REGRESSION RESULTS OF THE NONFUEL LINEHAUL UNIT COSTS, YE 9/30/89 THROUGH 9/30/97

YE 9/30/ X	Actual Y	Log Y
1989	$212.01	5.3566334
1990	$226.98	5.4248619
1991	$249.53	5.5195791
1992	$251.25	5.5264485
1993	$238.79	5.4755845
1994	$245.25	5.5022781
1995	$245.15	5.5018703
1996	$262.03	5.568459
1997	$289.44	5.667948
	1/	**2/**

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.84794083
R Square	0.719003652
Adjusted R Square	0.678861317
Standard Error	0.049308921
Observations	9

RESIDUAL OUTPUT

Observ.	Predicted Y (LN)	Residuals	Predicted Y (EXP)
1	5.39708733	-0.040453887	$220.762471
2	5.42402835	0.000833553	$226.790879
3	5.45096938	0.068609769	$232.983906
4	5.4779104	0.048538056	$239.346048
5	5.50485143	-0.029266924	$245.881922
6	5.53179245	-0.029514354	$252.596272
7	5.55873348	-0.056863209	$259.493973
8	5.5856745	-0.017215501	$266.580031
9	5.61261553	0.055332495	$273.859589

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.043549128	0.0435491	17.9113558	0.003877644
Residual	7	0.017019588	0.0024314		
Total	8	0.060568716			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.000%	Upper 95.000%
Intercept	-48.18861043	12.6869591	-3.798279	0.00672986	-78.18848014	-18.18874072	-78.18848014	-18.18874072
X Variable 1	0.026941025	0.006365754	4.232181	0.00387764	0.011888418	0.041993631	0.011888418	0.041993631

Note: The annual increase in unit cost is derived from the Residual Output above under Predicted Y (EXP) which produces a constant 2.73% annual increase.

1/ Values are from Appendix C, page 7.

2/ Values are the Natural Log of the values in preceding column, in order to put a geometric progression into linear form.

REGRESSION RESULTS OF DEPARTURE RELATED UNIT COSTS, YE 9/30/89 THROUGH 9/30/97

YE 9/30/ X	Actual Y	Log Y
1989	$38.29	3.6451888
1990	$43.46	3.771841
1991	$42.11	3.7402852
1992	$42.51	3.7497393
1993	$43.82	3.7800903
1994	$43.50	3.7727609
1995	$47.65	3.8638826
1996	$50.27	3.9174085
1997	$52.05	3.9522048
	1/	**2/**

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.924463008
R Square	0.854631854
Adjusted R Square	0.833864976
Standard Error	0.038940148
Observations	9

RESIDUAL OUTPUT

Observ.	Predicted Y (LN)	Residuals	Predicted Y (EXP)
1	3.67026797	-0.025079201	$39.2624
2	3.70251768	0.069323291	$40.5493
3	3.7347674	0.005517842	$41.8783
4	3.76701712	-0.017277774	$43.2509
5	3.79926683	-0.019176499	$44.6684
6	3.83151655	-0.058755612	$46.1324
7	3.86376627	0.000116363	$47.6445
8	3.89601598	0.021392494	$49.2060
9	3.9282657	0.023939095	$50.8188

