1,104,818	28.10
Jul 02	30.00	30.82	25.55	29.42	1,720,577	28.74
Jun 02	\$0.12 Cash Dividend					
Jun 02	28.30	30.93	27.40	30.00	1,323,660	29.31

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Historical Prices

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May 02	27.49	29.27	27.20	28.30	951,359	27.53
Apr 02	29.90	29.91	27.09	27.49	1,230,300	26.74
Mar 02	\$0.12 Cash Dividend					
Mar 02	29.02	31.75	28.99	30.18	1,788,680	29.36
Feb 02	28.45	29.64	26.62	29.02	1,521,111	28.12
Jan 02	28.53	30.25	26.61	28.24	1,598,128	27.37
Dec 01	\$0.12 Cash Dividend					
Dec 01	29.31	29.60	27.51	28.53	1,053,555	27.65
Nov 01	27.35	29.96	26.30	29.31	1,138,023	28.29
Oct 01	26.74	28.20	25.01	26.87	1,082,608	25.93
Sep 01	\$0.12 Cash Dividend					
Sep 01	27.25	28.27	22.40	26.75	1,831,393	25.82
Aug 01	26.79	27.45	26.00	27.11	1,306,121	26.05
Jul 01	30.24	31.66	25.80	26.74	1,600,252	25.70
Jun 01	\$0.12 Cash Dividend					
Jun 01	31.24	31.75	27.81	30.30	1,392,490	29.12
May 01	29.26	34.00	28.36	31.07	1,490,700	29.74
Apr 01	30.50	31.10	28.27	29.29	1,714,865	28.04
Mar 01	\$0.12 Cash Dividend					
Mar 01	30.02	30.65	26.26	30.38	1,586,627	29.08
Feb 01	30.61	31.18	29.40	30.01	1,416,031	28.61
Jan 01	28.38	31.00	27.75	30.61	1,692,814	29.18
Dec 00	\$0.12 Cash Dividend					
Dec 00	25.31	29.56	24.44	28.31	1,244,380	26.99
Nov 00	26.50	27.38	25.31	25.31	1,289,114	24.02
Oct 00	21.50	26.94	20.88	26.56	1,130,059	25.21
Sep 00	\$0.12 Cash Dividend					
Sep 00	22.38	22.94	20.38	21.56	1,427,045	20.46
Aug 00	24.44	25.50	22.00	22.39	1,111,714	21.14
Jul 00	23.31	27.44	22.00	24.44	1,628,600	23.07
Jun 00	\$0.12 Cash Dividend					
Jun 00	23.75	26.19	21.62	22.94	1,848,560	21.65
May 00	23.62	26.12	22.69	23.75	1,184,259	22.31
Apr 00	22.75	26.19	22.00	24.00	1,744,547	22.55

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Historical Prices

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Mar 98	96.14	103.51	95.66	100.67	458,504	30.29
Feb 98	85.41	96.99	84.68	96.14	596,215	28.66
Jan 98	89.57	91.02	81.31	83.72	625,630	24.96
Dec 97	\$0.30 Cash Dividend					
Dec 97	88.38	94.09	87.58	89.69	334,500	26.74
Nov 97	92.11	93.31	87.18	88.02	419,352	25.98
Oct 97	93.19	97.10	86.69	91.38	410,382	26.97
Sep 97	\$0.30 Cash Dividend					
Sep 97	88.46	95.47	86.82	92.95	345,700	27.43
Aug 97	92.53	93.31	85.46	87.92	323,342	25.69
Jul 97	87.74	93.79	86.06	92.59	419,186	27.05
Jun 97	\$0.30 Cash Dividend					
Jun 97	79.30	88.94	77.91	86.18	598,052	25.18
May 97	75.24	79.66	73.69	79.30	474,090	22.91
Apr 97	70.70	76.32	67.12	75.24	758,740	21.74
Mar 97	\$0.30 Cash Dividend					
Mar 97	79.26	82.05	70.22	70.70	798,990	20.43
Feb 97	83.43	85.09	79.26	79.26	559,426	22.64
Jan 97	80.93	85.33	80.33	83.31	393,559	23.80
Dec 96	\$0.30 Cash Dividend					
Dec 96	84.68	85.81	80.09	82.24	359,176	23.49
Nov 96	78.63	85.39	78.40	85.27	335,160	24.10
Oct 96	80.41	83.02	73.89	78.04	465,021	22.05
Sep 96	\$0.30 Cash Dividend					
Sep 96	75.50	80.89	74.01	80.06	436,245	22.62
Aug 96	75.03	80.23	74.08	75.62	388,409	21.11
Jul 96	76.80	82.00	72.07	74.55	448,090	20.81
Jun 96	\$0.30 Cash Dividend					
Jun 96	79.59	80.88	73.73	76.44	459,990	21.34
May 96	82.29	83.59	77.70	79.82	411,163	22.03
Apr 96	77.23	82.53	73.35	82.41	497,133	22.75
Mar 96	\$0.30 Cash Dividend					
Mar 96	75.78	82.06	74.72	77.70	583,409	21.45
Feb 96	76.95	79.41	75.07	75.07	509,515	20.48

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Historical Prices

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Jan 96	72.96	77.07	68.97	76.83	450,954	20.96
Dec 95	\$0.30 Cash Dividend					
Dec 95	75.38	77.65	69.32	73.20	975,055	19.97
Nov 95	77.95	78.07	73.86	75.50	382,800	20.35
Oct 95	68.02	79.24	65.91	78.42	567,631	21.14
Sep 95	\$0.30 Cash Dividend					
Sep 95	65.91	71.52	65.44	67.78	706,640	18.27
Aug 95	64.70	65.28	62.95	64.46	248,639	17.13
Jul 95	58.76	64.70	57.95	64.46	512,145	17.13
Jun 95	\$0.30 Cash Dividend					
Jun 95	56.55	59.58	55.04	58.99	498,031	15.68
May 95	55.12	56.74	51.76	56.62	495,309	14.81
Apr 95	55.12	56.85	53.49	55.12	492,426	14.42
Mar 95	\$0.30 Cash Dividend					
Mar 95	51.60	55.93	50.14	54.88	462,800	14.36

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* adjusted for dividends and splits please see FAQ.

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Press Release

Source: Burlington Northern Santa Fe Corporation

Burlington Northern Santa Fe Corporation Increases Quarterly Dividend By 25 Percent

Thursday July 17, 11:15 am ET

FORT WORTH, Texas, July 17 /PRNewswire-FirstCall/ -- Directors of Burlington Northern Santa Fe Corporation (NYSE: [BNI](#) - [News](#)) voted on July 17, 2003, to increase its next quarterly dividend to 15 cents per share on outstanding common stock. This represents a 25 percent increase from its previous quarterly dividend of 12 cents per share, or an annualized 60 cents per share dividend.

- (Logo: <http://www.newscom.com/cgi-bin/prnh/20010719/BNSFLOGO>)

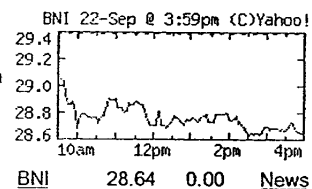
Dividends on common stock will be paid October 1, 2003, to shareholders of record September 10, 2003. Common shares outstanding on June 30, 2003, totaled approximately 373 million.

Through its subsidiary, The Burlington Northern and Santa Fe Railway Company, BNSF operates one of the largest railroad networks in North America, with 32,500 route miles covering 28 states and two Canadian provinces. BNSF is an industry leader in Web-enabling a variety of customer transactions at www.bnsf.com. The railway is among the world's top transporters of intermodal traffic, moves more grain than any other American railroad, transports the components of many of the products we depend on daily, and hauls enough coal to generate about 10 percent of the electricity produced in the United States.

Source: Burlington Northern Santa Fe Corporation

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Press Release

Source: Burlington Northern Santa Fe Corporation

Burlington Northern Santa Fe Reports Second-Quarter 2003 Results

Tuesday July 22, 8:05 am ET

- Second-quarter 2003 earnings was \$0.54 per share compared with second-quarter 2002 earnings of \$0.51 per share.
- Freight revenues increased 3.7 percent to \$2.26 billion compared with the prior-year period, on a 4.6 percent increase in units handled.
- Fuel expense increased \$56 million, year-over-year.
- Operating income was \$412 million compared with \$421 million a year ago.
- Lower second-quarter 2003 income tax expense primarily reflects a favorable tax settlement.

FORT WORTH, Texas, July 22 /PRNewswire-FirstCall/ -- Burlington Northern Santa Fe Corporation (NYSE: BNI - News; BNSF) today reported second-quarter 2003 earnings of \$0.54 per share compared with second-quarter 2002 earnings of \$0.51 per share.

- (Logo: <http://www.newscom.com/cgi-bin/prnh/20010719/BNSFLOGO>)

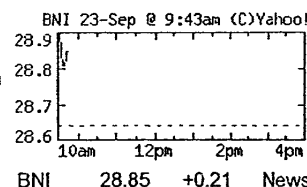
"Strong international volumes led BNSF to having overall revenue growth for the second consecutive quarter," said Matthew K. Rose, BNSF Chairman, President and Chief Executive Officer, "however, our bottom line continues to be impacted because of a 27 percent increase in fuel expense year-over-year."

Freight revenues for the second quarter increased 3.7 percent, or \$80 million, to \$2.26 billion compared with 2002 second-quarter revenues of \$2.18 billion. Consumer Products revenues increased \$63 million, or 7 percent, to \$911 million reflecting record growth in our international, truckload and perishable sectors. Coal revenues increased \$16 million, or 3 percent, to \$504 million, largely from index-driven rate increases. Agricultural Products revenues grew \$5 million, or 2 percent, to \$317 million, reflecting increased ethanol shipments from plants in the Midwest to California. Industrial Products revenues declined \$4 million, or 1 percent, to \$531 million with revenue growth in both the building and construction products sectors offset by weak demand in the chemical and petroleum products sectors. Second-quarter freight revenues included increased fuel surcharges of \$24 million compared with the prior year.

Operating expenses of \$1.88 billion were \$96 million, or 5 percent, higher than the same 2002 period primarily related to fuel expense and higher volumes handled. The \$56 million increase in fuel expense primarily relates to an average increase of \$0.16 per gallon in the cost of diesel fuel to \$0.89 per gallon, after hedge.

Operating income was \$412 million for the 2003 second quarter compared with \$421 million for the same 2002 period. Lower income tax expense in the second quarter of 2003 primarily reflects a favorable tax settlement.

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9/23/03

Common Stock Repurchases

During the 2003 second quarter, BNSF repurchased approximately 2 million shares of its common stock at an average price of \$27.57 per share. This brings total repurchases under BNSF's 150-million share-repurchase program to approximately 120 million shares as of June 30, 2003, at an average price of \$25.98 per share since the program was announced in July 1997.

Through its subsidiary, The Burlington Northern and Santa Fe Railway Company, BNSF operates one of the largest railroad networks in North America, with about 32,500 route miles covering 28 states and two Canadian provinces. BNSF is an industry leader in Web-enabling a variety of customer transactions at www.bnsf.com. The railway is among the world's top transporters of intermodal traffic, moves more grain than any other American railroad, transports the mineral components of many of the products we depend on daily, and hauls enough coal to generate about 10 percent of the electricity produced in the United States.

Financial Information Follows.

Statements made in this release concerning projections or expectations of financial or operational performance, or concerning other future events or objectives or results, are "forward-looking statements" within the meaning of the federal securities laws. Forward-looking statements involve a number of risks and uncertainties and actual results may differ materially from that projected or implied in those statements. Important factors that could cause such differences include, but are not limited to, economic and industry conditions: material adverse changes in economic or industry conditions, both within the United States and globally, customer demand, effects of adverse economic conditions affecting shippers, adverse economic conditions in the industries and geographic areas that produce and consume freight, competition and consolidation within the transportation industry, the extent to which BNSF is successful in gaining new long-term relationships with customers or retaining existing ones, changes in fuel prices, changes in the securities and capital markets, and changes in labor costs and labor difficulties, including stoppages affecting either BNSF's operations or our customers' abilities to deliver goods to BNSF for shipment; legal and regulatory factors: developments and changes in laws and regulations and the ultimate outcome of shipper and rate claims subject to adjudication, environmental investigations or proceedings and other types of claims and litigation; and operating factors: technical difficulties, changes in operating conditions and costs, competition, and commodity concentrations, the Company's ability to achieve its operational and financial initiatives and to contain costs, as well as natural events such as severe weather, floods and earthquakes or other disruptions of the Company's operating systems, structures, or equipment.

