

**Federal Communications Commission  
Pricing Policy Division  
Wireline Competition Bureau**

**October, 2002**

**Report  
On  
Depreciation Reserve Analysis for 2002**

## **Report on Depreciation Reserve Analysis for 2002**

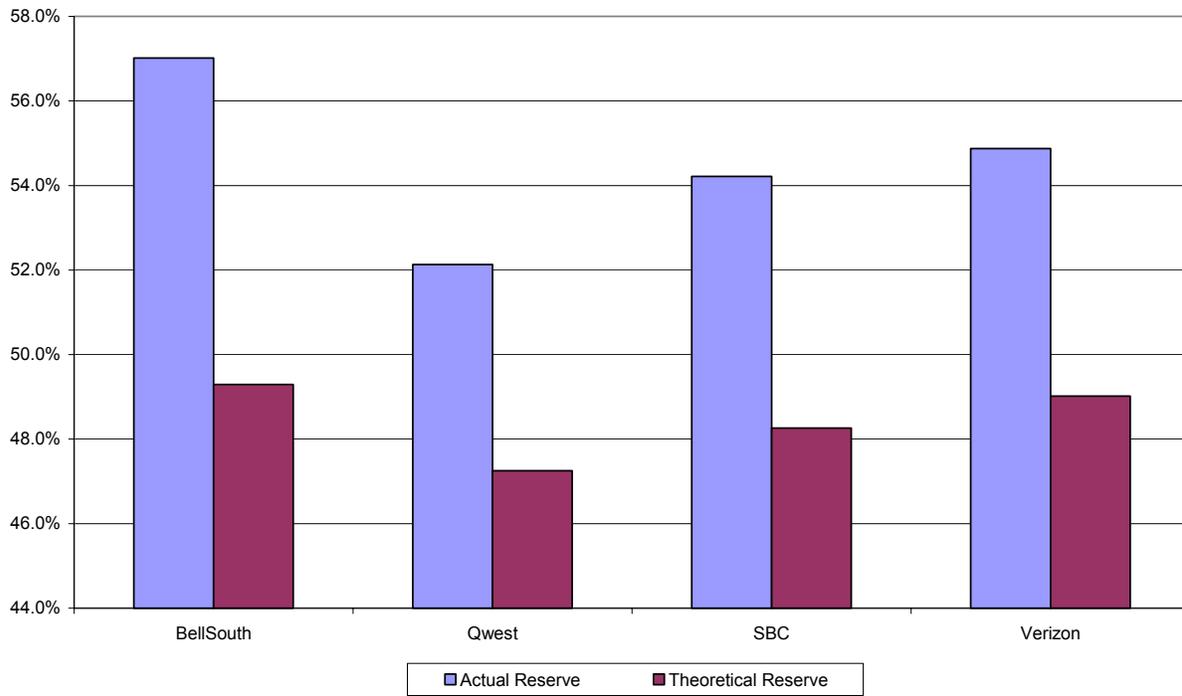
To monitor the effectiveness of the depreciation rates prescribed by the Commission, we periodically compare the actual depreciation reserves recorded in the carriers' accounts, as reported in ARMIS, with theoretical reserve studies filed by the carriers. Theoretical reserve studies are filed annually by July 1 and analyze the reserves as of the previous January 1. The most recent studies were filed July 1, 2002. Comparison of the actual depreciation reserves and the theoretical reserves provides a good indication of whether the depreciation rates applied in the past to the assets currently in use have been adequate to properly allocate the cost of the plant assets to operations over their useful life. Our analysis of the most recent data shows that the prescribed rates have been very effective and that the actual depreciation reserves and the reserves calculated in the theoretical reserve studies are remarkably close. The actual reserves for the carriers as a group considerably exceed the theoretical reserves, indicating that the depreciation recorded to date has been more than adequate. Our analysis also shows that the differences between the actual depreciation reserves and the theoretical reserves of the individual carriers are all within acceptable limits.

