

APPENDIX B

ANNUAL REGRESSION RESULTS

ANNUAL REGRESSION ANALYSIS — STATISTICS
 RED CANYON CREEK NEAR PARKMAN, WY (Station 06289100)

y vs. x
 SUMMARY OUTPUT

y = Station 06289100
x = Station 06289000

Red Canyon Creek Near Parkman, WY
 Little Bighorn River at State Line, Near Wyola,
 MT

<i>Regression Statistics</i>	
Multiple R	0.94699179
R Square	0.89679345
Adjusted R Square	0.870991813
Standard Error	213.9371204
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1590806.842	1590806.842	34.75723008	0.004140332
Residual	4	183076.3659	45769.09147		
Total	5	1773883.208			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-1391.220289	446.8664717	-3.113279643	0.035758225	-2631.923087	-150.5174916
X Variable 1	0.025398489	0.004308095	5.895526276	0.004140332	0.013437274	0.037359704

ln(y) vs. ln(x)
 SUMMARY OUTPUT

y = Station 06289100
x = Station 06289000

Red Canyon Creek Near Parkman, WY
 Little Bighorn River at State Line, Near Wyola,
 MT

<i>Regression Statistics</i>	
Multiple R	0.969788634
R Square	0.940489996
Adjusted R Square	0.925612494
Standard Error	0.12875971
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.048055225	1.048055225	63.21558901	0.001355303
Residual	4	0.066316252	0.016579063		
Total	5	1.114371477			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-16.27324302	2.926292999	-5.561043621	0.005119857	-24.39795172	-8.148534313
X Variable 1	2.021206093	0.254213438	7.950823166	0.001355303	1.315394975	2.727017211

ln(y) vs. x
 SUMMARY OUTPUT

y = Station 06289100
x = Station 06289000

Red Canyon Creek Near Parkman, WY
 Little Bighorn River at State Line, Near Wyola,
 MT

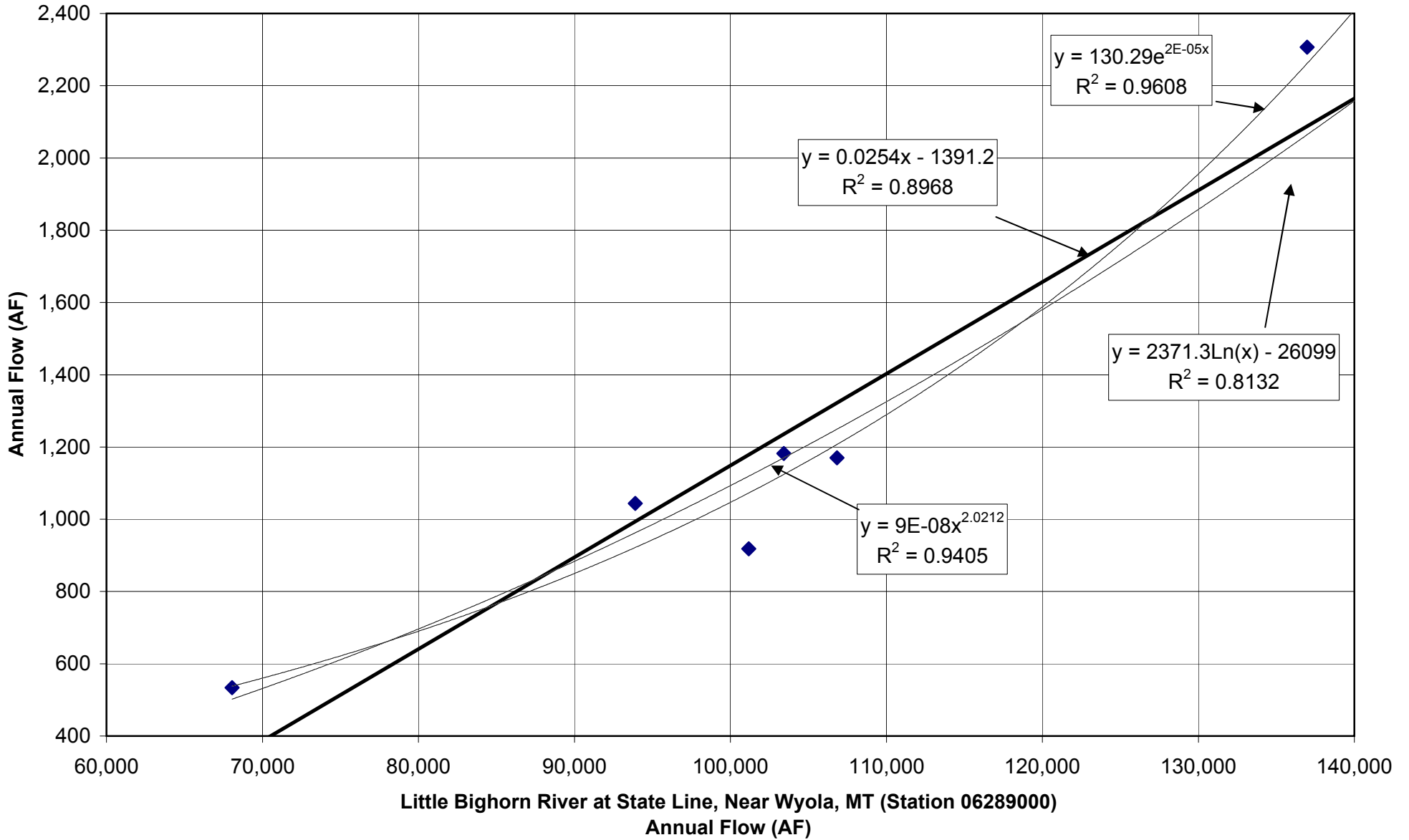
<i>Regression Statistics</i>	
Multiple R	0.980225885
R Square	0.960842786
Adjusted R Square	0.951053482
Standard Error	0.104445778
Observations	6

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.070735794	1.070735794	98.15231321	0.000582657
Residual	4	0.043635683	0.010908921		
Total	5	1.114371477			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	4.869737471	0.218163713	22.32148238	2.3849E-05	4.264016644	5.475458298
X Variable 1	2.08372E-05	2.10325E-06	9.907184929	0.000582657	1.49977E-05	2.66768E-05

ANNUAL REGRESSION ANALYSIS — TRENDLINES

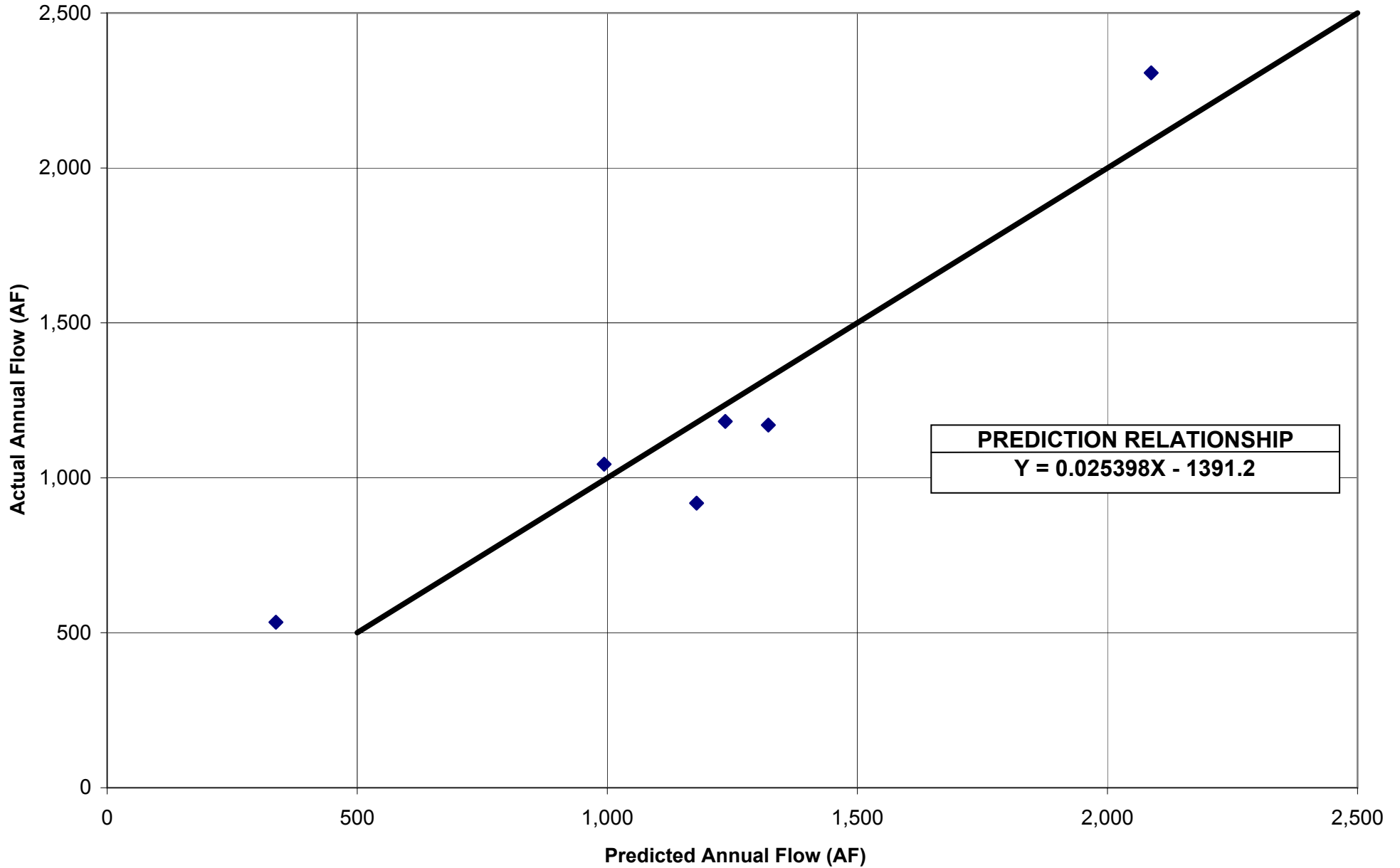
RED CANYON CREEK NEAR PARKMAN, WY (Station 06289100)



◆ 06289100
 Linear (06289100)
 - - - - Log. (06289100)
 - - - - Power (06289100)
 - - - - Expon. (06289100)

PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

RED CANYON CREEK NEAR PARKMAN, WY (Station 06289100)



ANNUAL REGRESSION ANALYSIS — STATISTICS

TWIN CREEK NEAR PARKMAN, WY (Station 06289870)

y vs. x
SUMMARY OUTPUT

y = Station 06289870
x = Station 06289000

Twin Creek Near Parkman, WY
Little Bighorn River at State Line, Near Wyola,
MT

<i>Regression Statistics</i>	
Multiple R	0.857370193
R Square	0.735083648
Adjusted R Square	0.646778197
Standard Error	1941.3324
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	31372494.74	31372494.74	8.324329257	0.06326049
Residual	3	11306314.46	3768771.486		
Total	4	42678809.2			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-7152.855747	4075.012581	-1.755296605	0.177474912	-20121.37665	5815.665151
X Variable 1	0.112799306	0.039095953	2.885191373	0.06326049	-0.011621582	0.237220194

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06289870
x = Station 06289000

Twin Creek Near Parkman, WY
Little Bighorn River at State Line, Near Wyola,
MT

<i>Regression Statistics</i>	
Multiple R	0.845590476
R Square	0.715023253
Adjusted R Square	0.620031004
Standard Error	0.397470784
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.189165821	1.189165821	7.527174684	0.071124849
Residual	3	0.473949073	0.157983024		
Total	4	1.663114894			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-16.59595493	9.036041593	-1.836639944	0.163584106	-45.35269909	12.16078923
X Variable 1	2.154150526	0.785163405	2.743569697	0.071124849	-0.344592196	4.652893247

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06289870
x = Station 06289000

Twin Creek Near Parkman, WY
Little Bighorn River at State Line, Near Wyola,
MT

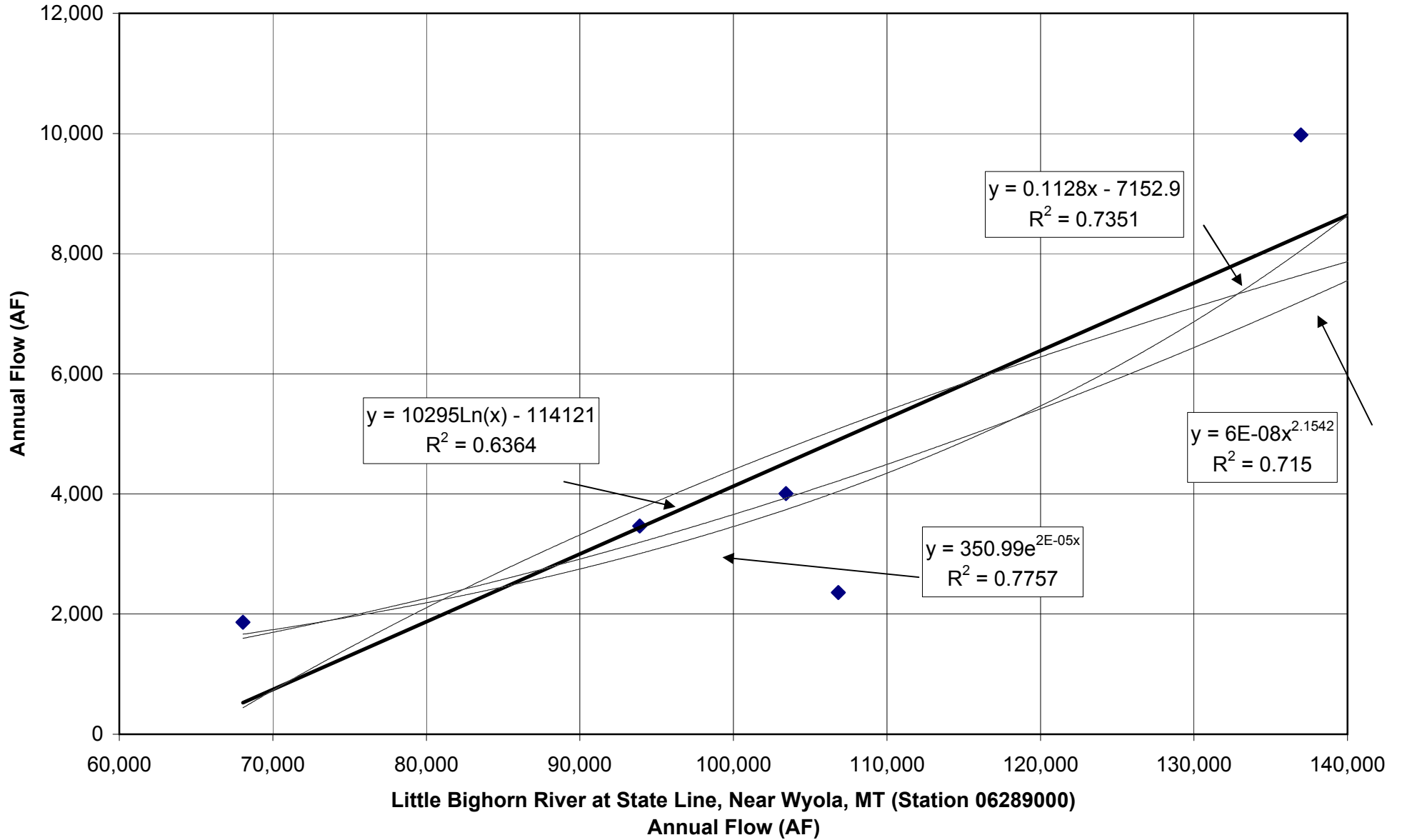
<i>Regression Statistics</i>	
Multiple R	0.880765357
R Square	0.775747614
Adjusted R Square	0.700996819
Standard Error	0.352589224
Observations	5

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.290157411	1.290157411	10.37778408	0.048530367
Residual	3	0.372957483	0.124319161		
Total	4	1.663114894			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	5.860755606	0.740113092	7.918729812	0.004198717	3.505383221	8.216127991
X Variable 1	2.28746E-05	7.1007E-06	3.221456826	0.048530367	2.76981E-07	4.54722E-05

ANNUAL REGRESSION ANALYSIS — TRENDLINES

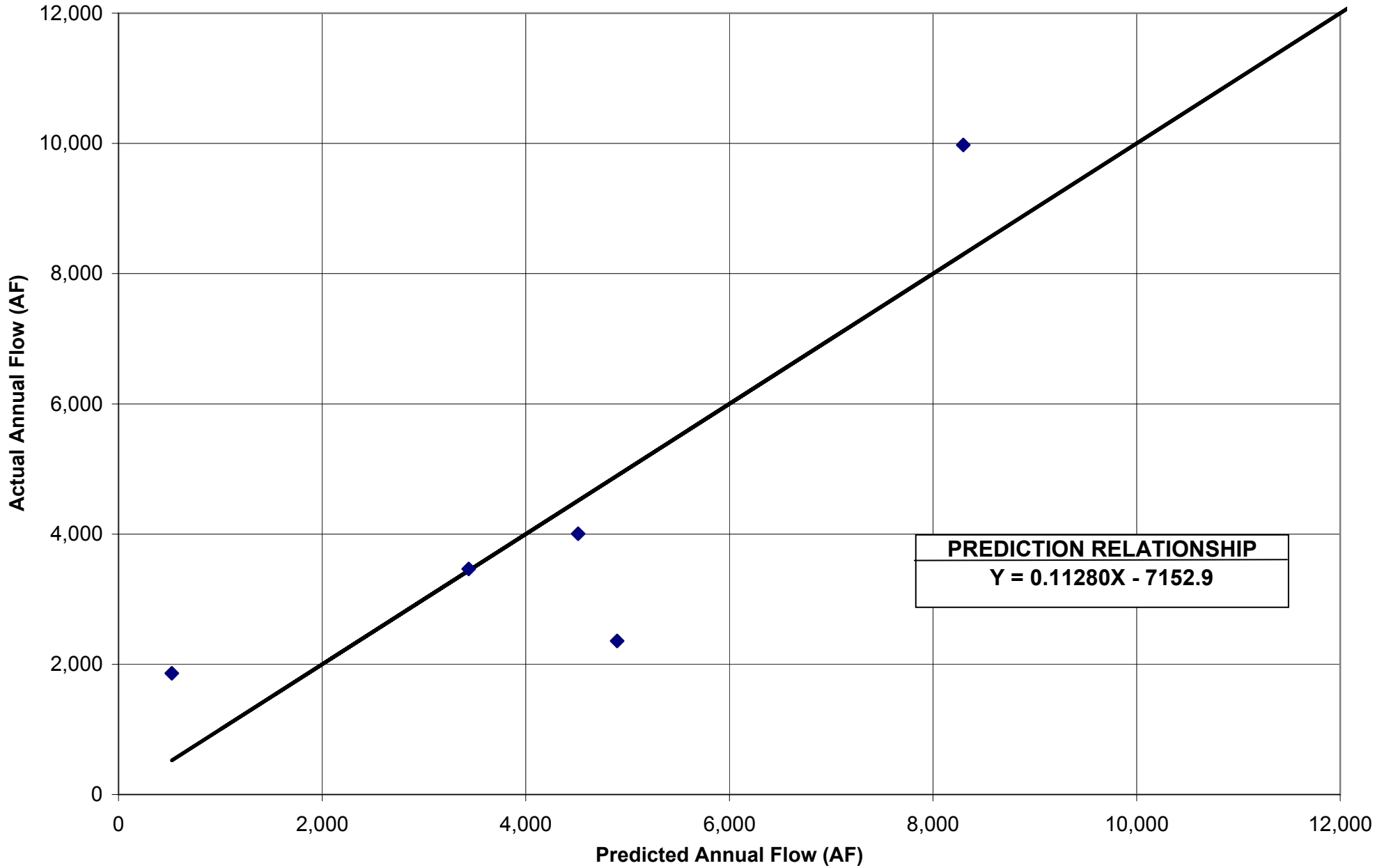
TWIN CREEK NEAR PARKMAN, WY (Station 06289870)



