Appendix B - Statistical Results

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1 Results of Univariate Analysis for Each Variable

Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999
Univariate Procedure

Variable=CLAY1

Moments

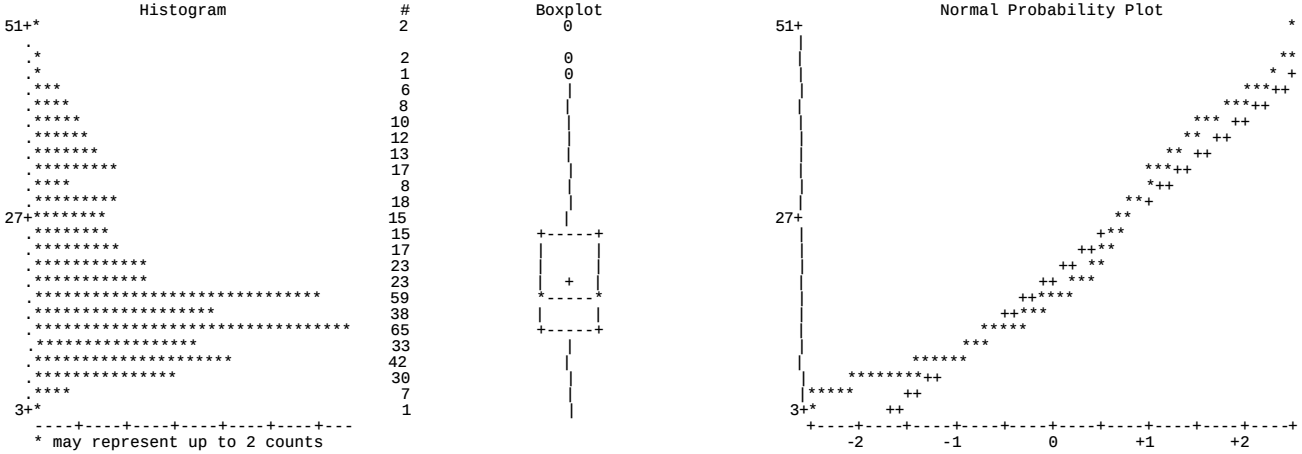
N	465	Sum Wgts	465
Mean	19.21634	Sum	8935.6
Std Dev	9.933951	Variance	98.68338
Skewness	0.86631	Kurtosis	-0.07991
USS	217498.7	CSS	45789.09
CV	51.69532	Std Mean	0.460676
T:Mean=0	41.71336	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.902414	Pr<W	0.0001

Quantiles(Def=5)

100% Max	50	99%	45.25
75% Q3	25.33	95%	38.33
50% Med	16.64	90%	35
25% Q1	12.25	10%	8.33
0% Min	3.6	5%	7.28
		1%	5.31
Range	46.4		
Q3-Q1	13.08		
Mode	17.5		

Extremes

Lowest	Obs	Highest	Obs
3.6(	198)	45.25(	172)
5.31(	138)	46.83(	178)
5.31(	102)	47.5(	10)
5.31(	97)	50(	171)
5.31(	58)	50(	392)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=NO2001

Moments

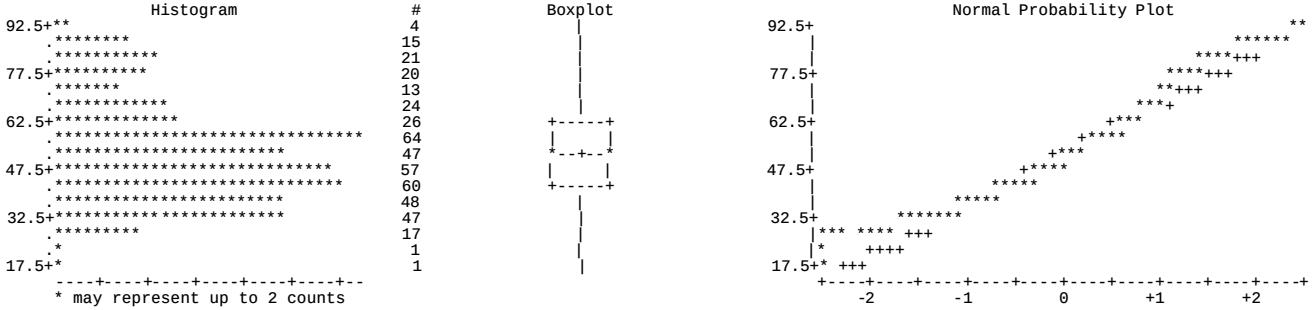
N	465	Sum Wgts	465
Mean	52.0697	Sum	24212.41
Std Dev	16.03357	Variance	257.0753
Skewness	0.581584	Kurtosis	-0.35651
USS	1380016	CSS	119282.9
CV	30.79251	Std Mean	0.743539
T:Mean=0	70.02956	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.938659	Pr<W	0.0001

Quantiles(Def=5)

100% Max	91.25	99%	89.17
75% Q3	60.83	95%	83.75
50% Med	50	90%	78.57
25% Q1	40	10%	33.33
0% Min	16.5	5%	30
		1%	26.25
Range	74.75		
Q3-Q1	20.83		
Mode	55		

Extremes

Lowest	Obs	Highest	Obs
16.5(	198)	89.17(	150)
23.33(	221)	90(	148)
25.5(	227)	90(	166)
26.25(	138)	90(	171)
26.25(	102)	91.25(	6)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=NO401

Moments

N	465	Sum Wgts	465
Mean	74.82751	Sum	34794.79
Std Dev	10.44101	Variance	109.0147
Skewness	0.400947	Kurtosis	-0.75347
USS	2654190	CSS	50582.82
CV	13.95344	Std Mean	0.48419
T:Mean=0	154.5415	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.937956	Pr<W	0.0001

Quantiles(Def=5)

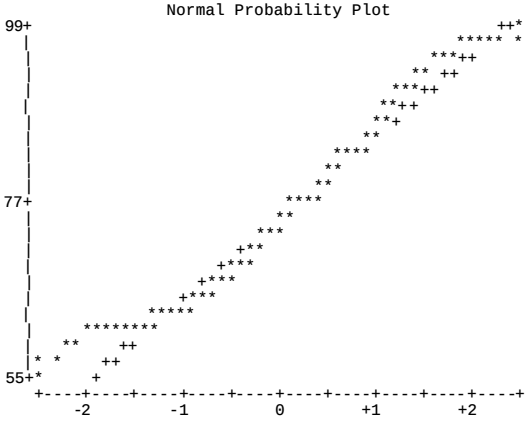
100% Max	98.75	99%	97.5
75% Q3	82.5	95%	94.58
50% Med	74.44	90%	90.94
25% Q1	66	10%	62.08
0% Min	54.58	5%	61
		1%	57.5
Range	44.17		
Q3-Q1	16.5		
Mode	82.5		

Extremes

Lowest	Obs	Highest	Obs
54.58(	221)	97.5(	148)
56.5(	235)	97.5(	150)
56.67(	214)	97.5(	166)
56.67(	62)	97.5(	453)
57.5(	195)	98.75(	6)

```
  Stem Leaf                                                #       Boxplot
    98 8                                                   1          |
    96 0225577915555                                      13          |
    94 23446600000466                                     14          |
    92 015996889                                           9          |
    90 000368889112555899                                 18          |
    88 01113458488                                        11          |
    86 2777775558                                         10          |
    84 4466600006888                                      13          |
    82 011224555555555555555555555555555573              36      +-----+
    80 0000000001468867799                                19      |     |
    78 0133355688022222222567                             23      |     |
    76 011122222245577888999001113555555555555558        40      |     |
    74 00222244455680000003334456678888889                34      *--+--*
    72 11555555555571455888                               20      |     |
    70 000000000044568222223347799                        27      |     |
    68 1123355555688889223444444555                       28      |     |
    66 000122222245677788011245555555555789              35      +-----+
    64 00112224444670003346666 77                         25         |
    62 011122222223555555558891111133333444558889999     45         |
    60 000044678890000112222224555667789 99               35         |
    58 080                                                3          |
    56 57755                                              5          |
    54 6                                                  1          |
       ----+----+----+----+----+----+----+----+----+----+
```

Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=SHRINK1

Moments

N	465	Sum Wgts	465
Mean	0.345613	Sum	160.71
Std Dev	0.498141	Variance	0.248145
Skewness	1.321515	Kurtosis	0.621419
USS	170.6825	CSS	115.1391
CV	144.1327	Std Mean	0.023101
T:Mean=0	14.96112	Pr>|T|	0.0001
Num ^= 0	206	Num > 0	206
M(Sign)	103	Pr>=|M|	0.0001
Sgn Rank	10660.5	Pr>=|S|	0.0001
W:Normal	0.717546	Pr<W	0.0001

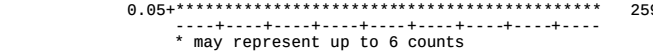
Quantiles(Def=5)

100% Max	2	99%	1.8
75% Q3	0.6	95%	1.43
50% Med	0	90%	1.22
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	2		
Q3-Q1	0.6		
Mode	0		

Extremes

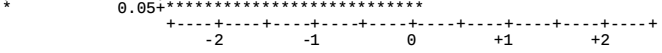
Lowest	Obs	Highest	Obs
0(	464)	1.8(	167)
0(	463)	1.83(	178)
0(	462)	2(	10)
0(	461)	2(	171)
0(	447)	2(	392)

Histogram



\# Boxplot

Normal Probability Plot

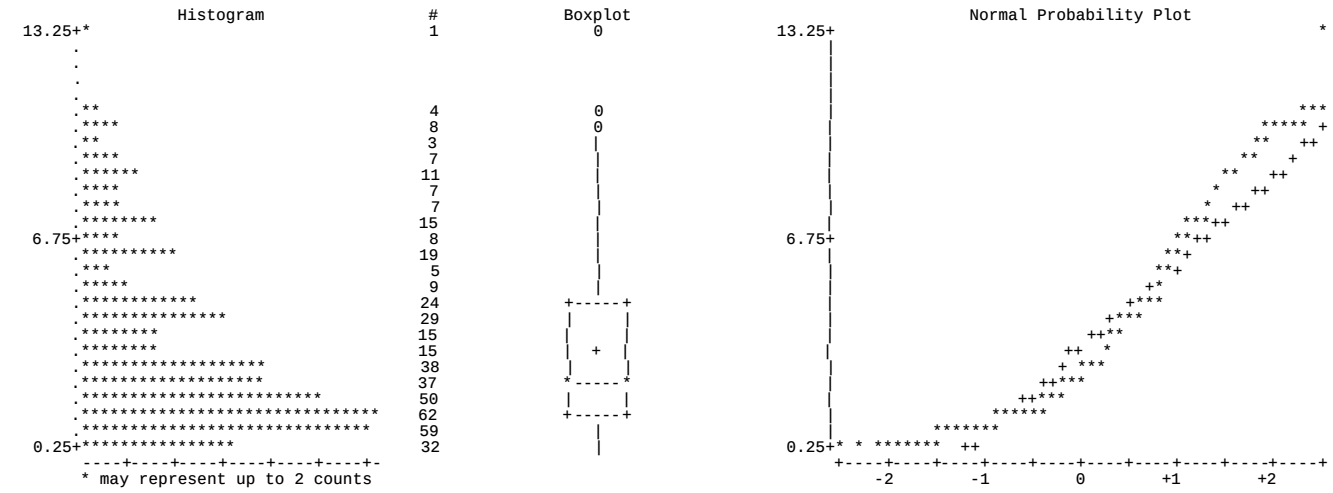


Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=PERM1

Moments				Quantiles(Def=5)				Extremes			
N	465	Sum Wgts	465	100% Max	13	99%	10.75	Lowest	Obs	Highest	Obs
Mean	3.301118	Sum	1535.02	75% Q3	4.72	95%	8.7	0.06(	171)	10.75(	58)
Std Dev	2.695409	Variance	7.265228	50% Med	2.36	90%	7.6	0.13(	392)	10.75(	97)
Skewness	1.045084	Kurtosis	0.250645	25% Q1	1.3	10%	0.58	0.13(	178)	10.75(	102)
USS	8438.349	CSS	3371.066	0% Min	0.06	5%	0.4	0.13(	10)	10.75(	138)
CV	81.65138	Std Mean	0.124997			1%	0.19	0.19(	242)	13(	198)
T:Mean=0	26.40967	Pr>|T|	0.0001	Range	12.94						
Num ^= 0	465	Num > 0	465	Q3-Q1	3.42						
M(Sign)	232.5	Pr>=|M|	0.0001	Mode	1.3						
Sgn Rank	54172.5	Pr>=|S|	0.0001								
W:Normal	0.869207	Pr<W	0.0001								



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=AWC1

Moments

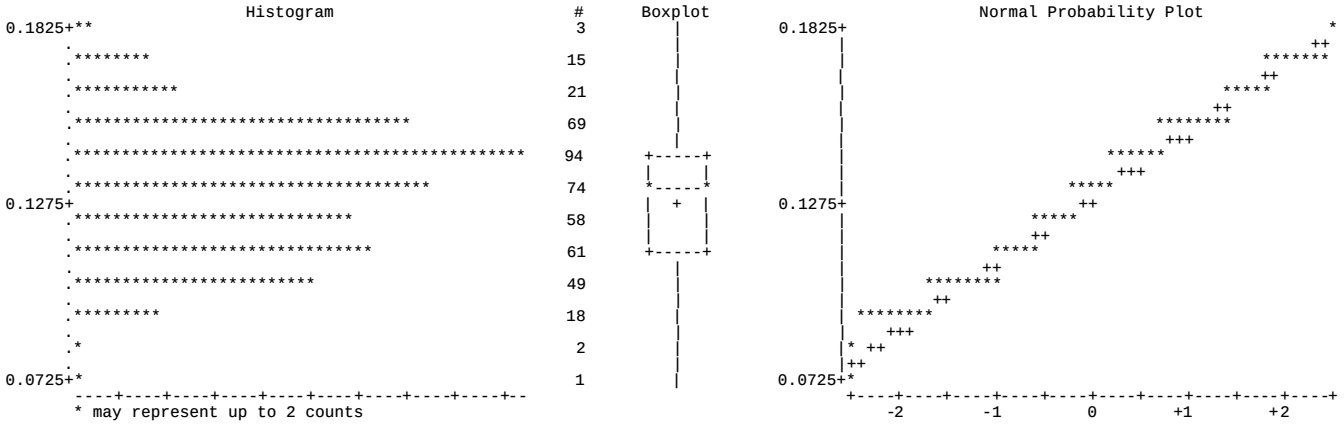
N	465	Sum Wgts	465
Mean	0.129032	Sum	60
Std Dev	0.020692	Variance	0.000428
Skewness	-0.0884	Kurtosis	-0.57575
USS	7.9406	CSS	0.198665
CV	16.03625	Std Mean	0.00096
T:Mean=0	134.4694	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.953253	Pr<W	0.0001

Quantiles(Def=5)