Depreciation accounting is the process of allocating the cost of plant assets to expense over the estimated useful life of the assets. When a company acquires plant assets that will be used in its operations over more than one year, it records the acquisitions in appropriate asset accounts at cost. Each year a portion of the assets' cost is charged to depreciation expense. The amount charged to depreciation expense is based on the estimated useful life of the assets and their estimated value at retirement (salvage value). The cost recorded in an asset account is not reduced as the assets are depreciated. Instead, the amount of depreciation recorded as expense is also recorded in an accumulated depreciation account, often referred to as the depreciation reserve, which keeps track of how much of the cost of the assets currently in the plant accounts has been charged to expense to date. The depreciation reserve subtracted from the cost of the plant shows how much of the cost remains to be depreciated in the future.

Our analysis shows that the depreciation reserves of the carriers for which the Commission prescribes depreciation rates equal 55% of the plant cost, i.e., slightly more than half of the plant cost has been charged to depreciation expense. By comparison, the theoretical reserve studies filed by the carriers show that, if the most recent data on plant lives and salvage value had been used to depreciate existing plant, the depreciation reserves would equal 49% of the plant cost. This indicates that the carriers as a group have recorded slightly more depreciation expense than necessary to recover the cost of the plant over its estimated useful life.

We also compared the depreciation reserves to the theoretical reserve studies by company, by state, and by account to identify any individual depreciation rates that may need adjustment. These comparisons are shown in the attached tables. Our analysis shows that the pattern for the companies as a group is also found for the major companies at the holding company level. The chart below compares the actual reserves and the theoretical reserves for the Regional Bell companies. As the chart shows the companies' theoretical reserves closely match the actual reserves and in each case the actual reserves are slightly higher than they need to be.

### Comparison of Actual Reserve and Theoretical Reserve



### Historical Perspective

Twenty years ago the carriers' reserve picture looked very different. In 1980, the Commission undertook a major review of its depreciation prescription process and the industry's depreciation reserve. The Commission found that the industry's actual depreciation reserve at that time was 19% of plant and that its theoretical reserve was 33%. This showed that depreciation charged to expense up to that time had been insufficient. To correct the shortfall in the depreciation reserve, the Commission took two major steps to improve its process for prescribing depreciation rates. First, it adopted improved depreciation methods that automatically adjusted depreciation rates to compensate for over or under depreciation in the past. Second, it made a major change in how plant lives were estimated. The focus was changed from historical-based studies to forward-looking studies. These changes led to the prescription of higher and more accurate depreciation rates.

By 1986, the ILEC reserve had increased to 28% of plant and the theoretical reserve had increased to 38%. To bring about a more timely closure of the gap between the actual and theoretical reserves, the Commission approved amortization of ILEC reserve deficiencies through additional charges to depreciation expense over a five-year period beginning in 1987. As a result of the changes made since 1980, the industry's depreciation reserve has risen from 19% in 1980 to 55% in 2002, and as shown in the attached tables, the depreciation reserve deficit has been eliminated.

**SUMMARY OF THEORETICAL RESERVE ANALYSIS**  
*(as of January 1, 2002)*

	TOTAL INVESTMENT	BOOK RESERVE		THEORETICAL RESERVE		RESERVE IMBALANCE
		AMOUNT	%	AMOUNT	%	
BELLSOUTH CORPORATION	57,479,317	32,771,596	57.0%	28,332,904	49.3%	(4,438,692)
SBC COMMUNICATIONS, INC	113,932,389	61,769,762	54.2%	54,985,473	48.3%	(6,784,289)
QWEST CORPORATION	39,719,304	20,705,588	52.1%	18,767,935	47.3%	(1,937,653)
VERIZON COMMUNICATIONS	118,792,919	65,188,694	54.9%	58,225,373	49.0%	(6,963,322)
<b>TOTAL BOC</b>	<b>329,923,929</b>	<b>180,435,641</b>	<b>54.7%</b>	<b>160,311,685</b>	<b>48.6%</b>	<b>(20,123,956)</b>

