
Gridding Report – Plate 1 BMSW contours – also used to construct plate 4

Mon Apr 30 17:36:29 2012
Elapsed time for gridding: 228.7 seconds

Data Source

Source Data File Name:
X Column: D
Y Column: E
Z Column: B

Data Counts

Active Data: 598
Original Data: 598
Excluded Data: 0
Deleted Duplicates: 0
Retained Duplicates: 0
Artificial Data: 0
Superseded Data: 0

Exclusion Filtering

Exclusion Filter String: Not In Use

Duplicate Filtering

Duplicate Points to Keep: First
X Duplicate Tolerance: 0.023
Y Duplicate Tolerance: 0.018

No duplicate data were found.

Breakline Filtering

Breakline Filtering: Not In Use

Data Counts

Active Data: 598

Univariate Statistics

	X	Y	Z
Count:	598	598	598
1%%-tile:	489864.3125	4343348	-3429
5%%-tile:	529085.536	4369121	-473
10%%-tile:	541745.375	4384552.518	473
25%%-tile:	566144.835	4410567.257	1978
50%%-tile:	607193.885	4433599.5	2921
75%%-tile:	635345.219	4453498.18	3955
90%%-tile:	651793.375	4468077.418	4938
95%%-tile:	658150.75	4474397.476	5330
99%%-tile:	665112.8125	4483536.875	6237
Minimum:	473345.375	4333583	-5360
Maximum:	666361.816	4489612.219	7249
Mean:	599785.772307	4430236.44873	2805.97658863
Median:	607217.3865	4433601	2922
Geometric Mean:	598229.772272	4430123.5472	N/A
Harmonic Mean:	596632.226415	4430010.3256	N/A
Root Mean Square:	601298.718537	4430349.02997	3362.50466051
Trim Mean (10%%):	601346.290941	4431442.15458	2906.73469388
Interquartile Mean:	603940.868196	4433528.45201	2961.090301
Midrange:	569853.5955	4411597.6095	944.5
Winsorized Mean:	601110.494898	4431211.95027	2902.95986622
TriMean:	603969.456	4432816.10925	2943.75
Variance:	1820220098.23	999206538.901	3438683.28253
Standard Deviation:	42664.0375285	31610.2283905	1854.36870189
Interquartile Range:	69200.384	42930.923	1977
Range:	193016.441	156029.219	12609
Mean Difference:	48501.4907681	35580.5988847	1985.14571744
Median Abs. Deviation:	33256.7565	21400.687	989
Average Abs. Deviation:	36189.3790757	25282.0163729	1341.20735786
Quartile Dispersion:	0.0575954697	0.00484325429512	N/A
Relative Mean Diff.:	0.0808646903735	0.00803130923066	N/A
Standard Error:	1744.66223611	1292.63836577	75.8307753655
Coef. of Variation:	0.0711321266664	0.00713511090352	N/A
Skewness:	-0.460901975994	-0.581561243568	-1.04027948215
Kurtosis:	2.38908860761	2.88282048956	5.33150560354
Sum:	358671891.84	2649281396.34	1677974
Sum Absolute:	358671891.84	2649281396.34	1817496
Sum Squares:	2.16212969051e+014	6761249680	1.17375395313e+016
Mean Square:	361560148914	1.96279925273e+013	11306437.592

Inter-Variable Covariance

	X	Y	Z
X:	1.8202201e+009	-3.5131411e+008	-11757689
Y:	-3.5131411e+008	9.9920654e+008	-17927167
Z:	-11757689	-17927167	3438683.3

Inter-Variable Correlation

	X	Y	Z
X:	1.000	-0.260	-0.149
Y:	-0.260	1.000	-0.306
Z:	-0.149	-0.306	1.000

Inter-Variable Rank Correlation

	X	Y	Z
X:	1.000	-0.262	-0.246
Y:	-0.262	1.000	-0.282
Z:	-0.246	-0.282	1.000

Principal Component Analysis

	PC1	PC2	PC3
X:	0.346383062042	0.346383062042	0.0106730734233
Y:	0.937783459932	0.937783459932	0.0217523492753
Z:	-0.0241030414546	-0.0241030414546	0.0217523492753
Lambda:	1950037573.11	869904664.081	2923083.225