100% Max	0.18	99%	0.17
75% Q3	0.14	95%	0.16
50% Med	0.13	90%	0.15
25% Q1	0.11	10%	0.1
0% Min	0.07	5%	0.1
		1%	0.09
Range	0.11		
Q3-Q1	0.03		
Mode	0.14		

Extremes

Lowest	Obs	Highest	Obs
0.07(	198)	0.17(	261)
0.08(	426)	0.17(	453)
0.08(	227)	0.18(	3)
0.09(	238)	0.18(	260)
0.09(	237)	0.18(	452)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=BD1

Moments

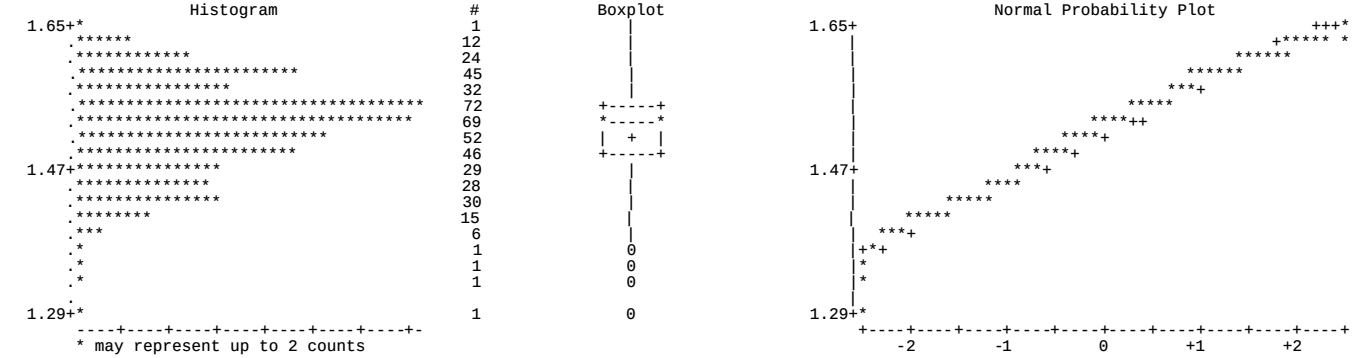
N	465	Sum Wgts	465
Mean	1.515398	Sum	704.66
Std Dev	0.059287	Variance	0.003515
Skewness	-0.43892	Kurtosis	0.033982
USS	1069.471	CSS	1.630951
CV	3.912324	Std Mean	0.002749
T:Mean=0	551.1777	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.970566	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1.65	99%	1.63
75% Q3	1.55	95%	1.6
50% Med	1.53	90%	1.59
25% Q1	1.48	10%	1.43
0% Min	1.28	5%	1.41
		1%	1.38
Range	0.37		
Q3-Q1	0.07		
Mode	1.53		

Extremes

Lowest	Obs	Highest	Obs
1.28(	261)	1.63(	102)
1.32(	392)	1.63(	138)
1.35(	171)	1.63(	237)
1.37(	2)	1.63(	238)
1.38(	178)	1.65(	198)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=CEC1

Moments

N	465	Sum Wgts	465
Mean	14.17508	Sum	6591.41
Std Dev	8.105377	Variance	65.69713
Skewness	1.026061	Kurtosis	0.244225
USS	123917.2	CSS	30483.47
CV	57.18048	Std Mean	0.375878
T:Mean=0	37.71192	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.879455	Pr<W	0.0001

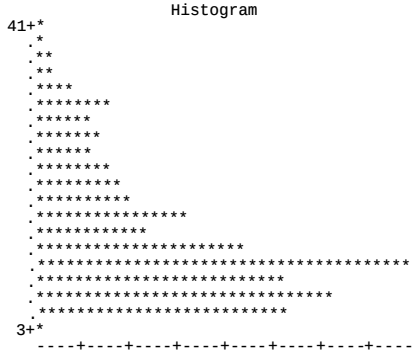
Quantiles(Def=5)

100% Max	41.67	99%	37.5
75% Q3	18.13	95%	30.83
50% Med	11.67	90%	27.5
25% Q1	8.06	10%	5.75
0% Min	3	5%	5.2
		1%	4.13
Range	38.67		
Q3-Q1	10.07		
Mode	10		

Extremes

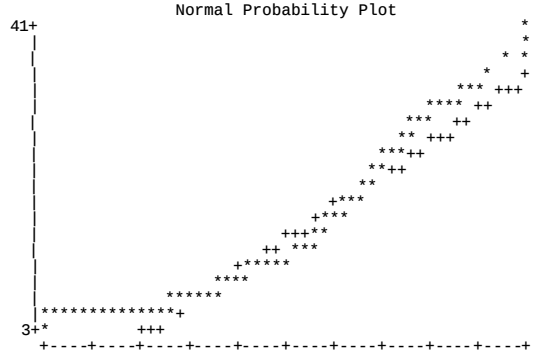
Lowest	Obs	Highest	Obs
3(	198)	37.5(	166)
4.13(	138)	37.5(	392)
4.13(	102)	37.92(	178)
4.13(	97)	38(	10)
4.13(	58)	41.67(	171)

Histogram



#	Boxplot
1	0
1	0
4	0
3	0
7	0
16	|
11	|
14	|
12	|
16	|
18	|
19	+-----+
32	| |
24	| + |
44	| |
77	*-----*
52	+-----+
61	|
52	|
1	|

Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=CLAY2

Moments

N	465	Sum Wgts	465
Mean	21.12465	Sum	9822.96
Std Dev	10.75128	Variance	115.59
Skewness	0.76948	Kurtosis	-0.30899
USS	261140.3	CSS	53633.76
CV	50.89448	Std Mean	0.498579
T:Mean=0	42.36974	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.907875	Pr<W	0.0001

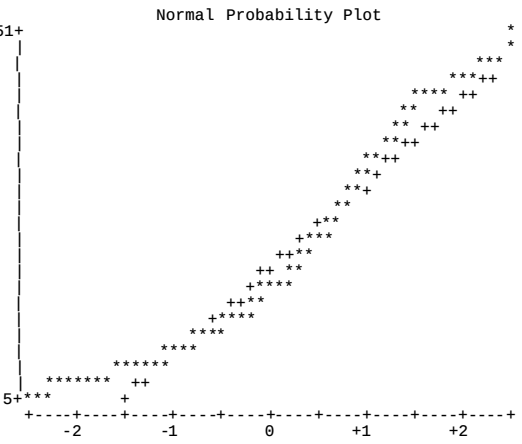
Quantiles(Def=5)

100% Max	50	99%	46.83
75% Q3	27.54	95%	43.54
50% Med	18.99	90%	38.08
25% Q1	12.92	10%	9.12
0% Min	5.16	5%	8.05
		1%	5.75
Range	44.84		
Q3-Q1	14.62		
Mode	19		

Extremes

Lowest	Obs	Highest	Obs
5.16(	138)	46.83(	241)
5.16(	102)	47.58(	178)
5.16(	97)	48.33(	392)
5.16(	58)	50(	166)
5.75(	87)	50(	171)

```
  Stem Leaf                                                #       Boxplot
    50 00                                                  2          0
    48 3                                                   1          |
    46 2886                                                4          |
    44 059224489                                           9          |
    42 0244468056788899                                   16          |
    40 12236788                                            8          |
    38 1312258                                             7          |
    36 23471123556                                        11          |
    34 0346812236679                                      13          |
    32 1347812455666                                      13          |
    30 5667790022247                                      13          |
    28 1222355889023557                                   16          |
    26 01137790022455555789                               20       +-----+
    24 024456778900112234455589                           24       |     |
    22 00112234677880224579                               20       |     |
    20 00111235667788001111224778 99                      28       |  +  |
    18 001122244457888000000000001123455667779999 9       43       *-----*
    16 11133444667800224556688                            23       |     |
    14 00123444455680002222222234455555666778888888899    46       |     |
    12 01233345555689999000123334444555666666778888899    46       +-----+
    10 12466789990012222333333333444444555577899          40          |
     8 01111222345778889900001122235556678899 9           39          |
     6 004448801222245778                                 18          |
     4 22228                                               5          |
       ----+----+----+----+----+----+----+----+----+----+-
```



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=NO2002

Moments

N	465	Sum Wgts	465
Mean	49.82424	Sum	23168.27
Std Dev	15.70278	Variance	246.5774
Skewness	1.003313	Kurtosis	0.383146
USS	1268753	CSS	114411.9
CV	31.51636	Std Mean	0.728199
T:Mean=0	68.42117	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.887829	Pr<W	0.0001

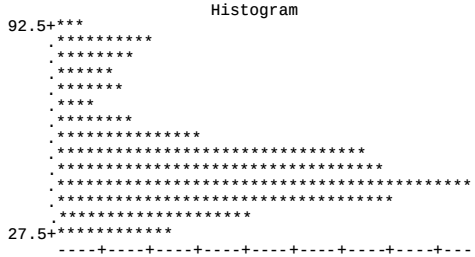
Quantiles(Def=5)

100% Max	91.25	99%	90
75% Q3	55.1	95%	85.42
50% Med	46.54	90%	77.81
25% Q1	39.24	10%	33.21
0% Min	25	5%	30
		1%	25.94
Range	66.25		
Q3-Q1	15.86		
Mode	50.83		

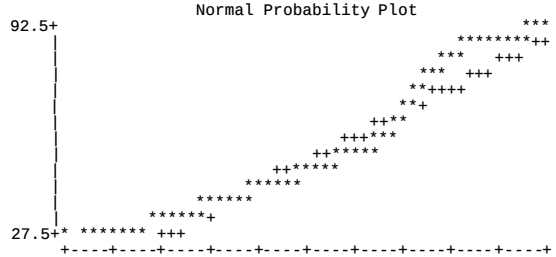
Extremes

Lowest	Obs	Highest	Obs
25(	102)	90(	6)
25.16(	138)	90(	171)
25.42(	426)	90.83(	150)
25.42(	300)	90.83(	166)
25.94(	97)	91.25(	148)

Histogram



Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=NO402

Moments				Quantiles(Def=5)				Extremes			
N	465	Sum Wgts	465	100% Max	97.5	99%	96.67	Lowest	Obs	Highest	Obs
Mean	72.75232	Sum	33829.83	75% Q3	77.34	95%	93.93	47.25(	235)	96.67(	148)
Std Dev	10.05747	Variance	101.1526	50% Med	70.99	90%	90	50.65(	287)	96.67(	166)
Skewness	0.722894	Kurtosis	-0.02996	25% Q1	65.46	10%	61.88	52.92(	62)	96.67(	453)
USS	2508134	CSS	46934.83	0% Min	47.25	5%	60.35	53.13(	446)	97.08(	2)
CV	13.82426	Std Mean	0.466404			1%	54.38	54.38(	286)	97.5(	6)
T:Mean=0	155.9857	Pr>|T|	0.0001	Range	50.25						
Num ^= 0	465	Num > 0	465	Q3-Q1	11.88						
M(Sign)	232.5	Pr>=|M|	0.0001	Mode	75.21						
Sgn Rank	54172.5	Pr>=|S|	0.0001								
W:Normal	0.925412	Pr<W	0.0001								

```
  Stem Leaf                                                #      Boxplot
    96 2477715                                             7         0
    94 4470000000034466                                   16         0
    92 02578001234889                                     14         |
    90 0248034567                                         10         |
    88 24344459                                            8         |
    86 0277156                                             7         |
    84 4467999223                                         10         |
    82 2357123788                                         10         |
    80 014578144579                                       12         |
    78 1122333345569013446                                19         |
    76 00111122234788922233566                            24   +-----+
    74 022234455566891112222222224467799                  35   |     |
    72 11111223456667888899011133344455589                34   |  +  |
    70 000000222223344445788000022222222244677777888889  48   *-----*
    68 11223333445557778899990001244555677888889          40   |     |
    66 012244445567777899900000011122556667899999         42   |     |
    64 00123444555677778889000012233444456666777778 89    46   +-----+
    62 000112455578880011111233335667888 99               35         |
    60 24567790011125555577777799                         26         |
    58 233335551566                                       12         |
    56 922                                                 3         |
    54 467                                                 3         |
    52 91                                                  2         |
    50 6                                                   1         |
    48
    46 2                                                   1         0
       ----+----+----+----+----+----+----+----+----+---
```

Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=SHRINK2

Moments

N	465	Sum Wgts	465
Mean	0.621097	Sum	288.81
Std Dev	0.55176	Variance	0.30444
Skewness	0.721323	Kurtosis	-0.44011
USS	320.6389	CSS	141.2599
CV	88.83646	Std Mean	0.025587
T:Mean=0	24.27366	Pr>|T|	0.0001
Num ^= 0	374	Num > 0	374
M(Sign)	187	Pr>=|M|	0.0001
Sgn Rank	35062.5	Pr>=|S|	0.0001
W:Normal	0.885486	Pr<W	0.0001

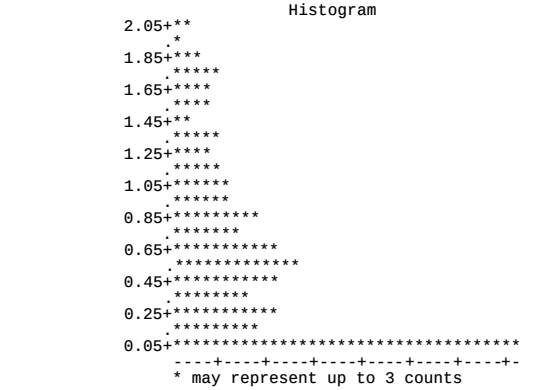
Quantiles(Def=5)

100% Max	2	99%	1.92
75% Q3	0.96	95%	1.75
50% Med	0.5	90%	1.5
25% Q1	0.16	10%	0
0% Min	0	5%	0
		1%	0
Range	2		
Q3-Q1	0.8		
Mode	0		

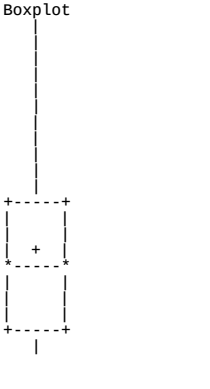
Extremes

Lowest	Obs	Highest	Obs
0(	446)	1.92(	178)
0(	423)	2(	10)
0(	375)	2(	166)
0(	347)	2(	171)
0(	345)	2(	392)

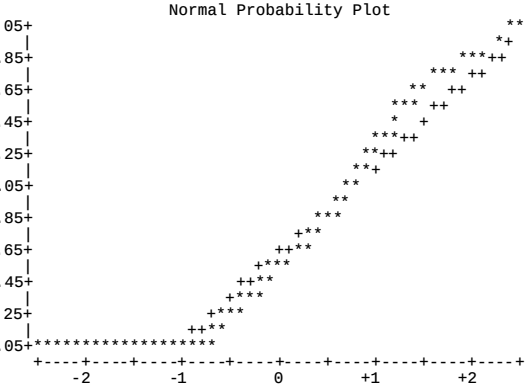
Histogram



Boxplot



Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999 52
April 22, 1999

Univariate Procedure

Variable=PERM2

Moments

N	465	Sum Wgts	465
Mean	3.25914	Sum	1515.5
Std Dev	2.643266	Variance	6.986857
Skewness	0.872603	Kurtosis	-0.09021
USS	8181.128	CSS	3241.902
CV	81.10319	Std Mean	0.122579
T:Mean=0	26.58817	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.890066	Pr<W	0.0001