◆ 06289870
 Linear (06289870)
 Log. (06289870)
 Power (06289870)
 Expon. (06289870)

PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

TWIN CREEK NEAR PARKMAN, WY (Station 06289870)



ANNUAL REGRESSION ANALYSIS — STATISTICS

PRAIRIE DOG CREEK NEAR ACME, WY (Station 06306250)

y vs. x
SUMMARY OUTPUT

y = Station 06306250 Prairie Dog Creek Near Acme, WY
x = Station 06317000 Powder River at Arvada, WY

<i>Regression Statistics</i>	
Multiple R	0.93355113
R Square	0.871517712
Adjusted R Square	0.855457426
Standard Error	3129.950473
Observations	10

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	531615792.4	531615792.4	54.26539177	7.86811E-05
Residual	8	78372719.71	9796589.963		
Total	9	609988512.1			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	15380.81525	2577.706685	5.966860132	0.000335583	9436.609132	21325.02137
X Variable 1	0.072738249	0.009874187	7.366504719	7.86811E-05	0.049968317	0.09550818

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06306250 Prairie Dog Creek Near Acme, WY
x = Station 06317000 Powder River at Arvada, WY

<i>Regression Statistics</i>	
Multiple R	0.928268784
R Square	0.861682936
Adjusted R Square	0.844393303
Standard Error	0.086990277
Observations	10

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.377140478	0.377140478	49.83812768	0.000106152
Residual	8	0.060538467	0.007567308		
Total	9	0.437678945			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	2.614059179	1.100099422	2.376202665	0.044810479	0.077223721	5.150894636
X Variable 1	0.629424876	0.08915856	7.059612431	0.000106152	0.423824736	0.835025016

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06306250 Prairie Dog Creek Near Acme, WY
x = Station 06317000 Powder River at Arvada, WY

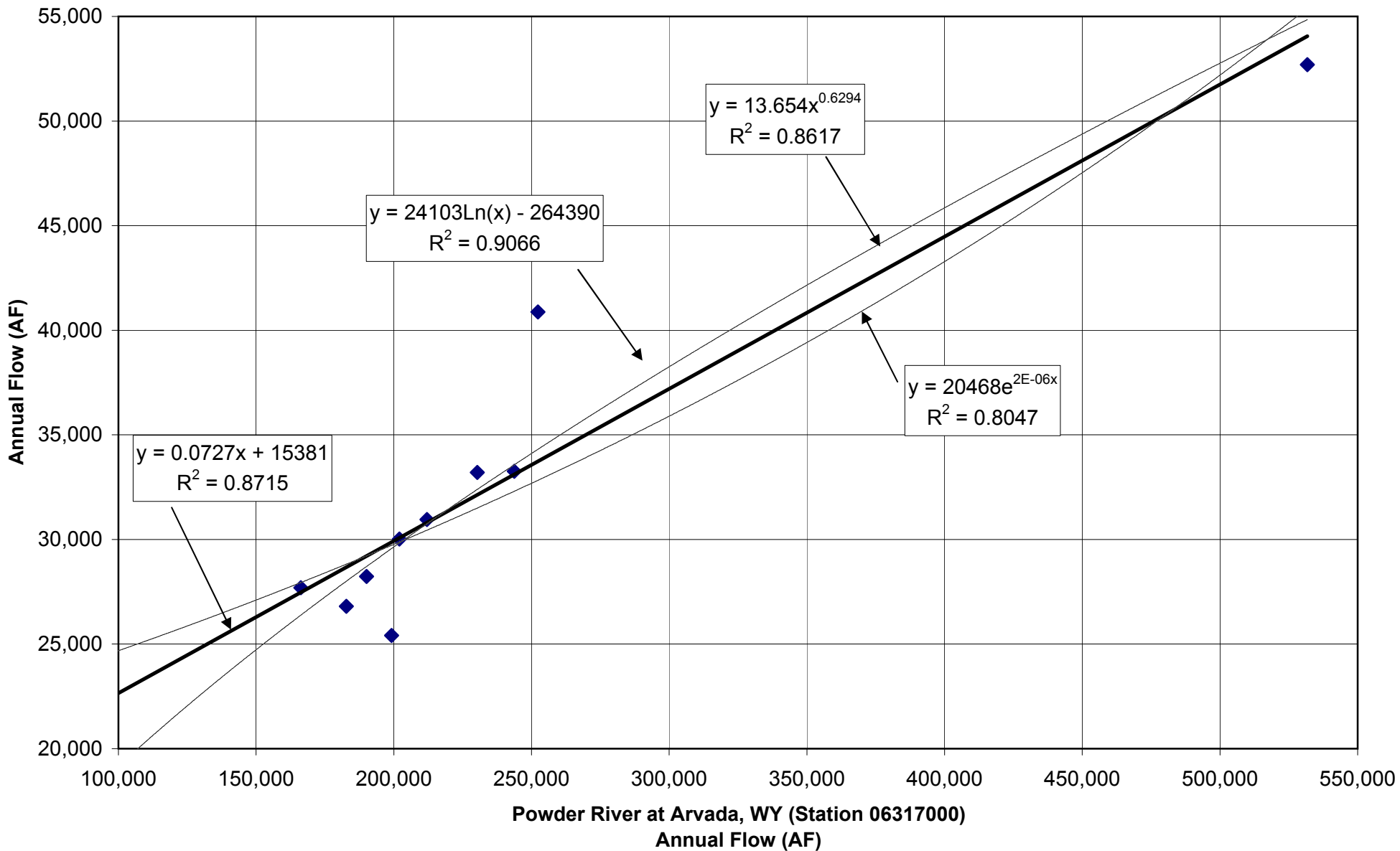
<i>Regression Statistics</i>	
Multiple R	0.897069754
R Square	0.804734143
Adjusted R Square	0.780325911
Standard Error	0.10335845
Observations	10

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.352215191	0.352215191	32.96978417	0.000432985
Residual	8	0.085463754	0.010682969		
Total	9	0.437678945			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.926608519	0.08512204	116.6161967	3.26759E-14	9.730316616	10.12290042
X Variable 1	1.87227E-06	3.26069E-07	5.741932094	0.000432985	1.12035E-06	2.62419E-06

ANNUAL REGRESSION ANALYSIS — TRENDLINES

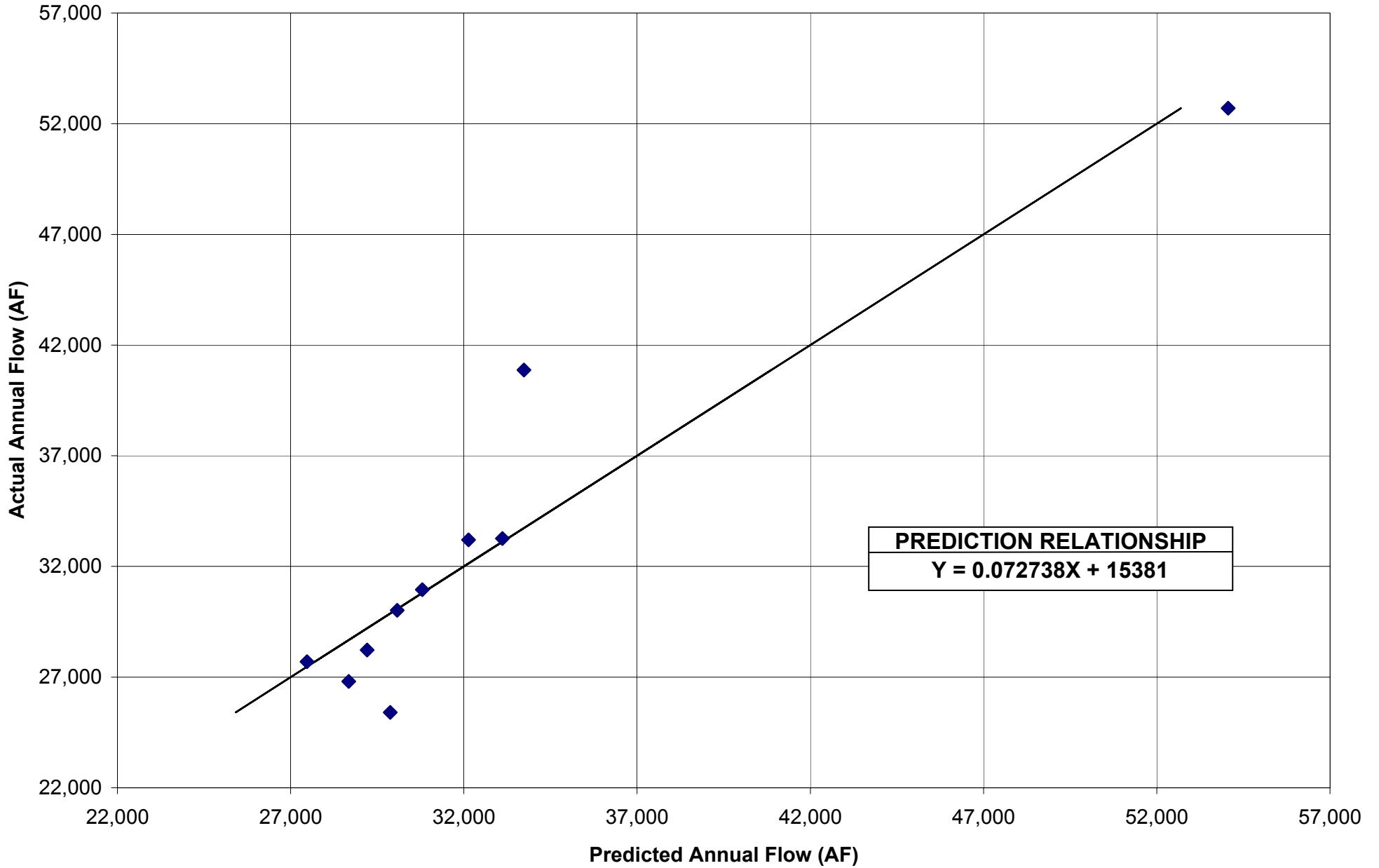
PRAIRIE DOG CREEK NEAR ACME, WY (Station 06306250)



◆ 06306250 — Linear (06306250) - - - - Log. (06306250) - - - - Power (06306250) - - - - Expon. (06306250)

PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

PRAIRIE DOG CREEK NEAR ACME, WY (Station 06306250)



ANNUAL REGRESSION ANALYSIS — STATISTICS

NORTH FORK POWDER RIVER BELOW BULL CREEK, NEAR HAZELTON, WY (Station
06311060)

y vs. x
SUMMARY OUTPUT

y = Station 06311060 North Fork Powder River Below Bull Creek,
Near Hazelton, WY

x = Station 06311000 North Fork Powder River Near Hazelton, WY

<i>Regression Statistics</i>	
Multiple R	0.91201326
R Square	0.831768187
Adjusted R Square	0.821253698
Standard Error	1441.374266
Observations	18

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	164349236.1	164349236.1	79.10686283	1.36646E-07
Residual	16	33240956.39	2077559.775		
Total	17	197590192.5			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	2154.177598	1256.753729	1.714080927	0.105816499	-510.0206911	4818.375887
X Variable 1	0.959757636	0.107908212	8.894203889	1.36646E-07	0.731002498	1.188512774

In(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06311060 North Fork Powder River Below Bull Creek,
Near Hazelton, WY

x = Station 06311000 North Fork Powder River Near Hazelton, WY

<i>Regression Statistics</i>	
Multiple R	0.902544356
R Square	0.814586315
Adjusted R Square	0.80299796
Standard Error	0.11204395
Observations	18

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.882454109	0.882454109	70.29352248	3.00205E-07
Residual	16	0.200861548	0.012553847		
Total	17	1.083315657			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	1.896444016	0.899560036	2.108190605	0.051133857	-0.01053764	3.803425672
X Variable 1	0.811747867	0.096819649	8.384123239	3.00205E-07	0.606499427	1.016996307

In(y) vs. x
SUMMARY OUTPUT

y = Station 06311060 North Fork Powder River Below Bull Creek,
Near Hazelton, WY

x = Station 06311000 North Fork Powder River Near Hazelton, WY

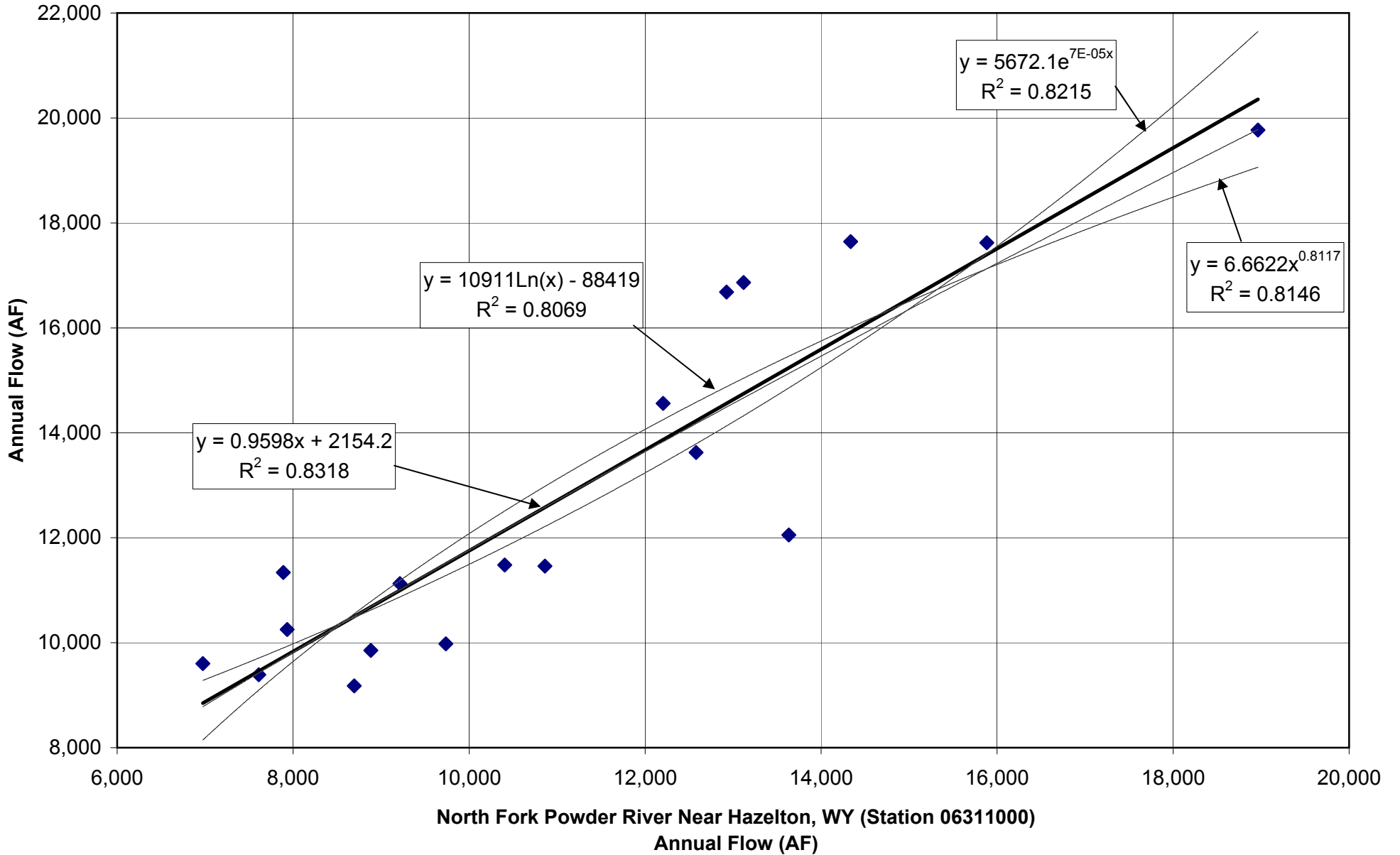
<i>Regression Statistics</i>	
Multiple R	0.906363528
R Square	0.821494845
Adjusted R Square	0.810338273
Standard Error	0.109936751
Observations	18

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.889938228	0.889938228	73.63326583	2.20746E-07
Residual	16	0.193377429	0.012086089		
Total	17	1.083315657			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.643306554	0.095855341	90.17031733	4.35101E-23	8.440102354	8.846510755
X Variable 1	7.06249E-05	8.23039E-06	8.580982801	2.20746E-07	5.31772E-05	8.80725E-05

ANNUAL REGRESSION ANALYSIS — TRENDLINES

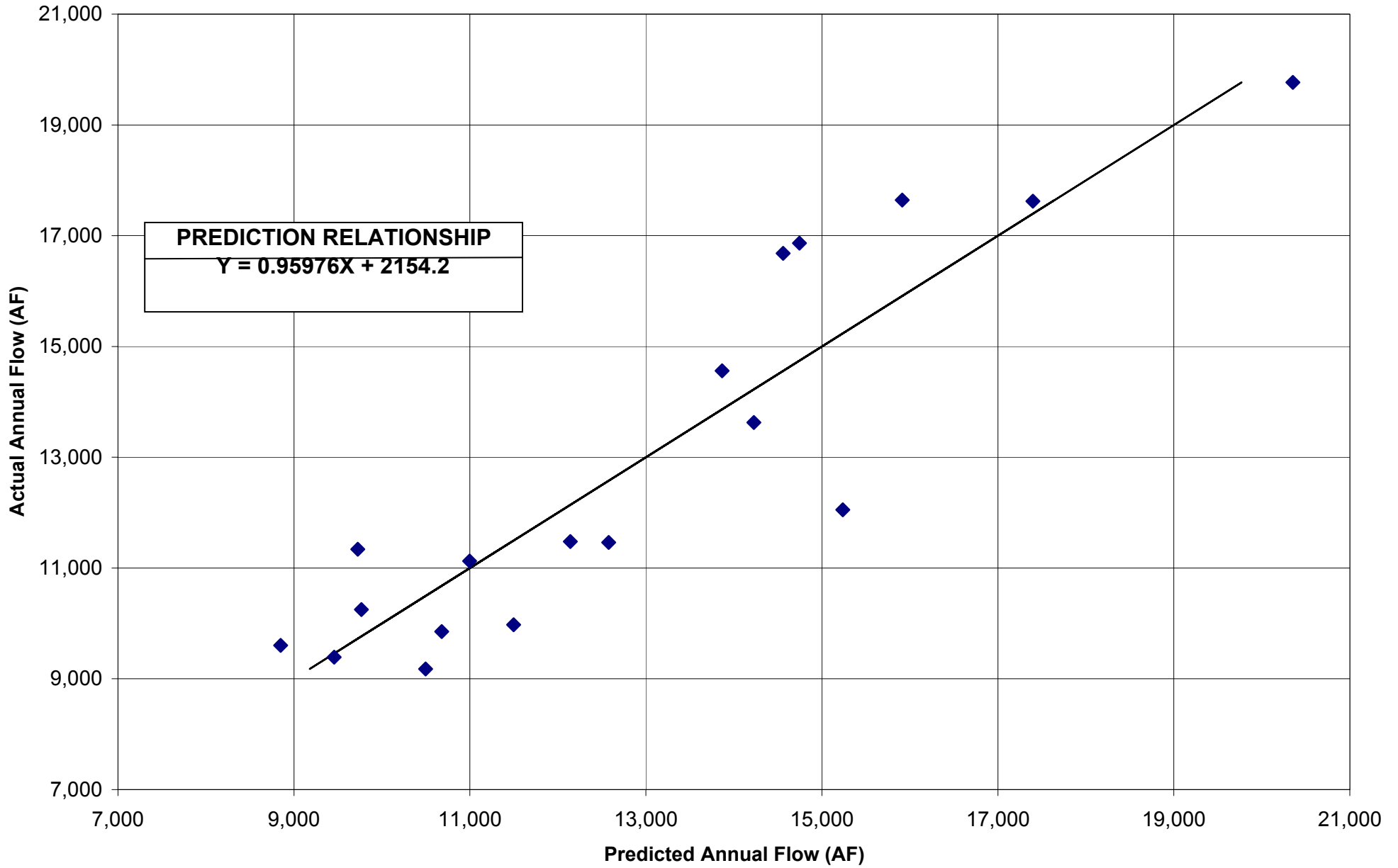
NORTH FORK POWDER RIVER BELOW BULL CREEK, NEAR HAZELTON, WY (Station 06311060)