The Company cautions against placing undue reliance on forward-looking statements, which reflect its current beliefs and are based on information currently available to it as of the date a forward-looking statement is made. The Company undertakes no obligation to revise forward-looking statements to reflect future events, changes in circumstances, or changes in beliefs. In the event the Company does update any forward-looking statement, no inference should be made that the Company will make additional updates with respect to that statement, related matters, or any other forward-looking statement. Any corrections or revisions may appear in the Company's public filings with the Securities and Exchange Commission (SEC), which are accessible at www.sec.gov or on the Company's website at www.bnsf.com, and which you are advised to consult. Investors are encouraged to read the Company's earnings release and investors' report together with its SEC filings for a more complete picture and better understanding of the Company and its financial disclosures.

Burlington Northern Santa Fe Corporation
Consolidated Income Information*
(in millions, except per share data)

	Three Months Ended June 30, 2003		Six Months Ended June 30, 2003	
Operating revenues				
Freight revenues	\$2,263	\$2,183	\$4,465	\$4,321
Other revenues	31	24	61	49
Total operating revenues	2,294	2,207	4,526	4,370
Operating expenses				
Compensation and benefits	699	698	1,416	1,416
Purchased services	312	282	613	557

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Burlington Northern Santa Fe Reports Second-Quarter 2003 Results

Page 3 of 7

Depreciation and amortization	225	231	451	461
Equipment rents	180	177	349	352
Fuel	263	207	537	391
Materials and other	203	191	402	392
Total operating expenses	1,882	1,786	3,768	3,569
Operating income	412	421	758	801
Interest expense	106	105	212	214
Other expense, net	3	6	5	2
Income before income taxes and cumulative effect of accounting change	303	310	541	585
Income tax expense	103	116	193	219
Income before cumulative effect of accounting change	200	194	348	366
Cumulative effect of accounting change, net of tax (A)	---	---	39	---
Net income	\$200	\$194	\$387	\$366
Diluted earnings per share before cumulative effect of accounting change	\$0.54	\$0.51	\$0.94	\$0.95
Diluted earnings per share after cumulative effect of accounting change	\$0.54	\$0.51	\$1.04	\$0.95
Diluted average shares outstanding (in millions)	372.4	382.3	372.9	383.9
Operating ratio (B)	81.8%	80.7%	83.0%	81.5%

(A) Reflects the adoption of Statement of Financial Accounting Standards (SFAS) No. 143, Accounting for Asset Retirement Obligations. This new standard changes the way the rail industry accounts for asset retirement costs.

(B) Calculated as Total operating expenses less Other revenues divided by Freight revenues.

* Certain prior period amounts have been reclassified to conform with the current period presentation.

Burlington Northern Santa Fe Corporation
Consolidated Balance Sheet Information
(Dollars in millions, except per share amounts)

	June 30, 2003	December 31, 2002
Assets		
Current assets:		
Cash and cash equivalents	\$43	\$28
Accounts receivable, net	148	141
Materials and supplies	229	226
Current portion of deferred income taxes	304	314
Other current assets	115	82
Total current assets	839	791
Property and equipment, net	24,541	24,022
Other assets	999	954
Total assets	\$26,379	\$25,767
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and other current liabilities	\$1,898	\$1,918
Long-term debt due within one year	153	173
Total current liabilities	2,051	2,091
Long-term debt and commercial paper	6,876	6,641
Deferred income taxes	7,180	6,975
Casualty and environmental liabilities	445	444
Minimum pension liability	368	368
Employee merger and separation costs	156	170
Other liabilities	1,154	1,146
Total liabilities	18,230	17,835

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SERVICE DATE -JUNE 19, 2003

EB

This decision will be included in the bound volumes of the STB printed reports at a later date.

SURFACE TRANSPORTATION BOARD

STB Ex Parte No. 558 (Sub-No. 6)

RAILROAD COST OF CAPITAL — 2002

Decided: June 11, 2003

Upon review of the evidence tendered in this proceeding, the Board finds that in 2002, the railroad industry had a composite after-tax cost of capital of 9.8%, based on: (1) a current cost of debt of 6.0%; (2) a current cost of common equity capital of 12.6%; (3) a cost of preferred equity capital of 6.3%; and (4) a capital structure mix of 41.2% debt, 56.7% common equity, and 2.1% preferred equity capital.

BY THE BOARD:

One of the Surface Transportation Board's regulatory responsibilities is the annual determination of the railroad industry's cost of capital. This determination is one component used in evaluating the adequacy of railroad revenues each year under the procedures and standards mandated by Congress in the Railroad Revitalization and Regulatory Reform Act of 1976 (4R Act) and promulgated in *Standards for Railroad Revenue Adequacy*, 364 I.C.C. 803 (1981), revised, 3 I.C.C.2d 261 (1986). This finding may also be used in other regulatory proceedings, including, but not necessarily limited to, those involving the prescription of maximum reasonable rate levels, the proposed abandonment of rail lines, and the setting of compensation for disputed trackage rights fees.

The most recent determination of the railroad industry's cost of capital was for the year 2001 in *Railroad Cost of Capital - 2001*, STB Ex Parte No. 558 (Sub-No. 5) (STB served June 20, 2002) (*Cost 01*). The instant proceeding, instituted in *Railroad Cost of Capital — 2002*, STB Ex Parte No. 558 (Sub-No. 6) (STB served Dec. 12, 2002), updates the railroad industry's cost of capital for the year 2002.

The only party to provide evidence in this proceeding was the Association of American Railroads (AAR). The AAR concluded that the composite after-tax cost of capital for the railroad industry for 2002 was 9.76%, significantly lower than the 2001 cost of capital rate of 10.2%.

Consistent with previous cost of capital proceedings, the AAR determined the overall railroad industry cost of capital rate using a "composite railroad" consisting of Class I carriers controlled by selected major railroad holding companies. The AAR's selection of these companies was based on criteria developed in *Railroad Cost of Capital — 1984*, 1 I.C.C.2d 989 (1985).¹ The following companies that met these criteria are included: Burlington Northern Santa Fe Corporation (BNSF), CSX Corporation (CSX), Norfolk Southern Corporation (NSC), and the Union Pacific Corporation (UPC).²

As discussed below, we have examined the procedures used by the AAR to determine the following for 2002: (1) the railroad industry's current cost of debt capital; (2) its cost of common equity capital; (3) its cost of preferred equity capital; (4) its capital structure mix; and (5) the composite after-tax railroad industry cost of capital. We have determined that the 2002 railroad cost of capital is 9.8%.

DEBT CAPITAL

The AAR developed its 2002 current cost of debt using bond price data from Standard & Poor's Corporation *Bond Guide* and a Standard and Poor's data base. The AAR's cost of debt is based on the market value yields of the major forms of long-term debt instruments for the sample railroad holding companies listed above. These debt instruments include: (1) bonds, notes, and debentures (bonds); (2) equipment trust certificates (ETCs); and (3) conditional sales agreements (CSAs). The yields of these debt instruments are weighted based on their market values.

Cost of Bonds, Notes, and Debentures (Bonds)

The AAR used data contained in Standard & Poor's *Bond Guide* for the current cost of bonds, based on monthly prices and yields during 2002, for all issues (a total of 61) that were publicly traded during the year. To determine the current (2002) market value of bonds, the AAR used these traded bonds and 65 additional bonds that were outstanding but not traded

¹ These criteria are as follows: (1) the company is listed on either the New York or American Stock Exchange; (2) the company paid dividends throughout the year; (3) the company's rail assets are greater than 50% of its total assets; and (4) the company has a debt rating of at least BBB (Standard & Poor's) and Baa (Moody's).

² These are the same companies included by the AAR and used in our 2001 cost of capital decision, *Cost 01*.

during 2002.³ Continuing the procedure in effect since 1988, the AAR based the market value on monthly prices for all traded bonds and the face or par value (\$1,000) for all bonds not traded during the year. The AAR computed the total market value of all outstanding bonds to be \$16.618 billion. Based on the yields for the traded bonds, the AAR calculated the weighted average 2002 yield for all bonds to be 5.89%.

We have examined the AAR's bond price and yield data and have made several minor modifications to the data submitted.⁴ We have recalculated the market value of all outstanding bonds to be \$16.639 billion. We have determined that the weighted average 2002 yield for all bonds continues to be 5.89%. Our recalculations and data for all bonds are shown in Tables 1 and 2 of the Appendix.

Cost of Equipment Trust Certificates (ETCs)

ETCs are not actively traded on secondary markets. Therefore, their costs must be estimated by comparing them to the yields of other debt securities that are actively traded. Following the practice in previous cost of capital proceedings, the AAR used government securities with maturities similar to these ETCs as surrogates for determining yields. After determining the 2002 yields for these government securities, the AAR added basis points⁵ to these yields to compensate for the additional risks associated with the ETCs.

No new ETC's were issued during 2002. There were 44 ETCs issued prior to 2002 that were outstanding during the year. The AAR determined that the yield spread for ETCs was 114 basis points higher than the yield for government bonds.⁶ Using the yield spreads, the AAR calculated the weighted average cost of ETCs to be 5.38%⁷ and their market value to be \$1.566 billion for 2002.⁸

³ This includes three NSC bonds which were only traded for part of the year. These are included both as traded and untraded (with prorations by month, depending on whether they were or were not traded). Thus, 123 bonds were actually considered.

⁴ These corrections are detailed in footnotes to Tables 1 and 2 in the Appendix.

⁵ A basis point equals 1/100th of a percentage point.

⁶ This figure is same as the spread used in 2001.

⁷ This is substantially lower than the 2001 figure of 5.96%.

⁸ The AAR has approximated the market values of ETCs using the same procedures used in previous cost of capital determinations. These procedures are based on the use of standard
(continued...)

We have analyzed the ETC cost and market value evidence supplied by the AAR and find them to be correct. A summary of our ETC computations is shown in Table 3 in the Appendix.

Cost of Conditional Sales Agreements (CSAs)

CSAs represent a small fraction (less than 1%) of total railroad debt. The cost of CSAs, however, can be estimated. The AAR used the yield spread between CSAs and ETCs for 1997 (the last year when a new CSA was issued) of 32 basis points to develop the year 2002 yield spread between CSAs and government bonds. This results in 146 basis points being added to government bond yields to develop the cost of CSAs.⁹ Using this yield spread, and adding the 146 basis points for government bonds, the AAR determined the weighted average cost of CSAs for 2002 to be 5.62%. The AAR determined the market value for CSAs to be \$0.157 billion.¹⁰ We have examined the cost and market value of the CSAs using the AAR's data, and have determined that the AAR computed the interest rate and market value of CSA's correctly. The results of these computations are shown in Table 4 in the Appendix.

Miscellaneous Debt and Capitalized Leases

As in previous cost of capital determinations, the AAR excluded the costs of capitalized leases and miscellaneous debt in its computation of the overall current cost of debt because these costs are not directly observable in the open market. Also in keeping with past practice, the AAR included the book value of leases and commercial paper in the overall market value of debt, which is used to determine the railroads' capital structure mix. The AAR noted that the cost of capitalized leases is generally higher than that of other debt, but it did not make any upward correction for the cost of those leases. The AAR determined that the market value for the capitalized leases and miscellaneous debt was \$3.925 billion for 2002.¹¹ We have examined the

⁸(...continued)

security industry formulas found in *Standard Security Calculation Methods*.

⁹ This yield spread equals the yield spread for ETCs vs. government bonds of 114 basis points plus the yield spread between ETCs and CSAs of 32 basis points. These are the same numbers as used in the 2001 determination.

¹⁰ The AAR approximated the market values of CSAs using the same procedures used in previous cost of capital determinations. These procedures are based on the use of standard security industry formulas found in *Standard Security Calculation Methods*.