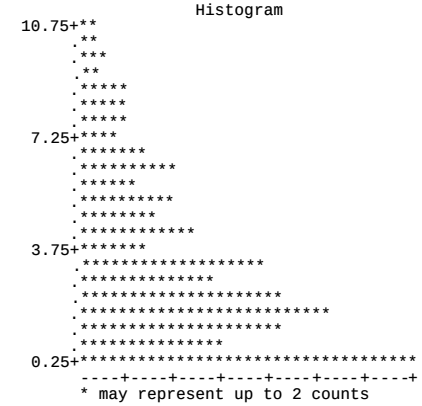
Quantiles(Def=5)

100% Max	10.75	99%	10
75% Q3	4.97	95%	8.5
50% Med	2.5	90%	7.43
25% Q1	1.23	10%	0.33
0% Min	0.06	5%	0.18
		1%	0.08
Range	10.69		
Q3-Q1	3.74		
Mode	1.61		

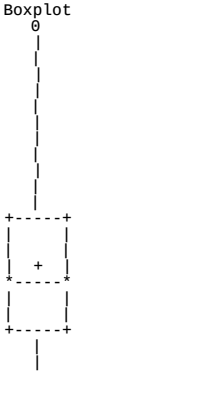
Extremes

Lowest	Obs	Highest	Obs
0.06(	171)	10(	238)
0.07(	178)	10.75(	58)
0.07(	176)	10.75(	97)
0.07(	153)	10.75(	102)
0.08(	151)	10.75(	138)

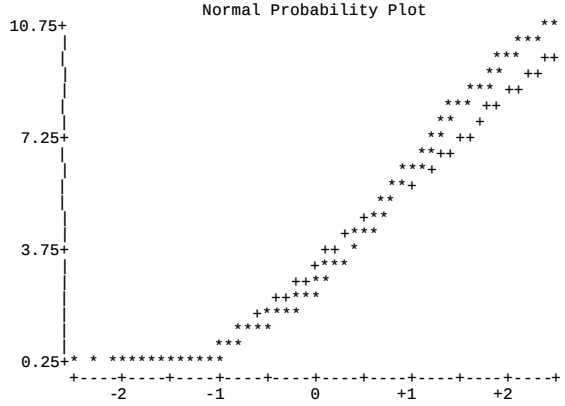
Histogram



Boxplot



Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1
Univariate Procedure

Variable=AWC2

Moments

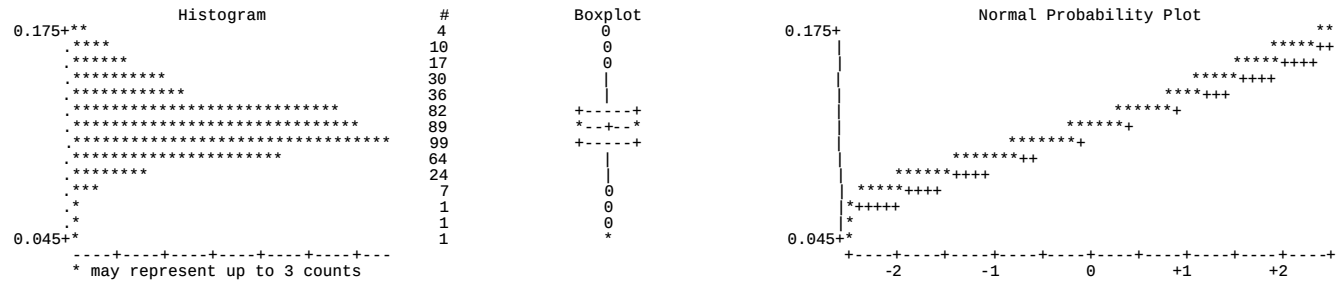
N	465	Sum Wgts	465
Mean	0.110882	Sum	51.56
Std Dev	0.020507	Variance	0.000421
Skewness	0.370053	Kurtosis	0.368119
USS	5.9122	CSS	0.195138
CV	18.49492	Std Mean	0.000951
T:Mean=0	116.5934	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.95553	Pr<W	0.0001

Quantiles(Def=5)

100% Max	0.17	99%	0.16
75% Q3	0.12	95%	0.15
50% Med	0.11	90%	0.14
25% Q1	0.1	10%	0.09
0% Min	0.04	5%	0.08
		1%	0.07
Range	0.13		
Q3-Q1	0.02		
Mode	0.1		

Extremes

Lowest	Obs	Highest	Obs
0.04(	426)	0.16(	453)
0.05(	238)	0.17(	3)
0.06(	206)	0.17(	7)
0.07(	449)	0.17(	9)
0.07(	448)	0.17(	452)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=BD2

Moments

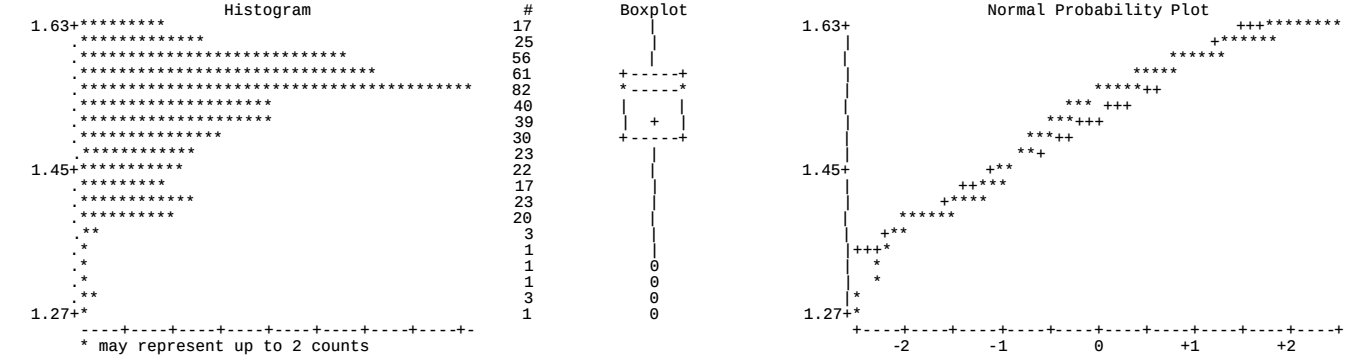
N	465	Sum Wgts	465
Mean	1.518022	Sum	705.88
Std Dev	0.069524	Variance	0.004834
Skewness	-0.85361	Kurtosis	0.359534
USS	1073.784	CSS	2.24278
CV	4.579904	Std Mean	0.003224
T:Mean=0	470.8364	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.924152	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1.63	99%	1.62
75% Q3	1.57	95%	1.61
50% Med	1.54	90%	1.59
25% Q1	1.48	10%	1.41
0% Min	1.26	5%	1.39
		1%	1.31
Range	0.37		
Q3-Q1	0.09		
Mode	1.54		

Extremes

Lowest	Obs	Highest	Obs
1.26(	223)	1.62(	426)
1.28(	287)	1.63(	58)
1.29(	389)	1.63(	97)
1.29(	387)	1.63(	102)
1.31(	261)	1.63(	138)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=CEC2

Moments

N	465	Sum Wgts	465
Mean	15.02963	Sum	6988.78
Std Dev	8.365647	Variance	69.98405
Skewness	1.034649	Kurtosis	0.362222
USS	137511.4	CSS	32472.6
CV	55.66101	Std Mean	0.387948
T:Mean=0	38.7414	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.884834	Pr<W	0.0001

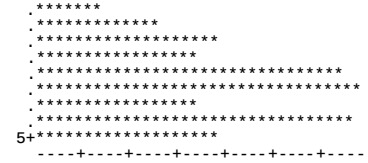
Quantiles(Def=5)

100% Max	42.5	99%	36.88
75% Q3	18.75	95%	33.44
50% Med	12.86	90%	29.17
25% Q1	8.61	10%	6.24
0% Min	4.13	5%	5.48
		1%	4.24
Range	38.37		
Q3-Q1	10.14		
Mode	10		

Extremes

Lowest	Obs	Highest	Obs
4.13(	138)	36.88(	7)
4.13(	102)	37.71(	163)
4.13(	97)	38.75(	178)
4.13(	58)	41.67(	171)
4.24(	227)	42.5(	166)

Histogram



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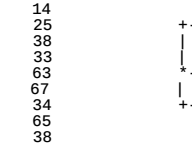
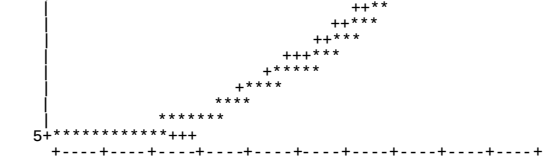
Boxplot



Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=HYD

Moments

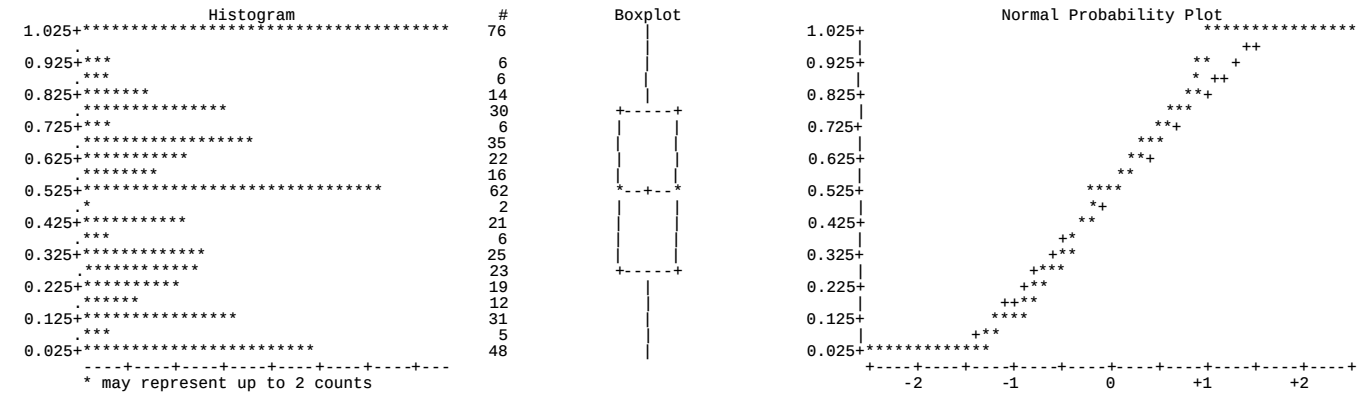
N	465	Sum Wgts	465
Mean	0.512538	Sum	238.33
Std Dev	0.32274	Variance	0.104161
Skewness	0.010763	Kurtosis	-1.11286
USS	170.4839	CSS	48.33081
CV	62.96907	Std Mean	0.014967
T:Mean=0	34.24516	Pr>|T|	0.0001
Num ^= 0	417	Num > 0	417
M(Sign)	208.5	Pr>=|M|	0.0001
Sgn Rank	43576.5	Pr>=|S|	0.0001
W:Normal	0.9083	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1	99%	1
75% Q3	0.75	95%	1
50% Med	0.5	90%	1
25% Q1	0.25	10%	0
0% Min	0	5%	0
		1%	0
Range	1		
Q3-Q1	0.5		
Mode	1		

Extremes

Lowest	Obs	Highest	Obs
0(	447)	1(	448)
0(	446)	1(	449)
0(	423)	1(	453)
0(	415)	1(	456)
0(	375)	1(	457)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999 57
April 22, 1999

Univariate Procedure

Variable=NO41

Moments

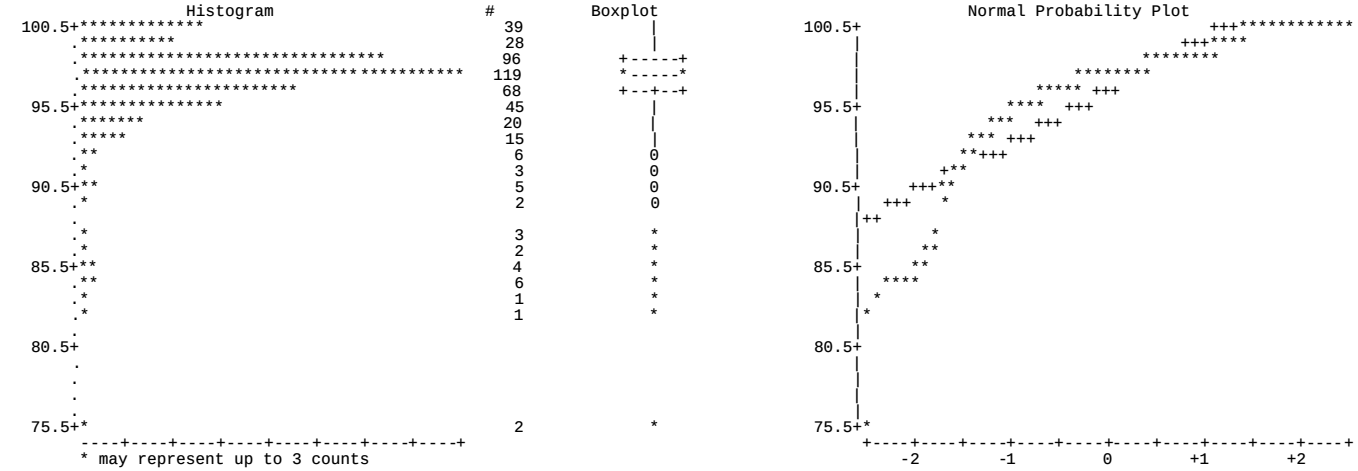
N	465	Sum Wgts	465
Mean	96.62204	Sum	44929.25
Std Dev	3.296341	Variance	10.86587
Skewness	-2.82764	Kurtosis	10.89784
USS	4346198	CSS	5041.762
CV	3.411583	Std Mean	0.152864
T:Mean=0	632.0777	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.733008	Pr<W	0.0001

Quantiles(Def=5)

100% Max	100	99%	100
75% Q3	98.33	95%	100
50% Med	97.5	90%	99.38
25% Q1	96	10%	93.75
0% Min	75	5%	90
		1%	84.17
Range	25		
Q3-Q1	2.33		
Mode	97.5		

Extremes

Lowest	Obs	Highest	Obs
75(	235)	100(	415)
75.89(	263)	100(	452)
82(	262)	100(	453)
83(	220)	100(	457)
84.17(	221)	100(	458)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999
Univariate Procedure

Variable=NO101

Moments

N	465	Sum Wgts	465
Mean	93.44723	Sum	43452.96
Std Dev	4.145098	Variance	17.18184
Skewness	-1.36595	Kurtosis	4.288167
USS	4068531	CSS	7972.374
CV	4.435764	Std Mean	0.192224
T:Mean=0	486.1363	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.914308	Pr<W	0.0001