**SUMMARY OF THEORETICAL RESERVE ANALYSIS**  
*(as of January 1, 2002)*

	TOTAL INVESTMENT	BOOK RESERVE		THEORETICAL RESERVE		RESERVE IMBALANCE
		AMOUNT	%	AMOUNT	%	
BELLSOUTH CORPORATION	57,479,317	32,771,596	57.0%	28,332,904	49.3%	(4,438,692)
QWEST CORPORATION	39,719,304	20,705,588	52.1%	18,767,935	47.3%	(1,937,653)
SBC COMMUNICATIONS, INC	113,932,389	61,769,762	54.2%	54,985,473	48.3%	(6,784,289)
Ameritech	37,734,396	21,452,734	56.9%	18,697,747	49.6%	(2,754,987)
Southwestern Bell	37,255,707	19,592,142	52.6%	17,944,873	48.2%	(1,647,270)
Pacific Telesis	33,889,255	18,009,244	53.1%	15,861,714	46.8%	(2,147,530)
SNET	5,053,031	2,715,642	53.7%	2,481,140	49.1%	(234,502)
VERIZON COMMUNICATIONS	118,792,919	65,188,694	54.9%	58,225,373	49.0%	(6,963,322)
Bell Atlantic - South	44,083,663	24,143,133	54.8%	21,400,556	48.5%	(2,742,578)
Bell Atlantic - North	42,085,514	23,491,499	55.8%	21,156,363	50.3%	(2,335,135)
GTE Companies	32,623,743	17,554,062	53.8%	15,668,454	48.0%	(1,885,608)
<b>TOTAL BOC</b>	<b>329,923,929</b>	<b>180,435,641</b>	<b>54.7%</b>	<b>160,311,685</b>	<b>48.6%</b>	<b>(20,123,956)</b>

**SUMMARY OF THEORETICAL RESERVE ANALYSIS BY STATE**  
*(as of January 1, 2002)*

	TOTAL INVESTMENT	BOOK RESERVE		THEORETICAL RESERVE		RESERVE IMBALANCE
		AMOUNT	%	AMOUNT	%	
<b>BELLSOUTH</b>						
ALABAMA	5,130,233	2,871,063	56.0%	2,501,297	48.8%	(369,766)
KENTUCKY	2,957,226	1,701,094	57.5%	1,406,069	47.5%	(295,025)
LOUISIANA	5,254,054	3,389,238	64.5%	2,806,392	53.4%	(582,846)
MISSISSIPPI	3,505,889	2,121,656	60.5%	1,759,811	50.2%	(361,845)
TENNESSEE	5,885,157	3,240,713	55.1%	2,822,746	48.0%	(417,967)
FLORIDA	13,722,498	8,016,972	58.4%	6,942,796	50.6%	(1,074,176)
GEORGIA	11,350,516	5,881,214	51.8%	5,200,260	45.8%	(680,954)
N CAROLINA	6,080,897	3,422,144	56.3%	2,997,345	49.3%	(424,800)
S CAROLINA	3,592,848	2,127,501	59.2%	1,896,189	52.8%	(231,312)
	<b>57,479,317</b>	<b>32,771,596</b>	<b>57.0%</b>	<b>28,332,904</b>	<b>49.3%</b>	<b>(4,438,692)</b>
<b>U S WEST</b>						
ARIZONA	6,007,412	2,857,128	47.6%	2,641,618	44.0%	(215,510)
COLORADO	7,652,255	3,675,931	48.0%	3,347,958	43.8%	(327,973)
NEW MEXICO	2,066,114	1,199,196	58.0%	1,134,961	54.9%	(64,235)
UTAH	2,725,598	1,273,229	46.7%	1,183,445	43.4%	(89,785)
WYOMING	798,144	503,784	63.1%	442,127	55.4%	(61,657)
IOWA	2,193,125	1,341,640	61.2%	1,155,630	52.7%	(186,010)
MINNESOTA	4,747,203	2,502,172	52.7%	2,210,875	46.6%	(291,298)
NEBRASKA	1,553,581	978,803	63.0%	840,652	54.1%	(138,151)
NORTH DAKOTA	502,993	322,185	64.1%	269,124	53.5%	(53,060)
SOUTH DAKOTA	691,279	409,400	59.2%	355,145	51.4%	(54,255)
IDAHO	1,129,593	630,190	55.8%	536,964	47.5%	(93,226)
MONTANA	871,017	528,913	60.7%	464,927	53.4%	(63,986)
OREGON	3,006,519	1,453,602	48.3%	1,379,052	45.9%	(74,549)
WASHINGTON	5,774,471	3,029,416	52.5%	2,805,458	48.6%	(223,958)
	<b>39,719,304</b>	<b>20,705,588</b>	<b>52.1%</b>	<b>18,767,935</b>	<b>47.3%</b>	<b>(1,937,653)</b>
<b>SBC COMMUNICATIONS</b>						
ILLINOIS	11,960,157	6,526,159	54.6%	5,627,791	47.1%	(898,368)
INDIANA	4,037,035	2,285,977	56.6%	2,037,836	50.5%	(248,142)
MICHIGAN	10,300,983	6,324,041	61.4%	5,444,134	52.9%	(879,907)
OHIO	7,710,082	4,417,550	57.3%	3,896,162	50.5%	(521,388)

