Exhibit No. _____ (KB-1T)
Docket No. UT-050778

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the matter of the Petition of:	)	**DOCKET NO. UT-050778**
Douglas and Jessica Rupp; Kathie Dunn and	)	
Chris Hall; Michelle Lechuga; Verlin	)	
Jacobs; Anthony Williams; Christine and	)	
Samuel Inman; and Sam	)	
Haverkemp and Chris Portrey,	)	
	)	
Petitioners,	)	
	)	
vs.	)	
	)	
Verizon Northwest Inc.,	)	
	)	
Respondent.	)	

RESPONSE TESTIMONY OF

KEITH BINNEY

ON BEHALF OF

VERIZON NORTHWEST INC.

MARCH 1, 2006

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I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT POSITION WITH VERIZON NORTHWEST INC.

A. My name is Keith Binney. My business address is 2312 W. Casino Rd, Everett, Washington. My position is Manager – Network Engineering.

Q. PLEASE DESCRIBE YOUR DUTIES AT VERIZON NORTHWEST INC.

A. I am responsible for managing the activities of Outside Plant Engineering for Verizon Northwest Inc. ("Verizon") in the states of Idaho, Oregon, and Washington. My responsibilities include financial and operational engineering and ensuring consistent implementation of practices, procedures, and programs, as well as engineering and designing network replacement, upgrade, augmentation and expansion work (including line extension projects). "Outside Plant" includes the cables, poles, conduits, and other facilities needed to connect Verizon's switching equipment to customers' premises.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND IN THE TELECOMMUNICATIONS INDUSTRY.

A. I hold a Bachelor of Science degree in Business Administration and have worked in the telecommunications engineering and planning discipline for over 30 years. I have held positions as a draftsman, engineer, planner, and Section Manager, in addition to my current position. My experience in the industry includes work in the engineering disciplines of Outside Plant Engineering & Planning and Network Design Engineering

and Planning. I have worked both in very rural areas, such as the one at issue in this case, and more urban areas.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses several topics, including Verizon's existing service area near Index, Washington; the cost of constructing the wireline extension requested by Petitioners; certain land-use permitting that would be required to construct such an extension; alternative means of communications available to Petitioners; and Verizon's reliance on the exchange boundaries in its tariffs filed with the Washington Utilities and Transportation Commission ("Commission").

II. VERIZON'S NETWORK

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS SECTION?

A. To describe Verizon's current network in the Index area as it relates to this case.

Q. PLEASE DESCRIBE VERIZON'S CURRENT NETWORK IN THE AREA CLOSEST TO THE PETITIONER'S PREMISES.

A. The Petitioners are located several miles outside of Verizon Northwest's West Index Electronic Service Area ("ESA"), which is in the Sultan Exchange. The West Index ESA serves the town of Index and the nearby area. Service is provided with a fiber-fed 914 remote carrier system that is connected by fiber-optic facilities that run to the host switch over 20 miles away in Snohomish. The 914 carrier system is a digital multiplexer that

extends switched access lines closer to the customer in order to reduce the copper loop length.

From the ESA site in Index, buried and aerial copper twisted pair cables connect the network to customer premises. Verizon's facilities run up the Index-Galena approximately 13,300 feet (about 2½ miles) from the ESA site in Index, approximately 16,650 feet (about three miles) short of Petitioners' premises. At the end of Verizon's facilities there are currently four vacant pairs, which would be sufficient to serve four new connections.

Attached as Exhibit KB-2 is a general area map that shows the location of Index off of Highway 2, on the way to Stevens Pass. The Index-Galena Road goes in a northeasterly direction from Index into the National Forest, generally paralleling the North Fork of the Skykomish River.

Q. HAVE YOU VISITED THIS AREA, INCLUDING THE STRETCH ALONG THE INDEX-GALENA ROAD WHERE PETITIONERS' RESIDENCES ARE LOCATED?

A. Yes.

Q. PLEASE DESCRIBE THAT AREA.

A. The Index-Galena Road is a two-lane blacktopped road built by Snohomish County. Index is a very small town, and once outside its core area, the road runs through heavily

forested terrain. Beyond the end of our current facilities, the road runs across the Mount Baker-Snoqualmie National Forest, bordered on one side (the right side, as you are driving away from the town) by steep mountainous terrain and on the other side by the river bank. Water flows down the mountainside to form creeks that run into the main channel of the river in a number of locations. Beyond the end of the existing network to the petitioner's premises, the road crosses these creeks using three bridges and nine culverts.

Continuous development is not present along this road. There are some homes where Verizon's network ends today, and beyond that there are essentially no residences until the Petitioners' locations.

At Petitioners' locations—according to the maps included with their testimony—there are some lots on mountain side of the road and some on the other side, between the road and the river. Mr. Rupp apparently owns a lot on the road by the river, but his residence is actually across the river. He appears to access it by some sort of cable car.