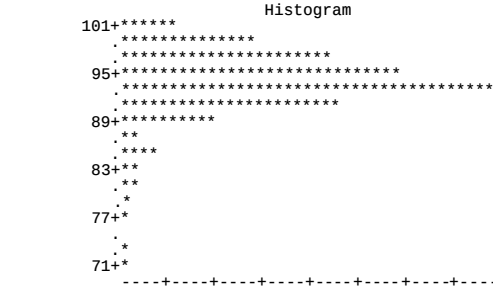
Quantiles(Def=5)

100% Max	100	99%	100
75% Q3	96.25	95%	99.29
50% Med	93.75	90%	98.33
25% Q1	91.5	10%	89.5
0% Min	70	5%	85.83
		1%	79.42
Range	30		
Q3-Q1	4.75		
Mode	95		

Extremes

Lowest	Obs	Highest	Obs
70(	235)	100(	198)
72.32(	263)	100(	203)
77.5(	224)	100(	260)
78.33(	262)	100(	335)
79.42(	197)	100(	336)

Histogram



#	Boxplot
17	|
42	|
66	+-----+
87	| |
123	*--+--*
69	+-----+
30	|
6	|
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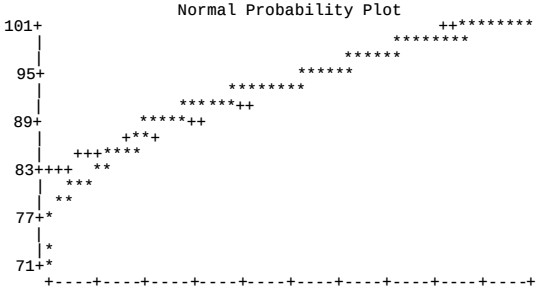
5	0
4	0
2	0
1	0
1	*
1	*

Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=NO42

Moments

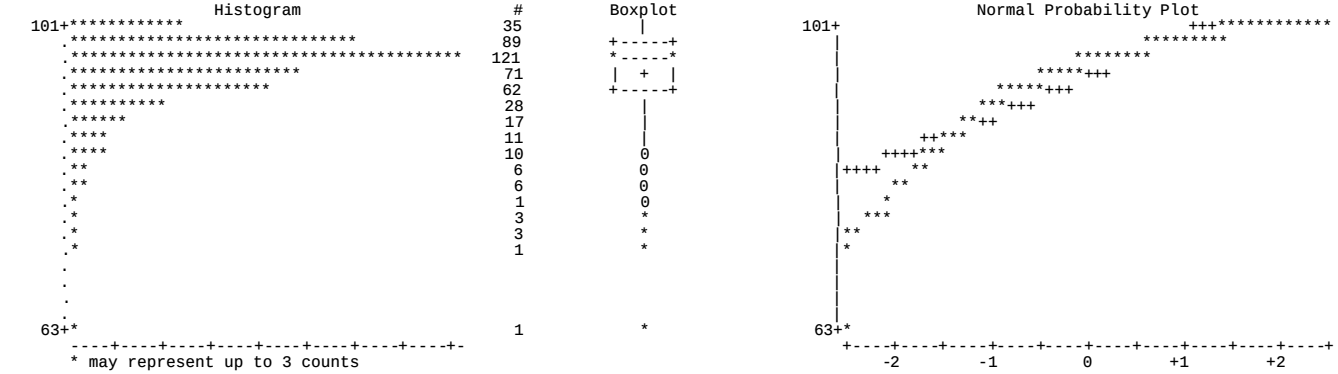
N	465	Sum Wgts	465
Mean	94.7423	Sum	44055.17
Std Dev	5.001767	Variance	25.01767
Skewness	-2.00514	Kurtosis	5.670205
USS	4185496	CSS	11608.2
CV	5.279339	Std Mean	0.231951
T:Mean=0	408.4576	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.822251	Pr<W	0.0001

Quantiles(Def=5)

100% Max	100	99%	100
75% Q3	98.13	95%	100
50% Med	96.25	90%	99.17
25% Q1	92.97	10%	88.5
0% Min	63.75	5%	84.9
		1%	75.78
Range	36.25		
Q3-Q1	5.16		
Mode	100		

Extremes

Lowest	Obs	Highest	Obs
63.75(	235)	100(	347)
72.5(	263)	100(	452)
75.29(	185)	100(	453)
75.78(	389)	100(	457)
75.78(	387)	100(	458)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=NO102

Moments

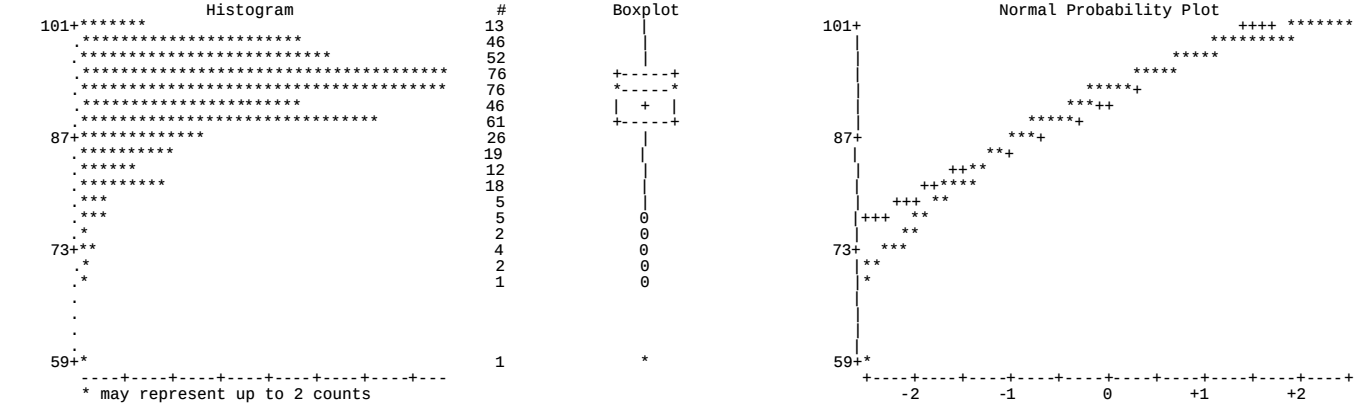
N	465	Sum Wgts	465
Mean	91.65069	Sum	42617.57
Std Dev	6.027059	Variance	36.32544
Skewness	-1.28281	Kurtosis	2.563161
USS	3922785	CSS	16855
CV	6.57612	Std Mean	0.279498
T:Mean=0	327.9116	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.911428	Pr<W	0.0001

Quantiles(Def=5)

100% Max	100	99%	100
75% Q3	95.83	95%	99.17
50% Med	92.92	90%	98.33
25% Q1	88.75	10%	83.75
0% Min	59.25	5%	80
		1%	72.31
Range	40.75		
Q3-Q1	7.08		
Mode	95		

Extremes

Lowest	Obs	Highest	Obs
59.25(	235)	100(	172)
68.72(	263)	100(	176)
70.74(	389)	100(	178)
70.74(	387)	100(	189)
72.31(	185)	100(	198)



* may represent up to 2 counts

Univariate Procedure

Variable=INCH101

Moments

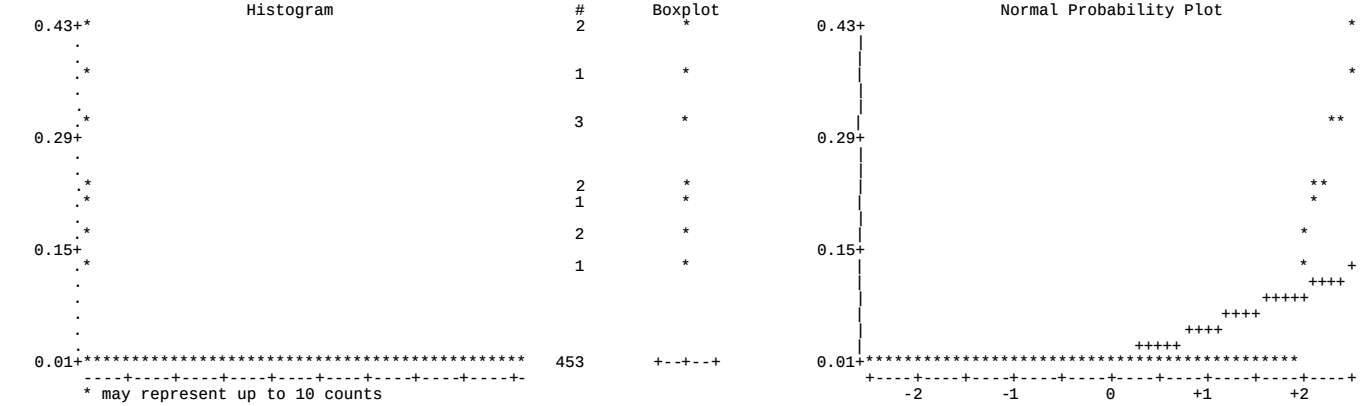
N	465	Sum Wgts	465
Mean	0.007011	Sum	3.26
Std Dev	0.045702	Variance	0.002089
Skewness	6.994395	Kurtosis	50.58637
USS	0.992	CSS	0.969145
CV	651.8846	Std Mean	0.002119
T:Mean=0	3.307926	Pr>|T|	0.0010
Num ^= 0	12	Num > 0	12
M(Sign)	6	Pr>=|M|	0.0005
Sgn Rank	39	Pr>=|S|	0.0005
W:Normal	0.155431	Pr<W	0.0001

Quantiles(Def=5)

100% Max	0.42	99%	0.31
75% Q3	0	95%	0
50% Med	0	90%	0
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	0.42		
Q3-Q1	0		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	465)	0.31(	65)
0(	464)	0.31(	146)
0(	463)	0.36(	66)
0(	462)	0.42(	62)
0(	461)	0.42(	157)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=INCH31

Moments

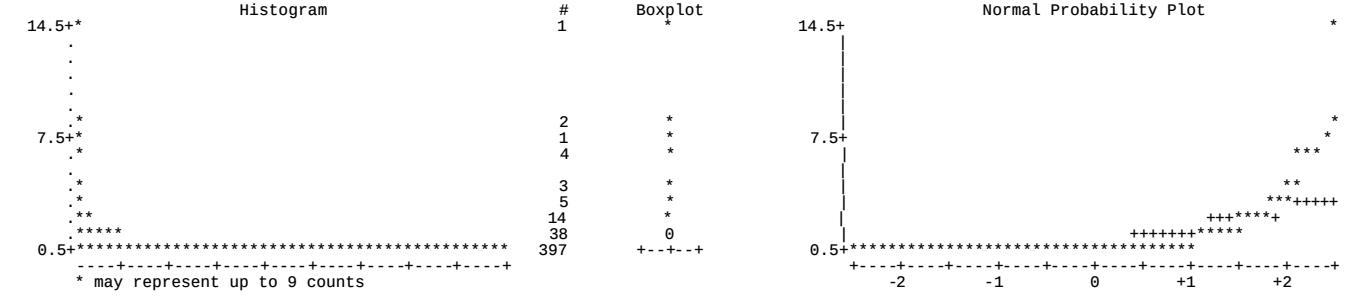
N	465	Sum Wgts	465
Mean	0.496344	Sum	230.8
Std Dev	1.270568	Variance	1.614344
Skewness	5.42488	Kurtosis	40.34089
USS	863.6118	CSS	749.0556
CV	255.9854	Std Mean	0.058921
T:Mean=0	8.423863	Pr>|T|	0.0001
Num ^= 0	177	Num > 0	177
M(Sign)	88.5	Pr>=|M|	0.0001
Sgn Rank	7876.5	Pr>=|S|	0.0001
W:Normal	0.45151	Pr<W	0.0001

Quantiles(Def=5)

100% Max	14.17	99%	6.67
75% Q3	0.42	95%	2.5
50% Med	0	90%	1.33
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	14.17		
Q3-Q1	0.42		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	465)	6.67(	302)
0(	459)	7.08(	391)
0(	458)	8.64(	26)
0(	457)	8.75(	247)
0(	453)	14.17(	392)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=INCH102

Moments

N	465	Sum Wgts	465
Mean	0.009097	Sum	4.23
Std Dev	0.052854	Variance	0.002794
Skewness	6.207598	Kurtosis	39.55472
USS	1.3347	CSS	1.296221
CV	581.0226	Std Mean	0.002451
T:Mean=0	3.711363	Pr>|T|	0.0002
Num ^= 0	15	Num > 0	15
M(Sign)	7.5	Pr>=|M|	0.0001
Sgn Rank	60	Pr>=|S|	0.0001
W:Normal	0.17857	Pr<W	0.0001

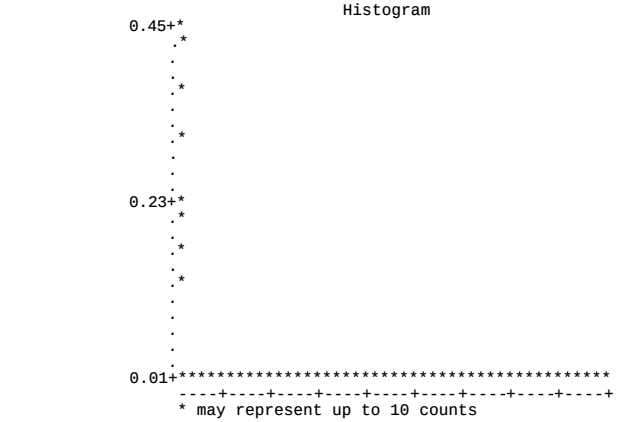
Quantiles(Def=5)

100% Max	0.45	99%	0.31
75% Q3	0	95%	0
50% Med	0	90%	0
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	0.45		
Q3-Q1	0		
Mode	0		

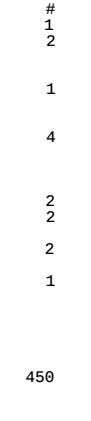
Extremes

Lowest	Obs	Highest	Obs
0(	465)	0.31(	450)
0(	464)	0.36(	66)
0(	463)	0.42(	62)
0(	462)	0.42(	157)
0(	461)	0.45(	451)

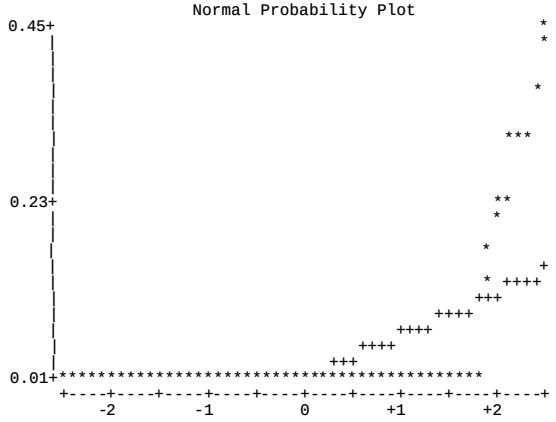
Histogram



\# Boxplot



Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=INCH32

Moments

N	465	Sum Wgts	465
Mean	0.396194	Sum	184.23
Std Dev	0.87463	Variance	0.764978
Skewness	3.714621	Kurtosis	17.46089
USS	427.9407	CSS	354.95
CV	220.7584	Std Mean	0.04056
T:Mean=0	9.768082	Pr>|T|	0.0001
Num ^= 0	173	Num > 0	173
M(Sign)	86.5	Pr>=|M|	0.0001
Sgn Rank	7525.5	Pr>=|S|	0.0001
W:Normal	0.525246	Pr<W	0.0001