**SUMMARY OF THEORETICAL RESERVE ANALYSIS BY STATE**  
*(as of January 1, 2002)*

	TOTAL INVESTMENT	BOOK RESERVE		THEORETICAL RESERVE		RESERVE IMBALANCE
		AMOUNT	%	AMOUNT	%	
WISCONSIN	3,726,138	1,899,007	51.0%	1,691,823	45.4%	(207,184)
ARKANSAS	2,371,469	1,349,637	56.9%	1,211,468	51.1%	(138,169)
KANSAS	2,821,319	1,524,924	54.1%	1,380,542	48.9%	(144,381)
MISSOURI	5,906,280	3,037,860	51.4%	2,824,845	47.8%	(213,015)
OKLAHOMA	3,437,090	1,926,676	56.1%	1,752,373	51.0%	(174,303)
TEXAS	22,719,549	11,753,045	51.7%	10,775,644	47.4%	(977,401)
CALIFORNIA	33,142,245	17,644,802	53.2%	15,553,560	46.9%	(2,091,242)
NEVADA	747,010	364,442	48.8%	308,154	41.3%	(56,288)
CONNECTICUT	5,053,031	2,715,642	53.7%	2,481,140	49.1%	(234,502)
	<b>113,932,389</b>	<b>61,769,762</b>	<b>54.2%</b>	<b>54,985,473</b>	<b>48.3%</b>	<b>(6,784,289)</b>

**VERIZON COMMUNICATIONS**

PENNSYLVANIA	11,999,419	6,701,929	55.9%	5,932,268	49.4%	(769,660)
MARYLAND	7,219,429	4,035,484	55.9%	3,560,328	49.3%	(475,157)
VIRGINIA	7,628,823	4,011,369	52.6%	3,405,451	44.6%	(605,918)
WASHINGTON DC	2,074,139	995,888	48.0%	960,267	46.3%	(35,621)
WEST VIRGINIA	2,122,029	1,300,413	61.3%	1,147,749	54.1%	(152,664)
DELAWARE	1,055,446	589,638	55.9%	495,119	46.9%	(94,519)
NEW JERSEY	11,984,377	6,508,412	54.3%	5,899,374	49.2%	(609,039)
MAINE	1,722,575	1,051,902	61.1%	916,652	53.2%	(135,250)
MASSACHUSETTS	10,377,368	5,726,457	55.2%	5,201,426	50.1%	(525,031)
NEW HAMPSHIRE	1,992,349	1,156,436	58.0%	1,036,317	52.0%	(120,119)
RHODE ISLAND	1,195,134	703,932	58.9%	645,937	54.0%	(57,996)
VERMONT	982,295	622,805	63.4%	554,084	56.4%	(68,721)
NEW YORK	25,815,792	14,229,966	55.1%	12,801,947	49.6%	(1,428,019)
FLORIDA	5,079,154	2,747,418	54.1%	2,460,753	48.4%	(286,665)
HAWAII	1,861,487	963,364	51.8%	975,296	52.4%	11,932
CALIFORNIA	1,039,368	614,542	59.1%	554,169	53.3%	(60,373)
ILLINOIS	1,753,598	974,916	55.6%	775,250	44.2%	(199,665)
INDIANA	2,290,146	1,241,515	54.2%	1,101,811	48.1%	(139,704)
IOWA	0	0	0.0%	0	0.0%	0
MICHIGAN	1,728,997	966,459	55.9%	845,369	48.9%	(121,089)
MISSOURI	974,263	470,520	48.3%	377,362	38.7%	(93,157)
NEBRASKA	0	0	0.0%	0	0.0%	0
OHIO	1,970,790	1,125,631	57.1%	1,066,739	54.1%	(58,891)
PENNSYLVANIA	1,388,230	758,723	54.7%	671,229	48.4%	(87,495)