◆ 06311060 — Linear (06311060) - - - - Log. (06311060) - - - - Power (06311060) - - - - Expon. (06311060)

PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

NORTH FORK POWDER RIVER BELOW BULL CREEK, NEAR HAZELTON, WY (Station 06311060)



ANNUAL REGRESSION ANALYSIS — STATISTICS

NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY (Station 06311400)

y vs. x
SUMMARY OUTPUT

y = Station 06311400 North Fork Powder River Below Pass Creek,
Near Mayoworth, WY

x = Station 06311000 North Fork Powder River Near Hazelton, WY

<i>Regression Statistics</i>	
Multiple R	0.88904848
R Square	0.790407199
Adjusted R Square	0.781674166
Standard Error	2498.150149
Observations	26

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	564836618	564836618	90.50774997	1.28995E-09
Residual	24	149778100.1	6240754.169		
Total	25	714614718			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9453.362335	1839.778864	5.138314457	2.92907E-05	5656.246166	13250.4785
X Variable 1	1.435105985	0.150848533	9.513556116	1.28995E-09	1.123769978	1.746441991

In(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06311400 North Fork Powder River Below Pass Creek,
Near Mayoworth, WY

x = Station 06311000 North Fork Powder River Near Hazelton, WY

<i>Regression Statistics</i>	
Multiple R	0.863544913
R Square	0.745709818
Adjusted R Square	0.735114393
Standard Error	0.102602255
Observations	26

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.740909769	0.740909769	70.38036406	1.34725E-08
Residual	24	0.252653346	0.010527223		
Total	25	0.993563114			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	4.550542379	0.668818491	6.803852527	4.89046E-07	3.170169142	5.930915616
X Variable 1	0.600906457	0.071627718	8.389300571	1.34725E-08	0.453074143	0.748738771

In(y) vs. x
SUMMARY OUTPUT

y = Station 06311400 North Fork Powder River Below Pass Creek,
Near Mayoworth, WY

x = Station 06311000 North Fork Powder River Near Hazelton, WY

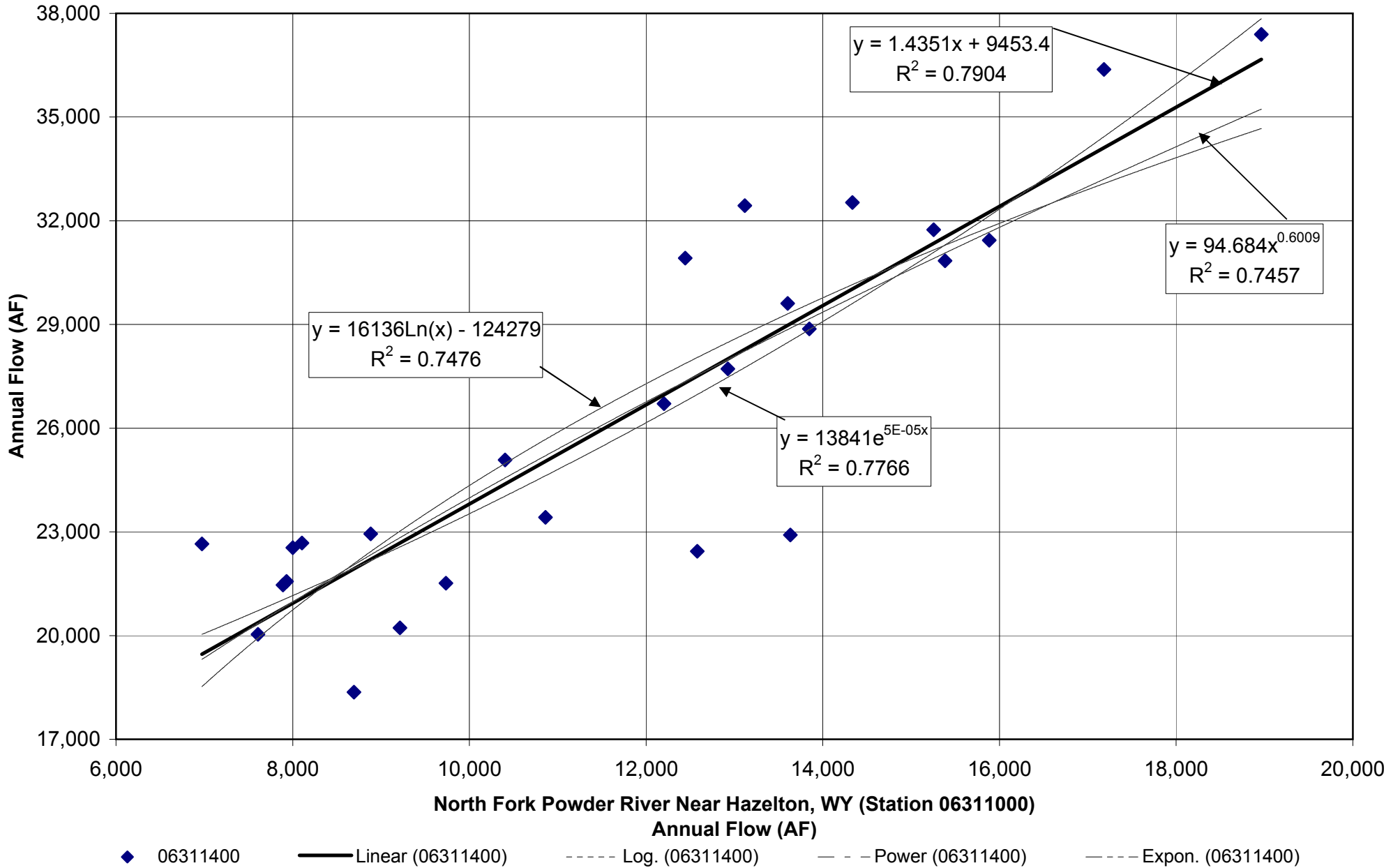
<i>Regression Statistics</i>	
Multiple R	0.881235495
R Square	0.776575998
Adjusted R Square	0.767266664
Standard Error	0.096173855
Observations	26

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.771577266	0.771577266	83.41907645	2.79955E-09
Residual	24	0.221985848	0.00924941		
Total	25	0.993563114			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.535381166	0.070827858	134.6275517	4.61318E-36	9.389199681	9.681562651
X Variable 1	5.30411E-05	5.80737E-06	9.133404428	2.79955E-09	4.10552E-05	6.50269E-05

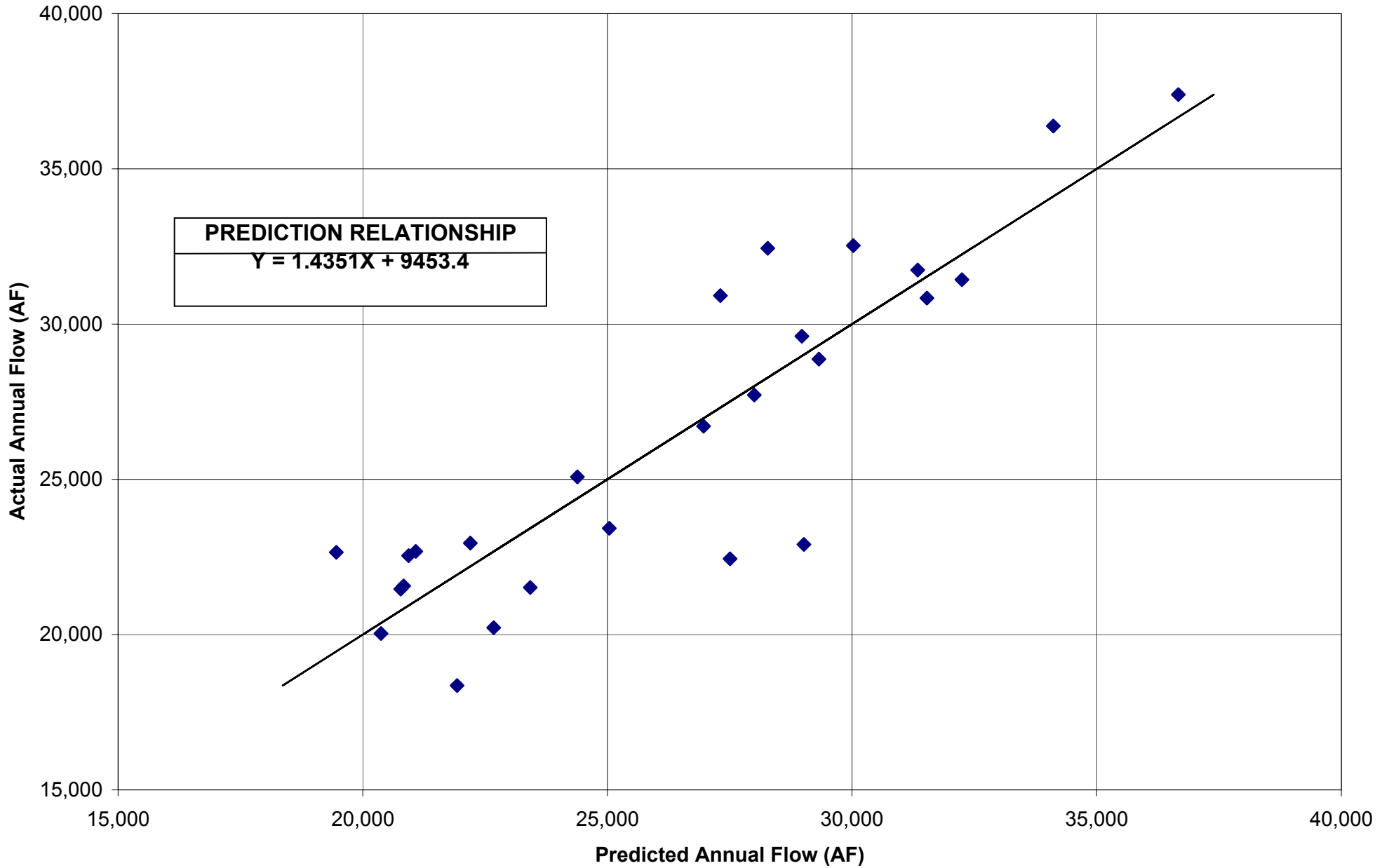
ANNUAL REGRESSION ANALYSIS — TRENDLINES

NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY (Station 06311400)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY (Station 06311400)



ANNUAL REGRESSION ANALYSIS — STATISTICS

POWDER RIVER NEAR KAYCEE, WY (Station 06312500)

y vs. x
SUMMARY OUTPUT

y = Station 06312500 Powder River Near Kaycee, WY
x = Station 06309200 Middle Fork Powder River Near Barnum, WY

<i>Regression Statistics</i>	
Multiple R	0.934689864
R Square	0.873645142
Adjusted R Square	0.810467713
Standard Error	10178.07361
Observations	4

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1432531868	1432531868	13.8284377	0.065310136
Residual	2	207186364.7	103593182.4		
Total	3	1639718233			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	36671.0978	14738.44218	2.488125771	0.130619354	-26743.34481	100085.5404
X Variable 1	2.669490078	0.717863302	3.71866074	0.065310136	-0.419228569	5.758208725

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06312500 Powder River Near Kaycee, WY
x = Station 06309200 Middle Fork Powder River Near Barnum, WY

<i>Regression Statistics</i>	
Multiple R	0.931260886
R Square	0.867246837
Adjusted R Square	0.800870256
Standard Error	0.12871008
Observations	4

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.216447693	0.216447693	13.06555446	0.068739114
Residual	2	0.033132569	0.016566285		
Total	3	0.249580263			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	5.258803189	1.688262128	3.114921019	0.089450853	-2.005207522	12.5228139
X Variable 1	0.622442042	0.172200733	3.614630612	0.068739114	-0.118478429	1.363362513

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06312500 Powder River Near Kaycee, WY
x = Station 06309200 Middle Fork Powder River Near Barnum, WY

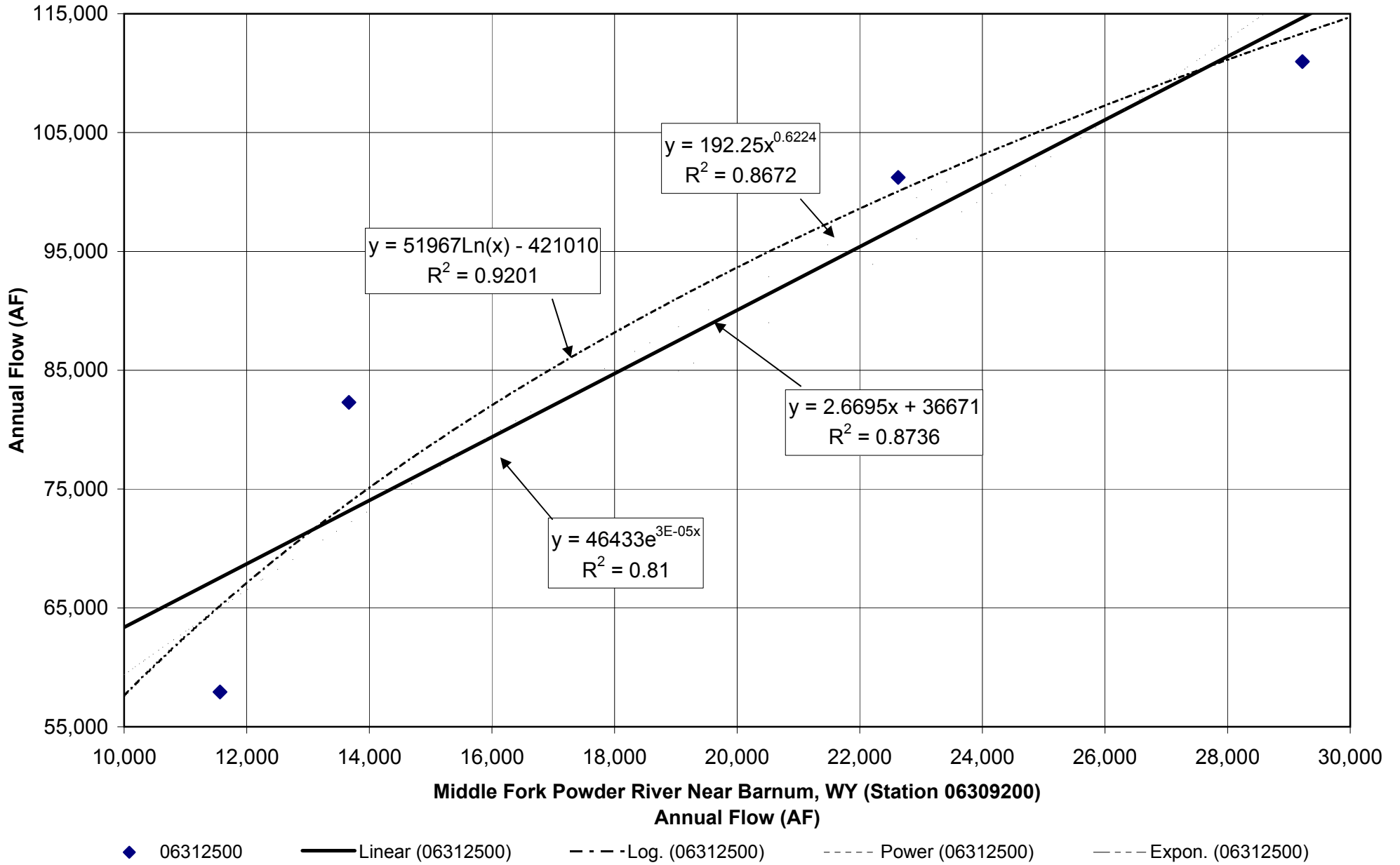
<i>Regression Statistics</i>	
Multiple R	0.900023575
R Square	0.810042436
Adjusted R Square	0.715063654
Standard Error	0.153963727
Observations	4

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.202170604	0.202170604	8.528667354	0.099976425
Residual	2	0.047409659	0.023704829		
Total	3	0.249580263			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	10.74576094	0.222948426	48.1984158	0.000430184	9.786490622	11.70503127
X Variable 1	3.17128E-05	1.08591E-05	2.92038822	0.099976425	-1.50102E-05	7.84359E-05

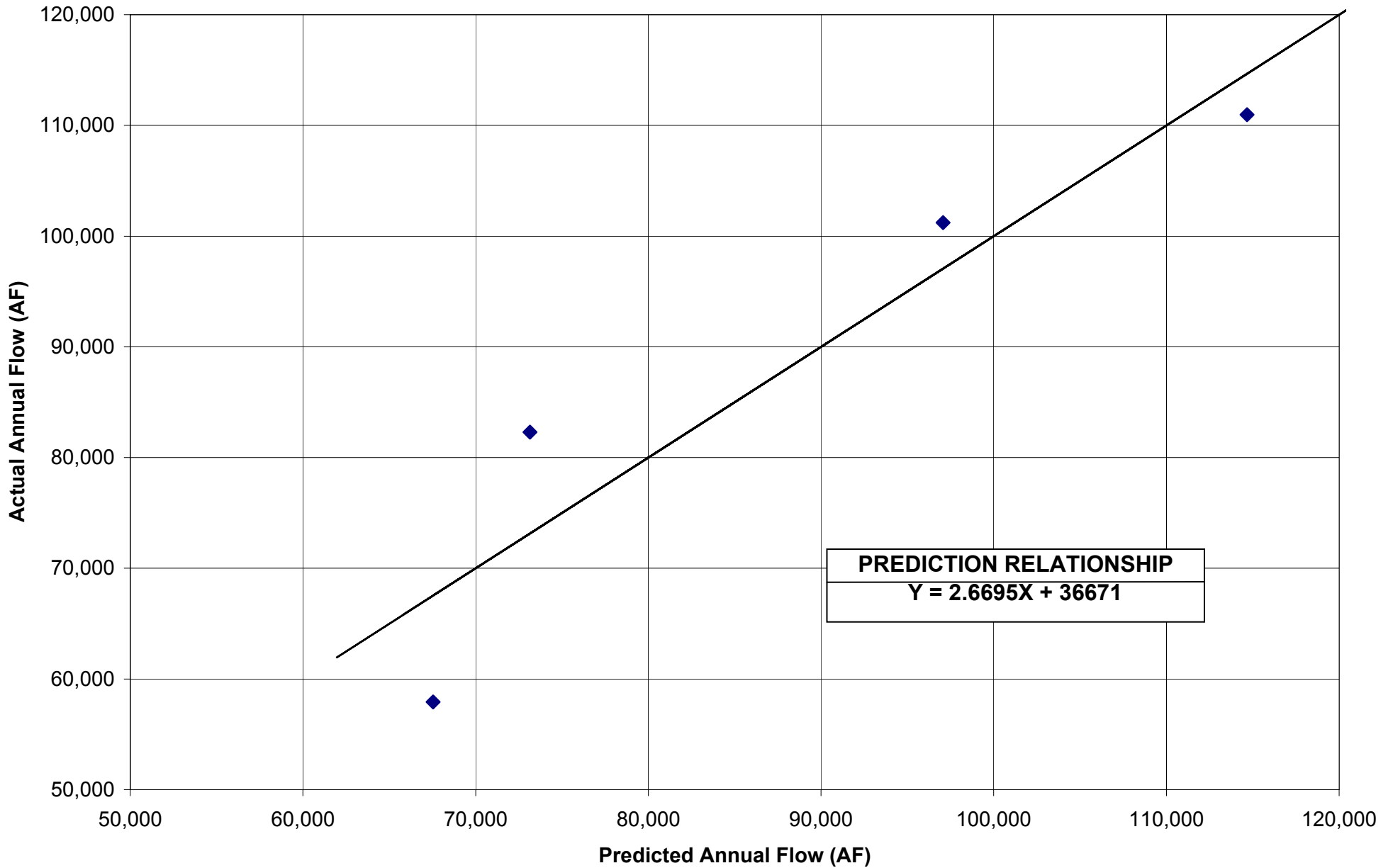
ANNUAL REGRESSION ANALYSIS — TRENDLINES

POWDER RIVER NEAR KAYCEE, WY (Station 06312500)