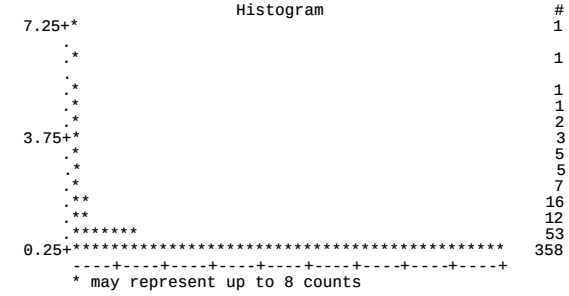
Quantiles(Def=5)

100% Max	7.27	99%	4.42
75% Q3	0.42	95%	2.08
50% Med	0	90%	1.25
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	7.27		
Q3-Q1	0.42		
Mode	0		

Extremes

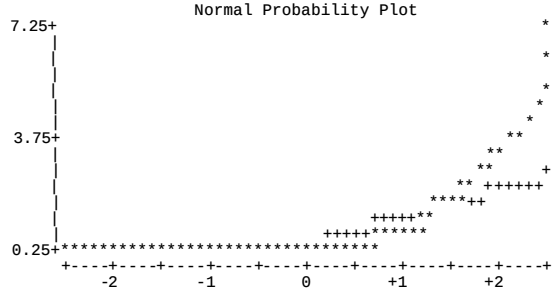
Lowest	Obs	Highest	Obs
0(	465)	4.42(	247)
0(	459)	4.75(	235)
0(	458)	5(	224)
0(	457)	6.11(	212)
0(	453)	7.27(	196)

Histogram



#	Boxplot
1	*
1	*
1	*
1	*
2	*
3	*
5	*
5	*
7	*
16	0
12	0
53	|
358	+--+--+

Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=OM1

Moments

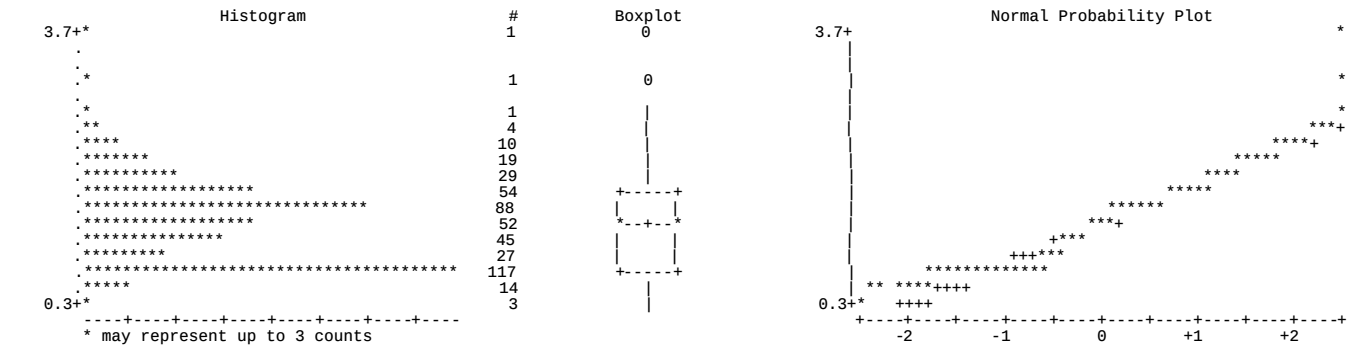
N	465	Sum Wgts	465
Mean	1.273204	Sum	592.04
Std Dev	0.503288	Variance	0.253299
Skewness	0.539944	Kurtosis	0.616905
USS	871.3184	CSS	117.5305
CV	39.52922	Std Mean	0.023339
T:Mean=0	54.55169	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.94935	Pr<W	0.0001

Quantiles(Def=5)

100% Max	3.75	99%	2.5
75% Q3	1.6	95%	2.13
50% Med	1.31	90%	1.88
25% Q1	0.75	10%	0.69
0% Min	0.25	5%	0.63
		1%	0.43
Range	3.5		
Q3-Q1	0.85		
Mode	0.75		

Extremes

Lowest	Obs	Highest	Obs
0.25(	195)	2.5(	347)
0.25(	194)	2.54(	144)
0.38(	192)	2.63(	240)
0.41(	220)	3.1(	239)
0.43(	221)	3.75(	224)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=OM2

Moments

N	465	Sum Wgts	465
Mean	0.497484	Sum	231.33
Std Dev	0.309058	Variance	0.095517
Skewness	0.632929	Kurtosis	-0.63372
USS	159.4029	CSS	44.31996
CV	62.12432	Std Mean	0.014332
T:Mean=0	34.71081	Pr>|T|	0.0001
Num ^= 0	447	Num > 0	447
M(Sign)	223.5	Pr>=|M|	0.0001
Sgn Rank	50064	Pr>=|S|	0.0001
W:Normal	0.892144	Pr<W	0.0001

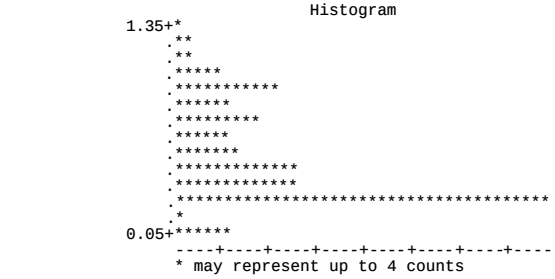
Quantiles(Def=5)

100% Max	1.31	99%	1.23
75% Q3	0.75	95%	1.04
50% Med	0.4	90%	0.96
25% Q1	0.25	10%	0.23
0% Min	0	5%	0.12
		1%	0
Range	1.31		
Q3-Q1	0.5		
Mode	0.25		

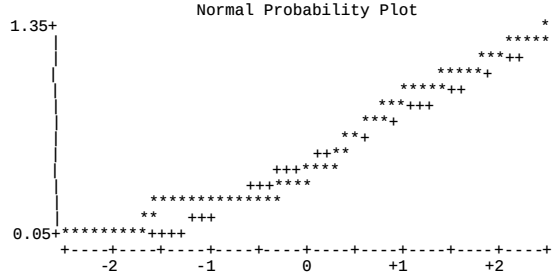
Extremes

Lowest	Obs	Highest	Obs
0(	243)	1.23(	428)
0(	242)	1.24(	9)
0(	241)	1.29(	6)
0(	240)	1.29(	378)
0(	239)	1.31(	7)

Histogram



Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=SALIN1

Moments

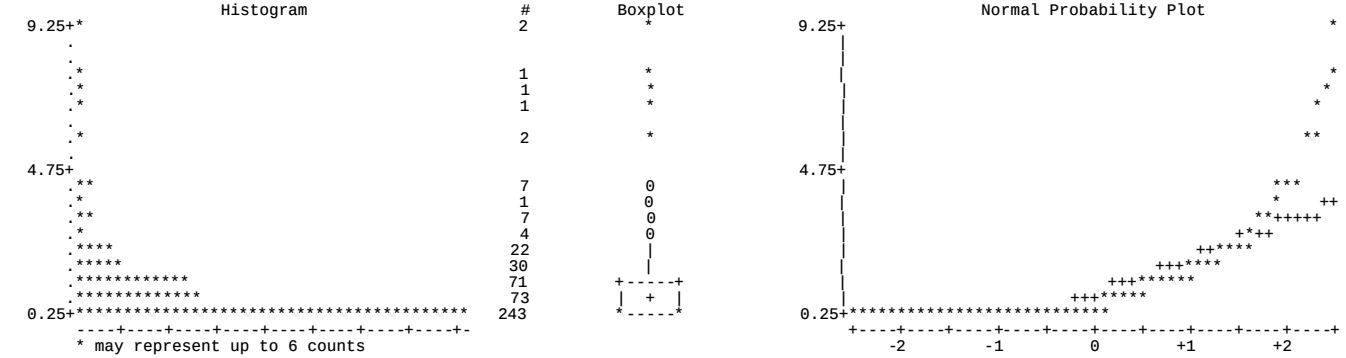
N	465	Sum Wgts	465
Mean	0.773935	Sum	359.88
Std Dev	1.177701	Variance	1.386979
Skewness	3.340656	Kurtosis	15.71564
USS	922.0822	CSS	643.5583
CV	152.1704	Std Mean	0.054615
T:Mean=0	14.17086	Pr>|T|	0.0001
Num ^= 0	321	Num > 0	321
M(Sign)	160.5	Pr>=|M|	0.0001
Sgn Rank	25840.5	Pr>=|S|	0.0001
W:Normal	0.658227	Pr<W	0.0001

Quantiles(Def=5)

100% Max	9	99%	6.5
75% Q3	1	95%	2.85
50% Med	0.36	90%	2
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	9		
Q3-Q1	1		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	465)	6.5(	143)
0(	464)	7.18(	149)
0(	463)	7.5(	178)
0(	462)	9(	153)
0(	461)	9(	176)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=SALIN2

Moments

N	465	Sum Wgts	465
Mean	1.106946	Sum	514.73
Std Dev	1.396266	Variance	1.949559
Skewness	3.016928	Kurtosis	11.88085
USS	1474.374	CSS	904.5955
CV	126.1368	Std Mean	0.06475
T:Mean=0	17.09562	Pr>|T|	0.0001
Num ^= 0	425	Num > 0	425
M(Sign)	212.5	Pr>=|M|	0.0001
Sgn Rank	45262.5	Pr>=|S|	0.0001
W:Normal	0.686169	Pr<W	0.0001

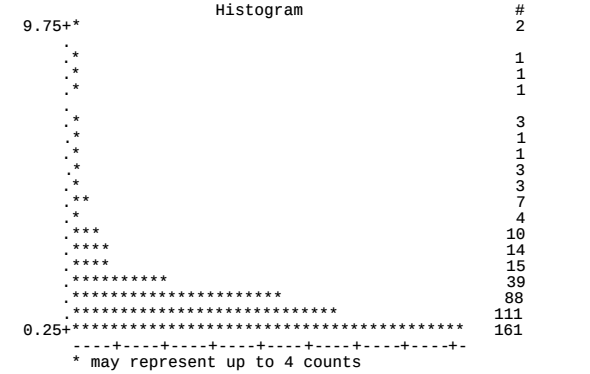
Quantiles(Def=5)

100% Max	9.86	99%	7.67
75% Q3	1.29	95%	3.9
50% Med	0.67	90%	2.67
25% Q1	0.29	10%	0.08
0% Min	0	5%	0
		1%	0
Range	9.86		
Q3-Q1	1		
Mode	1		

Extremes

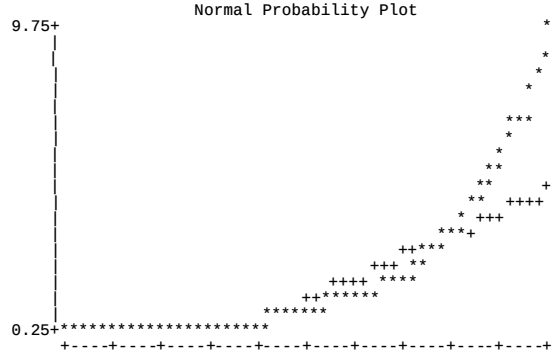
Lowest	Obs	Highest	Obs
0(	464)	7.67(	171)
0(	463)	8.27(	149)
0(	461)	8.67(	178)
0(	367)	9.86(	153)
0(	325)	9.86(	176)

Histogram



#	Boxplot
2	*
1	*
1	*
1	*
3	*
1	*
1	*
3	*
3	*
7	0
4	0
10	0
14	0
15	|
39	|
88	+--+--+
111	*-----*
161	+-----+

Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=BEDROCK

Moments

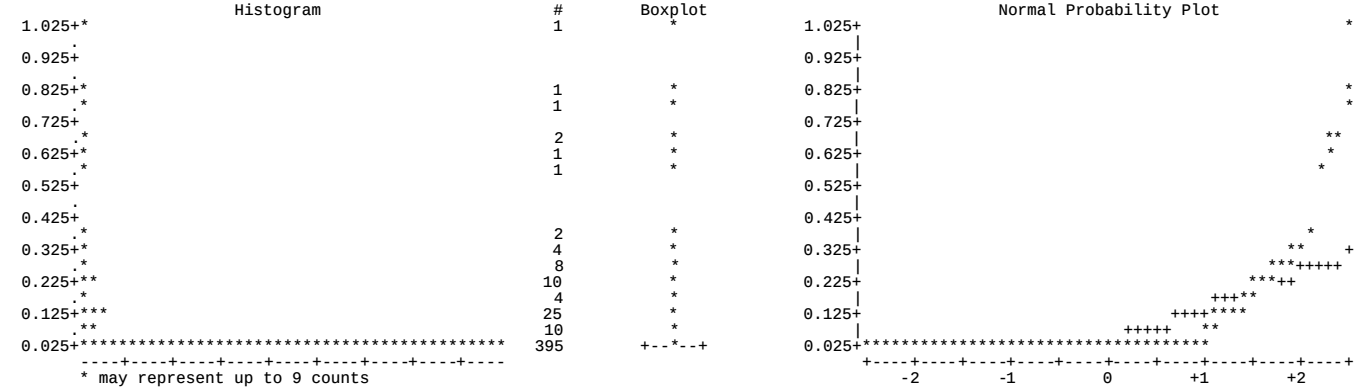
N	465	Sum Wgts	465
Mean	0.033742	Sum	15.69
Std Dev	0.108315	Variance	0.011732
Skewness	4.922273	Kurtosis	29.82797
USS	5.9731	CSS	5.443689
CV	321.0093	Std Mean	0.005023
T:Mean=0	6.717517	Pr>|T|	0.0001
Num ^= 0	71	Num > 0	71
M(Sign)	35.5	Pr>=|M|	0.0001
Sgn Rank	1278	Pr>=|S|	0.0001
W:Normal	0.371537	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1	99%	0.67
75% Q3	0	95%	0.2
50% Med	0	90%	0.13
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	1		
Q3-Q1	0		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	465)	0.67(	448)
0(	464)	0.67(	449)
0(	463)	0.75(	229)
0(	462)	0.8(	261)
0(	461)	1(	260)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=PAN