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*(as of January 1, 2002)*

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		AMOUNT	%	AMOUNT	%	
WISCONSIN	966,400	535,845	55.4%	385,068	39.8%	(150,778)
IDAHO	406,035	210,460	51.8%	204,547	50.4%	(5,913)
OREGON	1,112,261	537,467	48.3%	530,321	47.7%	(7,146)
WASHINGTON	2,361,285	1,123,213	47.6%	1,109,369	47.0%	(13,844)
ALABAMA	744,163	419,648	56.4%	376,380	50.6%	(43,269)
KENTUCKY	1,466,793	825,387	56.3%	726,283	49.5%	(99,104)
NORTH CAROLINA	1,055,054	568,644	53.9%	507,397	48.1%	(61,247)
SOUTH CAROLINA	512,728	295,264	57.6%	261,839	51.1%	(33,425)
VIRGINIA	1,363,200	677,515	49.7%	694,918	51.0%	17,403
TEXAS	4,549,789	2,497,532	54.9%	2,044,355	44.9%	(453,177)
	<b>118,792,919</b>	<b>65,188,694</b>	<b>54.9%</b>	<b>58,225,373</b>	<b>49.0%</b>	<b>(6,963,322)</b>
<b>TOTAL BOCs</b>	<b>329,923,929</b>	<b>180,435,641</b>	<b>54.7%</b>	<b>160,311,685</b>	<b>48.6%</b>	<b>(20,123,956)</b>

# Attachment 4

NUMBER a	PLANT ACCOUNT DESCRIPTION b	JANUARY 1, 2002 INVESTMENT c		BOOK RESERVE PERCENT e = d / c		THEORETICAL RESERVE PERCENT g = f / c		RESERVE IMBALANCE PERCENT i = h / c	
		AMOUNT d	AMOUNT c	AMOUNT d	PERCENT e = d / c	AMOUNT f	PERCENT g = f / c	AMOUNT h = f - d	PERCENT i = h / c
2112	MOTOR VEHICLES	2,004,683	3,474,861	57.7%	1,666,732	48.0%	(337,950)	-9.7%	
2113	AIRCRAFT	13,301	28,338	46.9%	9,958	35.1%	(3,343)	-11.8%	
2114	TOOLS & OTHER WK EQPT	1,104,050	2,553,892	43.2%	982,498	38.5%	(121,552)	-4.8%	
2121	BUILDINGS	6,493,164	24,680,187	26.3%	6,473,615	26.2%	(19,549)	-0.1%	
2122	FURNITURE	59,345	96,173	61.7%	54,795	57.0%	(4,551)	-4.7%	
2123.1	OFFICE SUPPORT	299,086	375,521	79.6%	203,034	54.1%	(96,052)	-25.6%	
2123.2	COMPANY COMMUNICATION EQ	460,574	612,740	75.2%	331,643	54.1%	(128,930)	-21.0%	
2124	GENERAL PURPOSE COMPUTERS	5,245,469	7,393,487	70.9%	4,627,519	62.6%	(617,950)	-8.4%	
2211	ANALOG SWITCHING	2,017,680	2,044,069	98.7%	1,672,738	81.8%	(344,942)	-16.9%	
2212	DIGITAL SWITCHING	27,596,312	60,377,453	45.7%	25,860,980	42.8%	(1,735,332)	-2.9%	
2215	ELECTRO-MECHANICAL SWITCH	-	-	-	-	-	-	-	
2220	OPERATOR SYSTEMS	348,765	662,647	52.6%	352,573	53.2%	3,808	0.6%	
2231	RADIO SYSTEMS	552,115	703,743	78.5%	464,370	66.0%	(87,744)	-12.5%	
2232	CIRCUIT - COMBINED	11,882,228	19,470,879	61.0%	9,571,894	49.2%	(2,310,334)	-11.9%	
2232.1	CIRCUIT - DDS	441,089	472,265	93.4%	352,998	74.7%	(88,091)	-18.7%	
2232.2	CIRCUIT - ANALOG	2,609,545	2,578,753	101.2%	2,134,885	82.8%	(474,660)	-18.4%	
2232.3	CIRCUIT - DIGITAL	32,226,198	59,616,060	54.1%	26,889,392	45.1%	(5,336,806)	-9.0%	
2311	STATION APPARATUS	324	427	75.9%	368	86.1%	43	10.2%	
2341	LARGE PBX	100,396	146,620	68.5%	86,263	58.8%	(14,133)	-9.6%	
2351	PUBLIC TELEPHONE	219,391	285,981	76.7%	200,487	70.1%	(18,904)	-6.6%	
2362	OTHER TERMINAL EQUIPMENT	2,699,982	3,248,959	83.1%	1,963,691	60.4%	(736,291)	-22.7%	
2411	POLES	4,793,955	5,842,196	82.1%	4,712,841	80.7%	(81,114)	-1.4%	
2421	AERIAL CABLE COMBINED	2,065,931	2,851,774	72.4%	1,880,187	65.9%	(185,744)	-6.5%	
2421.1	AERIAL CABLE METALLIC	19,370,671	27,519,568	70.4%	17,199,107	62.5%	(2,171,564)	-7.9%	
2421.2	AERIAL CABLE NON-METALLIC	919,327	2,494,508	36.9%	833,824	33.4%	(85,503)	-3.4%	
2422	UNDERGROUND CABLE - COMBINED	-	-	-	-	-	-	-	
2422.1	UNDERGROUND CABLE METALLIC	14,428,809	21,336,480	67.6%	13,257,053	62.1%	(1,171,756)	-5.5%	
2422.2	UNDERGROUND NON-METAL	2,548,359	6,629,953	38.4%	2,389,767	36.0%	(158,592)	-2.4%	
2423	BURIED CABLE COMBINED	2,611	7,352	35.5%	2,919	39.7%	308	4.2%	
2423.1	BURIED CABLE METALLIC	30,657,803	49,557,300	61.9%	27,378,033	55.2%	(3,279,771)	-6.6%	
2423.2	BURIED CABLE NON-METALLIC	1,513,655	4,142,536	36.5%	1,330,482	32.1%	(183,173)	-4.4%	

