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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF DETERMINING PRICES )  
FOR UNBUNDLED NETWORK ELEMENTS (UNEs) ) CASE NO.  
IN QWEST CORPORATION'S STATEMENT OF ) QWE-T-01-11  
GENERALLY AVAILABLE TERMS (SGAT) )

DIRECT TESTIMONY OF

Teresa K. Million

QWEST CORPORATION

November 12, 2003

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I. IDENTIFICATION OF WITNESS

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS AND  
2 POSITION WITH QWEST CORPORATION.

3 A. My name is Teresa K. (Terri) Million. My  
4 business address is 1801 California Street, Room 2050,  
5 Denver, Colorado 80202. I am employed by Qwest Services  
6 Corporation as a Staff Director in the Public Policy  
7 organization. In this position, I am responsible for  
8 preparing testimony and testifying about Qwest  
9 Corporation's cost studies in a variety of regulatory  
10 proceedings.

11 Q. WHAT IS YOUR EDUCATIONAL BACKGROUND AND  
12 PROFESSIONAL EXPERIENCE?

13 A. I received a Juris Doctor from the University of  
14 Denver, College of Law in 1994 and am licensed to practice  
15 law in the state of Colorado. I also have a Master of  
16 Business Administration from Creighton University and a  
17 degree in Animal Science from the University of Arizona.

18 I have more than 20 years experience in the  
19 telecommunications industry with an emphasis in tax and

1 regulatory compliance. I began my career with Qwest,  
2 (formerly Northwestern Bell Telephone Company and U S WEST)  
3 in 1983. Between 1983 and 1986 I administered Shared  
4 Network Facilities Agreements between Northwestern Bell and  
5 AT&T that emanated from divestiture. I held a variety of  
6 positions within the U S WEST, Inc. tax department over the  
7 next ten years, including tax accounting, audit, and state  
8 and federal tax research and planning. In 1997, I assumed  
9 a position with responsibility for affiliate transactions  
10 compliance, specifically compliance with section 272 of the  
11 Telecommunications Act of 1996 (the "Act"). 47 U.S.C.  
12 §272. In September 1999, I began my current assignment as  
13 a cost witness. In this position, I am responsible for  
14 managing cost issues, developing cost methods and  
15 representing Qwest in proceedings before regulatory  
16 commissions.

17 Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THE IDAHO  
18 PUBLIC UTILITIES COMMISSION?

19 A. This is the first docket in which I have appeared  
20 in Idaho.

1 Q. HAVE YOU TESTIFIED BEFORE OTHER STATE REGULATORY  
2 COMMISSIONS?

3 A. Yes. I have presented cost testimony before  
4 commissions on the issue of determining rates for unbundled  
5 network elements ("UNEs") in Arizona, Montana, New Mexico,  
6 South Dakota, Washington and Wyoming. In addition, I have  
7 submitted testimony related to section 272 of the Act in  
8 Arizona, Colorado and Nebraska. I have also filed cost  
9 testimony in Colorado related to Operator Services.

## II. PURPOSE OF TESTIMONY

10 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

11 A. The purpose of my testimony is to present Qwest's  
12 Idaho recurring and nonrecurring incremental cost data for  
13 unbundled network elements and interconnection services.  
14 These data are utilized as the basis for Qwest's pricing  
15 recommendations as presented in my Exhibit No. 1.

16 While Qwest believes that its cost studies produce  
17 appropriate Total Element Long Run Incremental Cost  
18 ("TELRIC") results under the FCC's pricing rules, Qwest  
19 recognizes that in many cases the FCC and state commissions

1 have accepted a range of prices for unbundled elements that  
2 have been deemed reasonable for purposes of TELRIC.  
3 Therefore, although Exhibit No. 1 represents Qwest's TELRIC  
4 advocacy in this cost proceeding, I also present, in  
5 supplemental testimony, Attachment A to the Motion for  
6 Approval of Negotiated Rates ("Motion for Approval") which  
7 contains a list of UNE prices that have been agreed upon  
8 during negotiations with Commission Staff.

9           **Q. WHY ARE YOU FILING THESE COST STUDIES AT THIS**  
10 **TIME?**

11           A. Qwest originally filed testimony and cost studies  
12 in this docket on June 29, 2001. Since that time, to  
13 assist in negotiating with Commission Staff to reach  
14 agreement on a large number of UNE rates, Qwest has  
15 provided a variety of cost study runs reflecting different  
16 depreciation lives and costs of capital. Qwest also filed  
17 supplemental testimony to make certain corrections and/or  
18 revisions to its original filing. As a result, Qwest has  
19 provided a large amount of data representing many different  
20 steps along the way to the present.

1 In the meantime, Qwest has updated several of its cost  
2 studies and models to reflect more current data, added a  
3 number of UNEs to the list of elements that were not a part  
4 of the original filing, and calculated more current  
5 factors. Thus, when Qwest and Commission Staff reached  
6 agreement on the first set of rates included in the initial  
7 phase of negotiation, it was agreed that Qwest would  
8 withdraw all of its original testimony and cost studies and  
9 models and replace them with testimony, cost studies and  
10 models that reflect the changes, corrections and updates  
11 that have occurred in the interim.