PREDICTED ANNUAL FLOW VERSUS ACTUAL FLOW

POWDER RIVER NEAR KAYCEE, WY (Station 06312500)



ANNUAL REGRESSION ANALYSIS — STATISTICS
SOUTH FORK POWDER RIVER NEAR KAYCEE, WY (Station 06313000)

y vs. x
SUMMARY OUTPUT

y = Station 06313000 South Fork Powder River Near Kaycee, WY
x = Station 06317000 Powder River at Arvada, WY

<i>Regression Statistics</i>	
Multiple R	0.956064777
R Square	0.914059857
Adjusted R Square	0.828119715
Standard Error	4100.680502
Observations	3

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	178850613	178850613	10.63600583	0.189410728
Residual	1	16815580.58	16815580.58		
Total	2	195666193.6			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	307.3442959	8817.995899	0.034854212	0.977820098	-111735.4369	112350.1255
X Variable 1	0.134068476	0.041109045	3.261288983	0.189410728	-0.388269231	0.656406184

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06313000 South Fork Powder River Near Kaycee, WY
x = Station 06317000 Powder River at Arvada, WY

<i>Regression Statistics</i>	
Multiple R	0.95279312
R Square	0.90781473
Adjusted R Square	0.815629459
Standard Error	0.147998311
Observations	3

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.215699535	0.215699535	9.847719984	0.196390839
Residual	1	0.0219035	0.0219035		
Total	2	0.237603035			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.782239436	3.500681354	-0.223453481	0.860044263	-45.26242287	43.697944
X Variable 1	0.900462257	0.286944344	3.138107707	0.196390839	-2.745495704	4.546420219

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06313000 South Fork Powder River Near Kaycee, WY
x = Station 06317000 Powder River at Arvada, WY

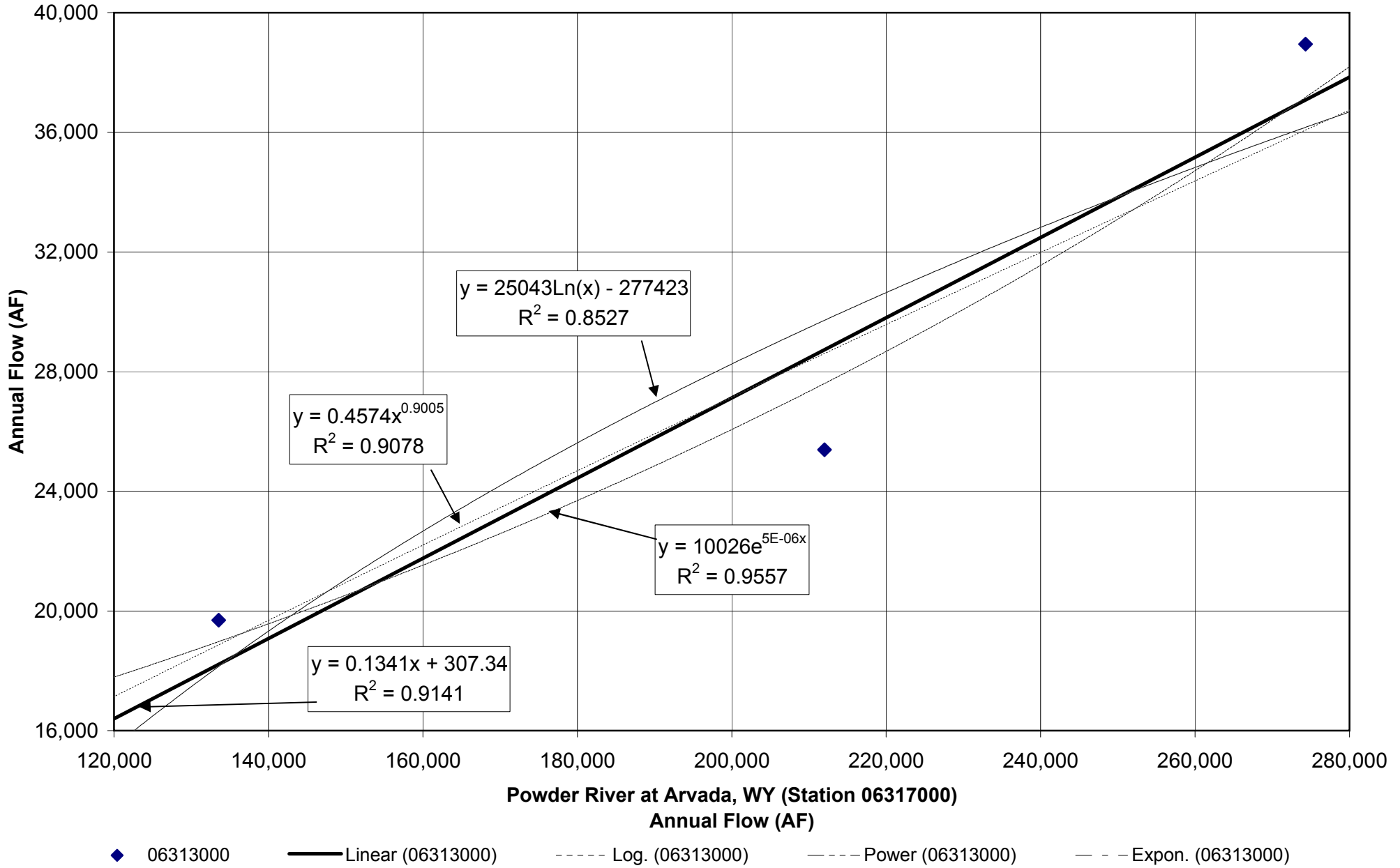
<i>Regression Statistics</i>	
Multiple R	0.977596478
R Square	0.955694875
Adjusted R Square	0.911389749
Standard Error	0.102601327
Observations	3

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.227076003	0.227076003	21.57075212	0.135010463
Residual	1	0.010527032	0.010527032		
Total	2	0.237603035			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.212920241	0.220631205	41.7571044	0.01524287	6.409546995	12.01629349
X Variable 1	4.77713E-06	1.02857E-06	4.644432379	0.135010463	-8.29205E-06	1.78463E-05

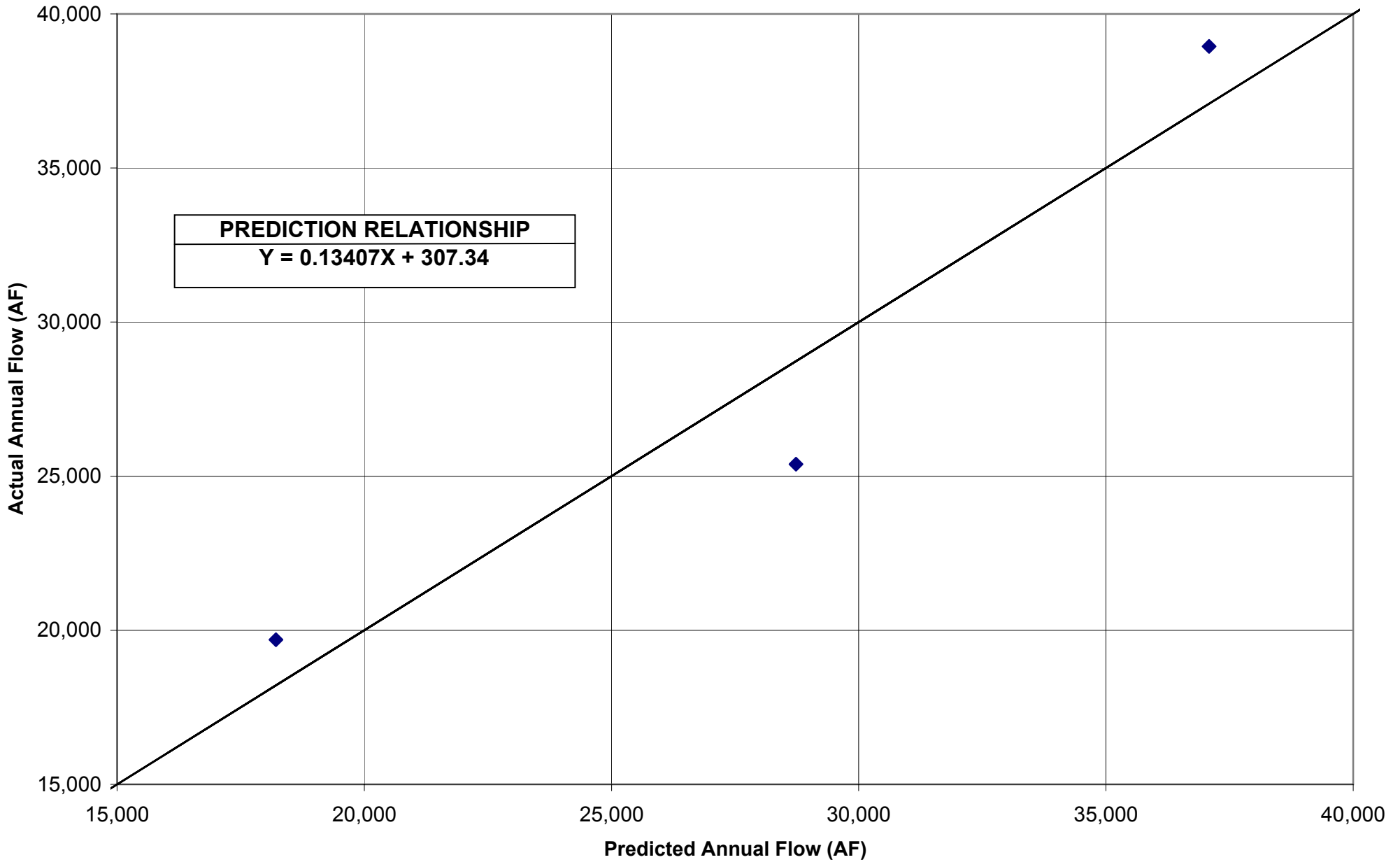
ANNUAL REGRESSION ANALYSIS — TRENDLINES

SOUTH FORK POWDER RIVER NEAR KAYCEE, WY (Station 06313000)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

SOUTH FORK POWDER RIVER NEAR KAYCEE, WY (Station 06313000)



ANNUAL REGRESSION ANALYSIS — STATISTICS

SALT CREEK NEAR SUSSEX, WY (Station 06313400)

y vs. x
SUMMARY OUTPUT

y = Station 06313400
x = Station 06313500

Salt Creek Near Sussex, WY
Powder River at Sussex, WY

<i>Regression Statistics</i>	
Multiple R	0.867520834
R Square	0.752592398
Adjusted R Square	0.734920426
Standard Error	5858.415647
Observations	16

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1461622383	1461622383	42.58678185	1.34334E-05
Residual	14	480494474.5	34321033.89		
Total	15	1942116858			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	10815.00943	3651.710943	2.961628013	0.010305903	2982.861439	18647.15741
X Variable 1	0.141717405	0.021716297	6.525854875	1.34334E-05	0.095140538	0.188294271

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06313400
x = Station 06313500

Salt Creek Near Sussex, WY
Powder River at Sussex, WY

<i>Regression Statistics</i>	
Multiple R	0.804620068
R Square	0.647413453
Adjusted R Square	0.6222287
Standard Error	0.200110304
Observations	16

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.029397054	1.029397054	25.70656317	0.000170837
Residual	14	0.560617873	0.040044134		
Total	15	1.590014927			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	2.558865351	1.535904773	1.666031252	0.117915205	-0.73532569	5.853056392
X Variable 1	0.655985692	0.129381552	5.070164018	0.000170837	0.378489614	0.93348177

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06313400
x = Station 06313500

Salt Creek Near Sussex, WY
Powder River at Sussex, WY

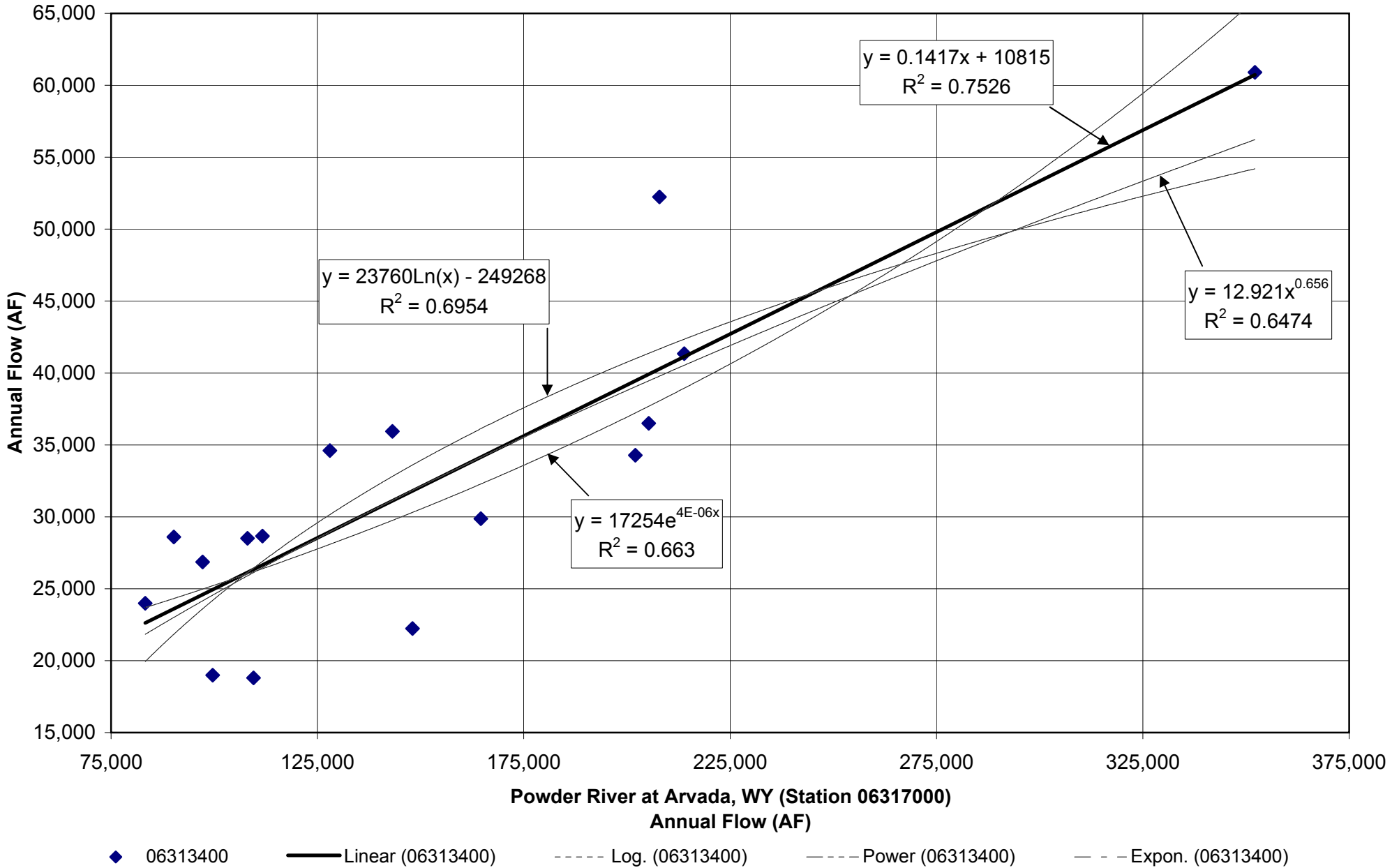
<i>Regression Statistics</i>	
Multiple R	0.814226699
R Square	0.662965117
Adjusted R Square	0.638891197
Standard Error	0.195647368
Observations	16

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.054124432	1.054124432	27.53872703	0.000123355
Residual	14	0.535890495	0.038277892		
Total	15	1.590014927			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.755777104	0.121952363	79.99662193	4.95213E-20	9.494215066	10.01733914
X Variable 1	3.80585E-06	7.25236E-07	5.247735419	0.000123355	2.25037E-06	5.36133E-06

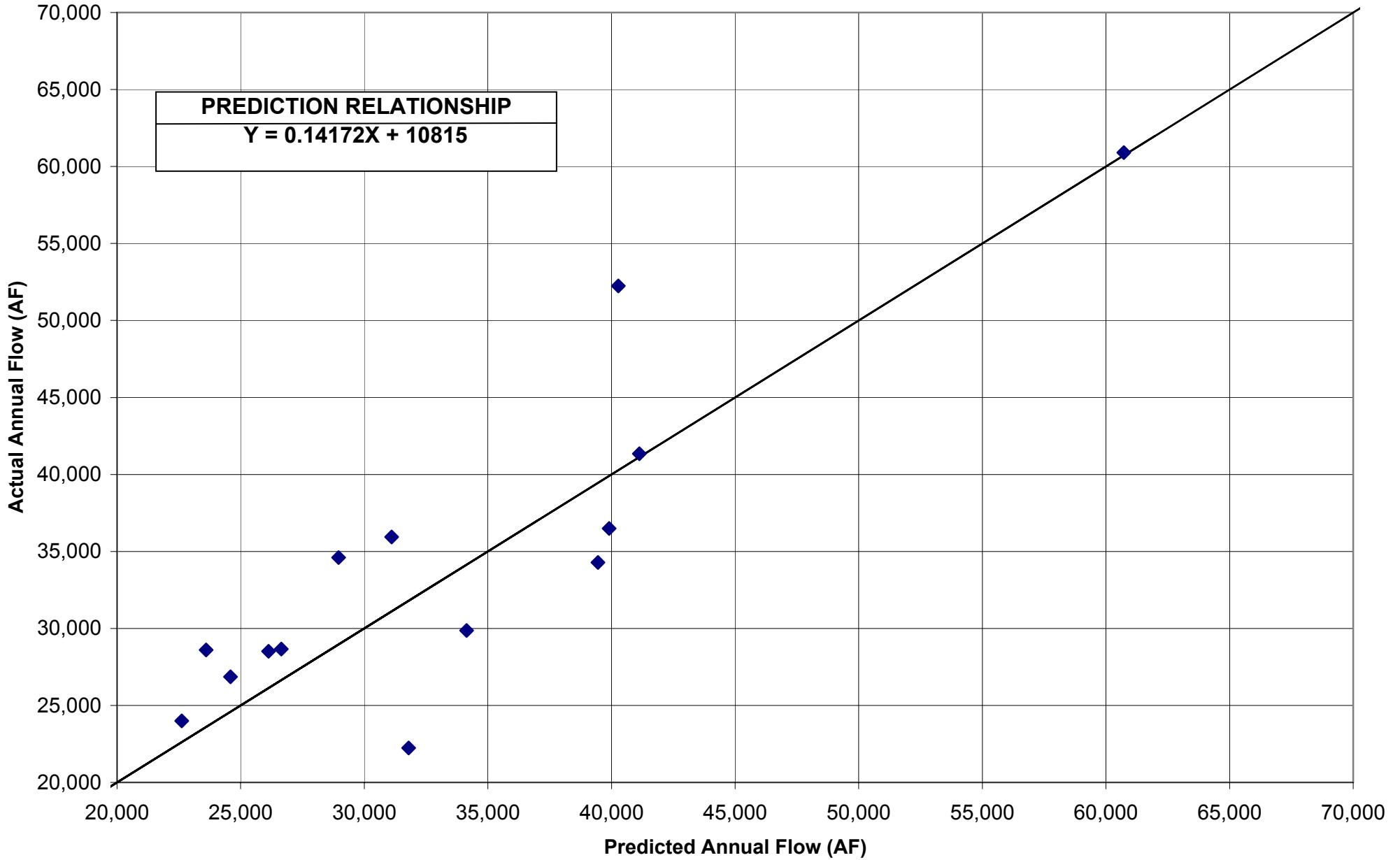
ANNUAL REGRESSION ANALYSIS — TRENDLINES

SALT CREEK NEAR SUSSEX, WY (Station 06313400)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