¹¹ This consists of \$2.245 billion capitalized leases and \$1.680 billion miscellaneous debt.

AAR's work papers and other evidence and have adjusted this figure to \$4.165 billion.¹² Table 5 in the appendix shows our recalculations for capitalized leases and miscellaneous debt.

Total Market Value of Debt

The AAR determined that the total market value for all debt during 2002 was \$29.324 billion. Due to our adjustments discussed previously, we have recomputed the total market value for all railroad debt in 2002 to be \$29.732 billion.¹³

Flotation Costs of Debt

As in past cost of capital decisions, the AAR's calculation of the current cost of debt included a flotation cost factor consisting of costs associated with the issuance of new debt such as underwriters' fees, advertising costs, and legal fees. The AAR determined that flotation costs for debt equaled 0.16%. We have reviewed the AAR's calculations concerning flotation costs and find that the cost factors developed for the various components of debt are reasonable.¹⁴

Overall Current Cost of Debt

The AAR concluded that the railroads' current cost of debt for 2002 was 6.0%. Our calculations produce a slightly higher figure (6.02%), rounded to 6.0%.¹⁵ Our calculations are shown in Table 8 in the Appendix.

COMMON EQUITY CAPITAL

¹² Our adjustment is based on a recalculation of capitalized leases for NSC. These leases were inadvertently omitted from the AAR's totals. Our calculations use \$2.485 billion for capitalized leases.

¹³ See Table 6 in the Appendix for a complete breakdown of the market value of debt.

¹⁴ See Table 7 in the Appendix for these calculations. The AAR's flotation cost factors are based on data developed by Salomon Brothers for ETCs and studies by the Securities and Exchange Commission concerning flotation costs for issuances of new bonds. The estimated flotation cost for CSAs is the same as that used in prior proceedings.

¹⁵ This is significantly lower than the 2001 cost of debt (6.88%).

In previous cost of capital decisions, we have determined the cost of common equity using the Discounted Cash Flow (DCF) method. The AAR submitted evidence as to the current cost of equity capital using this procedure. This evidence is virtually identical to that furnished by the AAR in previous cost of capital proceedings.

Market Value of Common Equity

The AAR calculated the 2002 market value of common equity by multiplying the number of shares outstanding by the daily closing price for each trading day during the year for each of the sample railroad holding companies. The AAR determined that the average market value for the year 2001 was \$40.836 billion. We have reviewed the AAR's calculations and have determined that this number is correct. Table 9 in the Appendix shows the calculations of the average market value of common equity and relative weights for each railroad.

Discounted Cash Flow (DCF) Method

The DCF method of determining the cost of common equity is used by the majority of state regulatory agencies and has been used by the Interstate Commerce Commission (ICC) and the Board for many years. Under the DCF method, the cost of common equity is the discount rate that makes the present value of expected returns from holding a stock (dividends and price appreciation) equal to the current market value of that stock. The DCF method considers two variables — dividend yield and expected growth in earnings per share.¹⁶

¹⁶ In *Railroad Cost of Capital - 1982*, 367 I.C.C. 662 (1983), the ICC developed the following DCF formula:

$$K = [D_{(0)} \times (1 + g/2) / P_{(0)}] + g, \text{ where:}$$

- K = cost of common equity
- $D_{(0)}$ = annual dividend
- $P_{(0)}$ = current stock price
- g = expected growth rate

This formula assumes that, at the start of the year, an investor would require a return on equity (K) equal to $[D_{(0)} / P_{(0)}] + g$, where $D_{(0)} / P_{(0)}$ represents the average dividend yield expected for the year and g represents an estimate of the expected growth rate. At the end of the year, the investor would be concerned with projected returns for the following year and would require a K equal to $[D_{(0)} \times (1 + g) / P_{(0)}] + g$, which would allow for dividend growth for the following year. The average of these two formulas produces this DCF formula.

Dividend Yield

The AAR computed the 2002 average dividend yield for the composite group of railroads using the same method that it employed in past cost of capital determinations, *i.e.*, weighting each company's monthly dividend yield on the basis of its prorated share of the total market value for the composite for each day during that month based on daily closing prices. The AAR developed a composite dividend yield of 1.40% for 2002. We have reviewed the AAR's calculations and have determined that this number is correct. This figure is lower than the 2001 dividend yield (1.66%). Our calculations of the dividend yield are shown in Table 10 in the Appendix.

Growth Rate

The AAR used the earnings per share growth rate forecasts published monthly by the Institutional Brokers Estimate System (IBES) throughout 2002.¹⁷ The AAR developed growth rates for each of the railroad holding companies that make up the composite by averaging the IBES forecasts for that company. It then weighted each company's growth rate according to its prorated share of the market value of the total railroad composite to arrive at a single projected growth rate. The AAR concluded that this composite growth rate was 11.12%, based on a truncated average of the forecasts.¹⁸ After making some minor adjustments to the AAR's data, we have determined the truncated composite growth rate to be 11.13%. This is .13 of a percentage point higher than the 11.0% growth rate developed in the 2001 cost of capital decision. Our growth rate calculations are shown in Tables 11 (truncated) and 12 (nontruncated) of the Appendix.

Flotation Costs

As with the issuance of new debt instruments, flotation costs are also incurred with the issuance of new equity securities. In *Adequacy of Railroad Revenue (1979 Determination)*, 363 I.C.C. 344, 352 (1979), the ICC concluded that flotation costs for equity capital should not be considered unless new equity had, in fact, been issued. This conclusion has been reaffirmed in

¹⁷ As has been the case since the findings in *Railroad Cost of Capital - 1987*, 4 I.C.C.2d 621 (1988), we have relied on the use of consensus analyst 5-year earnings per-share growth rate data published by IBES to develop the growth rate estimates used in the DCF approach. IBES data include growth rate estimates from essentially all major brokerage firms.

¹⁸ IBES provides a simple average, the highest forecast, and the lowest forecast for each railroad. The AAR excluded the highest and lowest forecasts to arrive at the truncated average. This is the same procedure that has been followed in previous cost of capital determinations.

subsequent cost of capital decisions. Because no railroad issued any new common equity capital during 2001, no flotation cost factor has been included in the DCF formula.

Conclusion - Cost of Common Equity Capital

Using a truncated average IBES growth rate (g) forecast of 11.12%, a dividend yield ($D_{(0)}/P_{(0)}$) of 1.4%, and the Board's DCF formula, the AAR determined the cost of common equity for 2002 to be 12.6%. Even with our slight adjustments to the AAR's data, our computation of the cost of common equity, when rounded, also equals 12.6%. This figure is 0.2 percentage points lower than the cost of common equity for 2001 (12.8%).¹⁹

PREFERRED EQUITY

Preferred equity has some of the characteristics of debt and some of the characteristics of equity. Essentially, preferred issues are like common stocks in that they have no maturity dates and represent ownership in the company (usually with no voting rights attached). They are like debt in that they usually have fixed dividend payments (akin to interest payments).

The AAR examined the two preferred stock issues of the sample railroad holding companies,²⁰ and determined their cost using the dividend yield method (dividends divided by market price). The AAR computed the market value of preferred stock by multiplying the average quarterly price for each issue by the number of shares outstanding during the quarter. This is the same procedure used in previous cost-of-capital determinations. The AAR computed the market value of preferred equity during 2002 to be \$1.534 billion. This is virtually identical to the figure for 2001 (\$1.533 billion). The AAR computed the cost of preferred equity to be 6.26%, the same as the figure for 2001.

We have determined that the AAR's computations are correct.²¹ Table 14 in the Appendix contains the calculations of the cost of preferred equity, rounded to 6.3%.

¹⁹ See Table 13 in the Appendix for our calculation of the cost of common equity.

²⁰ The two railroad holding companies with preferred stock are NSC and UPC.

²¹ The AAR has a slightly different value for NSC preferred stock, but this difference is insignificant.

STB Ex Parte No. 558 (Sub-No. 6)

CAPITAL STRUCTURE MIX

Our computations of market values and the capital structure mix for 2002 are shown in Table 15 in the Appendix. We have determined that the market value of bonds, preferred stock, and common equity for 2002 was \$72.103 billion. The percentage share of common equity increased slightly from 56.0% in 2001 to 56.7% in 2002. The percentage share of debt accordingly decreased from 41.8% in 2001 to 41.2% in 2002. The percentage share of preferred equity decreased slightly from 2.2% in 2001 to 2.1% in 2002.

COMPOSITE COST OF CAPITAL

Based on the evidence furnished in the record, and our adjustments to that evidence discussed above, we conclude that the 2002 composite after-tax cost of capital for the railroad industry, as set forth in Table 16 in the Appendix, was 9.8%. The procedure used to develop the composite cost of capital is consistent with the Statement of Principle established by the Railroad Accounting Principles Board: "Cost of capital shall be a weighted average computed using proportions of debt and equity as determined by their market values and current market rates."²² The 2002 cost of capital is 0.4 percentage point lower than the 2001 cost of capital (10.2%).

CONCLUSIONS

We find that for 2002:

1. The current cost of railroad long-term debt equals 6.0%.
2. The cost of common equity equals 12.6%.
3. The cost of preferred equity equals 6.3%.
4. The capital structure mix of the railroads equals 41.2% long-term debt, 56.7% common equity, and 2.1% preferred equity.
5. The composite railroad industry cost of capital equals 9.8%.

Environmental and Energy Considerations

We conclude that this action will not significantly affect either the quality of the human environment or the conservation of energy resources.

Regulatory Flexibility Analysis

²² Railroad Accounting Principles Board *Final Report*, Vol. 1, (1987).

BNSF



1st Quarter 2003 Investors' Report

Burlington Northern Santa Fe Corporation
Revenue Statistics by Commodity

Revenues (in millions)	Three Months Ended March 31,		Percent Change
	2003	2002	
Intermodal	\$ 696	\$ 633	10.0 %
Automotive	81	81	-
Other Consumer	71	64	10.9
Total Consumer	848	778	9.0
Industrial	511	491	4.1
Coal	485	508	(4.5)
Agricultural Products	358	361	(0.8)
Total freight revenue	2,202	2,138	3.0
Other revenue	30	25	20.0
Total revenues	\$ 2,232	\$ 2,163	3.2 %
Cars/units (in thousands)			
Intermodal	924	804	14.9 %
Automotive	42	37	13.5
Other Consumer Products	40	39	2.6
Total Consumer Products	1,006	880	14.3
Industrial Products	343	332	3.3
Coal	487	511	(4.7)
Agricultural Products	206	204	1.0
Total cars/units	2,042	1,927	6.0 %
Average revenue per car/unit			
Intermodal	\$ 753	\$ 787	(4.3) %
Automotive	1,929	2,189	(11.9)
Other Consumer Products	1,775	1,641	8.2
Total Consumer Products	843	884	(4.6)
Industrial Products	1,490	1,479	0.7
Coal	996	994	0.2
Agricultural Products	1,738	1,770	(1.8)
Average revenue per car/unit	\$ 1,078	\$ 1,109	(2.8) %
Revenue ton-miles (in millions)			
Intermodal	23,214	20,847	11.4 %
Automotive	1,253	1,232	1.7
Other Consumer Products	3,067	2,978	3.0
Total Consumer Products	27,534	25,057	9.9
Industrial Products	23,272	22,188	4.9
Coal	47,874	50,573	(5.3)
Agricultural Products	22,219	22,304	(0.4)
Total revenue ton-miles	120,899	120,122	0.6 %
Freight revenue per thousand ton-miles			
Intermodal	\$ 29.98	\$ 30.36	(1.3) %
Automotive	64.64	65.75	(1.7)
Other Consumer Products	23.15	21.49	7.7
Total Consumer Products	30.80	31.05	(0.8)
Industrial Products	21.96	22.13	(0.8)
Coal	10.13	10.04	0.9
Agricultural Products	16.11	16.19	(0.5)
Freight revenue per thousand ton-miles	\$ 18.21	\$ 17.80	2.3 %