Moments

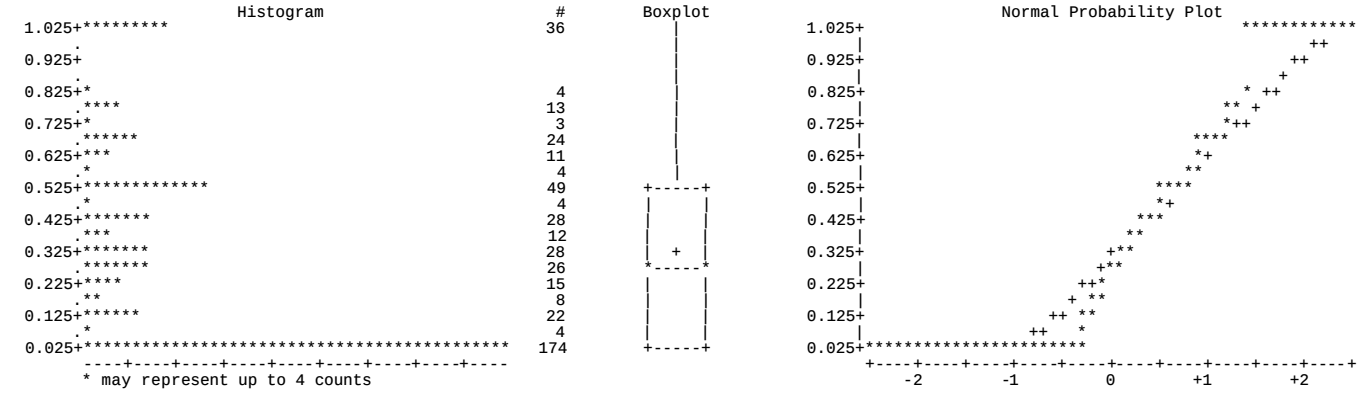
N	465	Sum Wgts	465
Mean	0.305118	Sum	141.88
Std Dev	0.314098	Variance	0.098658
Skewness	0.751486	Kurtosis	-0.4576
USS	89.0674	CSS	45.77722
CV	102.9432	Std Mean	0.014566
T:Mean=0	20.94735	Pr>|T|	0.0001
Num ^= 0	291	Num > 0	291
M(Sign)	145.5	Pr>=|M|	0.0001
Sgn Rank	21243	Pr>=|S|	0.0001
W:Normal	0.831859	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1	99%	1
75% Q3	0.5	95%	1
50% Med	0.25	90%	0.75
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	1		
Q3-Q1	0.5		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	458)	1(	405)
0(	457)	1(	406)
0(	456)	1(	407)
0(	455)	1(	418)
0(	454)	1(	437)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1,

Univariate Procedure

Variable=WATTAB

Moments

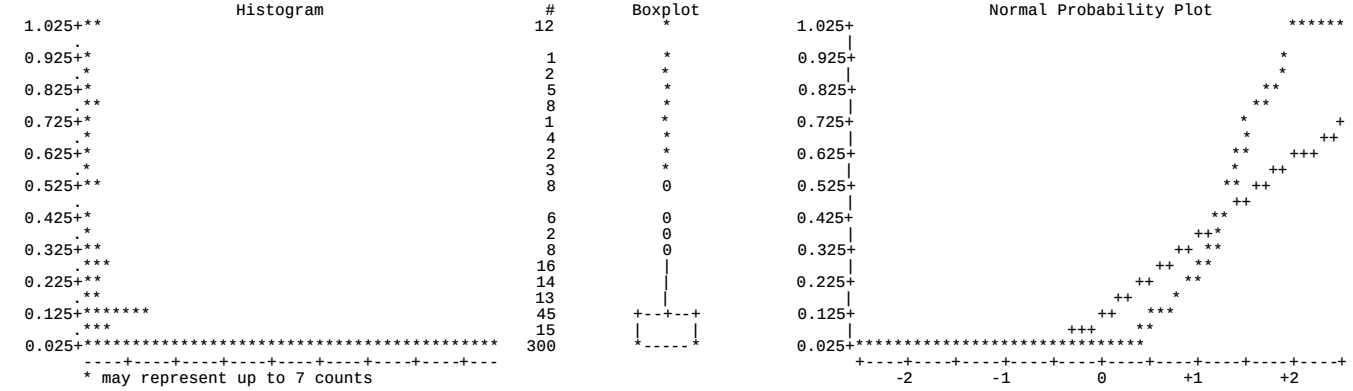
N	465	Sum Wgts	465
Mean	0.122516	Sum	56.97
Std Dev	0.239012	Variance	0.057127
Skewness	2.354431	Kurtosis	4.827324
USS	33.4865	CSS	26.50676
CV	195.086	Std Mean	0.011084
T:Mean=0	11.05352	Pr>|T|	0.0001
Num ^= 0	166	Num > 0	166
M(Sign)	83	Pr>=|M|	0.0001
Sgn Rank	6930.5	Pr>=|S|	0.0001
W:Normal	0.571141	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1	99%	1
75% Q3	0.13	95%	0.75
50% Med	0	90%	0.44
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	1		
Q3-Q1	0.13		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	464)	1(	166)
0(	459)	1(	176)
0(	455)	1(	202)
0(	454)	1(	203)
0(	453)	1(	457)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=WATSOIL

Moments

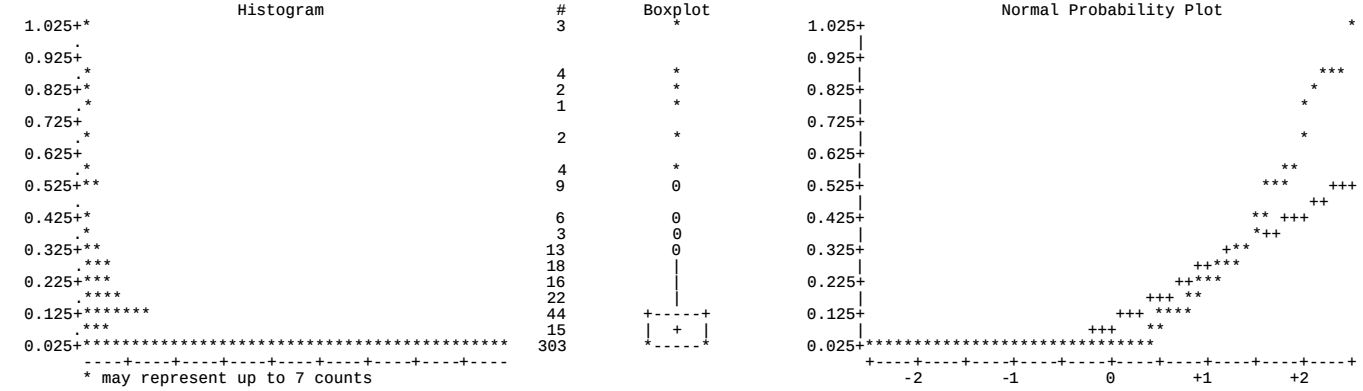
N	465	Sum Wgts	465
Mean	0.092817	Sum	43.16
Std Dev	0.177481	Variance	0.0315
Skewness	2.702724	Kurtosis	8.278883
USS	18.6218	CSS	14.61581
CV	191.2159	Std Mean	0.00823
T:Mean=0	11.27723	Pr>|T|	0.0001
Num ^= 0	162	Num > 0	162
M(Sign)	81	Pr>=|M|	0.0001
Sgn Rank	6601.5	Pr>=|S|	0.0001
W:Normal	0.590903	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1	99%	0.88
75% Q3	0.13	95%	0.5
50% Med	0	90%	0.3
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	1		
Q3-Q1	0.13		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	465)	0.88(	458)
0(	463)	0.89(	457)
0(	460)	1(	123)
0(	459)	1(	202)
0(	454)	1(	203)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=DRAIN

Moments

N	465	Sum Wgts	465
Mean	3.563312	Sum	1656.94
Std Dev	0.659991	Variance	0.435588
Skewness	-1.14973	Kurtosis	1.76875
USS	6106.307	CSS	202.1127
CV	18.52183	Std Mean	0.030606
T:Mean=0	116.424	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.914054	Pr<W	0.0001

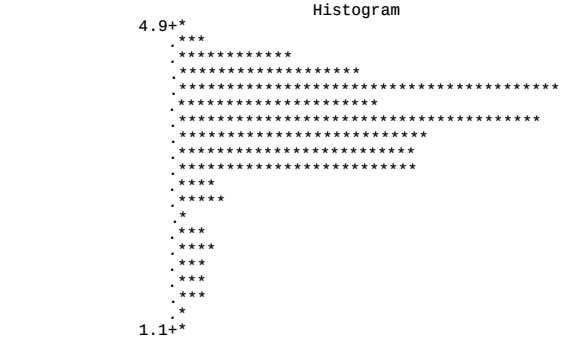
Quantiles(Def=5)

100% Max	4.91	99%	4.67
75% Q3	4	95%	4.43
50% Med	3.67	90%	4.33
25% Q1	3.25	10%	2.86
0% Min	1	5%	2.13
		1%	1.43
Range	3.91		
Q3-Q1	0.75		
Mode	4		

Extremes

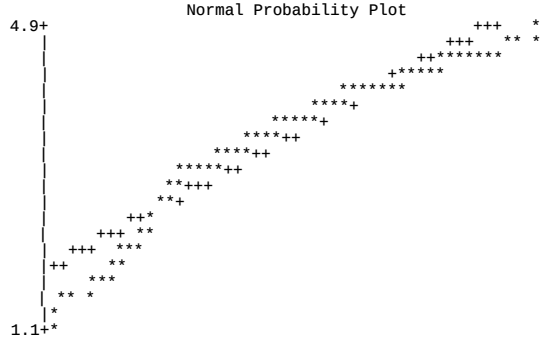
Lowest	Obs	Highest	Obs
1(	6)	4.67(	217)
1.14(	176)	4.67(	219)
1.33(	162)	4.67(	221)
1.43(	153)	4.67(	222)
1.43(	9)	4.91(	196)

Histogram



#	Boxplot
1	
6	
23	
37	
79	+-----+
42	| |
76	*-----*
51	| + |
49	+-----+
50	
7	
10	
2	
6	
8	0
5	0
5	0
5	0
1	0
2	0

Normal Probability Plot



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=HYD

Moments

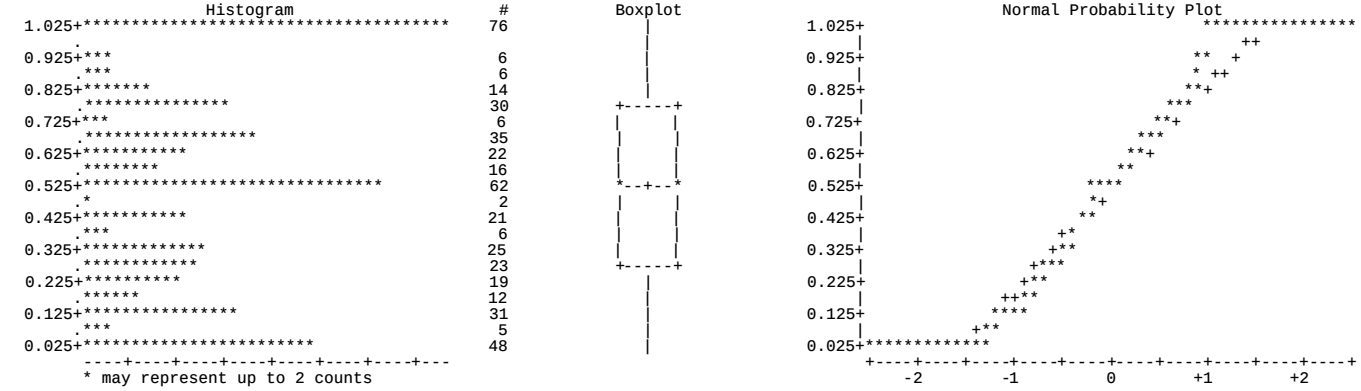
N	465	Sum Wgts	465
Mean	0.512538	Sum	238.33
Std Dev	0.32274	Variance	0.104161
Skewness	0.010763	Kurtosis	-1.11286
USS	170.4839	CSS	48.33081
CV	62.96907	Std Mean	0.014967
T:Mean=0	34.24516	Pr>|T|	0.0001
Num ^= 0	417	Num > 0	417
M(Sign)	208.5	Pr>=|M|	0.0001
Sgn Rank	43576.5	Pr>=|S|	0.0001
W:Normal	0.9083	Pr<W	0.0001

Quantiles(Def=5)

100% Max	1	99%	1
75% Q3	0.75	95%	1
50% Med	0.5	90%	1
25% Q1	0.25	10%	0
0% Min	0	5%	0
		1%	0
Range	1		
Q3-Q1	0.5		
Mode	1		

Extremes

Lowest	Obs	Highest	Obs
0(	447)	1(	448)
0(	446)	1(	449)
0(	423)	1(	453)
0(	415)	1(	456)
0(	375)	1(	457)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=FLOOD

Moments

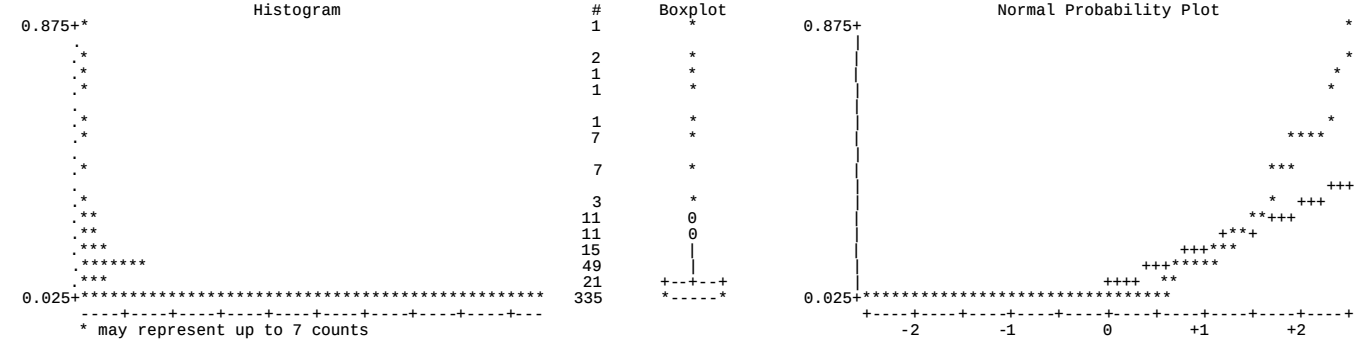
N	465	Sum Wgts	465
Mean	0.058129	Sum	27.03
Std Dev	0.126914	Variance	0.016107
Skewness	3.147976	Kurtosis	11.6833
USS	9.0449	CSS	7.473672
CV	218.3308	Std Mean	0.005885
T:Mean=0	9.876693	Pr>|T|	0.0001
Num ^= 0	130	Num > 0	130
M(Sign)	65	Pr>=|M|	0.0001
Sgn Rank	4257.5	Pr>=|S|	0.0001
W:Normal	0.533695	Pr<W	0.0001

Quantiles(Def=5)

100% Max	0.88	99%	0.67
75% Q3	0.08	95%	0.29
50% Med	0	90%	0.17
25% Q1	0	10%	0
0% Min	0	5%	0
		1%	0
Range	0.88		
Q3-Q1	0.08		
Mode	0		

Extremes

Lowest	Obs	Highest	Obs
0(	464)	0.67(	461)
0(	456)	0.71(	9)
0(	454)	0.75(	3)
0(	453)	0.75(	156)
0(	452)	0.88(	462)