I have attached the following photographs, which I took on a recent visit to the area:

- Exhibit KB-3: This is the view from the last aerial facility looking down Index-Galena Road in the direction of Petitioners' properties;
- Exhibit KB-4: This is an example of trees that have fallen across the roadway and been trimmed;
- Exhibit KB-5: This is Mr. Rupp's cable car landing

- Exhibit KB-6: An example of a driveway in the Skyko 2 area showing limited access

Q. IS THAT AREA PART OF ANY TOWN OR VILLAGE?

A. No. This is a remote, sparsely populated area. It is not part of any town, village, or other community.

III. COST OF CONSTRUCTION

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS SECTION?

A. To describe the cost of constructing the line extension requested by Petitioners.

Q. HAS VERIZON PREPARED AN ESTIMATE OF THE COST TO EXTEND WIRELINE SERVICE FROM THE END OF ITS EXISTING LINE TO THE BOUNDARY OF PETITIONERS' PROPERTIES?

A. Yes. We have prepared an estimate: $299,250. We have not performed a full engineering study, because such a study would be quite costly and would take resources away from ongoing operational projects. However, our estimate provides the Commission with a reliable picture of the minimum costs likely to be involved. A copy of the written estimate prepared by Verizon is attached as Confidential Exhibit KB-7C.

Q. PLEASE DESCRIBE THE CONSTRUCTION WORK ON WHICH THE ESTIMATE WAS BASED.

A. As I noted previously, there are currently four vacant cable pairs available at the point from which Verizon would extend facilities. By adding a 300-foot cable back towards Index, we could attach to a larger cable and obtain an additional five vacant pairs, bringing the total available pairs to nine, which would be just enough to serve the Petitioners. Then, from the end of the existing network we would install 16,650 feet of 25-pair cable (the smallest size we use) to pedestals along the Index-Galena road toward the Petitioners' premises. This would be "loaded plant," which means adding load coils, an induction device necessary to improve voice quality local loops that exceed 18,000 feet.

Our cost estimate on this project is based on installation using an off-set cable plow, because it would be the lowest cost construction method. The plow is a machine attached to a tractor that simultaneously makes a cut in the soil, lays down the cable, and covers it up. Beginning at the end of the current network, we would plow in the 25-pair cable along the shoulder of the road, with 14 pedestals placed at 1,000' intervals for bonding and grounding purposes, plus along the road toward the Petitioners' premises. Near the Petitioners' property, we would place serving terminals. The pedestals would need to be set back from the traveled roadway, so backhoe work would be required at each of the 14 pedestal locations.

There are rocky portions of terrain along the road, so we must assume that some percentage of the buried construction will require the use of a rock saw to maintain minimum depth requirements. Our estimate includes using a rock saw for approximately

2% of the total buried construction distance. We think this is likely to be the minimum that would be required. If more proved to be needed, the costs would increase accordingly. Rock sawing costs seven times more per foot than plowing.

There are areas along the route that might be considered wetlands and the Forest Service or other agency may require some sort of wetland mitigation. We will not know the budgetary impacts of any environmental mitigation until the environmental review (described below) is completed.

The proposed construction method at the three bridges, if the permitting agency will allow, is to attach two-inch conduit to the bridge and pull the cable into the conduit. We are assuming that we will be able to continue with our plow construction in the shoulder at the nine culvert locations. If we cannot use these methods and were, for example, required to bore under the creeks, our costs could increase significantly. We would request competitive bids from companies qualified to do this specialized type of work, but I would expect the costs for such service to be significantly higher than for plowing as described. In one circumstance where boring under some wetlands was required at State Route 522 near Clearview, the costs were increased 2.5 times over standard rates.

Q. WHY DOES YOUR ESTIMATE GO ONLY TO PEDESTALS ALONG THE ROAD AT THE BOUNDARY OF PETITIONERS' PROPERTIES?

A. Under the Company's tariff and the Commission's line extension rule, the cost of placing the service connection cable (except for the wire itself) from the property line to the

customer's home (including trenching, conduit, or other necessary structures) is the responsibility of the customer. Except for Mr. Rupp, placing the service connection cable would likely require use of a trench up the Petitioners' respective driveways. For Mr. Rupp, we would end our facility at his lot along the road by the river, and he would have to connect it across the river to his home.

Q. WHAT SERVICE(S) COULD BE PROVIDED THROUGH THIS LINE AS IT WOULD BE INSTALLED, I.E., WOULD IT INCLUDE DSL, TOLL SERVICE, ETC.?

A. Basic local and long distance service.

Q. IN A DATA RESPONSE, PETITIONER DOUGLAS RUPP MENTIONED T1 SERVICE. WILL T1 SERVICE BE AVAILABLE THROUGH THIS EXTENSION?

A. No. Verizon does not typically build facilities to support T1 services in residential areas. In any event, the equipment at the West Index ESA site is only capable of provisioning T1 service over loops much shorter than what would be involved here.