BNSF



Annual 2002 Investors' Report

Burlington Northern Santa Fe Corporation
Revenue Statistics by Commodity*

Revenues (in millions)	Three Months Ended December 31,		Percent Change	Year Ended December 31,			01-02 Percent Change
	2002	2001		2002	2001	2000	
Intermodal	\$ 698	\$ 666	4.8 %	\$ 2,758	\$ 2,638	\$ 2,652	4.5 %
Automotive	79	85	(7.1)	322	410	493	(21.5)
Other Consumer Products	69	68	1.5	273	276	260	(1.1)
Total Consumer Products	846	819	3.3	3,353	3,324	3,405	0.9
Industrial Products	491	492	(0.2)	2,041	2,080	2,114	(1.9)
Coal	540	546	(1.1)	2,071	2,123	2,131	(2.4)
Agricultural Products	393	415	(5.3)	1,408	1,531	1,462	(8.0)
Total freight revenue	2,270	2,272	(0.1)	8,873	9,058	9,112	(2.0)
Other revenue	31	29	6.9	106	118	95	(10.2)
Total revenues	\$ 2,301	\$ 2,301	0.0 %	\$ 8,979	\$ 9,176	\$ 9,207	(2.1) %
Cars/units (in thousands)							
Intermodal	898	863	4.1 %	3,563	3,391	3,440	5.1 %
Automotive	39	38	2.6	154	192	249	(19.8)
Other Consumer Products	40	41	(2.4)	163	169	161	(3.6)
Total Consumer Products	977	942	3.7	3,880	3,752	3,850	3.4
Industrial Products	340	342	(0.6)	1,415	1,442	1,501	(1.9)
Coal	546	559	(2.3)	2,097	2,133	2,023	(1.7)
Agricultural Products	218	222	(1.8)	794	828	793	(4.1)
Total cars/units	2,081	2,065	0.8 %	8,186	8,155	8,167	0.4 %
Average revenue per car/unit							
Intermodal	\$ 777	\$ 772	0.6 %	\$ 774	\$ 778	\$ 771	(0.5) %
Automotive	2,026	2,237	(9.4)	2,091	2,135	1,980	(2.1)
Other Consumer Products	1,725	1,659	4.0	1,675	1,633	1,615	2.6
Total Consumer Products	866	869	(0.3)	864	886	884	(2.5)
Industrial Products	1,444	1,439	0.3	1,442	1,442	1,408	0.0
Coal	989	977	1.2	988	995	1,053	(0.7)
Agricultural Products	1,803	1,869	(3.5)	1,773	1,849	1,844	(4.1)
Average revenue per car/unit	\$ 1,091	\$ 1,100	(0.8) %	\$ 1,084	\$ 1,111	\$ 1,116	(2.4) %
Revenue ton miles (in millions)							
Intermodal	22,915	22,024	4.0 %	90,122	88,353	92,658	2.0 %
Automotive	1,195	1,261	(5.2)	4,837	5,911	7,597	(18.2)
Other Consumer Products	2,974	3,034	(2.0)	12,098	12,070	11,812	0.2
Total Consumer Products	27,084	26,319	2.9	107,057	106,334	112,067	0.7
Industrial Products	21,906	22,336	(1.9)	92,489	97,241	99,178	(4.9)
Coal	54,211	56,276	(3.7)	209,353	213,158	204,303	(1.8)
Agricultural Products	22,241	23,041	(3.5)	81,335	85,096	76,411	(4.4)
Total revenue ton miles	125,442	127,972	(2.0) %	490,234	501,829	491,959	(2.3) %
Freight revenue per thousand ton miles							
Intermodal	\$ 30.46	\$ 30.24	0.7 %	\$ 30.60	\$ 29.86	\$ 28.62	2.5 %
Automotive	66.11	67.41	(1.9)	66.57	69.36	64.89	(4.0)
Other Consumer Products	23.20	22.41	3.5	22.57	22.87	22.01	(1.3)
Total Consumer Products	31.24	31.12	0.4	31.32	31.26	30.38	0.2
Industrial Products	22.41	22.03	1.7	22.07	21.39	21.32	3.2
Coal	9.96	9.70	2.7	9.89	9.96	10.43	(0.7)
Agricultural Products	17.67	18.01	(1.9)	17.31	17.99	19.13	(3.8)
Freight revenue per thousand ton miles	\$ 18.10	\$ 17.75	2.0 %	\$ 18.10	\$ 18.05	\$ 18.52	(0.3) %

* Excludes effects of a third quarter 2001 automotive contract settlement of \$32 million.

BNSF



Annual 1999 Investors' Report

Burlington Northern Santa Fe Corporation
Revenue Statistics by Commodity

Revenues (In millions)	Three Months Ended December 31,		Percent Change	Year Ended December 31,			98-99 Percent Change
	1999	1998		1999	1998	1997	
Carload	\$ 645	\$ 628	2.7 %	\$ 2,553	\$ 2,588	\$ 2,482	(1.4) %
Intermodal	679	637	6.6	2,518	2,437	2,243	3.3
Coal	554	560	(1.1)	2,227	2,239	1,972	(0.5)
Agricultural Commodities	361	354	2.0	1,329	1,271	1,248	4.6
Automotive	124	111	11.7	443	390	422	13.6
Total Freight Revenue	2,363	2,290	3.2	9,070	8,925	8,367	1.6
Other Revenues	7	4	75.0	30	16	3	87.5
Total Revenues	\$ 2,370	\$ 2,294	3.3 %	\$ 9,100	\$ 8,941	\$ 8,370	1.8 %
Cars/Units (In thousands)							
Carload	446	437	2.1 %	1,773	1,801	1,739	(1.6) %
Intermodal	865	810	6.8	3,203	3,086	2,811	3.8
Coal	545	536	1.7	2,123	2,078	1,862	2.2
Agricultural Commodities	193	189	2.1	715	689	669	3.8
Automotive	67	61	9.8	250	230	264	8.7
Total Cars/Units	2,116	2,033	4.1 %	8,064	7,884	7,345	2.3 %
Average Revenue Per Car/Unit							
Carload	\$ 1,446	\$ 1,437	0.6 %	\$ 1,440	\$ 1,437	\$ 1,427	0.2 %
Intermodal	785	786	(0.1)	786	790	798	(0.5)
Coal	1,017	1,045	(2.7)	1,049	1,077	1,059	(2.6)
Agricultural Commodities	1,870	1,873	(0.2)	1,859	1,845	1,865	0.8
Automotive	1,851	1,820	1.7	1,772	1,696	1,598	4.5
Average Revenue Per Car/Unit	\$ 1,117	\$ 1,126	(0.8) %	\$ 1,125	\$ 1,132	\$ 1,139	(0.6) %
Revenue Ton-Miles (In millions)							
Carload	29,135	27,516	5.9 %	113,424	113,724	105,659	(0.3) %
Intermodal	23,128	23,058	0.3	87,205	85,957	79,184	1.5
Coal	53,809	52,141	3.2	209,219	201,663	169,776	3.7
Agricultural Commodities	20,863	17,243	21.0	70,851	61,382	62,867	15.4
Automotive	2,011	1,785	12.7	7,057	6,319	7,102	11.7
Total Revenue Ton-Miles	128,946	121,743	5.9 %	487,756	469,045	424,588	4.0 %
Revenue Per Thousand Ton-Miles							
Carload	\$ 22.14	\$ 22.82	(3.0) %	\$ 22.51	\$ 22.76	\$ 23.49	(1.1) %
Intermodal	29.36	27.63	6.3	28.87	28.35	28.33	1.8
Coal	10.30	10.74	(4.1)	10.64	11.10	11.62	(4.1)
Agricultural Commodities	17.30	20.53	(15.7)	18.76	20.71	19.85	(9.4)
Automotive	61.66	62.18	(0.8)	62.77	61.72	59.42	1.7
Revenue Per Thousand Ton-Miles	\$ 18.33	\$ 18.81	(2.6) %	\$ 18.60	\$ 19.03	\$ 19.71	(2.3) %

Statement Explanation

Certain prior amounts have been reclassified to conform to the current year presentation.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

- Results of Operations
 - Year Ended December 31, 1997 Compared with Year Ended December 31, 1996
 - Revenues
 - Expenses
 - Year Ended December 31, 1996 Compared with Year Ended December 31, 1995
 - Revenues
 - Expenses
- Acquisition of SFP
- Capital Resources and Liquidity
 - 1997 Cash Flows
 - Other Capital Resources and Liquidity
 - Capital Expenditures and Resources
 - Inflation
 - Dividends
 - Capital Structure
- Other Matters
 - Casualty and Environmental
 - Other Claims and Litigation
 - Labor
 - Potential Sale of Investment in Pipeline Partnerships
 - Share Repurchase Program
 - Hedging Activities
 - Fuel
 - Interest Rate
 - UP - SP Merger
 - Year 2000
 - Recent Accounting Pronouncements
 - Forward Looking Information

Management's discussion and analysis relates to the financial condition and results of operations of Burlington Northern Santa Fe Corporation and its majority-owned subsidiaries (collectively BNSF or Company). BNSF was incorporated in Delaware on December 16, 1994, for the purpose of effecting a business combination between Burlington Northern Inc. (BNI) and Santa Fe Pacific Corporation (SFP) which was consummated on September 22, 1995. The principal subsidiary of BNSF is The Burlington Northern and Santa Fe Railway Company (BNSF Railway). BNSF Railway was formed in December 1996, when The Atchison, Topeka and Santa Fe Railway Company (ATSF) merged with and into Burlington Northern Railroad Company (BNRR).

RESULTS OF OPERATIONS

The results of operations discussed below include BNSF results for the year ended December 31, 1997 and 1996, BNI results for the year ended December 31, 1995 and SFP results from the merger date, September 22, 1995, through December 31, 1995. All earnings per share information is stated on a diluted basis.

REVENUE TABLE

The following table presents BNSF's revenue information by commodity for the years ended December 31, 1997, 1996 and 1995 and includes certain reclassifications of prior year information to conform to current year presentation.

	Revenues			Revenue Ton Miles (RTM)			Revenue Per Thousand RTM		
	1997	1996	1995	1997	1996	1995	1997	1996	1995
	(In millions)			(In millions)			(In millions)		
Intermodal	\$2,282	\$2,039	\$1,076	79,964	71,262	38,516	\$28.54	\$28.61	\$27.94
Coal	1,972	1,973	1,821	169,776	169,380	153,169	11.62	11.65	11.89
Agricultural Commodities	1,087	1,171	1,143	57,039	59,601	55,356	19.06	19.65	20.65
Chemicals	793	765	443	30,750	28,896	17,155	25.79	26.47	25.82
Forest Products	573	556	471	25,876	25,140	19,828	22.14	22.12	23.75
Consumer Goods	505	470	365	19,814	18,201	12,332	25.49	25.82	29.60
Metals	424	413	320	19,958	20,199	13,804	21.24	20.45	23.18
Automotive	422	396	211	7,102	6,062	3,158	59.42	65.32	66.81
Minerals	352	319	260	14,309	12,318	10,119	24.60	25.90	25.69
Other	3	39	7	--	--	--	--	--	--
Total	\$8,413	\$8,141	\$6,117	424,588	411,059	323,437	\$19.81	\$19.71	\$18.91

YEAR ENDED DECEMBER 31, 1997 COMPARED WITH YEAR ENDED DECEMBER 31, 1996

BNSF recorded net income for 1997 of \$885 million (\$5.64 per common share), compared with net income of \$889 million (\$5.74 per common share) for 1996. The decrease in net income is primarily due to a fourth quarter special charge of \$90 million (\$57 million after tax) or \$.36 per common share principally related to the consolidation of union clerical functions. This was largely offset by improved operating results in 1997 despite severe weather conditions in the first quarter of 1997 throughout the Northern Plains and the Pacific Northwest (PNW). The financial impact of recurring and protracted outages on many parts of the system, the cost of repairing track, signals and equipment, and the operating inefficiencies caused by the weather is virtually impossible to measure with precision. However, the Company estimates that the severe weather in the first quarter of 1997 resulted in lost revenue opportunities of approximately \$100 million and increased operating expenses by at least \$50 million.