ANOVA

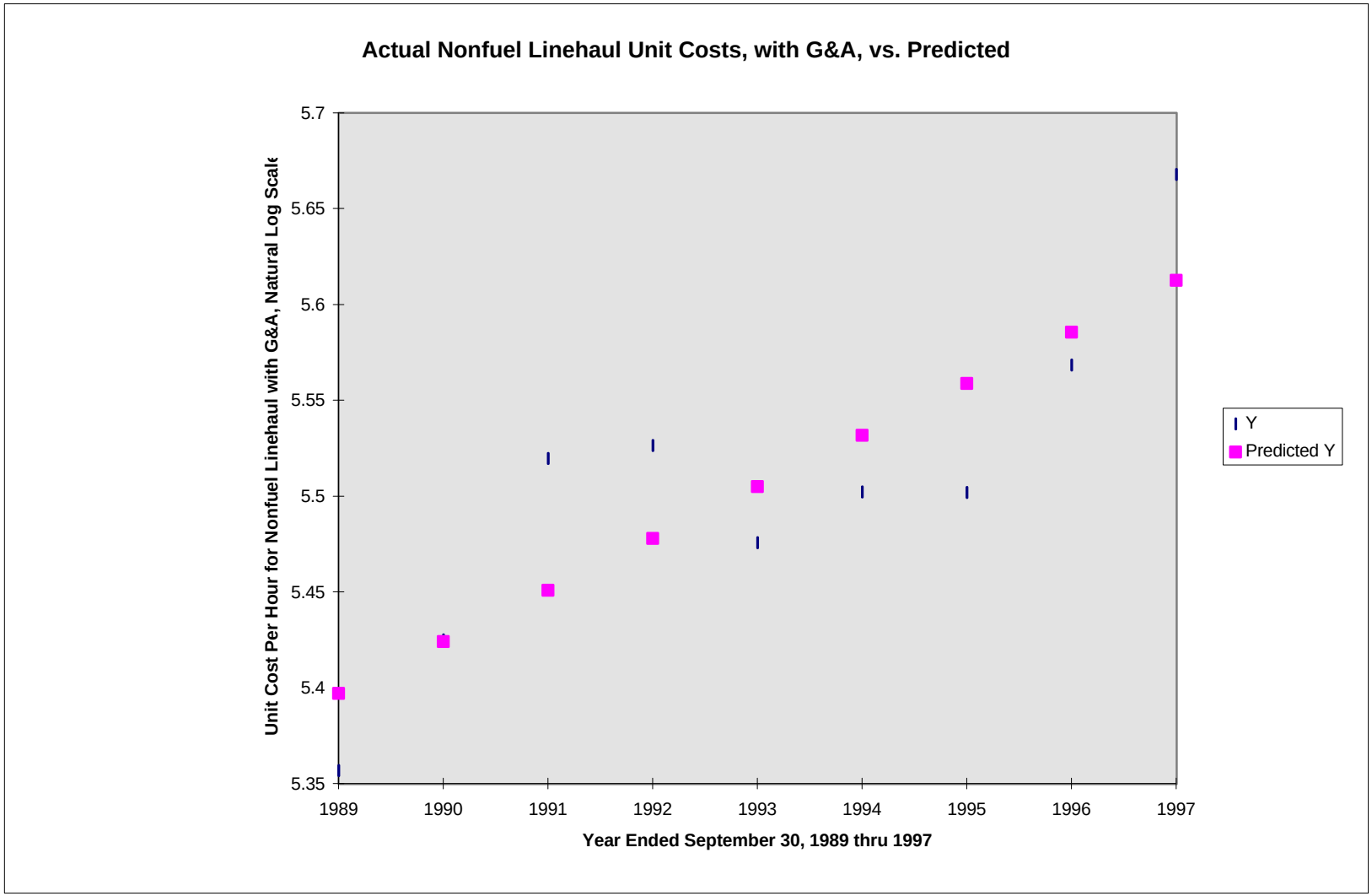
	df	SS	MS	F	Significance F
Regression	1	0.062402653	0.0624027	41.153603	0.000362045
Residual	7	0.010614346	0.0015163		
Total	8	0.073016999			