Planar Regression: $Z = AX + BY + C$

Fitted Parameters

	A	B	C
Parameter Value:	-0.0106446349181	-0.0216839833601	105255.6506
Standard Error:	0.00170210602743	0.00229731701191	10490.2436496

Inter-Parameter Correlations

	A	B	C
A:	1.000	0.260	-0.350
B:	0.260	1.000	-0.996
C:	-0.350	-0.996	1.000

ANOVA Table

Source	df	Sum of Squares	Mean Square	F
Regression: 52.2709840723	2	306791558.659	153395779.33	
Residual:	595	1746102361.01	2934625.81683	
Total:	597	2052893919.67		

Coefficient of Multiple Determination (R²): 0.149443454296

Nearest Neighbor Statistics

	Separation	Delta Z
1%%-tile:	77.8318700922	1
5%%-tile:	884.223985172	36
10%%-tile:	1313.59116655	83
25%%-tile:	2021.61102641	208
50%%-tile:	2893.90549258	596
75%%-tile:	3922.46497666	1352
90%%-tile:	5231.87875187	2548
95%%-tile:	6392.74286228	3422
99%%-tile:	10805.9853908	6749
Minimum:	0.0849999999627	0
Maximum:	15093.7947375	9536
Mean:	3219.39356131	1051.38461538
Median:	2895.63561824	600
Geometric Mean:	2573.86835201	N/A
Harmonic Mean:	14.9573277911	N/A
Root Mean Square:	3742.86553917	1673.26137391
Trim Mean (10%%):	3037.52727026	868.304267161
Interquartile Mean:	2922.81847492	662.27090301
Midrange:	7546.93986877	4768
Winsorized Mean:	3043.60518009	894.434782609
TriMean:	2932.97174706	688
Variance:	3650652.31146	1697232.19688
Standard Deviation:	1910.66802754	1302.77864462
Interquartile Range:	1900.85395024	1144
Range:	15093.7097375	9536

Mean Difference:	1931.86043873	1190.95330611
Median Abs. Deviation:	918.370575758	440
Average Abs. Deviation:	1302.12151953	801.334448161
Quartile Dispersion:	0.319789644221	N/A
Relative Mean Diff.:	0.600069672109	1.13274751093
Standard Error:	78.133025998	53.2745805356
Coef. of Variation:	0.593486938193	1.23910757829
Skewness:	1.88949037591	2.69001019423
Kurtosis:	9.10122985953	12.5674196962
Sum:	1925197.34966	628728
Sum Absolute:	1925197.34966	628728
Sum Squares:	8377407381.7	1674282568
Mean Square:	14009042.4443	2799803.62542

Complete Spatial Randomness

Lambda:	1.98564197935e-008
Clark and Evans:	0.907307581217
Skellam:	1045.17845642

Gridding Rules

Gridding Method:	Kriging
Kriging Type:	Point
Polynomial Drift Order:	0
Kriging std. deviation grid:	no

Semi-Variogram Model

Component Type:	Linear
Anisotropy Angle:	0
Anisotropy Ratio:	1
Variogram Slope:	1

Search Parameters

Search Ellipse Radius #1:	124000
Search Ellipse Radius #2:	124000
Search Ellipse Angle:	0

Number of Search Sectors:	4
Maximum Data Per Sector:	16
Maximum Empty Sectors:	3

Minimum Data:	8
Maximum Data:	64

Output Grid

Grid File Name:	
Grid Size:	1577 rows x 1931 columns
Total Nodes:	3045187
Filled Nodes:	3045187

Blanked Nodes: 0
Blank Value: 1.70141E+038

Grid Geometry

X Minimum: 473345.375
X Maximum: 666329.8125
X Spacing: 99.991936528497

Y Minimum: 4333583
Y Maximum: 4491147.238
Y Spacing: 99.977308375634

Univariate Grid Statistics

	Z
Count:	3045187
1%-tile:	-3175.10160813
5%-tile:	-1219.52837507
10%-tile:	-70.0646992418
25%-tile:	2176.74089884
50%-tile:	3090.63727084
75%-tile:	3764.64880179
90%-tile:	4539.3349822
95%-tile:	5048.2262997
99%-tile:	5964.23479692
Minimum:	-5322.90045866
Maximum:	7242.5953638
Mean:	2697.61496639
Median:	3090.63727084
Geometric Mean:	N/A
Harmonic Mean:	N/A
Root Mean Square:	3262.77170523
Trim Mean (10%):	2819.17157446
Interquartile Mean:	3062.33824558
Midrange:	959.847452571
Winsorized Mean:	2776.83377081
TriMean:	3030.66606058
Variance:	3368553.7998
Standard Deviation:	1835.36203508
Interquartile Range:	1587.90790296
Range:	12565.4958225
Mean Difference:	N/A
Median Abs. Deviation:	770.845714307
Average Abs. Deviation:	1274.29136743
Quartile Dispersion:	N/A
Relative Mean Diff.:	N/A
Standard Error:	1.05175542406
Coef. of Variation:	N/A
Skewness:	-1.20871148144