Excluding the fourth quarter special charge, net income for 1997 was \$942 million (\$6.00 per common share) compared with 1996 net income of \$889 million (\$5.74 per common share).

REVENUES

Total revenues for 1997 were \$8,413 million or 3 percent higher compared with revenues of \$8,141 million for 1996. The \$272 million increase primarily reflects increases in the intermodal, consumer goods, minerals, chemicals, automotive, forest products and metals segments partially offset by lower agricultural commodities revenues. Revenue per revenue ton mile, a key performance statistic, increased slightly in 1997 to \$19.81 from \$19.71 in 1996. During 1997, BNSF's share of the Western United States (U.S.) rail traffic market, based on reporting to the Association of American Railroads, increased 1.8 points to 41.4 percent.

Intermodal revenues improved \$243 million or 12 percent compared with 1996, due to increased volume growth in the Direct, International, Truckload, and IMC segments. The Direct segment experienced a 14 percent growth in revenues primarily due to an 18 percent gain in loadings. Direct segment growth was due to volume increases from less than truckload (LTL) shipments led by Yellow Freight, Consolidated Freightways and Roadway. LTL volume from Yellow Freight, Consolidated Freightways, and Roadway has grown substantially all year with growth accelerating in the 2nd, 3rd, and 4th quarters in particular due to Yellow Freight's change of operations completed in April 1997. International revenues increased 10 percent from 1996 due to an 8 percent increase in units moved. International growth has been the result of a strong import economy and increased market share by steamship lines such as Hyundai, OOCL, and Cosco that utilize BNSF. Truckload revenues increased 21 percent due to a 20 percent increase in loadings,

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REDACTED

REDACTED

BNSF Transportation Rates for Otter Tail
2000 - Second Quarter 2003

<u>Term</u>	<u>Rate 1/</u>
(1)	(2)
1Q 2000	
2Q 2000	
3Q 2000	
4Q 2000	
1Q 2001	
2Q 2001	
3Q 2001	
4Q 2001	
1Q 2002	\$13.49
2Q 2002	\$13.49
3Q 2002	\$13.49
4Q 2002	\$13.49
1Q 2003	\$13.76
2Q 2003	\$13.76

1/ Source: BNSF Freight Bills from 2000-2003

II-A-3

REPLY
OTHER

REVENUE SHORTFALL
ALLOCATION METHOD

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SERVICE DATE - APRIL 21, 2003
SURFACE TRANSPORTATION BOARD

NOTICE

STB Ex Parte No. 347 (Sub-No. 2)

RATE GUIDELINES—NON-COAL PROCEEDINGS

Decided: April 17, 2003

In Rate Guidelines—Non-Coal Proceedings, 1 S.T.B. 1004 (1996), the Board established guidelines for handling rate complaints in cases where the constrained market pricing (CMP) guidelines cannot practicably be applied.¹ In that decision, the Board provided tables containing “Revenue Shortfall Allocation Method” (RSAM) and “Average Revenue-to-Variable Cost >180” (R/VC_{>180}) percentages for each Class I railroad for the then most recent 4-year period. The RSAM measures the average markup above a carrier’s variable cost that the carrier would need to charge all its “potentially” captive traffic (traffic priced above 180% of variable costs) to earn adequate revenues as determined under 49 U.S.C 10704(a)(2). The R/VC_{>180} represents the average markup above variable cost that a carrier imposes on its high-rated traffic (traffic priced above 180% of variable costs). The Board updates the RSAM and R/VC_{>180} tables annually.

The attached tables contain RSAM and R/VC_{>180} percentages for most carriers for the period 1998-2001. Because the rail systems for CSX Transportation, Inc. (CSX) and Norfolk Southern Railroad (NS) changed significantly in 1998 with the acquisition by those two railroads of the Consolidated Rail Corporation (Conrail) and the division of Conrail’s assets between them, the pre-acquisition operating statistics of CSX and NS are not comparable to their post-acquisition statistics. Thus, the tables reflect only the post-Conrail acquisition (1999 through 2001) results for CSX and NS and for the Eastern and National composites.

By the Board, Leland L. Gardner, Director, Office of Economics, Environmental Analysis, and Administration.

Vernon A. Williams
Secretary

¹ CMP, adopted in Coal Rate Guidelines—Nationwide, 1 I.C.C.2d 520 (1985), is the preferred procedure for evaluating the reasonableness of challenged rates.

Table I
RSAM Markup Percentages
(Range With & Without Efficiency Adjustment)

Railroad/ Region	4 - Year Average	2001	2000	1999	1998
BNSF	213-289	258-354	222-296	185-248	188-258
GTW	149-205	146-168	129-186	118-188	203-278
IC	200-247	182-233	231-287	228-283	159-184
KCS	269-328	302-364	275-339	280-345	220-264
SOO	337-453	328-441	298-361	399-565	324-445
NS	195-245	186-235	208-272	191-227	
CSX	221-265	242-290	217-259	205-245	
UP	262-379	213-299	254-369	231-322	349-527
Eastern Region	208-254	211-258	213-265	201-240	
Western Region	241-338	233-326	243-341	217-298	270-388
National	222-294	224-298	228-308	213-277	

Table II
Average Existing Revenue-to-Variable Cost Percentages
For Traffic Above 180% R/VC

Railroad/ Region	4 - Year Average	2001	2000	1999	1998
BNSF	265	266	266	263	266
GTW	237	236	243	255	213
IC	258	255	241	264	272
KCS	249	263	242	248	243
SOO	245	256	228	246	250
NS	208	219	200	206	
CSX	198	192	191	210	
UP	229	234	222	234	225
Eastern Region	207	208	199	213	
Western Region	246	249	242	247	244
National	232	234	225	237	

II-A-3

REPLY
OTHER

RCAF

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EB

SERVICE DATE - LATE RELEASE DECEMBER 20, 2002

SURFACE TRANSPORTATION BOARD

Decision

STB Ex Parte No. 290 (Sub-No. 5) (2003-1)

QUARTERLY RAIL COST ADJUSTMENT FACTOR

Decided: December 19, 2002

In Railroad Cost Recovery Procedures, 1 I.C.C.2d 207 (1984), the Interstate Commerce Commission (ICC) outlined the procedures for calculating the all-inclusive index of railroad input prices and the method for computing the rail cost adjustment factor (RCAF). Under the procedures, the Association of American Railroads (AAR) is required to calculate the index on a quarterly basis and submit it on the fifth day of the last month of each calendar quarter. In Railroad Cost Recovery Procedures, 5 I.C.C.2d 434 (1989), aff'd sub nom. Edison Electric Institute, et al. v. ICC, 969 F.2d 1221 (D.C. Cir. 1992), the ICC adopted procedures that require the adjustment of the quarterly index for a measure of productivity.

The provisions of 49 U.S.C. 10708 direct the Surface Transportation Board (Board) to continue to publish both an unadjusted RCAF and a productivity-adjusted RCAF. In Productivity Adjustment Implementation, STB 158 (1996), the Board decided to publish a second productivity-adjusted RCAF called the RCAF-5. Consequently, three indices are now filed with the Board: the RCAF (Unadjusted), the RCAF (Adjusted), and the RCAF-5. The RCAF (Adjusted), which reflects national average productivity changes as originally developed and applied by the ICC, is currently based on a 5-year moving average. The RCAF-5 reflects national average productivity changes as if a 5-year moving average had been applied consistently from the productivity adjustment's inception in 1989.

As required by statute, the RCAF was rebased using the fourth quarter 2002 index value as the denominator and first quarter 2003 index value as the numerator. AAR's proposed rebasing calculations were verified, and they comply with the statute. The rebasing calculations are shown in Table C of the Appendix. As the forecast error calculations are part of the prescribed indexing methodology, those figures are shown on a rebased October 1, 2002 level to provide consistency.

The index of railroad input prices, RCAF (Unadjusted), RCAF (Adjusted), and RCAF-5 for the first quarter 2003 are shown in Table A of the Appendix to this decision. Table B shows the third quarter 2002 index and the RCAF calculated on both an actual and a forecasted basis. The difference between the actual calculation and the forecasted calculation is the forecast error adjustment.

Both the RCAF (Adjusted) and the RCAF-5 are currently calculated using a moving 5-year average of productivity change for U.S. Class I railroads. An average productivity change rate of 1.042 (4.2% per year) for the period 1997-2001 is currently used for both the RCAF (Adjusted) and the RCAF-5.

We have examined AAR's calculations for compliance with our procedures and find that the first quarter 2003 RCAF (Unadjusted) is 0.996, a decrease of 0.4% from the fourth quarter 2002 RCAF of 1.000. The RCAF (Adjusted) is 0.512, a decrease of 1.3% from the fourth quarter 2002 RCAF (Adjusted) of 0.519. The RCAF-5 is 0.495, a decrease of 1.4% from the fourth quarter 2002 RCAF-5 of 0.502.

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

Pursuant to 5 U.S.C. 605(b), we conclude that our action will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act.

AUTHORITY: 49 U.S.C. 10708.

It is ordered:

1. The Board has approved the first quarter 2003 Rail Cost Adjustment Factor (Unadjusted) of 0.996; RCAF (Adjusted) of 0.512; and RCAF-5 of 0.495.
2. Notice of this decision will be published in the Federal Register.
3. The effective date of this decision is January 1, 2003.

By the Board, Chairman Nober, Vice Chairman Burkes, and Commissioner Morgan.

Vernon A. Williams
Secretary

TABLE A
Ex Parte No. 290 (Sub-No. 5) (2003-1)
All Inclusive Index of Railroad Input Costs

LINE NO.	INDEX COMPONENT	2001 WEIGHTS	FOURTH QUARTER 2002 FORECAST	FIRST QUARTER 2003 FORECAST
1	LABOR	37.8%	276.6	269.7
2	FUEL	10.5%	103.5	100.7
3	MATERIALS AND SUPPLIES	4.6%	148.6	144.2
4	EQUIPMENT RENTS	10.5%	175.3	175.2
5	DEPRECIATION	10.6%	149.7	149.6
6	INTEREST	3.8%	98.6	98.6
7	OTHER ITEMS ¹	22.2%	160.2	162.2
8	WEIGHTED AVERAGE	100.0%	192.5	192.2
9	LINKED INDEX		189.9	190.6
10	PRELIMINARY RAIL COST ADJUSTMENT FACTOR ²		.989	.992
11	FORECAST ERROR ADJUSTMENT ³		0.011	0.004
12	RCAF (UNADJUSTED) (LINE 10 + LINE 11)		1.000	.996
13	RCAF (ADJUSTED) ⁴		0.519	0.512
14	RCAF-5 ⁵		0.502	0.495

¹ "Other Items" is a combination of Purchased Services, Casualties and Insurance, General and Administrative, Other Taxes, Loss and Damage, and Special Charges, price changes for all of which are measured by the Producer Price Index for Industrial Commodities Less Fuel and Related Products and Power.

² Linking is necessitated by a change to the 2001 weights beginning with the fourth quarter 2002. The following formula was used for the current quarter's index:

$$\frac{1^{\text{st}} \text{ Qr. 2003 Index}}{(2001 \text{ Weights})} \times \frac{4^{\text{th}} \text{ Qr. 2002 Index}}{(2001 \text{ Weights})} = \frac{4^{\text{th}} \text{ Quarter Linked Index}}{(1990 = 100 \text{ Linked})} \times \frac{\text{Linked Index}}{(\text{Current Quarter})}$$

$$\frac{193.2}{192.5} \times 189.9 = 190.6$$

³ The first quarter 2003 RCAF was rebased using the October 1, 2002, level of 192.1 in accordance with the requirements of the Staggers Rail Act of 1980 (10/1/02 = 1.00).

⁴ The first quarter 2003 forecast error adjustment was calculated as follows: a. Third quarter 2002 RCAF calculated using forecasted data equals 96.6; b. Third quarter 2001 RCAF calculated using actual data equals 97.0; c. The difference equals the forecast error (b-a) of 0.4. Because the actual third quarter value is greater than the forecast value, the difference is added to the preliminary RCAF.