SALT CREEK NEAR SUSSEX, WY (Station 06313400)



ANNUAL REGRESSION ANALYSIS — STATISTICS
LITTLE SOURDOUGH CREEK NEAR BUFFALO, WY (Station 06317340)

y vs. x
SUMMARY OUTPUT

y = Station 06317340
x = Station 06317000

Little Sourdough Creek Near Buffalo, WY
Powder River Near Arvada, WY

<i>Regression Statistics</i>	
Multiple R	0.993461431
R Square	0.986965616
Adjusted R Square	0.973931231
Standard Error	51.20118651
Observations	3

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	198505.0452	198505.0452	75.72015577	0.072840579
Residual	1	2621.5615	2621.5615		
Total	2	201126.6067			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-207.8101392	100.4018195	-2.069784593	0.286523802	-1483.530748	1067.91047
X Variable 1	0.004785425	0.000549939	8.701732918	0.072840579	-0.002202187	0.011773037

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06317340
x = Station 06317000

Little Sourdough Creek Near Buffalo, WY
Powder River Near Arvada, WY

<i>Regression Statistics</i>	
Multiple R	0.995767671
R Square	0.991553254
Adjusted R Square	0.983106509
Standard Error	0.065529229
Observations	3

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.504076846	0.504076846	117.3887914	0.058591974
Residual	1	0.00429408	0.00429408		
Total	2	0.508370926			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-9.332005784	1.448459459	-6.442711065	0.09803017	-27.73634938	9.072337808
X Variable 1	1.305077367	0.120454476	10.83461081	0.058591974	-0.225435308	2.835590042

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06317340
x = Station 06317000

Little Sourdough Creek Near Buffalo, WY
Powder River Near Arvada, WY

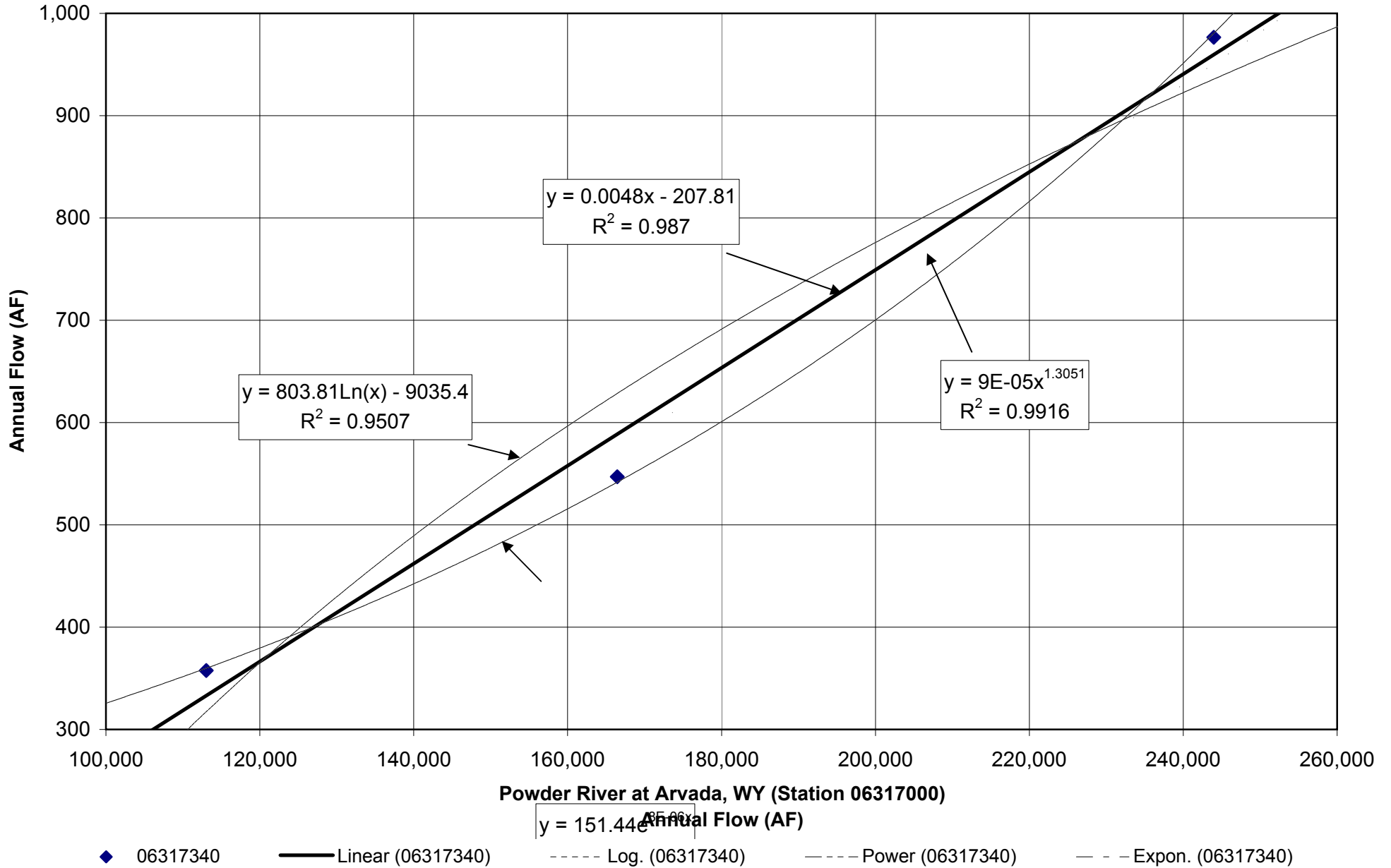
<i>Regression Statistics</i>	
Multiple R	0.99984962
R Square	0.999699263
Adjusted R Square	0.999398525
Standard Error	0.012364715
Observations	3

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.50821804	0.50821804	3324.159507	0.011040676
Residual	1	0.000152886	0.000152886		
Total	2	0.508370926			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	5.020165599	0.024246311	207.0486362	0.003074711	4.712088329	5.328242869
X Variable 1	7.65702E-06	1.32806E-07	57.65552451	0.011040676	5.96956E-06	9.34448E-06

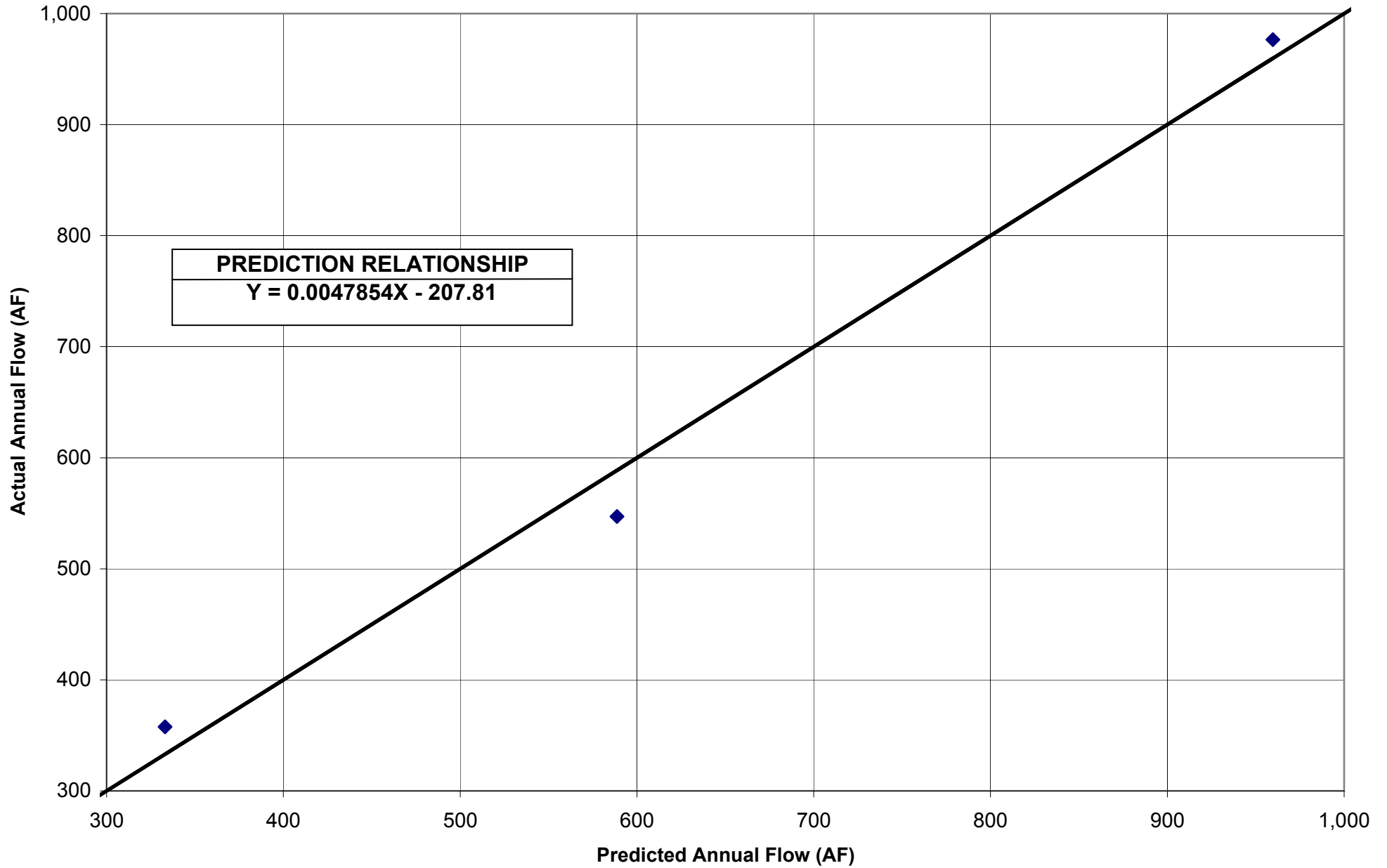
ANNUAL REGRESSION ANALYSIS — TRENDLINES

LITTLE SOURDOUGH CREEK NEAR BUFFALO, WY (Station 06317340)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

LITTLE SOURDOUGH CREEK NEAR BUFFALO, WY (Station 06317340)



ANNUAL REGRESSION ANALYSIS — STATISTICS

CLEAR CREEK NEAR BUFFALO, WY (Station 06318500)

y vs. x
SUMMARY OUTPUT

y = Station 06318500 Clear Creek Near Buffalo, WY
x = Station SEO Gage Clear Creek in Buffalo City Park, Buffalo, WY

<i>Regression Statistics</i>	
Multiple R	0.895138928
R Square	0.8012737
Adjusted R Square	0.791810543
Standard Error	5637.715306
Observations	23

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2691231884	2691231884	84.67297856	8.14478E-09
Residual	21	667460511.2	31783833.87		
Total	22	3358692395			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	24885.68599	2926.697931	8.50299094	3.05634E-08	18799.2834	30972.08858
X Variable 1	0.735481267	0.079928046	9.201792139	8.14478E-09	0.569261767	0.901700768

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06318500 Clear Creek Near Buffalo, WY
x = Station SEO Gage Clear Creek in Buffalo City Park, Buffalo, WY

<i>Regression Statistics</i>	
Multiple R	0.881152544
R Square	0.776429807
Adjusted R Square	0.765783607
Standard Error	0.126468878
Observations	23

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.166473622	1.166473622	72.9302314	2.84555E-08
Residual	21	0.335881919	0.015994377		
Total	22	1.502355541			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	6.061711392	0.553030508	10.96089872	3.79605E-10	4.911621291	7.211801494
X Variable 1	0.457505579	0.053572585	8.539919871	2.84555E-08	0.346095271	0.568915887

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06318500 Clear Creek Near Buffalo, WY
x = Station SEO Gage Clear Creek in Buffalo City Park, Buffalo, WY

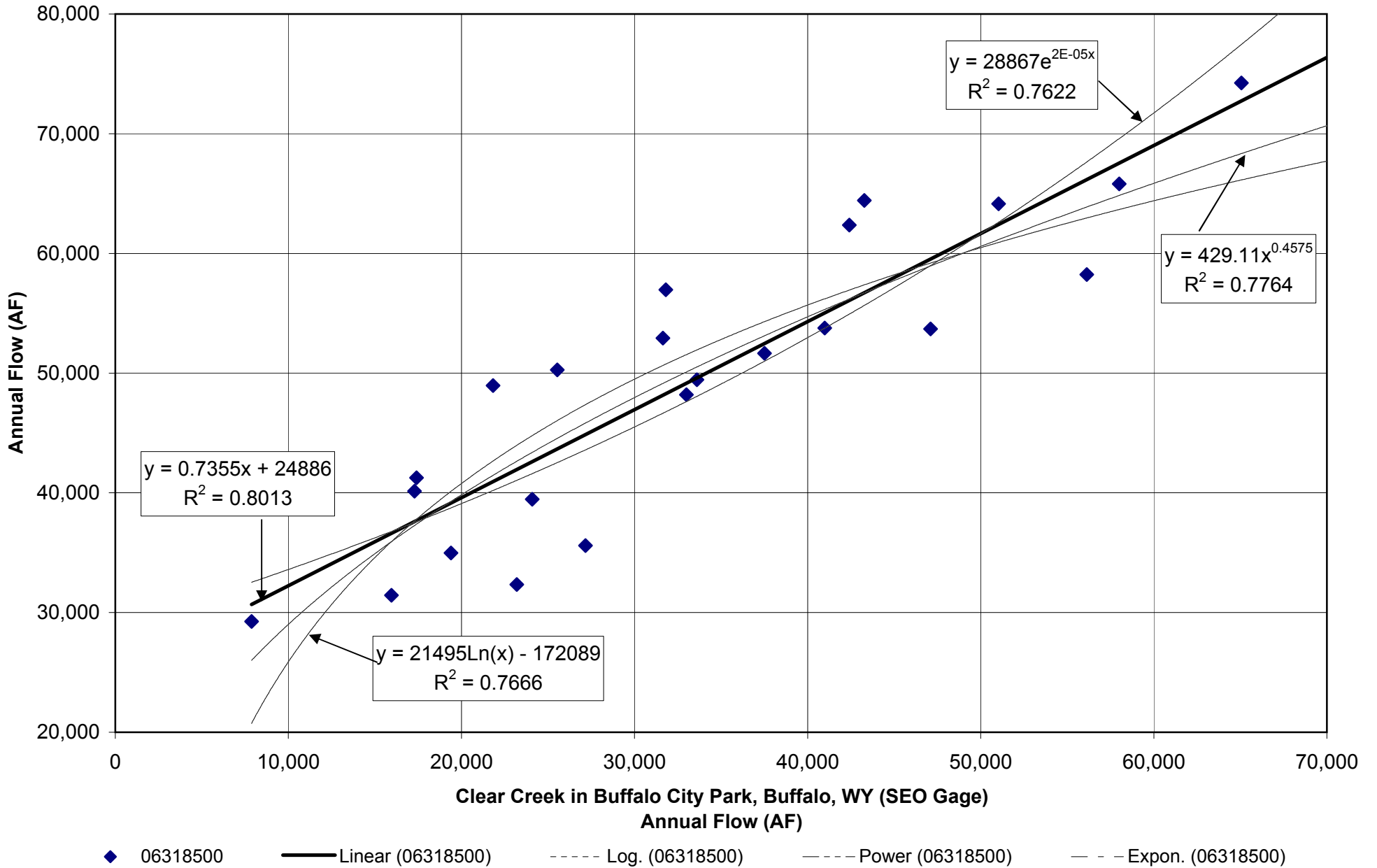
<i>Regression Statistics</i>	
Multiple R	0.873028295
R Square	0.762178404
Adjusted R Square	0.750853566
Standard Error	0.130437468
Observations	23

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.145062948	1.145062948	67.30148458	5.48974E-08
Residual	21	0.357292593	0.017013933		
Total	22	1.502355541			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	10.27044891	0.067713789	151.6744079	2.06931E-33	10.12963035	10.41126747
X Variable 1	1.51709E-05	1.84926E-06	8.203748203	5.48974E-08	1.13251E-05	1.90166E-05