Kurtosis:	4.65663918143
Sum:	8214742026.65
Sum Absolute:	9130052727
Sum Squares:	3.24180839075e+013
Mean Square:	10645679.2005

Gridding Report – Plate 2 water samples >10k TDS, elevation of top interval

Tue Apr 17 15:37:16 2012
Elapsed time for gridding: 459.9 seconds

Data Source

Source Data File Name:
X Column: G
Y Column: H
Z Column: F

Data Counts

Active Data: 963
Original Data: 966
Excluded Data: 0
Deleted Duplicates: 3
Retained Duplicates: 3
Artificial Data: 0
Superseded Data: 0

Exclusion Filtering

Exclusion Filter String: Not In Use

Duplicate Filtering

Duplicate Points to Keep: First
X Duplicate Tolerance: 0.021
Y Duplicate Tolerance: 0.014
Deleted Duplicates: 3
Retained Duplicates: 3
Artificial Data: 0

X	Y	Z	ID	Status
515979.22	4402773	3000	971	Retained
515979.22	4402773	2200	972	Deleted
518967.44	4407163.5	1678	359	Retained
518967.44	4407163.5	1478	360	Deleted

631267.06	4456301.5	-757	487	Retained
631267.06	4456301.5	-1075	488	Deleted

Breakline Filtering

Breakline Filtering: Not In Use

Data Counts

Active Data: 963

Univariate Statistics

	X	Y	Z
Count:	963	963	963
1%%-tile:	518626.375	4378689.5	-8883
5%%-tile:	536912.375	4401963	-5766
10%%-tile:	551520.242449	4409369.9961	-4464
25%%-tile:	572473.8125	4428897.5	-1106
50%%-tile:	592456.75	4436332.5	219
75%%-tile:	628873.0625	4450555.5	1344
90%%-tile:	640309.4375	4467258.5	3000
95%%-tile:	646425.4375	4472235	3349
99%%-tile:	653830.625	4477229	3875
Minimum:	485888.011548	4368677.5	-11774
Maximum:	665587.187546	4491491.49372	4645
Mean:	597143.800077	4437788.57175	-282.516095535
Median:	592456.75	4436332.5	219
Geometric Mean:	596113.026135	4437740.84304	N/A
Harmonic Mean:	595069.496449	4437693.05638	N/A
Root Mean Square:	598160.581776	4437836.24284	2753.75881866
Trim Mean (10%%):	598050.949756	4438273.50228	-97.7309468822
Interquartile Mean:	598408.591932	4438037.65313	209.55186722
Midrange:	575737.599547	4430084.49686	-3564.5
Winsorized Mean:	598178.763716	4438429.16393	-133.208722741
TriMean:	596565.09375	4438029.5	169
Variance:	1216626992.45	423550482.943	7511172.05042
Standard Deviation:	34880.1805106	20580.3421484	2740.6517565
Interquartile Range:	56399.25	21658	2450
Range:	179699.175998	122813.99372	16419
Mean Difference:	39757.7609698	22654.9226111	2909.57327565
Median Abs. Deviation:	28895.25	11585	1179
Average Abs. Deviation:	29968.2599562	15334.1043806	1936.13914849
Quartile Dispersion:	0.0469466822395	0.0024391142112	N/A
Relative Mean Diff.:	0.0665798773506	0.0051050026933	N/A

Standard Error:	1123.99810814	663.192257062	88.3162685592
Coef. of Variation:	0.0584116933075	0.00463752200349	N/A
Skewness:	-0.253395741046	-0.378024702664	-1.14997192867
Kurtosis:	2.17378534087	3.59788598649	4.41052346326
Sum:	575049479.474	4273590394.6	-272063
Sum Absolute:	575049479.474	4273590394.6	1876813
Sum Squares:	3.44557626572e+014		1.8965698069e+016
7302609689			
Mean Square:	357796081591	1.96943905182e+013	
7583187.63136			