⁵ The first quarter 2003 RCAF Adjusted (0.512) is calculated by dividing the first quarter 2003 RCAF Unadjusted (0.996) by the first quarter productivity adjustment factor of 1.9466. The first quarter 2003 productivity adjustment factor is calculated by multiplying the fourth quarter 2002 productivity adjustment factor of 1.9268 by the fourth root (1.0103) of the 1996-2000 annual average productivity growth rate of 1.042%.

⁶ The first quarter 2003 RCAF-5 (0.495) is calculated by dividing the first quarter 2003 RCAF Unadjusted (0.996) by the first quarter productivity adjustment factor-5 (PAF-5) of 2.0126. The first quarter 2003 productivity adjustment factor is calculated by multiplying the fourth quarter 2002 PAF-5 of 1.9921 by the fourth root (1.0103) of the 1996-2000 annual average productivity growth rate of 1.042%.

TABLE B

Ex Parte No. 290 (Sub-No. 5) (2003-1)
 Comparison of Third Quarter 2002 Index
 Calculated on Both a Forecasted and an Actual Basis

Line No.	INDEX COMPONENT	2000 WEIGHT	THIRD QUARTER 2002 FORECAST	THIRD QUARTER 2002 ACTUAL
1	LABOR	36.5%	257.1	257.1
2	FUEL	10.7%	94.4	91.5
3	MATERIALS AND SUPPLIES	4.8%	149.9	149.9
4	EQUIPMENT RENTS	11.1%	177.0	177.4
5	DEPRECIATION	10.2%	149.7	149.7
6	INTEREST	4.6%	108.8	108.8
7	OTHER ITEMS	22.1%	160.1	160.5
8	WEIGHTED AVERAGE	100.0%	186.4	186.3
9	LINKED INDEX		185.6	186.4
10	RAIL COST ADJUSTMENT FACTOR		96.6	97.0

TABLE C

**Rebasing the Denominator of the RCAF
to the Fourth Quarter 2002 Level ¹**

1.	Fourth Quarter 2002 Linked Index	189.9
2.	Second Quarter 2002 Linked Index Calculated Using Actual Data	186.4
3.	Second Quarter 2002 Linked Index Calculated Using forecasted Data	184.2
4.	Difference	2.2
5.	Fourth Quarter 2002 Linked Index Adjusted for Second Quarter 2002 Forecast Error (Line 1 plus Line 4)	192.1

¹ The actual and forecasted second quarter 2002 indices were rebased to adjust for forecast error in the rebasing of the denominator of the RCAF to the fourth quarter (10/1/02) level. Line five of this table (192.1) is the new denominator to be used in calculating the quarterly RCAF.

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SERVICE DATE - SEPTEMBER 20, 2002

SURFACE TRANSPORTATION BOARD

Decision

STB Ex Parte No. 290 (Sub-No. 5) (2002-4)

QUARTERLY RAIL COST ADJUSTMENT FACTOR

Decided: September 19, 2002

In Railroad Cost Recovery Procedures, 1 I.C.C.2d 207 (1984), the Interstate Commerce Commission (ICC) outlined the procedures for calculating the all-inclusive index of railroad input prices and the method for computing the rail cost adjustment factor (RCAF). Under the procedures, the Association of American Railroads (AAR) is required to calculate the index on a quarterly basis and submit it on the fifth day of the last month of each calendar quarter. In Railroad Cost Recovery Procedures, 5 I.C.C.2d 434 (1989), aff'd sub nom. Edison Electric Institute, et al. v. ICC, 969 F.2d 1221 (D.C. Cir. 1992), the ICC adopted procedures that require the adjustment of the quarterly index for a measure of productivity.

The provisions of 49 U.S.C. 10708 direct the Surface Transportation Board (Board) to continue to publish both an unadjusted RCAF and a productivity-adjusted RCAF. In Productivity Adjustment Implementation, Ex Parte No. 290 (Sub-No. 7) (STB served Oct. 3, 1996), the Board decided to publish a second productivity-adjusted RCAF called the RCAF-5. Consequently, three indices are now filed with the Board: the RCAF (Unadjusted), the RCAF (Adjusted), and the RCAF-5. The RCAF (Adjusted), which reflects national average productivity changes as originally developed and applied by the ICC, is currently based on a 5-year moving average. The RCAF-5 reflects national average productivity changes as if a 5-year moving average had been applied consistently from the productivity adjustment's inception in 1989.

The index of railroad input prices, RCAF (Unadjusted), RCAF (Adjusted), and RCAF-5 for the fourth quarter 2002 are shown in Table A of the Appendix to this decision. Table B shows the second quarter 2002 index and the RCAF calculated on both an actual and a forecasted basis. The difference between the actual calculation and the forecasted calculation is the forecast error adjustment.

The Board's rules mandate that the weights for each major cost component of the all-inclusive cost index, on which the RCAF is based, be updated annually in order to reflect the changing mix of index components. The procedure also requires the wages and supplement rates used in the labor index to be rebenchmarked in the fourth quarter of each year. See Railroad Cost Recovery Procedures, 364 I.C.C. 841 (1981). The weights used by the AAR are based on

STB Ex Parte No. 290 (Sub-No. 5) (2002-4)

the distribution of railway expenses for the year 2001. Similarly, AAR has used wage and supplement data for the year 2001 to calculate hourly labor rates that reflect the changing mix of employees. We have reviewed the reweighting and rebenchmarking calculations performed by AAR, and we find that they comply with the prescribed method.

Both the RCAF (Adjusted) and the RCAF-5 are currently calculated using a moving 5-year average of productivity change for U.S. Class I railroads. An average productivity change rate of 1.042 (4.2% per year) for the period 1996-2000 is currently used for the RCAF (Adjusted). In accordance with Ex Parte No. 290 (Sub-No. 7), *supra*, the RCAF-5 will continue to use the 1995-1999 average productivity change rate of 1.028 (2.8%) until January 1, 2003.

We have examined AAR's calculations for compliance with our procedures and find that the fourth quarter 2002 RCAF (Unadjusted) is 1.108, an increase of 4.3% from the third quarter 2002 RCAF of 1.062. The RCAF (Adjusted) is 0.575, an increase of 3.2% from the third quarter 2002 RCAF (Adjusted) of 0.557. The RCAF-5 is 0.556, an increase of 3.5% from the third quarter 2002 RCAF-5 of 0.537.

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

Pursuant to 5 U.S.C. 605(b), we conclude that our action will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act.

AUTHORITY: 49 U.S.C. 10708.

It is ordered:

1. The Board has approved the fourth quarter 2002 Rail Cost Adjustment Factor (Unadjusted) of 1.108, RCAF (Adjusted) of 0.575, and RCAF-5 of 0.556.
2. Notice of this decision will be published in the Federal Register.
3. The effective date of this decision is October 1, 2002.

STB Ex Parte No. 290 (Sub-No. 5) (2002-4)

By the Board, Chairman Morgan and Vice Chairman Burkes.

Vernon A. Williams
Secretary

TABLE A
Ex Parte No. 290 (Sub-No. 5) (2002-4)
All Inclusive Index of Railroad Input Costs

LINE NO.	INDEX COMPONENT	2001 WEIGHTS	THIRD QUARTER 2002 FORECAST	FOURTH QUARTER 2002 FORECAST
1	LABOR	37.6%	257.1	267.6
2	FUEL	10.5%	94.4	105.5
3	MATERIALS AND SUPPLIES	4.6%	149.9	148.6
4	EQUIPMENT RENTS	10.5%	177.0	175.9
5	DEPRECIATION	10.6%	149.7	149.7
6	INTEREST	3.8%	108.8	95.6
7	OTHER ITEMS ¹	22.2%	160.1	160.2
8	WEIGHTED AVERAGE	100.0%	188.1	192.5
9	LINKED INDEX		185.6	189.9
10	PRELIMINARY RAIL COST ADJUSTMENT FACTOR *		107.2	109.6
11	FORECAST ERROR ADJUSTMENT *		-0.010	0.012
12	RCAF(UNADJUSTED) (LINE 10 + LINE 11)		1.062	1.108
13	RCAF(ADJUSTED) ²		0.557	0.575
14	RCAF-5 ³		0.557	0.556

¹ "Other Items" is a combination of Purchased Services, Casualties and Insurance, General and Administrative, Other Taxes, Loss and Damage, and Special Charges, price changes for all of which are measured by the Producer Price Index for Industrial Commodities Less Fuel and Related Products and Power.

² Linking is necessitated by a change to the 2000 weights beginning with the fourth quarter 2002. The following formula was used for the current quarter's index:

$$\frac{4^{\text{th}} \text{ Qr. 2002 Index}}{(2001 \text{ Weights})} \text{ Times } \frac{3^{\text{rd}} \text{ Quarter Linked Index}}{(1980 = 100 \text{ Linked})} \text{ Equals } \frac{\text{Linked Index}}{(\text{Current Quarter})}$$

$$\frac{192.5}{188.1} \times 185.6 = 189.9$$

Or

³ The first quarter 1998 RCAF was rebased using the October 1, 1997, level of 173.2 in accordance with the requirements of the Staggers Rail Act of 1980 (10/1/97 = 1.00).

⁴ The fourth quarter 2002 forecast error adjustment was calculated as follows: a. Second quarter 2002 RCAF calculated using forecasted data equals 106.4; b. Second quarter 2002 RCAF calculated using actual data equals 107.6; c. The difference equals the forecast error (b-a) of 1.2. Since the actual second quarter value is greater than the forecast value, the difference is added to the preliminary RCAF.

⁵ The fourth quarter 2002 RCAF Adjusted (0.575) is calculated by dividing the fourth quarter 2002 RCAF Unadjusted (1.108) by the fourth quarter productivity adjustment factor of 1.9266. The fourth quarter 2002 productivity adjustment factor is calculated by multiplying the third quarter 2002 productivity adjustment factor of 1.9072 by the fourth root (1.0103) of the 1996-2000 annual average productivity growth rate of 1.042%.

⁶ The fourth quarter 2002 RCAF-5 (0.556) is calculated by dividing the fourth quarter 2002 RCAF Unadjusted (1.108) by the fourth quarter productivity adjustment factor-5 (PAF-5) of 1.9921. The fourth quarter 2002 productivity adjustment factor is calculated by multiplying the third quarter 2001 PAF-5 of 1.9784 by the fourth root (1.0069) of the 1975-1999 annual average productivity growth rate of 1.028%.

TABLE B

Ex Parte No. 290 (Sub-No. 5) (2002-4)
Comparison of Second Quarter 2002 Index
Calculated on Both a Forecasted and an Actual Basis

Line No.	INDEX COMPONENT	2000 WEIGHT	SECOND QUARTER 2002 FORECAST	SECOND QUARTER 2002 ACTUAL
1	LABOR	36.5%	257.3	257.3
2	FUEL	10.7%	82.5	91.6
3	MATERIALS AND SUPPLIES	4.8%	150.0	150.0
4	EQUIPMENT RENTS	11.1%	176.6	177.4
5	DEPRECIATION	10.2%	149.7	149.9
6	INTEREST	4.6%	108.8	108.8
7	OTHER ITEMS	22.1%	159.2	160.2
8	WEIGHTED AVERAGE	100.0%	185.0	186.3
9	LINKED INDEX		184.2	186.4
10	RAIL COST ADJUSTMENT FACTOR		106.4	107.6

32368
EB

SERVICE DATE - DECEMBER 20, 2001

SURFACE TRANSPORTATION BOARD

Decision

STB Ex Parte No. 290 (Sub-No. 5) (2002-1)

QUARTERLY RAIL COST ADJUSTMENT FACTOR

Decided: December 19, 2001

In Railroad Cost Recovery Procedures, 1 I.C.C.2d 207 (1984), the Interstate Commerce Commission (ICC) outlined the procedures for calculating the all-inclusive index of railroad input prices and the method for computing the rail cost adjustment factor (RCAF). Under the procedures, the Association of American Railroads (AAR) is required to calculate the index on a quarterly basis and submit it on the fifth day of the last month of each calendar quarter. In Railroad Cost Recovery Procedures, 5 I.C.C.2d 434 (1989), aff'd sub nom. Edison Electric Institute, et al. v. ICC, 969 F.2d 1221 (D.C. Cir. 1992), the ICC adopted procedures that require the adjustment of the quarterly index for a measure of productivity.