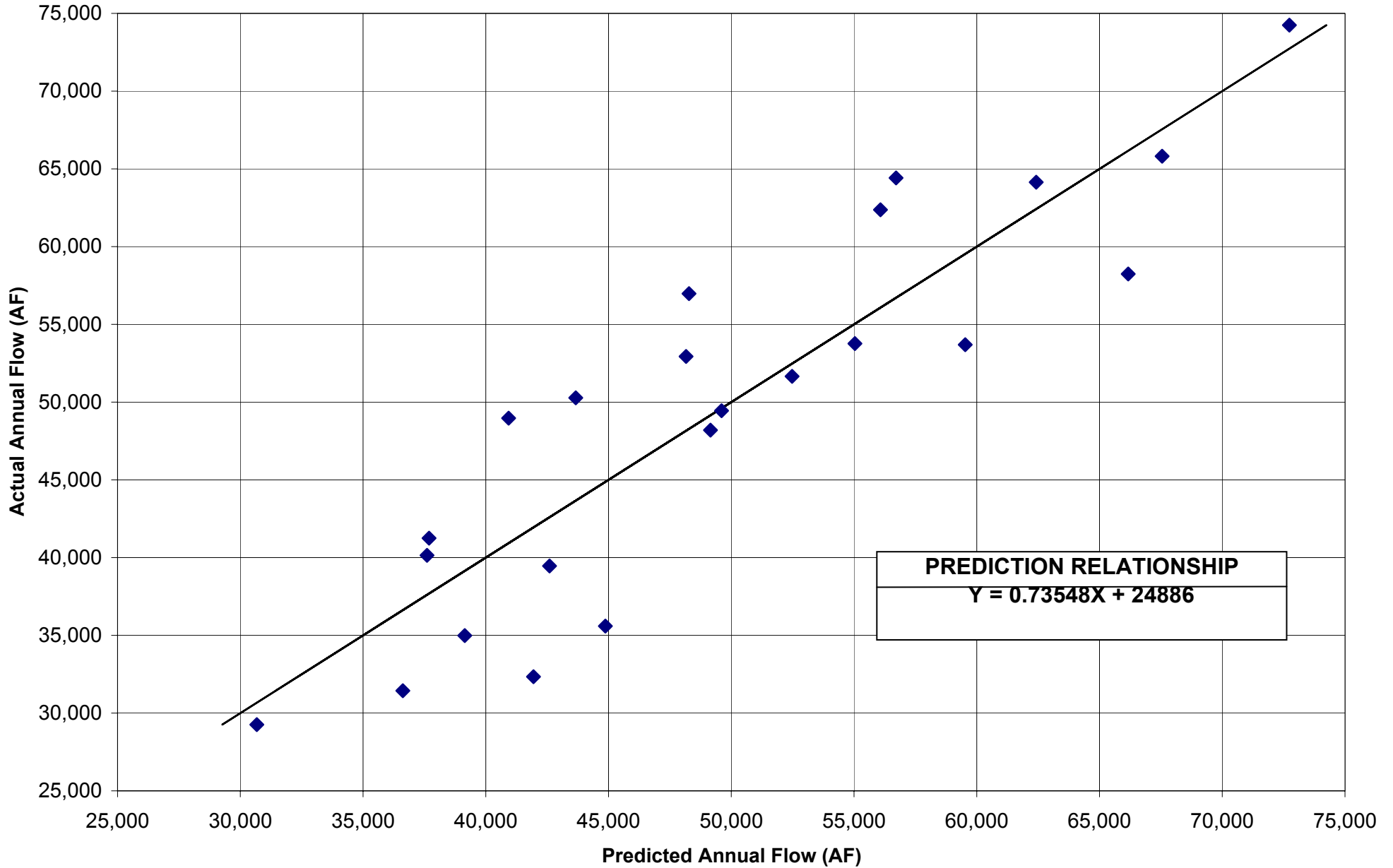
ANNUAL REGRESSION ANALYSIS — TRENDLINES

CLEAR CREEK NEAR BUFFALO, WY (Station 06318500)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

CLEAR CREEK NEAR BUFFALO, WY (Station 06318500)



ANNUAL REGRESSION ANALYSIS — STATISTICS
SOUTH PINEY CREEK NEAR STORY, WY (Station 06321000)

y vs. x
SUMMARY OUTPUT

y = Station 06321000 South Piney Creek Near Story, WY
x = Station 06311000 North Fork Powder River Near Hazelton, WY

<i>Regression Statistics</i>	
Multiple R	0.915827379
R Square	0.838739788
Adjusted R Square	0.806487746
Standard Error	4958.408869
Observations	7

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	639373592.9	639373592.9	26.00578836	0.003771473
Residual	5	122929092.6	24585818.51		
Total	6	762302685.4			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	28318.68378	6660.222836	4.251912358	0.008077028	11198.06392	45439.30365
X Variable 1	2.848029031	0.558482282	5.099587077	0.003771473	1.412406966	4.283651096

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06321000 South Piney Creek Near Story, WY
x = Station 06311000 North Fork Powder River Near Hazelton, WY

<i>Regression Statistics</i>	
Multiple R	0.8752588
R Square	0.766077967
Adjusted R Square	0.719293561
Standard Error	0.090216598
Observations	7

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.133273786	0.133273786	16.37464327	0.009858747
Residual	5	0.040695172	0.008139034		
Total	6	0.173968958			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	6.060168612	1.222224928	4.958308795	0.004254359	2.918344546	9.201992678
X Variable 1	0.531098753	0.131246992	4.046559437	0.009858747	0.193718171	0.868479335

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06321000 South Piney Creek Near Story, WY
x = Station 06311000 North Fork Powder River Near Hazelton, WY

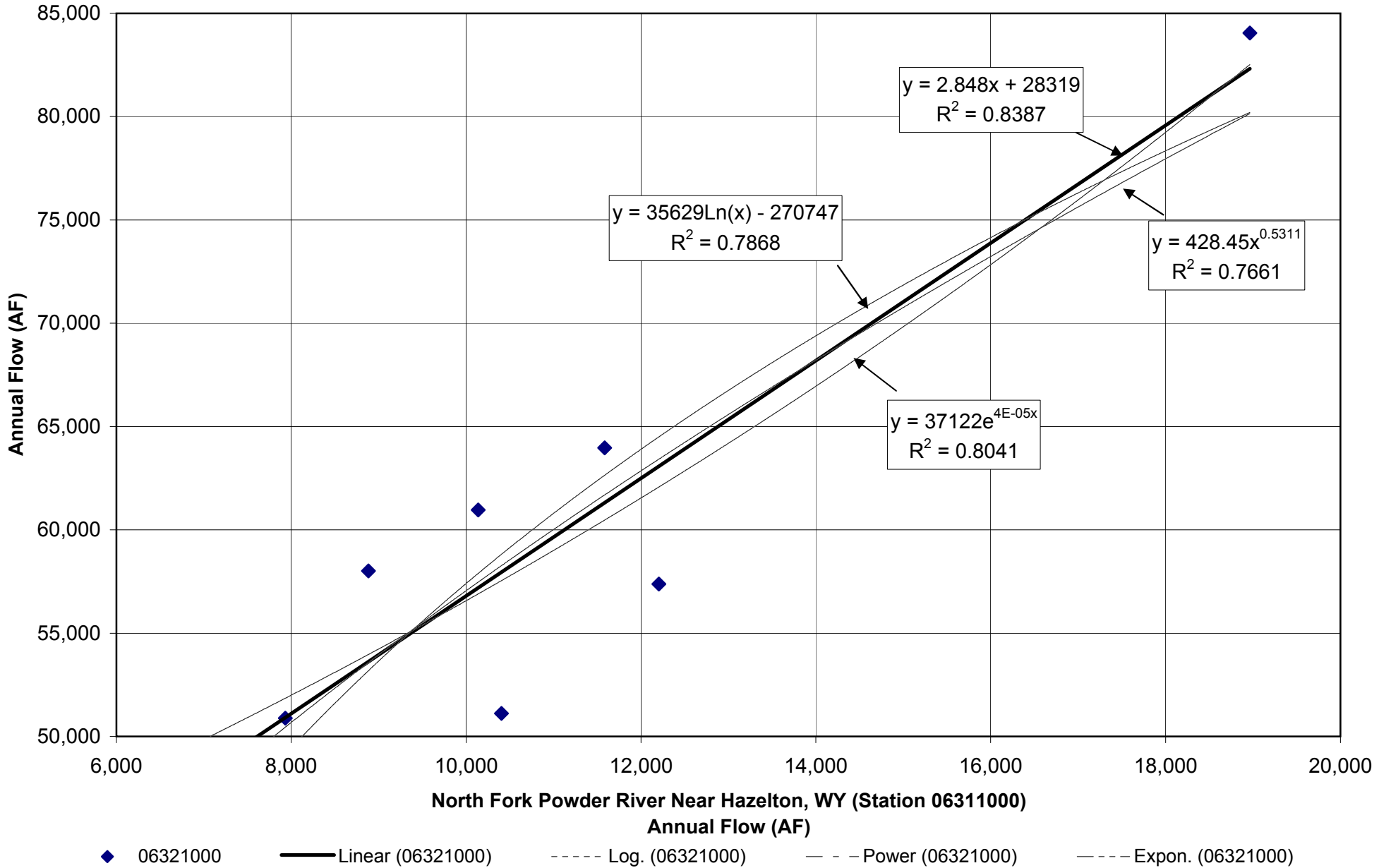
<i>Regression Statistics</i>	
Multiple R	0.896693243
R Square	0.804058772
Adjusted R Square	0.764870526
Standard Error	0.082568385
Observations	7

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.139881267	0.139881267	20.51785577	0.006227406
Residual	5	0.034087691	0.006817538		
Total	6	0.173968958			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	10.52197513	0.110907321	94.87178116	2.46662E-09	10.23687925	10.80707101
X Variable 1	4.21257E-05	9.29996E-06	4.529663979	0.006227406	1.82194E-05	6.60319E-05

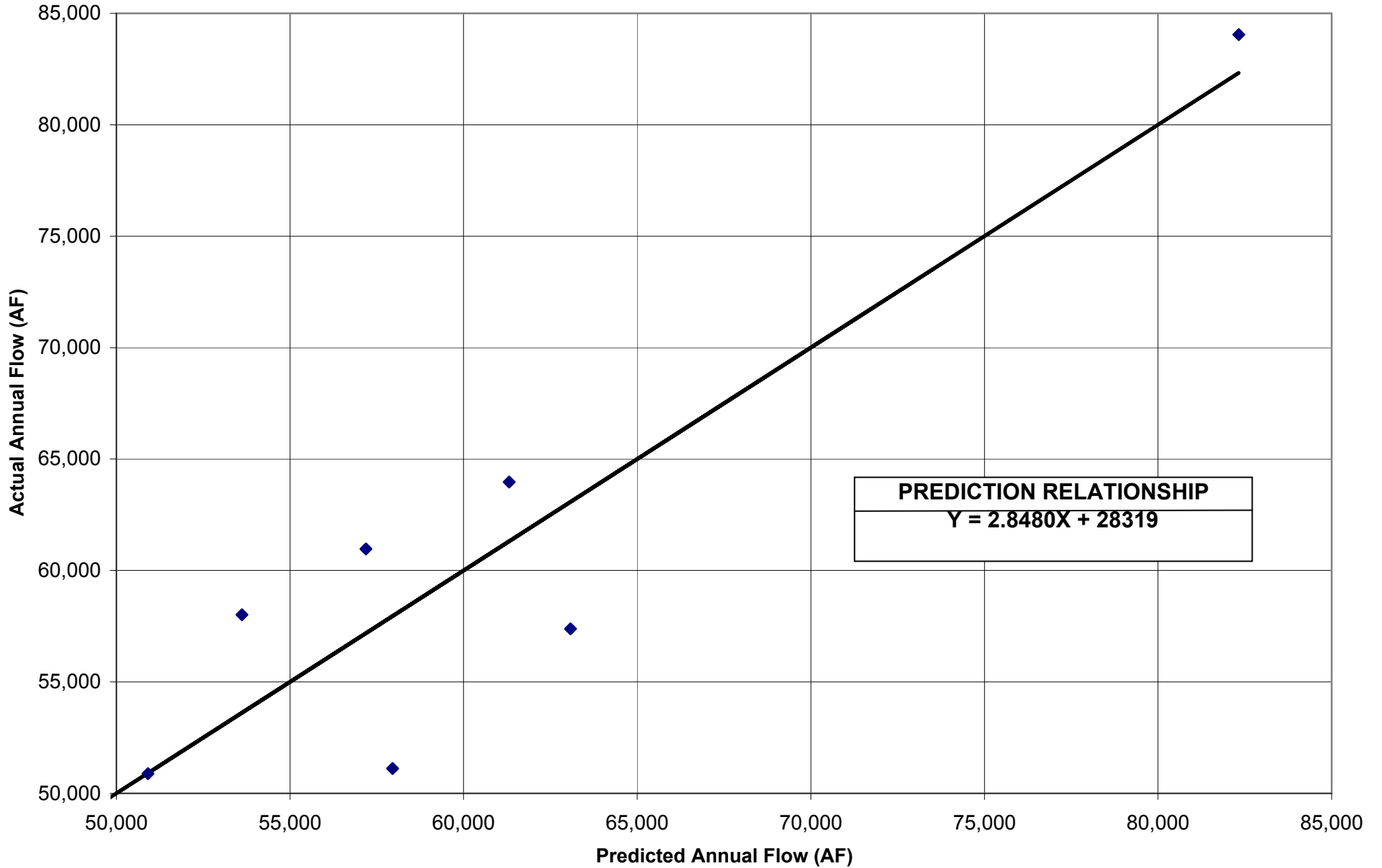
ANNUAL REGRESSION ANALYSIS — TRENDLINES

SOUTH PINEY CREEK NEAR STORY, WY (Station 06321000)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

SOUTH PINEY CREEK NEAR STORY, WY (Station 06321000)



IRRIGATION SEASON REGRESSION ANALYSIS — STATISTICS
PINEY CREEK BELOW LAKE DESMET TUNNEL INTAKE, WY (SEO Gage)

y vs. x
SUMMARY OUTPUT

y = Station SEO Gage Piney Creek Below Lake DeSmet Tunnel Intake, WY
x = Station 06323000 Piney Creek at Kearney, WY

<i>Regression Statistics</i>	
Multiple R	0.935405677
R Square	0.87498378
Adjusted R Square	0.86605405
Standard Error	9634.511121
Observations	16

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	9095384024	9095384024	97.98546901	1.05946E-07
Residual	14	1299533264	92823804.54		
Total	15	10394917287			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-10655.21402	5266.964723	-2.023027414	0.062599338	-21951.7399	641.3118474
X Variable 1	0.976698564	0.098668769	9.898760984	1.05946E-07	0.765074913	1.188322216

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station SEO Gage Piney Creek Below Lake DeSmet Tunnel Intake, WY
x = Station 06323000 Piney Creek at Kearney, WY

<i>Regression Statistics</i>	
Multiple R	0.803116991
R Square	0.644996901
Adjusted R Square	0.619639537
Standard Error	0.413830609
Observations	16

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	4.356109021	4.356109021	25.43627551	0.000179482
Residual	14	2.39758082	0.171255773		
Total	15	6.753689842			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.354913895	1.967202085	0.180415575	0.859411864	-3.864318703	4.574146492
X Variable 1	0.932163662	0.184826998	5.043438857	0.000179482	0.535748825	1.328578499

ln(y) vs. x
SUMMARY OUTPUT

y = Station SEO Gage Piney Creek Below Lake DeSmet Tunnel Intake, WY
x = Station 06323000 Piney Creek at Kearney, WY

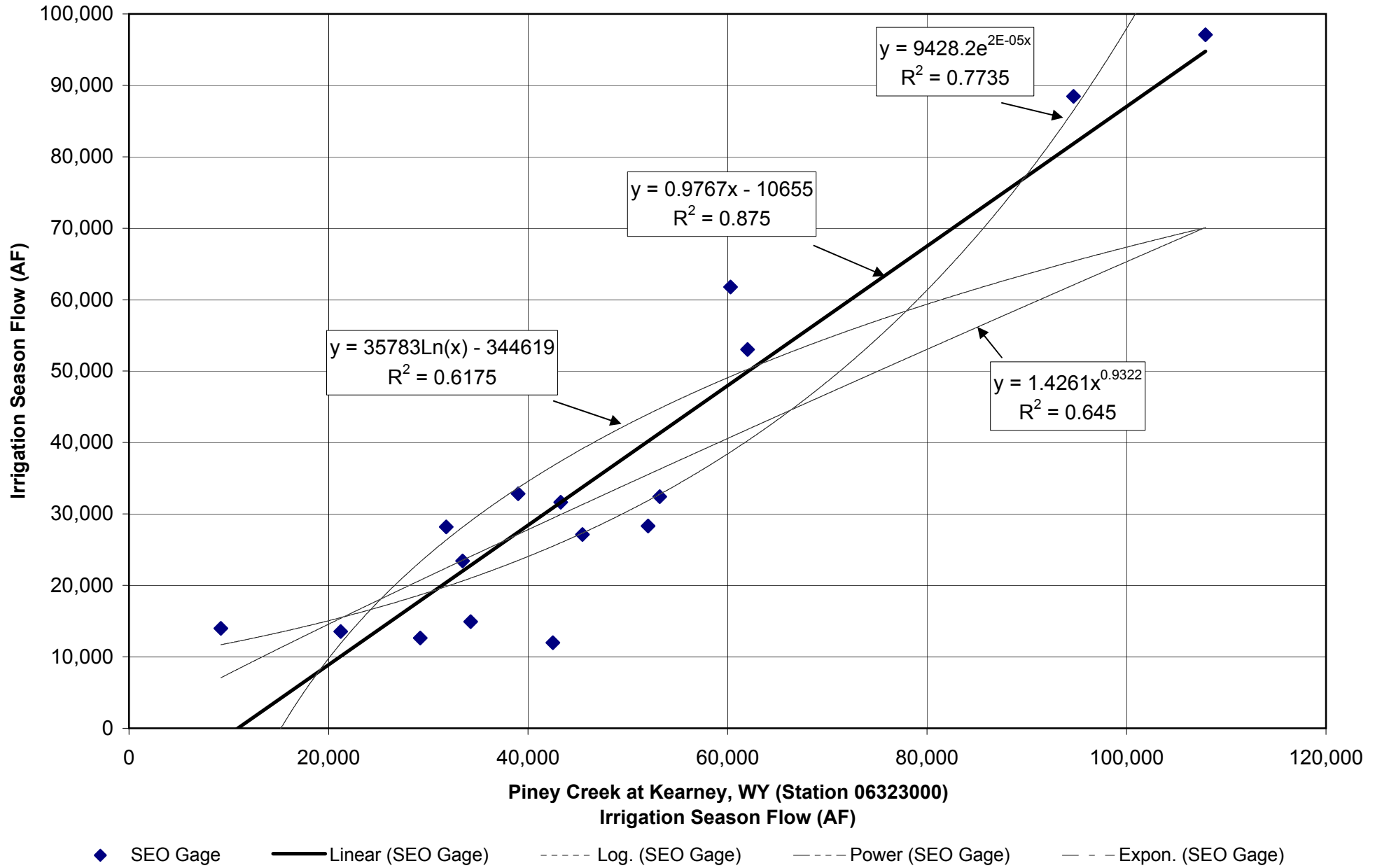
<i>Regression Statistics</i>	
Multiple R	0.879495105
R Square	0.773511639
Adjusted R Square	0.757333899
Standard Error	0.330544156
Observations	16

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	5.224057699	5.224057699	47.81333088	7.15422E-06
Residual	14	1.529632143	0.109259439		
Total	15	6.753689842			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.151460708	0.180700856	50.64425764	2.918E-17	8.763895573	9.539025843
X Variable 1	2.34074E-05	3.38516E-06	6.914718424	7.15422E-06	1.6147E-05	3.06679E-05