Inter-Variable Covariance

	X	Y	Z
X:	1.216627e+009	-82706870	6548850.4
Y:	-82706870	4.2355048e+008	-31509903
Z:	6548850.4	-31509903	7511172.1

Inter-Variable Correlation

	X	Y	Z
X:	1.000	-0.115	0.069
Y:	-0.115	1.000	-0.559
Z:	0.069	-0.559	1.000

Inter-Variable Rank Correlation

	X	Y	Z
X:	1.000	-0.120	-0.070
Y:	-0.120	1.000	-0.544
Z:	-0.070	-0.544	1.000

Principal Component Analysis

	PC1	PC2	PC3
X:	0.103240615883	0.103240615883	-0.000267280083702
Y:	0.991853841573	0.991853841573	0.0750430705545
Z:	-0.0746145574848	-0.0746145574848	0.0750430705545

Lambda: 1225238464.07 417312052.973 5138130.40272

Planar Regression: $Z = AX + BY + C$

Fitted Parameters

	A	B	C
Parameter Value:	0.00032978490241	-0.074330284567	329382.642281
Standard Error:	0.00211739245743	0.00358862017912	16120.3835565

Inter-Parameter Correlations

	A	B	C
A:	1.000	0.115	-0.192
B:	0.115	1.000	-0.997
C:	-0.192	-0.997	1.000

ANOVA Table

Source	df	Sum of Squares	Mean Square	F
Regression: 217.784347763	2	2255216406.26	1127608203.13	
Residual:	960	4970531106.24	5177636.569	
Total:	962	7225747512.5		

Coefficient of Multiple Determination (R^2): 0.312108387729

Nearest Neighbor Statistics

	Separation	Delta Z
1%%-tile:	5	6
5%%-tile:	249.72384748	25
10%%-tile:	366.150242387	56
25%%-tile:	535.989738708	198
50%%-tile:	812	582
75%%-tile:	1455.64865266	1546
90%%-tile:	2559.47167476	3342
95%%-tile:	3932.27987242	5181
99%%-tile:	9815.63761451	9024
Minimum:	0.170238068522	2
Maximum:	35583.429317	11378

Mean:	1328.63776054	1301.22845275
Median:	812	582
Geometric Mean:	793.568780363	503.260145087
Harmonic Mean:	54.6678451874	96.7997403256
Root Mean Square:	2346.23859411	2269.992347
Trim Mean (10%%):	1048.08535997	1010.52078522
Interquartile Mean:	863.006554488	686.663900415
Midrange:	17791.7997775	5690
Winsorized Mean:	1068.93714408	1039.16510903
TriMean:	903.909597843	727
Variance:	3743444.51539	3463266.09952
Standard Deviation:	1934.79831388	1860.98524968
Interquartile Range:	919.658913955	1348
Range:	35583.2590789	11376
Mean Difference:	1315.74873393	1630.86585795
Median Abs. Deviation:	361.648158521	481
Average Abs. Deviation:	831.26031277	1062.39979232
Quartile Dispersion:	0.461759985116	0.772935779817
Relative Mean Diff.:	0.99029906646	1.25332784916
Standard Error:	62.348004299	59.969411548
Coef. of Variation:	1.45622710067	1.43017565113
Skewness:	7.87656004278	2.64267263055
Kurtosis:	111.655273614	10.7042900437
Sum:	1279478.1634	1253083
Sum Absolute:	1279478.1634	1253083
Sum Squares:	5301156625.48	4962209241
Mean Square:	5504835.54048	5152865.25545

Complete Spatial Randomness

Lambda:	4.36347354515e-008
Clark and Evans:	0.555076396773
Skellam:	1453.39228833

Gridding Rules

Gridding Method: Kriging
Kriging Type: Point

Polynomial Drift Order: 0
Kriging std. deviation grid: no

Semi-Variogram Model

Component Type: Linear
Anisotropy Angle: 0
Anisotropy Ratio: 1
Variogram Slope: 1

Search Parameters

Search Ellipse Radius #1: 109000
Search Ellipse Radius #2: 109000
Search Ellipse Angle: 0