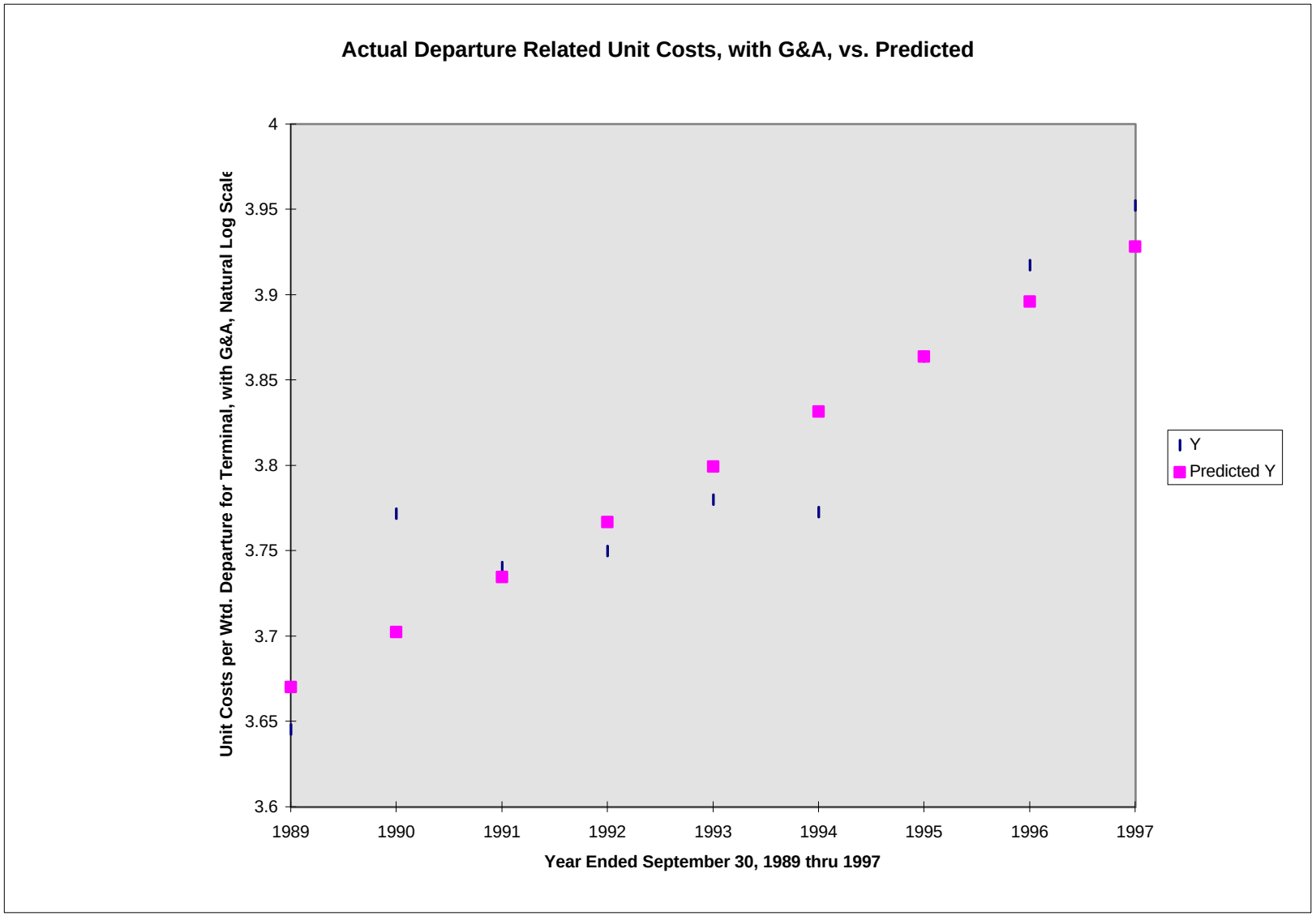
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.000%	Upper 95.000%
Intercept	-60.47441843	10.0191213	-6.0359	0.00052323	-84.16585869	-36.78297818	-84.16585869	-36.78297818
X Variable 1	0.032249717	0.005027151	6.4151074	0.00036205	0.020362401	0.044137032	0.020362401	0.044137032

Note: The annual increase in unit cost is derived from the Residual Output above under Predicted Y (EXP) which produces a constant 3.28% annual increase.

1/ Values are from Appendix D, page 4.

2/ Values are the Natural Log of the values in preceding column, in order to put a geometric progression into linear form.


Actual Nonfuel Linehaul Unit Costs, with G&A, vs. Predicted
Unit Cost Per Hour for Nonfuel Linehaul with G&A, Natural Log Scale
5.7
5.65
5.6
5.55
5.5
5.45
5.4
5.35
1989
1990
1991
1992
1993
1994
1995
1996
1997
Year Ended September 30, 1989 thru 1997
Y
Predicted Y



Note: In 1995, predicted ($47.6445) is so close to Actual ($47.65) that they are superimposed on each other, and only one is visible on this page.