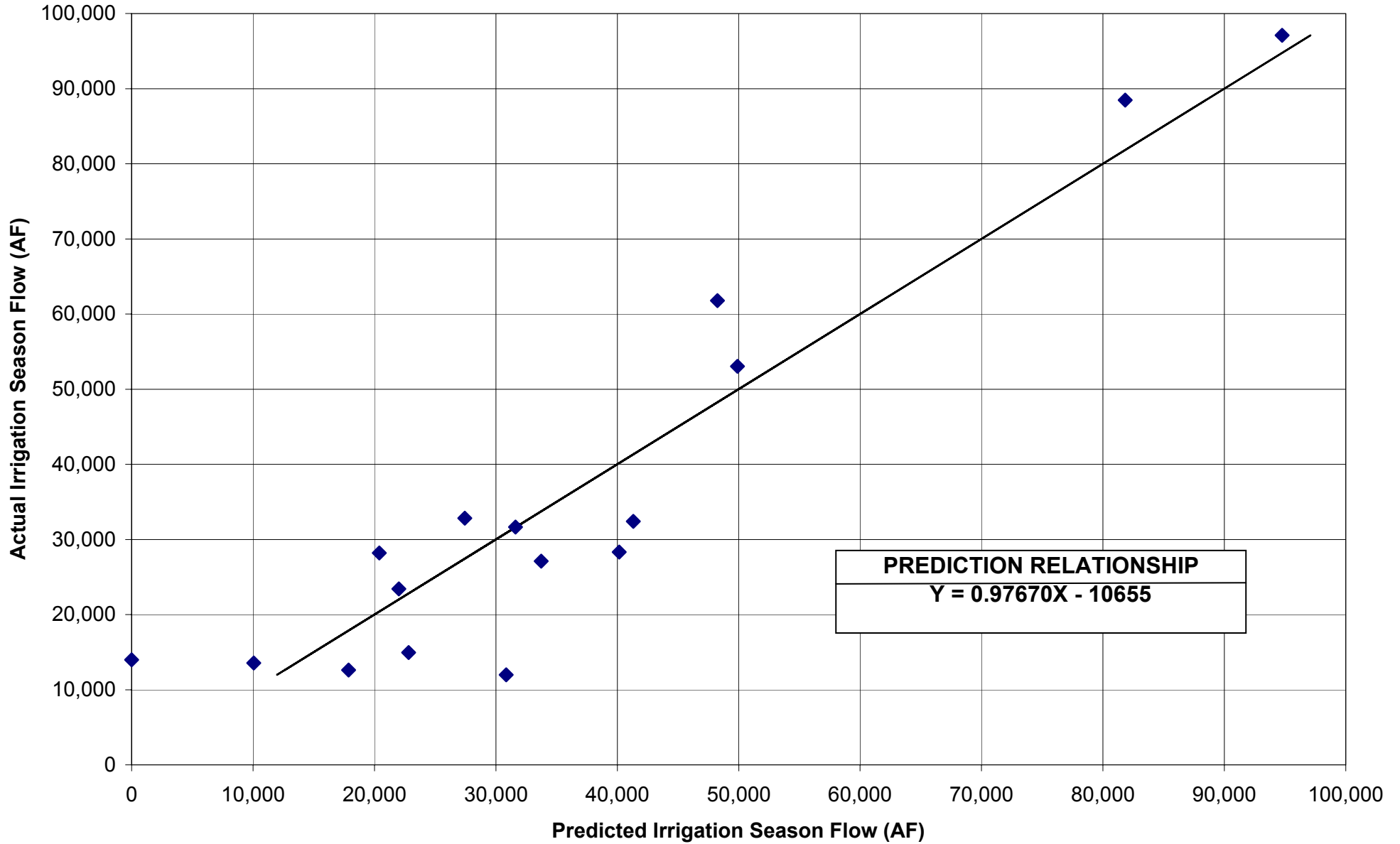
IRRIGATION SEASON REGRESSION ANALYSIS — TRENDLINES

PINEY CREEK BELOW LAKE DESMET TUNNEL INTAKE (SEO Gage)



PREDICTED IRRIGATION SEASON FLOW VERSUS ACTUAL IRRIGATION SEASON FLOW

PINEY CREEK BELOW LAKE DESMET TUNNEL INTAKE (SEO Gage)



IRRIGATION SEASON REGRESSION ANALYSIS — STATISTICS

PINEY CREEK AT UCROSS, WY (Station 06323500)

y vs. x
SUMMARY OUTPUT

y = Station 06323500 Piney Creek at Ucross, WY
x = Station 06323000 Piney Creek at Kearney, WY

<i>Regression Statistics</i>	
Multiple R	0.884675854
R Square	0.782651367
Adjusted R Square	0.769866153
Standard Error	13102.40094
Observations	19

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	10509017772	10509017772	61.21535281	4.93434E-07
Residual	17	2918439475	171672910.3		
Total	18	13427457246			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-3636.243319	8319.597334	-0.437069629	0.667562137	-21189.08389	13916.59725
X Variable 1	1.079198701	0.13793397	7.82402408	4.93434E-07	0.788183056	1.370214345

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06323500 Piney Creek at Ucross, WY
x = Station 06323000 Piney Creek at Kearney, WY

<i>Regression Statistics</i>	
Multiple R	0.770747095
R Square	0.594051085
Adjusted R Square	0.570171737
Standard Error	0.371809166
Observations	19

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3.439073935	3.439073935	24.87719036	0.000112435
Residual	17	2.350114947	0.138242056		
Total	18	5.789188881			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-1.636315321	2.498569254	-0.654900927	0.521295049	-6.907843017	3.635212375
X Variable 1	1.146116528	0.229788405	4.987703916	0.000112435	0.661304694	1.630928361

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06323500 Piney Creek at Ucross, WY
x = Station 06323000 Piney Creek at Kearney, WY

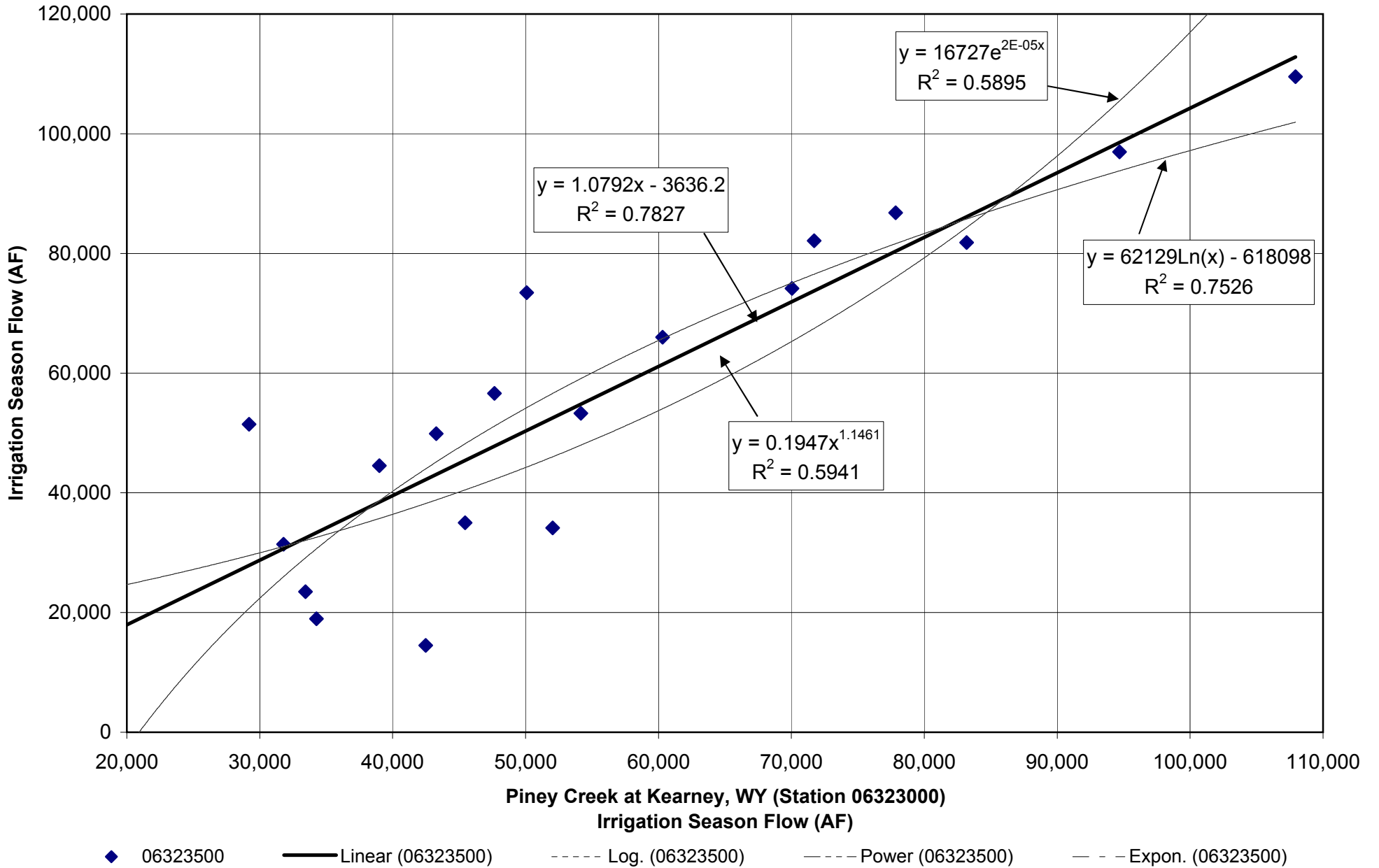
<i>Regression Statistics</i>	
Multiple R	0.767798731
R Square	0.589514892
Adjusted R Square	0.565368709
Standard Error	0.373880747
Observations	19

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3.412813057	3.412813057	24.41441348	0.000123974
Residual	17	2.376375825	0.139786813		
Total	18	5.789188881			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	9.724757754	0.237402083	40.96323693	1.96423E-18	9.223882442	10.22563307
X Variable 1	1.94481E-05	3.93599E-06	4.941094361	0.000123974	1.11439E-05	2.77523E-05

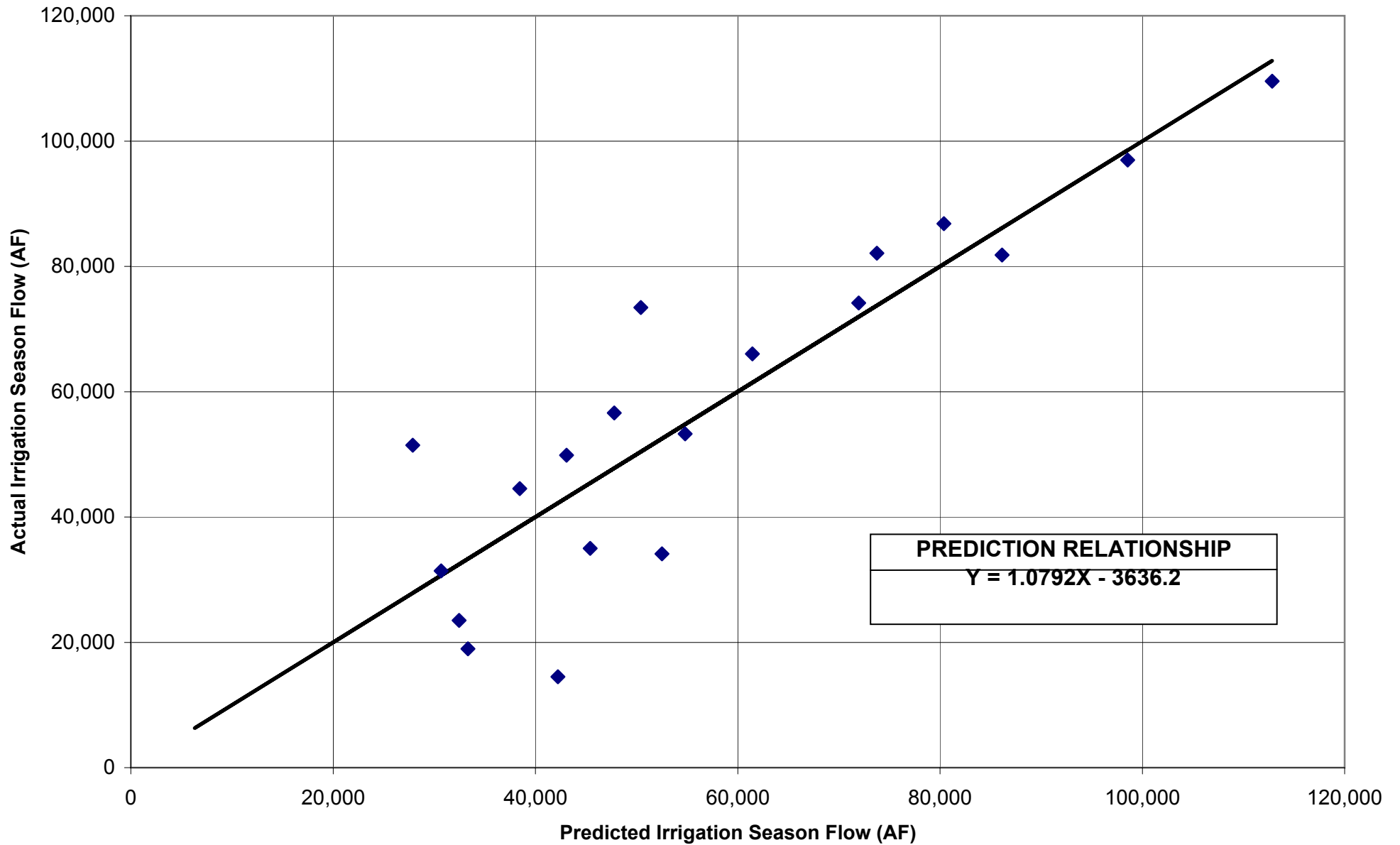
IRRIGATION SEASON REGRESSION ANALYSIS — TRENDLINES

PINEY CREEK AT UCROSS, WY (Station 06323500)



PREDICTED IRRIGATION SEASON FLOW VERSUS ACTUAL IRRIGATION SEASON FLOW

PINEY CREEK AT UCROSS, WY (Station 06323500)



ANNUAL REGRESSION ANALYSIS — STATISTICS

LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY (Station 06324890)

y vs. x
SUMMARY OUTPUT

y = Station 06324890 Little Powder River Below Corral Creek, Near Weston, WY

x = Station 06426500 Belle Fourche River Below Moorcroft, WY

<i>Regression Statistics</i>	
Multiple R	0.99555641
R Square	0.991132565
Adjusted R Square	0.988915706
Standard Error	706.741576
Observations	6

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	223313508.7	223313508.7	447.0887213	2.95744E-05
Residual	4	1997934.621	499483.6552		
Total	5	225311443.3			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-463.9221192	365.4521802	-1.269446851	0.273113505	-1478.582138	550.7378993
X Variable 1	0.184832476	0.008741409	21.14447259	2.95744E-05	0.160562385	0.209102568

ln(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06324890 Little Powder River Below Corral Creek, Near Weston, WY

x = Station 06426500 Belle Fourche River Below Moorcroft, WY

<i>Regression Statistics</i>	
Multiple R	0.876408535
R Square	0.768091921
Adjusted R Square	0.710114901
Standard Error	0.899919076
Observations	6

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	10.72912302	10.72912302	13.24821322	0.021968355
Residual	4	3.239417374	0.809854344		
Total	5	13.9685404			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-4.422974651	3.267130816	-1.353779478	0.247244567	-13.4940028	4.648053499
X Variable 1	1.242160991	0.34127088	3.639809504	0.021968355	0.294639165	2.189682817

ln(y) vs. x
SUMMARY OUTPUT

y = Station 06324890 Little Powder River Below Corral Creek, Near Weston, WY

x = Station 06426500 Belle Fourche River Below Moorcroft, WY

<i>Regression Statistics</i>	
Multiple R	0.782067367
R Square	0.611629366
Adjusted R Square	0.514536707
Standard Error	1.164578346
Observations	6

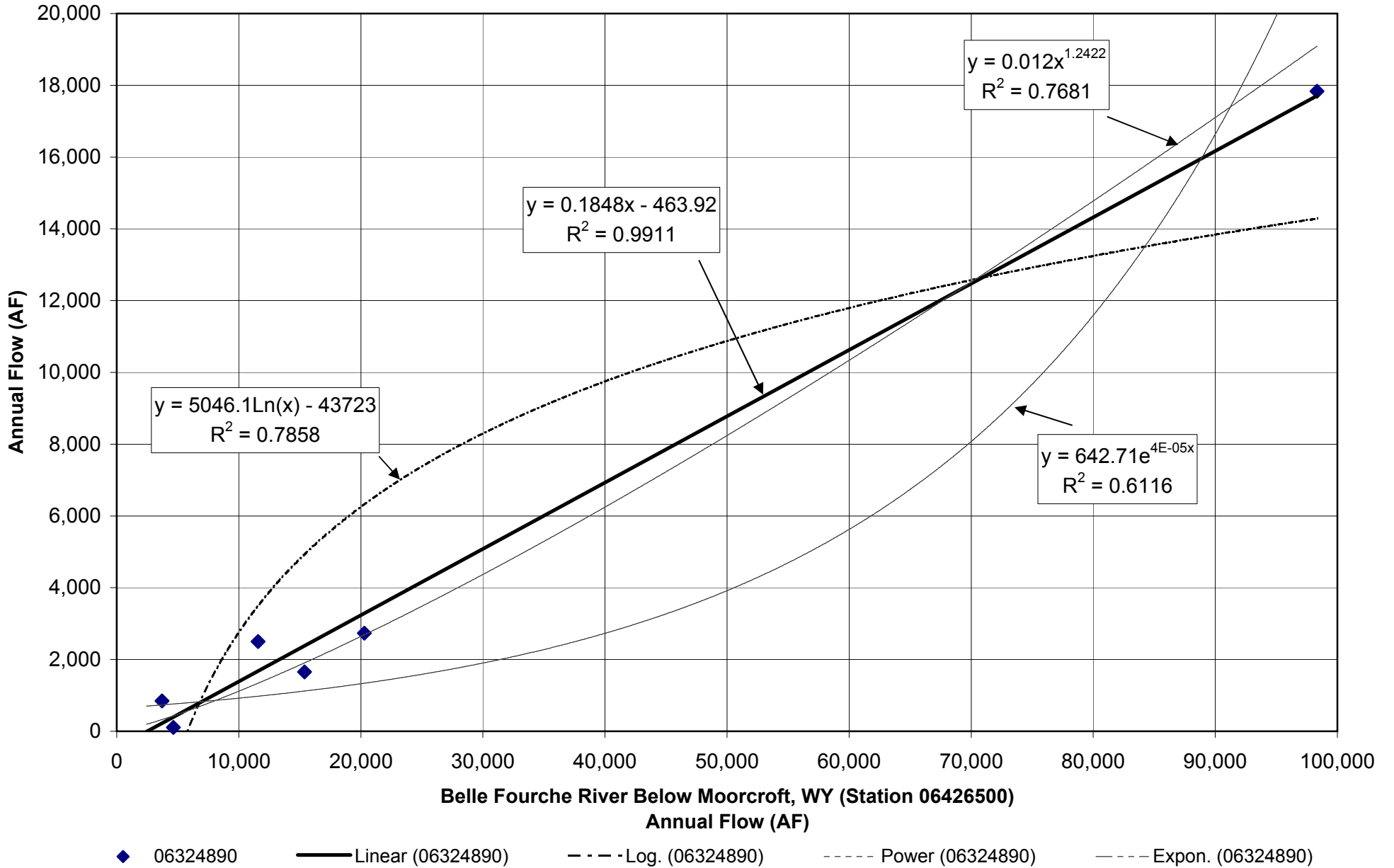
ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	8.543569505	8.543569505	6.299439886	0.066066634
Residual	4	5.424970892	1.356242723		
Total	5	13.9685404			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	6.46569768	0.602197055	10.73684707	0.000426518	4.793727153	8.137668208
X Variable 1	3.61527E-05	1.44042E-05	2.5098685	0.066066634	-3.83991E-06	7.61453E-05