Number of Search Sectors: 4
Maximum Data Per Sector: 16
Maximum Empty Sectors: 3

Minimum Data: 8
Maximum Data: 64

Output Grid

Grid File Name:
Grid Size: 1577 rows x 1931 columns
Total Nodes: 3045187
Filled Nodes: 3045187
Blanked Nodes: 0
Blank Value: 1.70141E+038

Grid Geometry

X Minimum: 473345.375
X Maximum: 666329.8125
X Spacing: 99.991936528497

Y Minimum: 4333583
Y Maximum: 4491147.238
Y Spacing: 99.977308375634

Univariate Grid Statistics

	Z
Count:	3045187
1%%-tile:	-10413.0213121
5%%-tile:	-6588.94650118
10%%-tile:	-5138.47137106
25%%-tile:	-2131.80647595
50%%-tile:	33.9099836666
75%%-tile:	1400.11083351
90%%-tile:	2312.66447803
95%%-tile:	2607.66740371
99%%-tile:	3012.53760888
Minimum:	-13549.4678284
Maximum:	4639.04386209
Mean:	-767.452066624
Median:	33.9099836666
Geometric Mean:	N/A
Harmonic Mean:	N/A
Root Mean Square:	3081.01555103
Trim Mean (10%%):	-523.378346679
Interquartile Mean:	-142.934306791
Midrange:	-4455.21198315
Winsorized Mean:	-589.158894071
TriMean:	-165.968918776

Variance:	8903677.07497
Standard Deviation:	2983.90299356
Interquartile Range:	3531.91730946
Range:	18188.5116905
Mean Difference:	N/A
Median Abs. Deviation:	1734.70778527
Average Abs. Deviation:	2222.03874114
Quartile Dispersion:	N/A
Relative Mean Diff.:	N/A
Standard Error:	1.70992757743
Coef. of Variation:	N/A
Skewness:	-1.2142049569
Kurtosis:	4.34472562121
Sum:	-2337035056.41
Sum Absolute:	6767221173.34
Sum Squares:	2.8906915161e+013
Mean Square:	9492656.82568

Gridding Report – Plate 3 non-saline water analyses

Tue Nov 01 11:36:05 2011
Elapsed time for gridding: 0.14 seconds

Data Source

Source Data File Name:
X Column: G
Y Column: H
Z Column: F

Data Counts

Active Data: 414
Original Data: 414
Excluded Data: 0
Deleted Duplicates: 0
Retained Duplicates: 0
Artificial Data: 0
Superseded Data: 0

Exclusion Filtering

Exclusion Filter String: Not In Use

Duplicate Filtering

Duplicate Points to Keep: First
X Duplicate Tolerance: 0.022
Y Duplicate Tolerance: 0.013

No duplicate data were found.

Breakline Filtering

Breakline Filtering: Not In Use

Data Counts

Active Data: 414

Univariate Statistics

	X	Y	Z
Count:	414	414	414
1%%-tile:	517011.375	4399005	-8915
5%%-tile:	521210.40625	4404730.5	-6514
10%%-tile:	538663.125	4417258	-5663
25%%-tile:	557927	4425013	-3643
50%%-tile:	611763.9375	4449571.5	472
75%%-tile:	639762.25	4460423	3678
90%%-tile:	647361.625	4467377.5	4010
95%%-tile:	650270.4375	4471739	4385
99%%-tile:	655028.4375	4475492	5226
Minimum:	474357.21875	4372506	-10480
Maximum:	660732.75	4485506.5	7003
Mean:	598965.146126	4443121.65367	-34.3888888889
Median:	612297.4375	4449621.5	472
Geometric Mean:	597298.940193	4443072.85087	N/A
Harmonic Mean:	595600.924899	4443023.97916	N/A
Root Mean Square:	600594.101431	4443170.38725	3884.98915778
Trim Mean (10%%):	600412.712121	4443698.95608	98.6085790885
Interquartile Mean:	604625.726582	4444668.41361	690.420289855
Midrange:	567544.984375	4429006.25	-1738.5
Winsorized Mean:	599984.670205	4443915.41937	31.7173913043
TriMean:	605304.28125	4446144.75	244.75
Variance:	1958759703.55	434109467.796	15128500.4319
Standard Deviation:	44257.8773051	20835.2938015	3889.53730307
Interquartile Range:	81835.25	35410	7321
Range:	186375.53125	113000.5	17483
Mean Difference:	49775.1635991	23543.2260454	4368.83769052
Median Abs. Deviation:	34272.375	16384.25	3278
Average Abs. Deviation:	40275.2036443	17334.4187971	3213.45652174
Quartile Dispersion:	0.0683276150304	0.00398517304047	N/A
Relative Mean Diff.:	0.0831019366002	0.00529880293194	N/A
Standard Error:	2175.15600171	1023.99882505	191.1603295
Coef. of Variation:	0.0738905720831	0.00468933678292	N/A
Skewness:	-0.36237366177	-0.444735202292	-0.526112593704
Kurtosis:	1.70844995678	2.39576819219	2.08750019276
Sum:	247971570.496	1839452364.62	-14237
Sum Absolute:	247971570.496	1839452364.62	1350139
Sum Squares:	1.49335295715e+014	6248560273	8.17308991933e+015
Mean Square:	360713274674	1.97417630902e+013	15093140.756