Q. HOW WOULD MAINTENANCE COSTS FOR SUCH AN EXTENSION COMPARE TO MAINTENANCE COSTS FOR THE EXISTING NETWORK?

A. They would be more—likely considerably more over time. This is because longer cables provide more opportunities for potential damage to the facilities to develop. As noted, the extension to the Petitioners would be about 16,650 feet. In addition, pedestals placed

on winding roads—especially remote, unlit roads—are more susceptible to vehicular damage. Equipment in remote areas is more likely to experience vandalism. There is potential for flooding and washouts.

In addition, there are significant costs incurred in servicing. When there is trouble with such remote facilities, obviously it takes our technicians longer to drive back and forth to the work site, which is more costly.

Q. WHAT EFFECT, IF ANY, WOULD THE REQUESTED EXTENSION HAVE ON VERIZON'S EXISTING NETWORK, INCLUDING CUSTOMERS IN INDEX?

A. The extension would use reserve capacity engineered into the current network. As I mentioned previously, such an extension would use up all the cable capacity currently in the last section of Verizon's network. Therefore, if new customers should apply for service in that area, new facilities would have to be constructed to serve them. The capacity of the carrier equipment could also be affected.

IV. PERMITTING

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS SECTION?

A. To address some of the key permitting issues that would be involved in the construction of an extension as requested by Petitioners.

Q. WHAT CONSTRUCTION, RIGHT OF WAY, OR OTHER PERMITS WOULD BE REQUIRED TO CONSTRUCT THE LINE EXTENSION REQUESTED BY PETITIONERS?

A. Our understanding at this point is that Verizon would be required to obtain a U.S. Forest Service Special Use permit, with potential additional review by Snohomish County, the U. S. Department of Fish & Wildlife, and the State Historic Preservation Office. See Exhibits KB-8 and KB-9 (e-mails from Forest Service).

Q. HAVE YOU INVESTIGATED WHAT WOULD BE NECESSARY TO OBTAIN A FOREST SERVICE PERMIT?

A. Yes. There would be at least two steps. First, an environmental assessment would need to be conducted. The criterion for such an assessment is site-specific and determined by the local Forest Supervisor. A Decision Document is prepared with the results and opinions of the environmental specialists. The environmental assessment can take up to a year and would cost at least $10,000. Due to workload and limited staff availability, the Forest Service would not be able to start the assessment until several months to a year after the request is made; possibly delaying an actual decision for up to two years after the process begins.

It is also possible that, based on the environmental review, that the permit could be denied.

Second, an application for a special use permit would need to be completed. If the resulting decision is to authorize the project, a permit for construction and operation/maintenance would be issued. The Forest Service has estimated that the permit could be signed by all parties and fully executed approximately three to six weeks after the environmental review is completed. There would also be an annual permit fee.

V. ALTERNATIVE MODES OF COMMUNICATION

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS SECTION?

A. To describe some of the communication alternatives that we believe are available to Petitioners in the Skyko 2 area.

Q. WHAT ALTERNATIVES ARE AVAILABLE FOR TELECOMMUNICATIONS SERVICES IN THE SKYKO 2 AREA?

A. We are aware of a number of alternative modes of communication available to the Petitioners. First, at least two of the Petitioners, Douglas Rupp and Melinda Inman, have owned satellite phones, and one other Petitioner reports having borrowed one of those phones to use in an emergency situation. See Exhibit KB-10 (data request responses). Although Petitioners complain about the call quality using these phones, such phones clearly appear to be a viable option for them.

Petitioners have indicated that they found satellite phones too costly. To give the Commission a sense of what the existing cost of satellite phone service would be,

attached as Exhibit KB-11 are pages from certain websites that contain offers for satellite phones and accompanying service.

Second, many, if not all of the Petitioners own cell phones. See Exhibit KB-12 (data request responses). Petitioners assert that cell coverage does not extend all the way to their homes, but it appears that coverage can be obtained some distance down the Index-Galena Road. Although there is obviously some inconvenience associated with using a cell phone in this location, the existence of these cell phones indicates that Petitioners are not completely without the ability to communicate with the rest of the world by phone.

Additional alternatives are discussed in the testimony of Carl Danner.

VI. RELIANCE BY VERIZON ON EXCHANGE BOUNDARIES

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS SECTION?

A. To describe how Verizon relies on its existing exchange boundaries as defined in the tariffs it files with the Commission.

Q. PLEASE DESCRIBE SOME OF THE WAYS IN WHICH VERIZON RELIES ON THE EXCHANGE BOUNDARIES IN THE TARIFFS IT FILES WITH THE WUTC.

A. Geographic boundaries are a fundamental element of telephony outside plant design. The boundaries are important to provide a finite basis for sizing the network in the most cost-

effective manner. Extending boundaries beyond the basis for that initial design can affect many aspects of the network.

I have already discussed the effect this line extension would have on capacity in the existing network. The Digital Loop Carrier equipment in Index was also sized with channels to meet the service requirements in a defined area. Therefore, enlarging the service area could undermine the engineering capacity decisions that have been made for that type of equipment.

Q. DOES THAT COMPLETE YOUR RESPONSE TESTIMONY?

A. Yes.