12 Q. IF QWEST IS PRESENTING NEW COST RESULTS, DOES IT  
13 INTEND TO SEEK RATES FOR ALL UNES? \*

14 A. Yes. Exhibit No. 1 reflects the TELRIC rates for  
15 all UNEs as produced by Qwest's cost studies and models.  
16 Qwest intends to seek rates for all of the UNEs contained  
17 in Exhibit No. 1. However, Attachment A to the Motion for  
18 Approval, which is the same document that is attached to my  
19 supplemental testimony as Exhibit No. 30, reflects rates  
20 that have been agreed upon by Qwest and Commission Staff  
21 during negotiations. For those elements, Qwest asks the  
22 Commission to adopt the rates presented in Attachment A.

1 In addition, Qwest has executed an agreement with the  
2 Commission that it will not seek rates in this cost docket  
3 that are higher than its "benchmarked" rates for certain  
4 elements. Benchmarking was the process Qwest followed  
5 during the 271 filings to establish rates that reflected a  
6 range that the TELRIC principles would produce using a  
7 methodology developed by the FCC. It allowed the  
8 Commission to establish rates for Idaho based on the  
9 relationship of the rates produced by the FCC's Synthesis  
10 Model ("SM") for Idaho to the rates it produced for a state  
11 (Colorado) whose rates had been the subject of a TELRIC  
12 proceeding. Although the Commission will see that Qwest's  
13 cost studies produce TELRIC based rates that are higher  
14 than the benchmark rates, Qwest is not seeking rates higher  
15 than the benchmark rates at this time.

16 **Q. PLEASE DESCRIBE THE COST MODELS AND STUDIES THAT**  
17 **YOU ARE PROVIDING AS A PART OF THIS TESTIMONY.**

18 A. My testimony introduces and describes the Qwest  
19 Integrated Cost Model ("ICM"). The ICM is an integrated  
20 cost model that calculates the recurring TELRIC for the  
21 major unbundled network elements and interconnection  
22 services. Additionally, I present Qwest's proposal for

1 deaveraging of the UNE loop, introduce the Qwest  
2 collocation model and Line Sharing collocation study, and  
3 discuss other recurring cost studies that are not part of  
4 the ICM. The Collocation Model is an integrated model that  
5 calculates both recurring and nonrecurring TELRIC for the  
6 major collocation services. In addition, I present a  
7 variety of stand-alone cost studies for collocation  
8 services such as Space Optioning and Space Reservation.

9 I also introduce and describe the Qwest Enhanced  
10 Nonrecurring Cost Studies ("ENRC") and present Qwest's  
11 Idaho nonrecurring costs. The ENRC calculates the  
12 nonrecurring TELRIC for all UNEs and interconnection  
13 services. A complete listing of Qwest's cost studies, by  
14 exhibit number and cost study ID number, is provided at the  
15 end of this testimony in the Index of Exhibits.

16 **Q. ARE OTHER QWEST WITNESSES PROVIDING TESTIMONY**  
17 **REGARDING COST ISSUES?**

18 **A.** Yes. Dick Buckley provides testimony that  
19 describes in detail the methodology and assumptions  
20 included in the Loop Module of the ICM.

1 Q. HAS QWEST FILED COPIES OF EACH TELRIC STUDY,  
2 ALONG WITH DETAILED STUDY DOCUMENTATION?

3 A. Yes. My non-confidential cost study workpapers  
4 (Exhibit Nos. 2 - 24) are provided electronically on  
5 compact disc ("CD") including copies of each cost study.  
6 The electronic documentation also includes all cost study  
7 calculations (e.g., excel spreadsheets) and methodology  
8 descriptions. In addition, the workpapers include the  
9 supporting investment and expense cost models (along with  
10 user manuals) used to calculate investments and expenses in  
11 the studies. Using the workpapers, interested parties will  
12 be able to follow the cost study calculations in each  
13 TELRIC study, and replicate the Qwest TELRIC results, if  
14 desired.

### III. TELRIC PRINCIPLES

15 A. Summary of TELRIC Principles

16 Q. PLEASE SUMMARIZE THE OVERALL ECONOMIC PRINCIPLES  
17 THAT ARE APPLIED IN QWEST'S TELRIC STUDIES.

18 A. The Qwest TELRIC studies identify the forward-  
19 looking direct costs that are caused by the provision of an

1 interconnection service or network element in the long run,  
2 plus the incremental cost of shared facilities and  
3 operations. These studies identify total element costs -  
4 the average incremental cost of providing the entire  
5 quantity of the elements in the network. The assumptions,  
6 methods, and procedures used in Qwest's cost studies are  
7 designed to yield the forward-looking replacement costs of  
8 reproducing the telecommunications network, considering the  
9 most efficient, least-cost technologies that are currently  
10 available.