Inter-Variable Covariance

	X	Y	Z
X:	1.9587597e+009	-1.8228323e+008	73546278
Y:	-1.8228323e+008	4.3410947e+008	-65390645
Z:	73546278	-65390645	15128500

Inter-Variable Correlation

	X	Y	Z
X:	1.000	-0.198	0.427
Y:	-0.198	1.000	-0.807
Z:	0.427	-0.807	1.000

Inter-Variable Rank Correlation

	X	Y	Z
X:	1.000	-0.202	0.349
Y:	-0.202	1.000	-0.823
Z:	0.349	-0.823	1.000

Principal Component Analysis

	PC1	PC2	PC3
X:	0.122991714598	0.122991714598	-0.0241619915415
Y:	0.983003456806	0.983003456806	0.140266463616
Z:	-0.136298356734	-0.136298356734	0.140266463616
Lambda:	1983561688.86	420369242.101	4066740.82162

Planar Regression: $Z = AX + BY + C$

Fitted Parameters

	A	B	C
Parameter Value:	0.0244863398357	-0.140349843557	608890.57599
Standard Error:	0.00231617274115	0.00491996369101	22176.201043

Inter-Parameter Correlations

	A	B	C
A:	1.000	0.198	-0.257
B:	0.198	1.000	-0.998
C:	-0.257	-0.998	1.000

ANOVA Table

Source	df	Sum of Squares	Mean Square	F
Regression: 543.624344657	2	4534098180.28	2267049090.14	
Residual:	411	1713972498.11	4170249.38714	
Total:	413	6248070678.39		

Coefficient of Multiple Determination (R^2): 0.725679719975

Nearest Neighbor Statistics

	Separation	Delta Z
1%%-tile:	5.65685424949	1
5%%-tile:	221.081432961	9
10%%-tile:	359.517732525	27
25%%-tile:	582.352559801	133
50%%-tile:	1212.34689755	475
75%%-tile:	1779.5208987	1128
90%%-tile:	2906.03871275	3519
95%%-tile:	5397.73971214	4746
99%%-tile:	14008.0054122	9032
Minimum:	5	0
Maximum:	26715.0346078	10220
Mean:	1831.50672388	1149.35748792
Median:	1214.7794379	477
Geometric Mean:	1032.29946544	N/A
Harmonic Mean:	194.558694389	N/A
Root Mean Square:	3360.5966684	2139.605211
Trim Mean (10%%):	1351.71825942	862.08847185
Interquartile Mean:	1200.47481475	541.526570048
Midrange:	13360.0173039	5110
Winsorized Mean:	1336.90501543	924.1352657
TriMean:	1196.6418134	552.75
Variance:	7958416.31587	3264773.75083
Standard Deviation:	2821.06652099	1806.86849295
Interquartile Range:	1197.1683389	995
Range:	26710.0346078	10220

Mean Difference:	1923.59804248	1526.23583769
Median Abs. Deviation:	612.05111833	417.5
Average Abs. Deviation:	1193.91055	

Gridding Report – Figure 7. Difference map – new data points gridding.

Tue May 01 09:46:27 2012
Elapsed time for gridding: 0.62 seconds

Data Source

Source Data File Name:
X Column: D
Y Column: E
Z Column: B

Data Counts

Active Data: 236
Original Data: 236
Excluded Data: 0
Deleted Duplicates: 0
Retained Duplicates: 0
Artificial Data: 0
Superseded Data: 0

Exclusion Filtering

Exclusion Filter String: Not In Use

Duplicate Filtering

Duplicate Points to Keep: First
X Duplicate Tolerance: 0.022
Y Duplicate Tolerance: 0.016

No duplicate data were found.