# Attachment 4

NUMBER a	PLANT ACCOUNT DESCRIPTION b	JANUARY 1, 2002 INVESTMENT c		BOOK RESERVE AMOUNT d		PERCENT e = d / c		THEORETICAL RESERVE AMOUNT f		PERCENT g = f / c		RESERVE IMBALANCE AMOUNT h = f - d		PERCENT i = h / c	
2424	SUBMARINE CABLE COMBINED	67,901	46,277	68.2%	40,585	59.8%	(5,692)	-8.4%							
2424.1	SUBMARINE CABLE METALLIC	9,211	8,833	95.9%	7,798	84.7%	(1,036)	-11.2%							
2424.2	SUBMARINE CABLE NON-METAL	4,823	1,236	25.6%	1,065	22.1%	(171)	-3.5%							
2425	DEEP SEA CABLE - COMBINED	-	-	-	-	-	-	-							
2425.1	DEEP SEA CABLE - METALLIC	-	-	-	-	-	-	-							
2425.2	DEEP SEA CABLE - NON-METAL	17,040	7,414	43.5%	4,890	28.7%	(2,524)	-14.8%							
2426	INTRABLDG CABLE COMBINED	587,257	473,415	80.6%	392,876	66.9%	(80,540)	-13.7%							
2426.0	INTRABLDG CABLE METALLIC	1,392,096	1,132,946	81.4%	967,887	69.5%	(165,059)	-11.9%							
2426.0	INTRABLDG CABLE NON-METAL	123,431	85,724	69.5%	42,543	34.5%	(43,182)	-35.0%							
2431	AERIAL WIRE	89,818	118,434	131.9%	92,971	103.5%	(25,463)	-28.3%							
2441	CONDUIT SYSTEM	18,427,629	5,886,540	31.9%	5,876,424	31.9%	(10,116)	-0.1%							
	TOTAL ACCOUNTS	329,923,929	180,435,641	54.7%	160,311,685	48.6%	(20,123,956)	-6.1%							