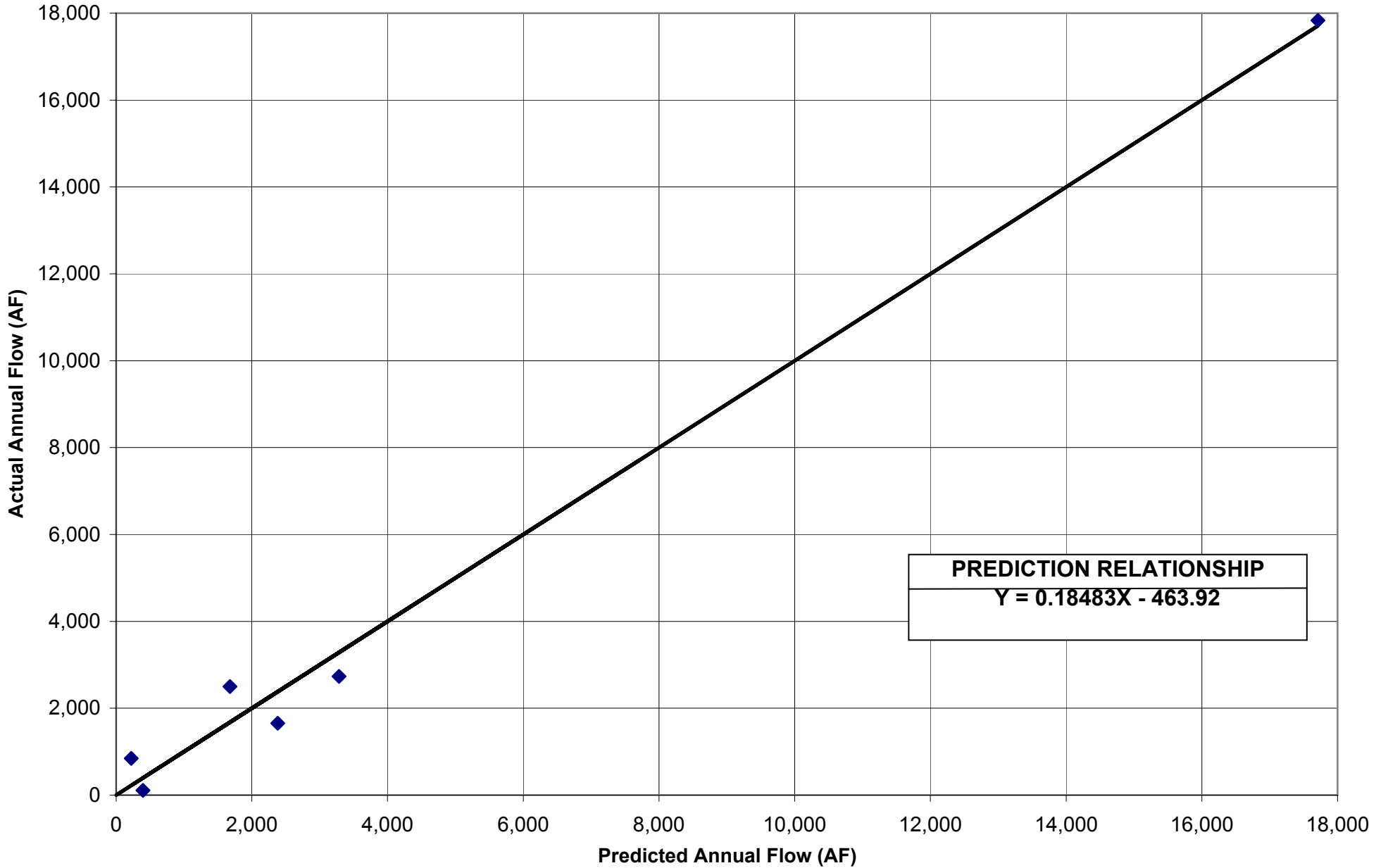
ANNUAL REGRESSION ANALYSIS — TRENDLINES

LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY (Station 06324890)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW

LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY (Station 06324890)



ANNUAL REGRESSION ANALYSIS — STATISTICS

LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (Station 06324970)

y vs. x
SUMMARY OUTPUT

y = Station 06324970 Little Powder River Above Dry Creek, Near Weston, WY

x = Station 06426500 Belle Fourche River Below Moorcroft, WY

<i>Regression Statistics</i>	
Multiple R	0.895265822
R Square	0.801500892
Adjusted R Square	0.793560927
Standard Error	8579.169157
Observations	27

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	7429779424	7429779424	100.9451502	2.91578E-10
Residual	25	1840053585	73602143.42		
Total	26	9269833010			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	475.7092089	2302.99865	0.206560785	0.838025979	-4267.401974	5218.820392
X Variable 1	0.904092096	0.089984963	10.04714637	2.91578E-10	0.718764725	1.089419467

In(y) vs. ln(x)
SUMMARY OUTPUT

y = Station 06324970 Little Powder River Above Dry Creek, Near Weston, WY

x = Station 06426500 Belle Fourche River Below Moorcroft, WY

<i>Regression Statistics</i>	
Multiple R	0.80121818
R Square	0.641950572
Adjusted R Square	0.627628595
Standard Error	0.598245575
Observations	27

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	16.04196651	16.04196651	44.82276203	5.13553E-07
Residual	25	8.947444212	0.357897768		
Total	26	24.98941072			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.253049951	1.350519445	0.187372312	0.852881144	-2.528394965	3.034494866
X Variable 1	0.953649974	0.142442535	6.694980361	5.13553E-07	0.660284287	1.247015661

In(y) vs. x
SUMMARY OUTPUT

y = Station 06324970 Little Powder River Above Dry Creek, Near Weston, WY

x = Station 06426500 Belle Fourche River Below Moorcroft, WY

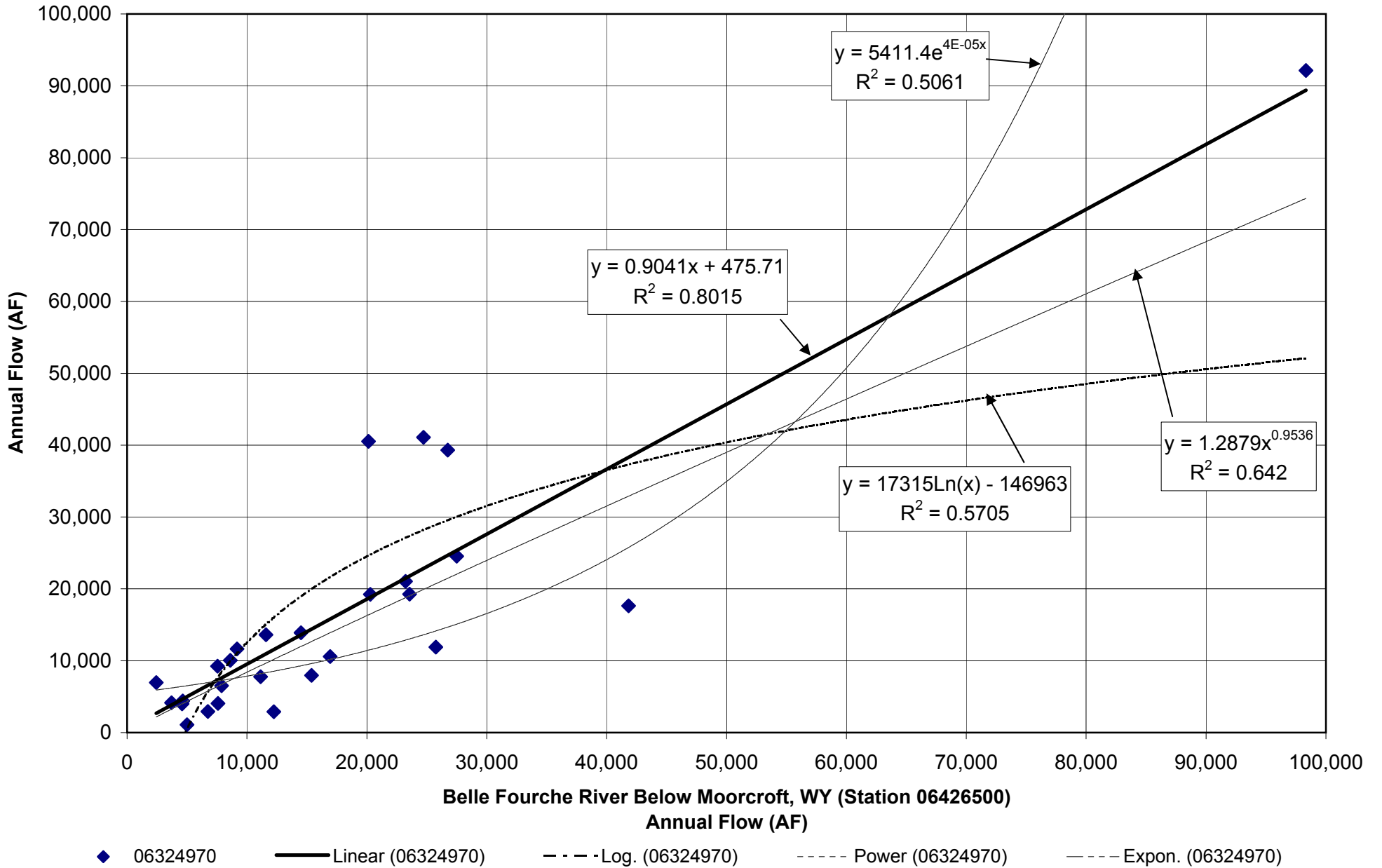
<i>Regression Statistics</i>	
Multiple R	0.711431158
R Square	0.506134293
Adjusted R Square	0.486379664
Standard Error	0.702606946
Observations	27

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	12.64799772	12.64799772	25.62104866	3.17721E-05
Residual	25	12.341413	0.49365652		
Total	26	24.98941072			

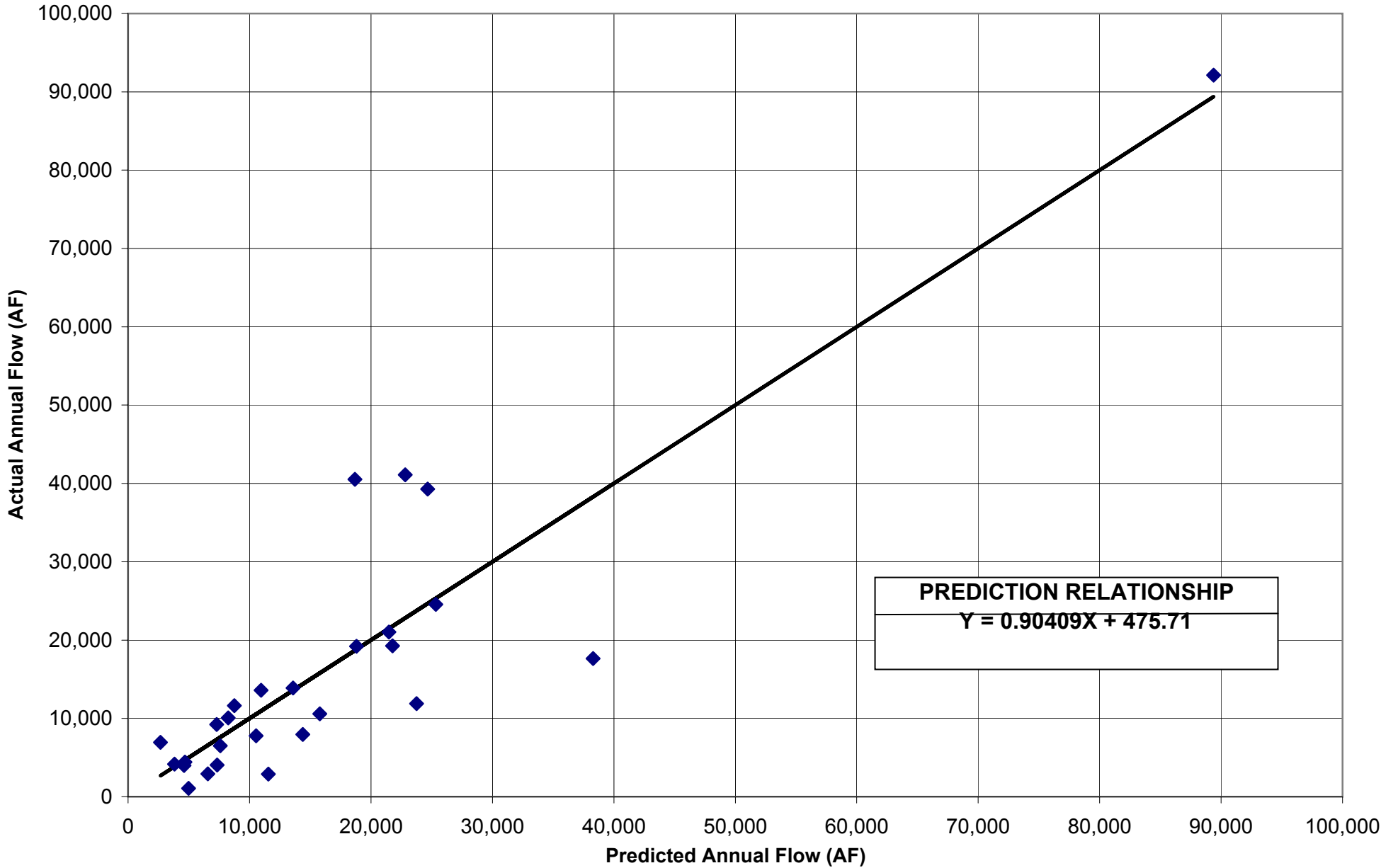
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.59627092	0.188608339	45.57736394	1.38551E-25	8.207825046	8.984716794
X Variable 1	3.73023E-05	7.36949E-06	5.061723883	3.17721E-05	2.21246E-05	5.248E-05

ANNUAL REGRESSION ANALYSIS — TRENDLINES

LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (Station 06324970)



PREDICTED ANNUAL FLOW VERSUS ACTUAL ANNUAL FLOW
LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (Station 06324970)



MONTHLY REGRESSION ANALYSIS — STATISTICS
 BELLE FOURCHE RIVER BELOW MOORCROFT, WY (Station 06426500)

y vs. x
 SUMMARY OUTPUT

y = Station 06426500 Belle Fourche River Below Moorcroft, WY
x = Station USBR Gage Inflow to Keyhole Reservoir

<i>Regression Statistics</i>	
Multiple R	0.932944161
R Square	0.870384808
Adjusted R Square	0.870094841
Standard Error	1591.875437
Observations	449

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	7606433615	7606433615	3001.669802	1.9281E-200
Residual	447	1132728131	2534067.408		
Total	448	8739161746			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-386.15391	82.84000306	-4.661442488	4.15105E-06	-548.9582226	-223.3495973
X Variable 1	0.670981604	0.012246984	54.78749677	1.9281E-200	0.646912775	0.695050432

(y+1) vs (x+1)
 SUMMARY OUTPUT

y = Station 06426500 Belle Fourche River Below Moorcroft, WY
x = Station USBR Gage Inflow to Keyhole Reservoir

<i>Regression Statistics</i>	
Multiple R	0.932944161
R Square	0.870384808
Adjusted R Square	0.870094841
Standard Error	1591.875437
Observations	449

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	7606433615	7606433615	3001.669802	1.9281E-200
Residual	447	1132728131	2534067.408		
Total	448	8739161746			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-385.8248916	82.84516477	-4.657180569	4.23381E-06	-548.6393485	-223.0104347
X Variable 1	0.670981604	0.012246984	54.78749677	1.9281E-200	0.646912775	0.695050432

log(y+1) vs log(x+1)
 SUMMARY OUTPUT

y = Station 06426500 Belle Fourche River Below Moorcroft, WY
x = Station USBR Gage Inflow to Keyhole Reservoir

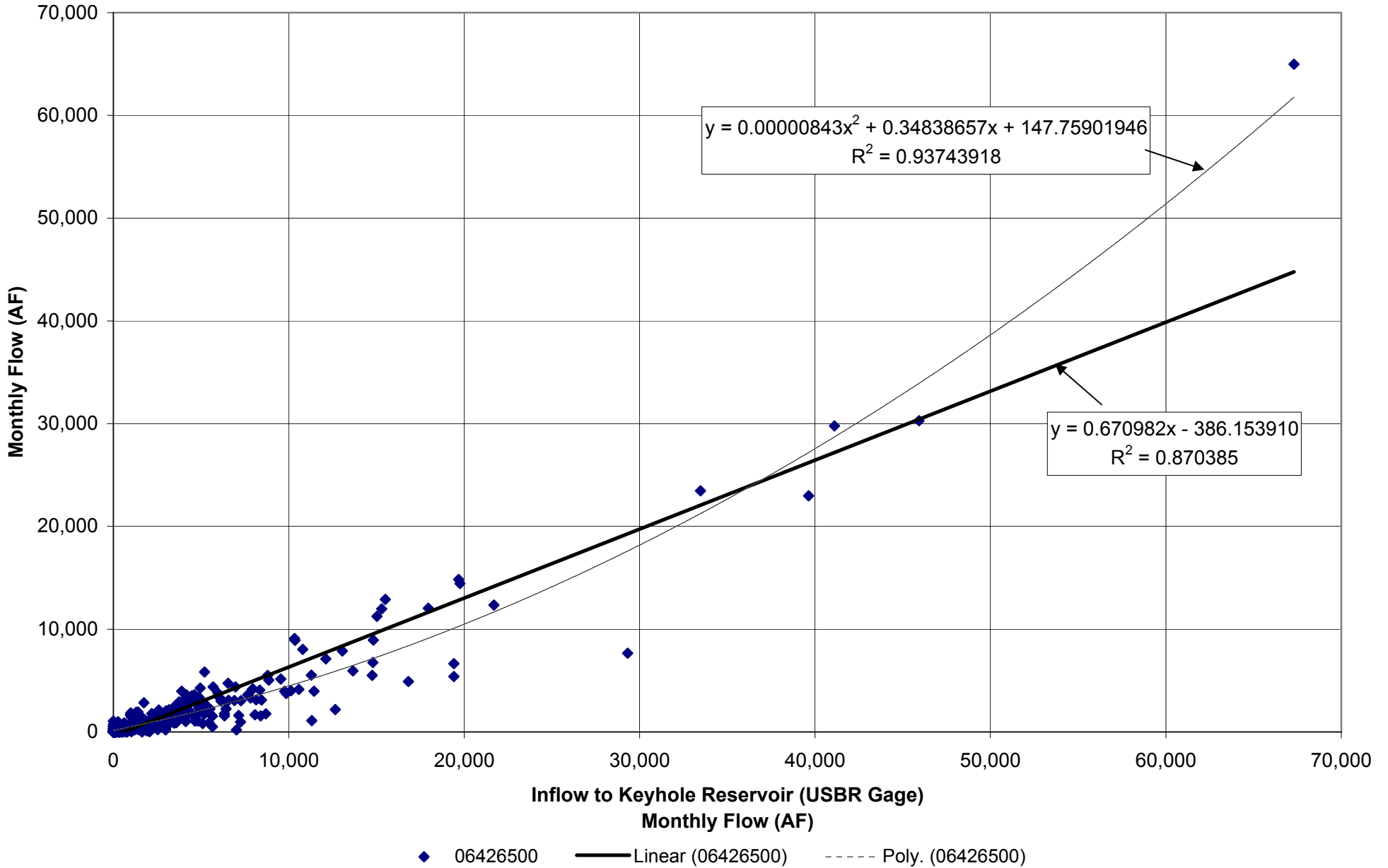
<i>Regression Statistics</i>	
Multiple R	0.767947358
R Square	0.589743145
Adjusted R Square	0.588825345
Standard Error	0.768376337
Observations	449

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	379.3696143	379.3696143	642.56132	1.6163E-88
Residual	447	263.9097815	0.590402196		
Total	448	643.2793958			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.701868529	0.069389803	10.11486552	8.54661E-22	0.565497708	0.83823935
X Variable 1	0.635577803	0.025073296	25.34879326	1.6163E-88	0.586301601	0.684854006

MONTHLY REGRESSION — TRENDLINES

BELLE FOURCHE RIVER BELOW MOORCROFT, WY (Station 06426500)



PREDICTED MONTHLY FLOW VERSUS ACTUAL MONTHLY FLOW

BELLE FOURCHE RIVER BELOW MOORCROFT, WY (Station 06426500)