Breakline Filtering

Breakline Filtering: Not In Use

Data Counts

Active Data: 236

Univariate Statistics

	X	Y	Z
Count:	236	236	236
1%%-tile:	498245.53125	4335511	28
5%%-tile:	534085.0625	4365078	638
10%%-tile:	541802.3125	4376173.5	1618
25%%-tile:	573617.4375	4404666	2383
50%%-tile:	619617.9375	4424309	3130
75%%-tile:	640645.375	4441157.5	4177
90%%-tile:	653442.6875	4453624	4980
95%%-tile:	659705.625	4460454.5	5213
99%%-tile:	664743.5625	4471470	6237
Minimum:	473345.375	4333583	-1205
Maximum:	665600.75	4474877	6383
Mean:	607511.61348	4421119.50212	3195.22457627
Median:	619894.46875	4424755.25	3151
Geometric Mean:	605988.643872	4421021.06518	N/A
Harmonic Mean:	604406.025014	4420922.29123	N/A
Root Mean Square:	608974.644277	4421217.60282	3471.95706851
Trim Mean (10%%):	609326.013498	4422309.18075	3203.20657277
Interquartile Mean:	615571.648634	4424651.55882	3155.95798319
Midrange:	569473.0625	4404230	2589
Winsorized Mean:	608418.332097	4421886.94703	3236.15254237
TriMean:	613374.671875	4423610.375	3205
Variance:	1787330292.92	871130721.886	1852876.96637
Standard Deviation:	42276.8292676	29514.9237147	1361.20423389
Interquartile Range:	67027.9375	36491.5	1794
Range:	192255.375	141294	7588
Mean Difference:	47216.2680795	32768.8826001	1523.54060584
Median Abs. Deviation:	27404.4375	18325.75	835.5
Average Abs. Deviation:	33941.2180879	22987.7648305	1056.91101695
Quartile Dispersion:	0.0552005190392	0.00412528013927	N/A
Relative Mean Diff.:	0.0777207662073	0.00741189705105	N/A
Standard Error:	2751.98718104	1921.25788805	88.6068484166
Coef. of Variation:	0.0695901581625	0.00667589367367	N/A
Skewness:	-0.727702417882	-0.750166207308	-0.154618138284
Kurtosis:	2.62815557879	3.30053318435	3.16090474797
Sum:	143372740.781	1043384202.5	754073
Sum Absolute:	143372740.781	1043384202.5	757045
Sum Squares:	8.75206276999e+013		4.61313096159e+015
Mean Square:	370850117372	1.95471650915e+013	
12054485.8856			

Inter-Variable Covariance

	X	Y	Z
X:	1.7873303e+009	-2.3426839e+008	-21289467
Y:	-2.3426839e+008	8.7113072e+008	-7226561
Z:	-21289467	-7226561	1852877

Inter-Variable Correlation

	X	Y	Z
X:	1.000	-0.188	-0.370
Y:	-0.188	1.000	-0.180
Z:	-0.370	-0.180	1.000

Inter-Variable Rank Correlation

	X	Y	Z
X:	1.000	-0.161	-0.342
Y:	-0.161	1.000	-0.200
Z:	-0.342	-0.200	1.000

Principal Component Analysis

	PC1	PC2	PC3
X:	0.233874369805	0.233874369805	0.0134857027983
Y:	0.972154706331	0.972154706331	0.011941179747
Z:	-0.0147650298288	-0.0147650298288	0.011941179747
Lambda:	1843952691.7	814881780.79	1479419.2855

Planar Regression: $Z = AX + BY + C$

Fitted Parameters

	A	B	C
Parameter Value:	-0.0134735632959	-0.0119189816229	64075.8128521
Standard Error:	0.00191923376003	0.00274908784389	12426.0906917

Inter-Parameter Correlations

	A	B	C
A:	1.000	0.188	-0.277
B:	0.188	1.000	-0.996
C:	-0.277	-0.996	1.000

ANOVA Table

Source	df	Sum of Squares	Mean Square	F
Regression: 29.3614440489	2	87649884.2932	43824942.1466	
Residual:	233	347776202.804	1492601.72877	
Total:	235	435426087.097		