Univariate analysis of data from the Well Inventory as of: 09:24 Wednesday, September 1, 1999

Univariate Procedure

Variable=SLOPE

Moments

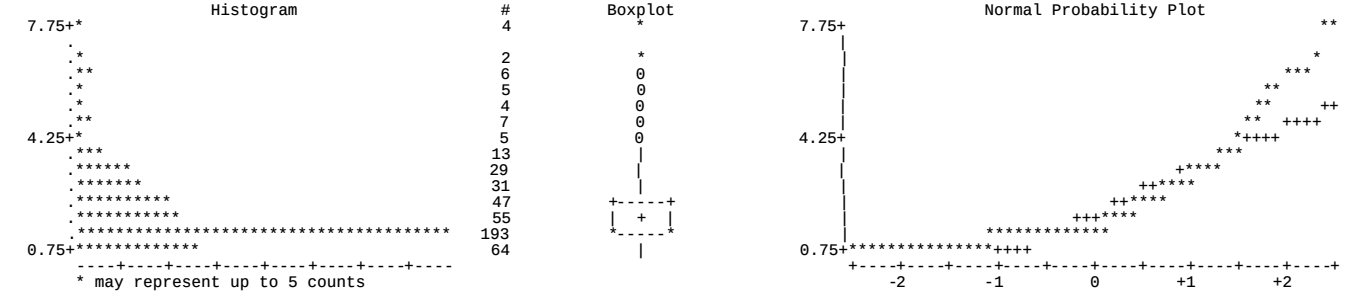
N	465	Sum Wgts	465
Mean	1.864796	Sum	867.13
Std Dev	1.337263	Variance	1.788273
Skewness	1.9877	Kurtosis	4.365571
USS	2446.779	CSS	829.7588
CV	71.71098	Std Mean	0.062014
T:Mean=0	30.07051	Pr>|T|	0.0001
Num ^= 0	465	Num > 0	465
M(Sign)	232.5	Pr>=|M|	0.0001
Sgn Rank	54172.5	Pr>=|S|	0.0001
W:Normal	0.761816	Pr<W	0.0001

Quantiles(Def=5)

100% Max	7.94	99%	6.94
75% Q3	2.33	95%	4.88
50% Med	1.25	90%	3.46
25% Q1	1	10%	0.88
0% Min	0.5	5%	0.75
		1%	0.5
Range	7.44		
Q3-Q1	1.33		
Mode	1		

Extremes

Lowest	Obs	Highest	Obs
0.5(	465)	6.94(	430)
0.5(	462)	7.67(	448)
0.5(	461)	7.67(	449)
0.5(	459)	7.86(	230)
0.5(	453)	7.94(	229)



2. Results of Cluster Analysis

Step 1.

Cluster analysis of data from the Well Inventory as of: 195
April 22, 1999 07:14 Sunday, April 18, 1999

CLUSTERING ON no2001-AVERAGE METHOD

Average Linkage Cluster Analysis

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL33	CL42	71	0.00082	0.996	0.998	-9.17	5777	184.9	0.11306	
19	CL52	OB221	7	0.00006	0.996	0.998	-7.73	6024	48.8	0.12727	
18	CL49	CL38	17	0.00025	0.996	0.997	-6.89	6023	82.4	0.12742	
17	CL30	CL40	52	0.00077	0.995	0.997	-7.54	5444	139.3	0.12818	
16	CL32	CL35	79	0.00163	0.993	0.996	-9.82	4407	344.3	0.14696	
15	CL34	CL27	49	0.00093	0.992	0.996	-9.73	4154	132.2	0.14917	
14	CL28	CL24	32	0.00098	0.991	0.995	-9.37	3970	98.6	0.18139	
13	CL23	CL19	35	0.00075	0.991	0.995	-8.28	3963	64.5	0.18958	
12	CL18	CL37	33	0.00115	0.989	0.994	-7.51	3855	101.3	0.19325	
11	CL20	CL26	110	0.00395	0.985	0.992	-9.63	3081	292.1	0.20527	
10	CL22	CL17	91	0.00368	0.982	0.991	-10.1	2727	213.7	0.21410	
9	CL16	CL15	128	0.00871	0.973	0.988	-12.8	2061	336.9	0.28046	
8	CL14	CL25	51	0.00429	0.969	0.985	-11.4	2027	142.9	0.30844	
7	CL10	CL13	126	0.01163	0.957	0.980	-12.1	1706	227.3	0.35716	
6	CL21	CL8	67	0.00901	0.948	0.973	-10.3	1679	98.1	0.44809	
5	CL9	CL11	238	0.05379	0.894	0.961	-15.9	973.6	730.2	0.49403	
4	CL12	CL6	100	0.03699	0.857	0.939	-13.8	923.7	219.9	0.67127	
3	CL7	OB198	127	0.00265	0.855	0.890	-4.88	1359	18.4	0.80741	
2	CL3	CL5	365	0.20100	0.654	0.751	-7.09	874.1	794.8	0.81863	
1	CL4	CL2	465	0.65373	0.000	0.000	0.00	.	874.1	1.49745	

CLUSTERING ON no2001-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL34	CL42	71	0.00082	0.996	0.998	-9.31	5726	184.9	0.10412	
19	CL29	CL40	52	0.00077	0.995	0.998	-10.3	5090	139.3	0.11865	
18	CL47	CL39	17	0.00025	0.995	0.997	-9.31	5135	82.4	0.12224	
17	CL50	OB221	7	0.00006	0.995	0.997	-7.64	5406	48.8	0.12635	
16	CL35	CL28	46	0.00081	0.994	0.996	-7.93	4990	135.2	0.13241	
15	CL30	CL31	82	0.00180	0.992	0.996	-9.90	4107	326.6	0.14437	
14	CL21	CL33	32	0.00096	0.991	0.995	-9.47	3942	88.0	0.16797	
13	CL24	CL17	35	0.00075	0.991	0.995	-8.38	3938	64.5	0.17645	
12	CL18	CL36	33	0.00115	0.989	0.994	-7.59	3833	101.3	0.18022	
11	CL20	CL25	110	0.00395	0.985	0.992	-9.69	3068	292.1	0.19091	
10	CL22	CL19	91	0.00368	0.982	0.991	-10.1	2718	213.7	0.19567	
9	CL15	CL16	128	0.00865	0.973	0.988	-12.8	2061	328.6	0.26097	
8	CL14	CL26	51	0.00429	0.969	0.985	-11.4	2027	142.9	0.28902	
7	CL10	CL13	126	0.01163	0.957	0.980	-12.1	1706	227.3	0.32672	
6	CL23	CL8	67	0.00901	0.948	0.973	-10.3	1679	98.1	0.41428	
5	CL9	CL11	238	0.05379	0.894	0.961	-15.9	973.6	730.2	0.45929	
4	CL12	CL6	100	0.03699	0.857	0.939	-13.8	923.7	219.9	0.62302	
3	CL7	CL5	364	0.19667	0.661	0.890	-19.7	449.8	798.6	0.74421	
2	CL3	OB198	365	0.00697	0.654	0.751	-7.09	874.1	8.9	1.27324	
1	CL4	CL2	465	0.65373	0.000	0.000	0.00	.	874.1	1.39003	

Cluster analysis of data from the Well Inventory as of: 197
April 22, 1999 07:14 Sunday, April 18, 1999

CLUSTERING ON no401-AVERAGE METHOD

Average Linkage Cluster Analysis

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL30	CL36	65	0.00075	0.996	0.998	-9.44	5676	154.8	0.11697	
19	CL25	CL35	26	0.00029	0.996	0.998	-8.81	5612	39.2	0.12127	
18	CL28	CL96	8	0.00009	0.996	0.997	-7.37	5836	14.4	0.12366	
17	CL32	OB6	14	0.00007	0.995	0.997	-5.75	6122	11.6	0.13437	
16	CL24	CL45	60	0.00089	0.995	0.996	-6.54	5465	112.7	0.13607	
15	CL38	CL29	44	0.00089	0.994	0.996	-6.78	5041	177.1	0.14571	
14	CL20	CL27	96	0.00205	0.992	0.995	-8.87	4103	159.3	0.16609	
13	CL17	CL26	32	0.00086	0.991	0.995	-8.01	4035	94.5	0.17163	
12	CL40	CL21	31	0.00091	0.990	0.994	-6.91	4011	86.5	0.18133	
11	CL34	CL16	87	0.00269	0.987	0.992	-7.75	3488	155.7	0.19913	

10	CL31	CL23	78	0.00346	0.984	0.991	-8.40	3049	533.9	0.21050
9	CL18	OB221	9	0.00016	0.984	0.988	-5.22	3405	8.7	0.21160
8	CL22	CL15	106	0.00630	0.977	0.985	-6.51	2803	327.7	0.25678
7	CL13	CL19	58	0.00580	0.971	0.980	-5.81	2596	203.1	0.32576
6	CL14	CL9	105	0.00449	0.967	0.973	-3.21	2685	130.6	0.37670
5	CL12	CL10	109	0.01352	0.953	0.961	-2.81	2354	279.6	0.40284
4	CL6	CL11	192	0.03289	0.921	0.939	-4.23	1780	512.7	0.43498
3	CL5	CL8	215	0.06188	0.859	0.890	-4.40	1403	488.4	0.57017
2	CL3	CL4	407	0.39595	0.463	0.751	-16.5	398.7	1197	1.02765
1	CL2	CL7	465	0.46270	0.000	0.000	0.00	.	398.7	1.56403

CLUSTERING ON no401-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL42	CL29	47	0.00046	0.996	0.998	-8.68	5967	85.4	0.10397	
19	CL36	CL55	19	0.00022	0.996	0.998	-7.86	5972	80.4	0.10420	
18	CL25	CL46	26	0.00028	0.996	0.997	-7.13	5930	38.0	0.11327	
17	CL28	CL24	57	0.00049	0.995	0.997	-6.88	5686	70.8	0.12796	
16	CL32	OB6	14	0.00007	0.995	0.996	-5.13	5996	11.6	0.12967	
15	CL38	CL30	44	0.00089	0.994	0.996	-5.58	5457	177.1	0.13817	
14	CL17	CL33	93	0.00211	0.992	0.995	-8.08	4321	185.6	0.14894	
13	CL16	CL26	32	0.00086	0.991	0.995	-7.29	4229	94.5	0.15945	
12	CL40	CL19	31	0.00091	0.990	0.994	-6.26	4186	86.5	0.16989	
11	CL27	OB221	7	0.00011	0.990	0.992	-3.67	4562	15.2	0.17337	
10	CL22	CL20	92	0.00380	0.986	0.991	-5.66	3653	273.1	0.19576	
9	CL31	CL23	78	0.00346	0.983	0.988	-5.81	3274	533.9	0.20315	
8	CL21	CL15	106	0.00630	0.977	0.985	-6.94	2724	327.7	0.23827	
7	CL13	CL18	58	0.00580	0.971	0.980	-6.16	2537	203.1	0.30620	
6	CL14	CL10	185	0.02766	0.943	0.973	-11.7	1523	617.8	0.37248	
5	CL12	CL9	109	0.01352	0.930	0.961	-9.41	1519	279.6	0.37600	
4	CL5	CL8	215	0.06188	0.868	0.939	-12.6	1008	488.4	0.51687	
3	CL6	CL11	192	0.00908	0.859	0.890	-4.40	1403	47.9	0.55890	
2	CL4	CL3	407	0.39595	0.463	0.751	-16.5	398.7	1197	0.95169	
1	CL2	CL7	465	0.46270	0.000	0.000	0.00	.	398.7	1.45415	

CLUSTERING ON no101-AVERAGE METHOD
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	OB224	OB262	2	0.00004	0.993	0.998	-16.6	3544	.	0.14159	
19	CL82	CL32	8	0.00014	0.993	0.998	-15.3	3669	24.7	0.15276	
18	CL30	CL63	10	0.00022	0.993	0.997	-14.0	3770	26.8	0.15389	
17	CL31	CL37	55	0.00187	0.991	0.997	-15.8	3154	245.3	0.18754	
16	CL26	CL29	90	0.00364	0.988	0.996	-19.2	2376	300.0	0.21391	
15	CL22	CL33	99	0.00552	0.982	0.996	-22.7	1758	408.8	0.24046	
14	CL19	CL25	14	0.00080	0.981	0.995	-21.2	1814	37.4	0.25028	
13	CL27	CL28	9	0.00058	0.981	0.995	-19.3	1910	37.1	0.25659	
12	OB197	CL20	3	0.00019	0.980	0.994	-16.9	2068	4.4	0.26632	
11	CL24	CL18	63	0.00273	0.978	0.992	-16.2	1994	159.4	0.29201	
10	CL23	CL17	84	0.00682	0.971	0.991	-17.3	1688	205.7	0.31050	
9	CL16	CL21	191	0.01801	0.953	0.988	-21.4	1154	489.1	0.32416	
8	OB235	OB263	2	0.00034	0.953	0.985	-17.9	1311	.	0.39577	
7	CL10	CL15	183	0.04695	0.906	0.980	-24.5	732.6	519.4	0.53105	
6	CL13	CL12	12	0.00315	0.902	0.973	-20.2	849.6	34.3	0.60024	
5	CL9	CL11	254	0.06613	0.836	0.961	-22.9	587.7	579.8	0.60670	
4	CL14	CL6	26	0.01609	0.820	0.939	-17.6	701.3	75.3	0.82102	
3	CL5	CL7	437	0.33405	0.486	0.890	-27.0	218.6	918.6	0.94632	
2	CL3	CL4	463	0.36107	0.125	0.751	-27.0	66.2	324.2	1.96575	
1	CL2	CL8	465	0.12515	0.000	0.000	0.00	.	66.2	3.88038	

CLUSTERING ON no101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	OB224	OB262	2	0.00004	0.993	0.998	-16.6	3544	.	0.14159	
19	CL29	CL61	10	0.00022	0.993	0.998	-15.4	3628	26.8	0.14528	
18	CL79	CL34	8	0.00014	0.993	0.997	-14.0	3770	24.7	0.14813	
17	CL31	CL38	55	0.00187	0.991	0.997	-15.8	3154	245.3	0.17856	
16	CL25	CL30	90	0.00364	0.988	0.996	-19.2	2376	300.0	0.20100	
15	CL22	CL33	99	0.00552	0.982	0.996	-22.7	1758	408.8	0.22743	
14	CL18	CL24	14	0.00080	0.981	0.995	-21.2	1814	37.4	0.23321	
13	CL27	CL28	9	0.00058	0.981	0.995	-19.3	1910	37.1	0.24539	
12	OB197	CL20	3	0.00019	0.980	0.994	-16.9	2068	4.4	0.25674	
11	CL26	CL19	63	0.00273	0.978	0.992	-16.2	1994	159.4	0.27451	
10	CL23	CL17	84	0.00682	0.971	0.991	-17.3	1688	205.7	0.28860	
9	CL16	CL21	191	0.01801	0.953	0.988	-21.4	1154	489.1	0.29627	
8	OB235	OB263	2	0.00034	0.953	0.985	-17.9	1311	.	0.39577	
7	CL9	CL15	290	0.06685	0.886	0.980	-27.4	591.7	605.6	0.48771	
6	CL13	CL12	12	0.00315	0.883	0.973	-23.2	690.0	34.3	0.56977	
5	CL11	CL14	77	0.02498	0.858	0.961	-20.7	692.6	387.1	0.71134	
4	CL7	CL10	374	0.18456	0.673	0.939	-27.5	316.3	634.7	0.81079	
3	CL4	CL5	451	0.30171	0.371	0.890	-30.5	136.4	420.0	1.04701	
2	CL6	CL8	14	0.02049	0.351	0.751	-20.6	250.2	55.8	1.66523	
1	CL3	CL2	465	0.35083	0.000	0.000	0.00	.	250.2	2.44832	