The provisions of 49 U.S.C. 10708 direct the Surface Transportation Board (Board) to continue to publish both an unadjusted RCAF and a productivity-adjusted RCAF. In Productivity Adjustment-Implementation, Ex Parte No. 290 (Sub-No. 7) (STB served Oct. 3, 1996), the Board decided to publish a second productivity-adjusted RCAF called the RCAF-5. Consequently, three indices are now filed with the Board: the RCAF (Unadjusted), the RCAF (Adjusted), and the RCAF-5. The RCAF (Adjusted), which reflects national average productivity changes as originally developed and applied by the ICC, is currently based on a 5-year moving average. The RCAF-5 reflects national average productivity changes as if a 5-year moving average had been applied consistently from the productivity adjustment's inception in 1989.

The index of railroad input prices, RCAF (Unadjusted), RCAF (Adjusted), and RCAF-5 for the first quarter 2002 are shown in Table A of the Appendix to this decision. Table B shows the third quarter 2001 index and the RCAF calculated on both an actual and a forecasted basis. The difference between the actual calculation and the forecasted calculation is the forecast error adjustment.

Both the RCAF (Adjusted) and the RCAF-5 are currently calculated using a moving 5-year average of productivity change for U.S. Class I railroads. An average productivity change rate of 1.028 (2.8% per year) for the period 1995-1999 is currently used for both the RCAF (Adjusted) and the RCAF-5.

We have examined AAR's calculations for compliance with our procedures and find that the first quarter 2002 RCAF (Unadjusted) is 1.076, a decrease of 0.2% from the fourth quarter

STB Ex Parte No. 290 (Sub-No. 5) (2002-1)

2001 RCAF of 1.078. The RCAF (Adjusted) is 0.576, a decrease of 0.9% from the fourth quarter 2001 RCAF (Adjusted) of 0.581. The RCAF-5 is 0.551, a decrease of 0.9% from the fourth quarter 2001 RCAF-5 of 0.556.

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

Pursuant to 5 U.S.C. 605(b), we conclude that our action will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act.

AUTHORITY: 49 U.S.C. 10708.

It is ordered:

1. The Board has approved the first quarter 2002 Rail Cost Adjustment Factor (Unadjusted) of 1.076, RCAF, (Adjusted) of 0.576, and RCAF-5 of 0.551.
2. Notice of this decision will be published in the Federal Register.
3. The effective date of this decision is January 1, 2002.

By the Board, Chairman Morgan, Vice Chairman Clyburn, and Commissioner Burkes.

Vernon A. Williams
Secretary

TABLE A
Ex Parte No. 290 (Sub-No. 5) (2002-1)
All Inclusive Index of Railroad Input Costs

LINE NO.	INDEX COMPONENT	2000 WEIGHTS	FOURTH QUARTER 2001 FORECAST	FIRST QUARTER 2002 FORECAST
1	LABOR	36.3%	253.0	260.5
2	FUEL	10.7%	108.5	87.4
3	MATERIALS AND SUPPLIES	4.8%	153.8	155.5
4	EQUIPMENT RENT	11.1%	179.2	178.9
5	DEPRECIATION	10.2%	130.0	150.1
6	INTEREST	4.6%	108.8	108.8
7	OTHER ITEMS ¹	22.1%	160.2	159.2
8	WEIGHTED AVERAGE	100.0%	186.9	187.2
9	LINKED INDEX ²		186.1	186.4
10	PRELIMINARY RAIL COST ADJUSTMENT FACTOR ³		107.4	107.6
11	FORECAST ERROR ADJUSTMENT ⁴		0.004	0.000
12	RCAF (UNADJUSTED) (LINE 10 + LINE 11)		1.078	1.076
13	RCAF (ADJUSTED) ⁵		0.581	0.576
14	RCAF-5 ⁶		0.556	0.551

¹ "Other Items" is a combination of Purchased Services, Casualties and Insurance, General and Administrative, Other Taxes, Loss and Damage, and Special Charges, price changes for all of which are measured by the Producer Price Index for Industrial Commodities Less Fuel and Related Products and Power.

² Linking is necessitated by a change to the 1999 weights beginning with the fourth quarter 2001. The following formula was used for the current quarter's index:

$$\frac{1^{st} \text{ Qr. 2002 Index (2000 Weights)}}{4^{th} \text{ Qr. 2001 Index (2000 Weights)}} \times \text{Times 4}^{th} \text{ Quarter Linked Index (1980 = 100 Linked)} = \text{Equals Linked Index (Current Quarter)}$$

Or

$$\frac{187.2}{186.9} \times 186.1 = 186.4$$

³ The first quarter 1998 RCAF was rebased using the October 1, 1997, level of 173.2 in accordance with the requirements of the Staggers Rail Act of 1980 (10/1/97 = 1.00).

⁴ The first quarter 2002 forecast error adjustment was calculated as follows: a. Third quarter 2001 RCAF calculated using forecasted data equals 107.9; b. Third quarter 2001 RCAF calculated using actual data equals 107.9; c. The difference equals the forecast error (b-a) of 0.0. Since the actual third quarter value is the same as the forecast value, there is no change to the preliminary RCAF.

⁵ The first quarter 2002 RCAF Adjusted (0.576) is calculated by dividing the first quarter 2002 RCAF Unadjusted (1.076) by the first quarter productivity adjustment factor of 1.8686. The first quarter 2002 productivity adjustment factor is calculated by multiplying the fourth quarter 2001 productivity adjustment factor of 1.8558 by the fourth root (1.0069) of the 1995-1999 annual average productivity growth rate of 1.028%.

⁶ The first quarter 2002 RCAF-5 (0.551) is calculated by dividing the first quarter 2002 RCAF Unadjusted (1.076) by the first quarter productivity adjustment factor-5 (PAF-5) of 1.9513. The first quarter 2002 productivity adjustment factor is calculated by multiplying the fourth quarter 2001 PAF-5 of 1.9379 by the fourth root (1.0069) of the 1995-1999 annual average productivity growth rate of 1.028%.

TABLE B

Ex Parte No. 290 (Sub-No. 5) (2002-1)
 Comparison of Third Quarter 2001 Index
 Calculated on Both a Forecasted and an Actual Basis

Line No.	INDEX COMPONENT	1999 WEIGHT	THIRD QUARTER 2001 FORECAST	THIRD QUARTER 2001 ACTUAL
1	LABOR	39.3%	256.3	256.3
2	FUEL	7.1%	108.3	101.3
3	MATERIALS AND SUPPLIES	5.3%	155.8	155.8
4	EQUIPMENT RENTS	11.4%	177.8	177.7
5	DEPRECIATION	10.6%	150.2	150.0
6	INTEREST	4.6%	94.9	94.9
7	OTHER ITEMS	21.7%	161.2	160.2
8	WEIGHTED AVERAGE	100.0%	192.2	191.5
9	LINKED INDEX		186.9	186.8
10	RAIL COST ADJUSTMENT FACTOR		107.9	107.9

31519
EB

SERVICE DATE - DECEMBER 20, 2000

SURFACE TRANSPORTATION BOARD

Decision

STB Ex Parte No. 290 (Sub-No. 5) (2001-1)

QUARTERLY RAIL COST ADJUSTMENT FACTOR

Decided: December 19, 2000

In Railroad Cost Recovery Procedures, 1 I.C.C.2d 207 (1984), the Interstate Commerce Commission (ICC) outlined the procedures for calculating the all-inclusive index of railroad input prices and the method for computing the rail cost adjustment factor (RCAF). Under the procedures, the Association of American Railroads (AAR) is required to calculate the index on a quarterly basis and submit it on the fifth day of the last month of each calendar quarter. In Railroad Cost Recovery Procedures, 5 I.C.C.2d 434 (1989), aff'd sub nom. Edison Electric Institute, et al. v. ICC, 969 F.2d 1221 (D.C. Cir. 1992), the ICC adopted procedures that require the adjustment of the quarterly index for a measure of productivity.

The provisions of 49 U.S.C. 10708 direct the Surface Transportation Board (Board) to continue to publish both an unadjusted RCAF and a productivity-adjusted RCAF. In Productivity Adjustment-Implementation, Ex Parte No. 290 (Sub-No. 7) (STB served Oct. 3, 1996), the Board decided to publish a second productivity-adjusted RCAF called the RCAF-5. Consequently, three indices are now filed with the Board: the RCAF (Unadjusted), the RCAF (Adjusted), and the RCAF-5. The RCAF (Adjusted), which reflects national average productivity changes as originally developed and applied by the ICC, is currently based on a 5-year moving average. The RCAF-5 reflects national average productivity changes as if a 5-year moving average had been applied consistently from the productivity adjustment's inception in 1989.

The index of railroad input prices, RCAF (Unadjusted), RCAF (Adjusted), and RCAF-5 for the first quarter 2001 are shown in Table A of the Appendix to this decision. Table B shows the third quarter 2000 index and the RCAF calculated on both an actual and a forecasted basis. The difference between the actual calculation and the forecasted calculation is the forecast error adjustment.

The Board's rules mandate that the weights for each major cost component of the all-inclusive cost index, on which the RCAF is based, be updated annually in order to reflect the changing mix of index components. The procedure also requires the wages and supplement rates used in the labor index to be rebenchmarked in the fourth quarter of each year. See Railroad Cost Recovery Procedures, 364 I.C.C. 841 (1981). The expenses used by AAR to calculate the updates are based on the railroads' 1999 operating expenses. We have reviewed the revised

reweighting and rebenchmarking calculations performed by AAR, and we find that they comply with the prescribed method.

We note that in October of this year, CSX Transportation revised its 1999 R-1 Annual Report to reflect its new financial reporting system. Those revisions produced very minor changes in the weights used to calculate the all-inclusive index, but somewhat more meaningful changes in the benchmark for health and welfare benefits. Cumulatively, the changes result in a lower labor index and a slightly lower (105.6 instead of 105.9) preliminary RCAF. This also means that the decision issued on September 20, 2000, slightly overstated the RCAF calculations for that period. We believe that this overstatement should be corrected using the agency's forecast error adjustment procedure for the second quarter 2001 RCAF figures. Although the situation here is not exactly what the ICC had in mind when it first established the forecast error adjustment procedure, we believe the procedure represents the best available method for correcting this slight overstatement.

Both the RCAF (Adjusted) and the RCAF-5 are currently calculated using a moving 5-year average of productivity change for U.S. Class I railroads. An average productivity change rate of 1.035 (3.5% per year) for the period 1994-1998 is currently used for the RCAF (Adjusted). In accordance with Ex Parte No. 290 (Sub-No. 7), *supra*, the RCAF-5 will also use the 1994-1998 average productivity change rate of 1.035 (3.5%) until January 1, 2002.

We have examined AAR's calculations for compliance with our procedures and find that the first quarter 2001 RCAF (Unadjusted) is 1.085, an increase of 2.2% from the fourth quarter 2000 RCAF of 1.062. The RCAF (Adjusted) is 0.597, an increase of 1.4% from the fourth quarter 2000 RCAF (Adjusted) of 0.589. The RCAF-5 is 0.574, an increase of 1.2% from the fourth quarter 2000 RCAF-5 of 0.567.

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

Pursuant to 5 U.S.C. 605(b), we conclude that our action will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act.

AUTHORITY: 49 U.S.C. 10708.

It is ordered:

1. The Board has approved the first quarter 2001 Rail Cost Adjustment Factor (Unadjusted) of 1.085, RCAF (Adjusted) of 0.597, and RCAF-5 of 0.574.

STB Ex Parte No. 290 (Sub-No. 5) (2001-1)

2. Notice of this decision will be published in the Federal Register.

3. The effective date of this decision is January 1, 2001.

By the Board, Chairman Morgan, Vice Chairman Burkes, and Commissioner Clyburn.