Coefficient of Multiple Determination (R²): 0.201296814524

Nearest Neighbor Statistics

	Separation	Delta Z
1%%-tile:	1207.7305163	1
5%%-tile:	2081.37094243	34
10%%-tile:	2325.43272939	82
25%%-tile:	2897.3657439	194
50%%-tile:	3925.84330162	457
75%%-tile:	5473.22683615	1037
90%%-tile:	7247.19806309	1897
95%%-tile:	9525.3990607	3100
99%%-tile:	13774.9566333	3872
Minimum:	823.452488004	1
Maximum:	34111.5522137	4687
Mean:	4691.11868719	800.275423729
Median:	3935.69992748	457
Geometric Mean:	4042.37366869	393.722158305
Harmonic Mean:	3574.79067425	43.9441100353
Root Mean Square:	5835.86102462	1220.024741
Trim Mean (10%%):	4252.72391559	677.112676056
Interquartile Mean:	3962.44480889	506.268907563
Midrange:	17467.5023509	2344
Winsorized Mean:	4271.42621321	683.792372881
TriMean:	4055.56979582	536.25
Variance:	12101958.8481	851628.208925
Standard Deviation:	3478.7869794	922.837043538
Interquartile Range:	2575.86109226	843
Range:	33288.0997257	4686

Mean Difference:	2801.94914238	883.560944825
Median Abs. Deviation:	1197.28126325	310
Average Abs. Deviation:	1843.86668317	588.978813559
Quartile Dispersion:	0.307727447922	0.684809098294
Relative Mean Diff.:	0.597288052001	1.10407107182
Standard Error:	226.449744191	60.0715748555
Coef. of Variation:	0.74156874114	1.15314929857
Skewness:	4.85337522504	2.02176137116
Kurtosis:	36.7829157785	7.06637579132
Sum:	1107104.01018	188865
Sum Absolute:	1107104.01018	188865
Sum Squares:	8037516640.1	351276647
Mean Square:	34057273.8987	1488460.36864

Complete Spatial Randomness

Lambda:	8.68779955703e-009
Clark and Evans:	0.874503018344
Skellam:	438.744359107

Gridding Rules

Gridding Method:	Kriging
Kriging Type:	Point
Polynomial Drift Order:	0
Kriging std. deviation grid:	no

Semi-Variogram Model

Component Type:	Linear
Anisotropy Angle:	0
Anisotropy Ratio:	1
Variogram Slope:	1

Search Parameters

No Search (use all data):	true
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Output Grid

Grid File Name:	
Grid Size:	316 rows x 387 columns
Total Nodes:	122292
Filled Nodes:	122292
Blanked Nodes:	0
Blank Value:	1.70141E+038

Grid Geometry

X Minimum:	473345.375
X Maximum:	666329.8125
X Spacing:	499.95968264249

Y Minimum: 4333583
Y Maximum: 4491147.238
Y Spacing: 500.20393015873

Univariate Grid Statistics

	Z
Count:	122292
1%%-tile:	502.896474249
5%%-tile:	1615.13580036
10%%-tile:	2021.99389788
25%%-tile:	2677.73886448
50%%-tile:	3393.9576918
75%%-tile:	4042.35324882
90%%-tile:	4490.64493428
95%%-tile:	4708.19904549
99%%-tile:	5330.38984853
Minimum:	-1138.59911402
Maximum:	6328.97353155
Mean:	3301.2553844
Median:	3393.97347721
Geometric Mean:	N/A
Harmonic Mean:	N/A
Root Mean Square:	3449.2916841
Trim Mean (10%%):	3333.29262409
Interquartile Mean:	3368.70364317
Midrange:	2595.18720877
Winsorized Mean:	3329.63485162
TriMean:	3377.00187423
Variance:	999334.180672
Standard Deviation:	999.667034903
Interquartile Range:	1364.61438434
Range:	7467.57264557
Mean Difference:	N/A
Median Abs. Deviation:	678.537392474
Average Abs. Deviation:	796.308953048
Quartile Dispersion:	N/A
Relative Mean Diff.:	N/A
Standard Error:	2.85861946896
Coef. of Variation:	N/A
Skewness:	-0.478453121891
Kurtosis:	3.36836647234
Sum:	403717123.469
Sum Absolute:	403908386.562
Sum Squares:	1.45498290392e+012
Mean Square:	11897613.122