11 Q. HOW IS THE CONCEPT OF LONG RUN CONSIDERED IN THE  
12 QWEST TELRIC STUDIES?

13 A. The Qwest TELRIC studies consider a time period  
14 over which all inputs are variable.<sup>1</sup> In this context, long  
15 run does not relate to a specific period of time (e.g.,  
16 five years, ten years, etc.) but refers to a time period  
17 long enough that all inputs, including investments, are  
18 variable. From a practical standpoint, this means that in  
19 a long run study all investments related to the network

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<sup>1</sup> *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, FCC 96-325, CC Docket Nos. 96-98, 95-185, First Report and Order at ¶ 692 (Rel. August 6, 1996) ("First Report and Order").

1 element are considered variable, and the costs associated  
2 with these investments are included in the TELRIC study  
3 results.

4 Q. PLEASE EXPLAIN HOW THE TELRIC STUDIES IDENTIFY  
5 REPLACEMENT COSTS FOR THE TOTAL ELEMENT.

6 A. The Qwest TELRIC studies consider the costs of a  
7 network that is "built from scratch," assuming the existing  
8 location of network "nodes" or switches. These long run  
9 studies identify the total "replacement" costs of serving  
10 all current and anticipated demand, rather than the costs  
11 of adding equipment to an existing network to meet a small  
12 increment in demand. Thus, the studies consider the  
13 efficiencies associated with building a network to serve  
14 total demand, assuming a single carrier.

15 In the Qwest TELRIC studies, the increment studied is the  
16 total quantity of the network element. Therefore, the  
17 studies calculate the average cost for all units of output,  
18 rather than the marginal cost of the next or last unit of  
19 output.

20 Q. PLEASE EXPLAIN HOW THE FORWARD-LOOKING CONCEPT IS  
21 CONSIDERED IN THE QWEST TELRIC STUDIES.

1           A. The Qwest TELRIC studies identify the forward-  
2 looking costs that are likely to be incurred in the future.  
3 These studies consider the least-cost, forward-looking  
4 technologies and methods of operations that are currently  
5 available and practical to deploy in the network, given  
6 current and anticipated demand for the total element.  
7 Thus, in calculating appropriate TELRIC costs it is  
8 important to consider, as Qwest has, what is currently  
9 being deployed in the system, as well as, what will be used  
10 by the competitor on a forward-looking basis.

11           **Q. IS IT IMPORTANT THAT TELRIC STUDIES CONTAIN**  
12 **REALISTIC FORWARD-LOOKING ASSUMPTIONS?**

13           A. Yes. A TELRIC study must provide a realistic  
14 estimate of forward-looking costs. In fact, in its  
15 recently released TELRIC NPRM<sup>2</sup> the FCC tentatively concludes  
16 that "our TELRIC rules should more closely account for the  
17 real-world attributes of the routing and topography of an  
18 incumbent's network in the development of forward-looking  
19 costs." Thus, a TELRIC study must provide an estimate of

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<sup>2</sup> *In the Matter of Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers, Notice of Proposed Rulemaking, WC Docket No. 03-173, ¶ 52 (Rel. September 15, 2003) ("TELRIC NPRM").*

1 the forward-looking costs that Qwest or any efficient  
2 carrier would be likely to incur in the future without  
3 losing sight of the real-world attributes of the existing  
4 network. Consistent with this standard, the Qwest TELRIC  
5 studies use the latest technologies and methods of  
6 operations that are currently available. Only technologies  
7 that are commercially available and that are currently  
8 being deployed in the industry today are included in the  
9 studies. The studies do not rely on technologies that  
10 might be available in the future. There is too much  
11 uncertainty about unproven, potential technologies to  
12 permit their use in cost studies, including uncertainty  
13 about whether the technologies will actually become  
14 available, the potential cost of the technologies, and the  
15 potential uses of the technologies.

16 Nor do the studies rely exclusively on "state-of-the-art"  
17 technologies that may be available, but are impractical to  
18 deploy in every situation. For example, fiber-based DS1  
19 technologies are considered to be "state-of-the-art."

20 However, in circumstances where utilization is low (e.g.,  
21 there is demand for only 1 or 2 DS1s at an end-user  
22 location) and is not likely to increase in the foreseeable  
23 future, it is impractical to deploy fiber rather than

1 copper-based DS1s. This is because a fiber-based DS1  
2 technology, such as OC3, provides capacity for 84 DS1s at  
3 only one location unless appropriate additional electronics  
4 and fiber are deployed in multiple end-user locations. The  
5 cost of fiber and these electronics causes fiber-based  
6 architectures to be far more costly than copper on a per-  
7 DS1 basis in low demand situations.

8 Some parties may advocate the use of a theoretical, least-  
9 cost TELRIC methodology that employs unrealistic  
10 assumptions to produce low cost estimates, such as assuming  
11 high demand for DS1s at each end-user location to justify  
12 an all-fiber network. The Commission should reject these  
13 "fantasy cost" estimates, because pricing based on these  
14 studies would prevent Qwest from recovering its legitimate,  
15 realistic costs (e.g., by either not assuming enough cost  
16 for necessary electronics or by overstating system  
17 utilization). No firm could continue to invest in  
18 infrastructure if it were forced to sell its services based  
19 on "fantasy" costs that are below the actual costs the firm  
20 incurs to build the infrastructure.

21 In its TELRIC studies, Qwest uses current market prices to  
22 determine the costs for equipment and materials. Placement