Vernon A. Williams
Secretary

TABLE A
Ex Parte No. 290 (Sub-No. 5) (2001-1)
All Inclusive Index of Railroad Input Costs

LINE No.	INDEX COMPONENT	1999 ¹ WEIGHTS	FOURTH QUARTER 2000 FORECAST	FIRST QUARTER 2001 FORECAST
1	LABOR	39.3%	245.5	254.4
2	FUEL	7.1%	123.4	129.7
3	MATERIALS AND SUPPLIES	5.3%	150.1	148.7
4	EQUIPMENT RENTS	11.4%	174.2	174.7
5	DEPRECIATION	10.6%	150.3	150.3
6	INTEREST	4.6%	94.9	94.9
7	OTHER ITEMS ²	21.7%	160.3	161.0
8	WEIGHTED AVERAGE	100.0%	188.1	192.2
9	LINKED INDEX ³		182.9	186.9
10	PRELIMINARY RAIL COST ADJUSTMENT FACTOR ⁴		105.6	107.9
11	FORECAST ERROR ADJUSTMENT ⁵		0.003	0.006
12	RCAF (UNADJUSTED) (LINE 10 + LINE 11)		1.062	1.085
13	RCAF (ADJUSTED) ⁶		0.589	0.597
14	RCAF-5 ⁷		0.567	0.574

¹ The 1999 weights were revised to reflect the revised 1999 CSX Transportation R-1 Annual Report.

² "Other Items" is a combination of Purchased Services, Casualties and Insurance, General and Administrative, Other Taxes, Loss and Damage, and Special Charges, price changes for all of which are measured by the Producer Price Index for Industrial Commodities Less Fuel and Related Products and Power.

³ Linking is necessitated by a change to the 1999 weights beginning with the fourth quarter 2000. The following formula was used for the current quarter's index:

$$\frac{1^{\text{st}} \text{ Qr. 2001 Index (1999 Weights)}}{4^{\text{th}} \text{ Qr. 2000 Index (1999 Weights)}} \times \text{Times 4th Quarter Linked Index (1980 = 100 Linked)} = \text{Equals Linked Index (Current Quarter)}$$

Or

$$\frac{192.2}{188.1} \times 182.9 = 186.9$$

⁴ The first quarter 1998 RCAF was rebased using the October 1, 1997, level of 173.2 in accordance with the requirements of the Staggers Rail Act of 1980 (10/1/97 = 1.00).

⁵ The first quarter 2001 forecast error adjustment was calculated as follows: a. Third quarter 2000 RCAF calculated using forecasted data equals 104.8; b. Third quarter 2000 RCAF calculated using actual data equals 105.4; c. The difference equals the forecast error (b-a) of 0.6. Since the actual second quarter value is greater than the forecast, the difference is added to the preliminary RCAF.

⁶ The first quarter 2001 RCAF Adjusted (0.597) is calculated by dividing the first quarter 2001 RCAF Unadjusted (1.085) by the first quarter productivity adjustment factor of 1.8180. The first quarter 2001 productivity adjustment factor is calculated by multiplying the fourth quarter 2000 productivity adjustment factor of 1.8025 by the fourth root (1.0086) of the 1994-1998 annual average productivity growth rate of 1.035%.

⁷ The first quarter 2001 RCAF-5 (0.574) is calculated by dividing the first quarter 2001 RCAF Unadjusted (1.085) by the first quarter productivity adjustment factor-5 (PAF-5) of 1.8938. The first quarter 2001 productivity adjustment factor is calculated by multiplying the fourth quarter 2000 PAF-5 of 1.8727 by the fourth root (1.0086) of the 1994-1998 annual average productivity growth rate of 1.035%.

TABLE B

Ex Parte No. 290 (Sub-No. 5) (2001-1)
Comparison of Third Quarter 2000 Index
Calculated on Both a Forecasted and an Actual Basis

Line No.	INDEX COMPONENT	1998 WEIGHT	THIRD QUARTER 2000 FORECAST	THIRD QUARTER 2000 ACTUAL
1	LABOR	39.9%	245.7	245.7
2	FUEL	7.0%	98.7	108.2
3	MATERIALS AND SUPPLIES	5.5%	147.6	147.6
4	EQUIPMENT RENTS	10.8%	175.0	175.0
5	DEPRECIATION	10.6%	150.2	150.2
6	INTEREST	4.8%	98.0	98.0
7	OTHER ITEMS	21.4%	161.3	159.9
8	WEIGHTED AVERAGE	100.0%	187.1	187.5
9	LINKED INDEX		181.6	182.5
10	RAIL COST ADJUSTMENT FACTOR		104.8	105.4

30679
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SERVICE DATE - DECEMBER 20, 1999

SURFACE TRANSPORTATION BOARD

Decision

STB Ex Parte No. 290 (Sub-No. 5) (2000-1)

QUARTERLY RAIL COST ADJUSTMENT FACTOR

Decided: December 17, 1999

In Railroad Cost Recovery Procedures, 1 I.C.C.2d 207 (1984), the Interstate Commerce Commission (ICC) outlined the procedures for calculating the all-inclusive index of railroad input prices and the method for computing the rail cost adjustment factor (RCAF). Under the procedures, the Association of American Railroads (AAR) is required to calculate the index on a quarterly basis and submit it on the fifth day of the last month of each calendar quarter. In Railroad Cost Recovery Procedures, 5 I.C.C.2d 434 (1989), aff'd sub nom. Edison Electric Institute, et al. v. ICC, 969 F.2d 1221 (D.C. Cir. 1992), the ICC adopted procedures that require the adjustment of the quarterly index for a measure of productivity.

The provisions of 49 U.S.C. 10708, which were recently revised by the ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803, direct the Surface Transportation Board (Board) to continue to publish both an unadjusted RCAF and a productivity-adjusted RCAF.¹ In Productivity Adjustment-Implementation, Ex Parte No. 290 (Sub-No. 7) (STB served Oct. 3, 1996), the Board decided to publish a second productivity-adjusted RCAF called the RCAF-5. Consequently, three indices are now filed with the Board: the RCAF (Unadjusted), the RCAF (Adjusted), and the RCAF-5. The RCAF (Adjusted), which reflects national average productivity changes as originally developed and applied by the ICC, is currently based on a 5-year moving average. The RCAF-5 reflects national average productivity changes as if a 5-year moving average had been applied consistently from the productivity adjustment's inception in 1989.

The index of railroad input prices, RCAF (Unadjusted), RCAF (Adjusted), and RCAF-5 for the first quarter 2000 are shown in Table A of the Appendix to this decision. Table B shows the third quarter 1999 index and the RCAF calculated on both an actual and a forecasted basis. The difference between the actual calculation and the forecasted calculation is the forecast error adjustment.

Both the RCAF (Adjusted) and the RCAF-5 are currently calculated using a moving 5-year average of productivity change for U.S. Class I railroads. An average productivity change rate of 1.057 (5.7% per year) for the period 1993-1997 is currently used for both the RCAF (Adjusted) and the RCAF-5.

¹ The RCAF provisions of former section 10707a were revised and redesignated as 49 U.S.C. 10708.

We have examined AAR's calculations for compliance with our procedures and find that the first quarter 2000 RCAF (Unadjusted) is 1.043, an increase of 3.2% from the fourth quarter 1999 RCAF of 1.011. The RCAF (Adjusted) is 0.594, an increase of 1.7% from the fourth quarter 1999 RCAF (Adjusted) of 0.584. The RCAF-5 is 0.581, an increase of 1.8% from the fourth quarter 1999 RCAF-5 of 0.571.

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

Pursuant to 5 U.S.C. 605(b), we conclude that our action will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act.

AUTHORITY: 49 U.S.C. 10708.

It is ordered:

1. The Board has approved the first quarter 2000 Rail Cost Adjustment Factor (Unadjusted) of 1.043, RCAF (Adjusted) of 0.594, and RCAF-5 of 0.581.
2. Notice of this decision will be published in the Federal Register.
3. The effective date of this decision is January 1, 2000.

By the Board, Chairman Morgan, Vice Chairman Clyburn, and Commissioner Burkes.

Vernon A. Williams
Secretary

TABLE A
Ex Parte No. 290 (Sub-No. 5) (2000-1)
All Inclusive Index of Railroad Input Costs

LINE NO.	INDEX COMPONENT	1998 WEIGHTS	FOURTH QUARTER 1999 FORECAST	FIRST QUARTER 2000 FORECAST
1	LABOR	39.9%	233.9	242.8
2	FUEL	7.0%	75.9	90.1
3	MATERIALS AND SUPPLIES	5.5%	148.3	146.5
4	EQUIPMENT RENTS	10.8%	172.3	173.9
5	DEPRECIATION	10.6%	150.0	150.1
6	INTEREST	4.8%	98.0	98.0
7	OTHER ITEMS ¹	21.4%	156.0	160.1
8	WEIGHTED AVERAGE	100.0%	179.4	184.9
9	LINKED INDEX ²		174.1	179.4
10	PRELIMINARY RAIL COST ADJUSTMENT FACTOR ³		100.5	103.6
11	FORECAST ERROR ADJUSTMENT ⁴		0.006	0.007
12	RCAF (UNADJUSTED) (LINE 10 + LINE 11)		1.011	1.043
13	RCAF (ADJUSTED) ⁵		0.584	0.594
14	RCAF-5 ⁶		0.571	0.581

¹ "Other Items" is a combination of Purchased Services, Casualties and Insurance, General and Administrative, Other Taxes, Loss and Damage, and Special Charges, price changes for all of which are measured by the Producer Price Index for Industrial Commodities Less Fuel and Related Products and Power.

² Linking is necessitated by a change to the 1997 weights beginning with the fourth quarter 1998. The following formula was used for the current quarter's index:

$$\frac{\text{1st Qr. 2000 Index (1998 Weights)}}{\text{4th Qr. 1999 Index (1998 Weights)}} \times \text{4th Qr. 1999 Index (Linked Index)} = \text{Linked Index (1980-98 Weights)}$$

Or

$$\frac{184.9}{179.4} \times 174.1 = 179.4$$

³ The first quarter 1998 RCAF was rebased using the October 1, 1997, level of 173.2 in accordance with the requirements of the Staggers Rail Act of 1980 (10/1/97 = 1.00).

⁴ The first quarter 2000 forecast error adjustment was calculated as follows: a. Third quarter 1999 RCAF calculated using forecasted data equals 100.6; b. Third quarter 1999 RCAF calculated using actual data equals 101.3; c. The difference equals the forecast error (b-a) of 0.7. Since the actual third quarter value is greater than the forecast, the difference is added to the preliminary RCAF.

⁵ First quarter 2000 RCAF Adjusted (0.594) is calculated by dividing the first quarter 2000 RCAF Unadjusted (1.043) by the first quarter productivity adjustment factor of 1.7568. The first quarter 2000 productivity adjustment factor is calculated by multiplying the fourth quarter 2000 productivity adjustment factor of 1.7325 by the fourth root (1.0140) of the 1993-1997 annual average productivity growth rate of 1.057%.

⁶ First quarter 2000 RCAF-5 (0.581) is calculated by dividing the first quarter 2000 RCAF Unadjusted (1.043) by the first quarter productivity adjustment factor-5 (PAF-5) of 1.7962. The first quarter 2000 productivity adjustment factor is calculated by multiplying the fourth quarter 1999 PAF-5 of 1.7714 by the fourth root (1.0140) of the 1993-1997 annual average productivity growth rate of 1.057%.

APPENDIX

TABLE B

Ex Parte No. 290 (Sub-No. 5) (2000-1)
Comparison of Third Quarter 1999 Index
Calculated on Both a Forecasted and an Actual Basis

Line No.	INDEX COMPONENT	1997 WEIGHT	THIRD QUARTER 1999 FORECAST	THIRD QUARTER 1999 ACTUAL
1	LABOR	41.0%	236.0	236.0
2	FUEL	8.6%	66.3	70.7
3	MATERIALS AND SUPPLIES	5.8%	149.4	149.4
4	EQUIPMENT RENTS	11.1%	172.1	172.8
5	DEPRECIATION	10.2%	148.6	150.2
6	INTEREST	3.9%	102.0	102.0
7	OTHER ITEMS	19.4%	155.4	156.4
8	WEIGHTED AVERAGE		179.5	180.3
9	LINKED INDEX		174.2	175.4
10	RAIL COST ADJUSTMENT FACTOR		100.6	101.3