CLUSTERING ON no41-AVERAGE METHOD
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL32	CL49	6	0.00009	0.995	0.998	-13.3	4409	13.8	0.12867	
19	CL136	CL27	72	0.00219	0.993	0.998	-16.9	3291	652.9	0.17338	
18	CL29	CL28	83	0.00237	0.990	0.997	-19.4	2646	270.4	0.18004	
17	CL342	CL20	9	0.00024	0.990	0.997	-17.9	2748	15.5	0.18066	
16	CL63	CL131	7	0.00022	0.990	0.996	-16.3	2874	924.7	0.19021	
15	OB235	OB263	2	0.00008	0.990	0.996	-14.3	3063	.	0.19092	
14	OB220	OB262	2	0.00010	0.990	0.995	-12.3	3274	.	0.21451	
13	CL23	CL25	51	0.00221	0.987	0.995	-12.9	2929	180.4	0.21816	
12	CL22	CL31	12	0.00061	0.987	0.994	-11.0	3054	39.5	0.23280	
11	CL21	CL26	221	0.01134	0.975	0.992	-17.8	1797	723.9	0.23891	
10	CL34	CL24	6	0.00063	0.975	0.991	-15.2	1949	59.5	0.31841	
9	CL11	CL18	304	0.03174	0.943	0.988	-24.4	942.7	537.1	0.38227	
8	CL13	CL12	63	0.00758	0.935	0.985	-22.7	945.4	129.3	0.45675	
7	CL17	CL14	11	0.00156	0.934	0.980	-18.9	1077	30.9	0.49196	
6	CL19	CL9	376	0.05933	0.875	0.973	-24.2	639.8	426.6	0.53111	
5	CL10	CL7	17	0.00513	0.869	0.961	-19.3	765.4	28.6	0.61277	
4	CL8	CL6	439	0.14983	0.720	0.939	-25.0	394.3	534.6	0.86832	
3	CL16	CL5	24	0.02028	0.699	0.890	-17.6	537.1	55.4	1.03111	
2	CL4	CL3	463	0.52060	0.179	0.751	-25.6	100.7	798.3	2.39278	
1	CL2	CL15	465	0.17867	0.000	0.000	0.00	.	100.7	4.60823	

CLUSTERING ON no41-CENTROID METHOD
All Vulnerable sections

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL38	CL29	103	0.00170	0.995	0.998	-13.3	4418	249.9	0.13244	
19	CL27	CL26	118	0.00267	0.992	0.998	-17.9	3093	269.8	0.16157	
18	CL342	CL21	9	0.00024	0.992	0.997	-16.6	3183	15.5	0.16839	
17	CL30	CL20	188	0.00651	0.985	0.997	-23.7	1876	418.5	0.18014	
16	CL24	CL28	62	0.00238	0.983	0.996	-24.0	1722	206.7	0.18863	
15	CL62	CL131	7	0.00022	0.983	0.996	-22.2	1825	924.7	0.18984	
14	OB235	OB263	2	0.00008	0.983	0.995	-20.0	1961	.	0.19092	
13	CL25	CL22	27	0.00097	0.982	0.995	-18.5	2014	68.4	0.20871	
12	OB220	OB262	2	0.00010	0.982	0.994	-16.1	2190	.	0.21451	
11	CL136	CL19	157	0.01026	0.971	0.992	-20.1	1536	415.7	0.28494	
10	CL33	CL18	12	0.00094	0.970	0.991	-17.6	1654	25.6	0.31176	
9	CL16	CL13	89	0.01015	0.960	0.988	-18.9	1375	200.8	0.35376	
8	CL11	CL17	345	0.05771	0.902	0.985	-29.1	604.2	842.7	0.39561	
7	CL31	CL15	12	0.00258	0.900	0.980	-25.4	686.2	102.9	0.45323	
6	CL10	CL23	15	0.00310	0.897	0.973	-21.1	797.8	30.0	0.54701	
5	CL6	CL12	17	0.00329	0.894	0.961	-16.0	965.0	10.9	0.65784	
4	CL9	CL8	434	0.14718	0.746	0.939	-23.3	452.1	664.1	0.69472	
3	CL7	CL5	29	0.04101	0.705	0.890	-17.3	552.9	103.9	1.16301	
2	CL4	CL3	463	0.52665	0.179	0.751	-25.6	100.7	824.1	2.12008	
1	CL2	CL14	465	0.17867	0.000	0.000	0.00	.	100.7	4.56237	

CLUSTERING ON inch31-AVERAGE METHOD
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL24	CL26	78	0.00077	0.998	0.998	4.69	14356	173.2	0.10550	
19	CL41	CL33	9	0.00010	0.998	0.998	5.45	14310	72.0	0.11033	
18	CL35	CL30	17	0.00023	0.998	0.997	5.26	13367	92.2	0.12786	
17	CL29	CL19	14	0.00028	0.998	0.997	5.05	12442	26.3	0.15520	
16	CL32	CL22	43	0.00103	0.997	0.996	1.23	9102	115.5	0.17196	
15	OB29	CL27	3	0.00012	0.997	0.996	2.76	9432	14.7	0.20543	
14	CL59	CL20	366	0.01060	0.986	0.995	-16.7	2445	3497	0.20817	
13	CL21	OB66	9	0.00017	0.986	0.995	-14.5	2621	32.1	0.21543	
12	OB302	OB391	2	0.00011	0.986	0.994	-12.1	2843	.	0.22818	
11	CL16	CL18	60	0.00440	0.981	0.992	-13.5	2385	152.7	0.30835	
10	CL25	CL15	6	0.00071	0.981	0.991	-11.1	2556	19.8	0.34840	
9	CL17	CL13	23	0.00266	0.978	0.988	-9.73	2528	89.7	0.35331	
8	CL23	CL12	5	0.00101	0.977	0.985	-6.71	2765	23.1	0.45856	
7	CL14	CL11	426	0.05538	0.922	0.980	-21.6	896.8	1321	0.52926	
6	CL10	CL44	8	0.00250	0.919	0.973	-17.3	1042	17.5	0.64771	
5	CL6	CL9	31	0.02439	0.895	0.961	-15.8	976.8	106.6	1.04104	
4	CL8	CL28	7	0.01006	0.885	0.939	-10.4	1178	43.7	1.29931	
3	CL7	CL5	457	0.22273	0.662	0.890	-19.7	452.2	972.8	1.43536	
2	CL3	CL4	464	0.41173	0.250	0.751	-23.7	154.5	562.6	3.79377	
1	CL2	OB392	465	0.25014	0.000	0.000	0.00	.	154.5	7.65071	

CLUSTERING ON inch31-CENTROID METHOD
All Vulnerable sections

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL29	CL41	11	0.00013	0.999	0.998	11.54	22497	51.8	0.10685	
19	CL36	CL32	8	0.00009	0.999	0.998	11.90	21846	44.5	0.10722	
18	CL34	CL63	27	0.00036	0.999	0.997	9.44	17587	276.3	0.11131	
17	CL26	CL23	91	0.00182	0.997	0.997	-0.89	8426	261.2	0.14369	
16	CL19	CL30	20	0.00056	0.996	0.996	-1.32	7702	73.6	0.16441	
15	OB29	CL27	3	0.00012	0.996	0.996	0.29	8024	14.7	0.20313	
14	CL21	OB66	9	0.00017	0.996	0.995	1.85	8298	32.1	0.21287	
13	OB302	OB391	2	0.00011	0.996	0.995	3.82	8772	.	0.22818	
12	CL22	CL17	382	0.01611	0.980	0.994	-17.6	1979	2417	0.23219	
11	CL18	CL16	47	0.00343	0.976	0.992	-17.2	1861	141.7	0.26307	
10	CL20	CL14	20	0.00195	0.974	0.991	-15.4	1912	94.9	0.30204	
9	CL25	CL15	6	0.00071	0.974	0.988	-12.5	2096	19.8	0.33206	
8	CL24	CL13	5	0.00101	0.973	0.985	-9.43	2310	23.1	0.44244	
7	CL12	CL11	429	0.05887	0.914	0.980	-23.1	807.6	1085	0.57126	
6	CL9	CL44	8	0.00250	0.911	0.973	-18.8	941.4	17.5	0.62146	
5	CL6	CL10	28	0.02169	0.889	0.961	-16.6	925.4	99.4	0.93831	
4	CL8	CL28	7	0.01006	0.879	0.939	-11.1	1121	43.7	1.27834	
3	CL7	CL5	457	0.21753	0.662	0.890	-19.7	452.2	904.8	1.38564	
2	CL3	CL4	464	0.41173	0.250	0.751	-23.7	154.5	562.6	3.72223	
1	CL2	OB392	465	0.25014	0.000	0.000	0.00	.	154.5	7.62617	

CLUSTERING ON inch101-AVERAGE METHOD
All Vulnerable sections
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL21	OB454	442	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL20	OB455	443	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL19	OB456	444	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL18	OB457	445	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL17	OB458	446	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL16	OB459	447	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL15	OB460	448	0.00000	1.000	0.995	.	.	.	0.00000	T
13	CL14	OB461	449	0.00000	1.000	0.995	.	.	.	0.00000	T
12	CL13	OB462	450	0.00000	1.000	0.994	.	.	.	0.00000	T
11	CL12	OB463	451	0.00000	1.000	0.992	.	.	.	0.00000	T
10	CL11	OB464	452	0.00000	1.000	0.991	.	.	.	0.00000	T
9	CL10	OB465	453	0.00000	1.000	0.988	.	.	.	0.00000	
8	OB30	OB50	2	0.00005	1.000	0.985	87.93	127E4	.	0.15472	
7	OB29	CL278	3	0.00028	1.000	0.980	63.91	234E3	.	0.30944	
6	OB12	CL8	3	0.00084	0.999	0.973	49.37	78409	16.3	0.54702	
5	CL328	OB66	4	0.00193	0.997	0.961	40.45	36933	.	0.77361	
4	CL6	CL7	6	0.00758	0.989	0.939	28.74	14224	25.9	1.12402	
3	CL317	CL5	6	0.01308	0.976	0.890	26.82	9488	27.0	1.54528	
2	CL4	CL3	12	0.08599	0.890	0.751	17.58	3756	36.2	2.75111	
1	CL9	CL2	465	0.89025	0.000	0.000	0.00	.	3756	4.44851	

CLUSTERING ON inch101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	OB454	442	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL20	OB455	443	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL19	OB456	444	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL18	OB457	445	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL17	OB458	446	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL16	OB459	447	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL15	OB460	448	0.00000	1.000	0.995	.	.	.	0.00000	T
13	CL14	OB461	449	0.00000	1.000	0.995	.	.	.	0.00000	T
12	CL13	OB462	450	0.00000	1.000	0.994	.	.	.	0.00000	T
11	CL12	OB463	451	0.00000	1.000	0.992	.	.	.	0.00000	T
10	CL11	OB464	452	0.00000	1.000	0.991	.	.	.	0.00000	T
9	CL10	OB465	453	0.00000	1.000	0.988	.	.	.	0.00000	
8	OB30	OB50	2	0.00005	1.000	0.985	87.93	127E4	.	0.15472	
7	OB29	CL278	3	0.00028	1.000	0.980	63.91	234E3	.	0.30944	
6	OB12	CL8	3	0.00084	0.999	0.973	49.37	78409	16.3	0.54152	
5	CL328	OB66	4	0.00193	0.997	0.961	40.45	36933	.	0.77361	
4	CL6	CL7	6	0.00758	0.989	0.939	28.74	14224	25.9	1.08305	
3	CL317	CL5	6	0.01308	0.976	0.890	26.82	9488	27.0	1.50853	
2	CL4	CL3	12	0.08599	0.890	0.751	17.58	3756	36.2	2.57869	
1	CL9	CL2	465	0.89025	0.000	0.000	0.00	.	3756	4.20326	

CLUSTERING ON clay1-AVERAGE METHOD
All Vulnerable sections
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL34	CL54	25	0.00032	0.996	0.998	-10.3	5368	80.5	0.11863	
19	CL36	CL41	39	0.00070	0.995	0.998	-10.9	4889	181.1	0.13620	
18	CL44	OB172	3	0.00005	0.995	0.997	-9.32	5134	10.9	0.13838	
17	CL32	CL26	107	0.00234	0.993	0.997	-13.2	3739	278.1	0.15826	
16	CL28	CL29	99	0.00201	0.991	0.996	-15.0	3141	313.9	0.15866	
15	CL47	CL22	14	0.00037	0.990	0.996	-13.5	3245	37.8	0.16803	
14	CL24	CL27	37	0.00085	0.989	0.995	-12.5	3220	64.6	0.17520	
13	CL30	OB198	19	0.00013	0.989	0.995	-10.4	3455	20.4	0.17999	
12	CL25	CL33	34	0.00118	0.988	0.994	-9.42	3399	140.9	0.18979	
11	CL21	CL13	83	0.00221	0.986	0.992	-9.26	3157	139.4	0.20395	
10	CL18	CL363	5	0.00032	0.986	0.991	-6.58	3438	16.3	0.25619	
9	CL19	CL20	64	0.00419	0.981	0.988	-7.16	2995	206.5	0.26946	
8	CL12	CL23	56	0.00447	0.977	0.985	-6.77	2755	139.7	0.30074	
7	CL16	CL17	206	0.01934	0.958	0.980	-12.0	1720	674.9	0.31687	
6	CL14	CL9	101	0.01862	0.939	0.973	-12.9	1410	272.8	0.46064	
5	CL10	CL15	19	0.00327	0.936	0.961	-7.98	1671	64.7	0.48088	
4	CL7	CL11	289	0.05720	0.878	0.939	-11.2	1110	572.5	0.51229	
3	CL8	CL5	75	0.02000	0.858	0.890	-4.43	1401	141.4	0.63498	
2	CL6	CL4	390	0.22542	0.633	0.751	-8.33	798.6	786.1	0.90883	
1	CL2	CL3	465	0.63300	0.000	0.000	0.00	.	798.6	1.62133	

CLUSTERING ON clay1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL33	CL55	25	0.00032	0.996	0.998	-10.4	5333	80.5	0.11185	
19	CL38	CL47	39	0.00070	0.995	0.998	-11.0	4861	181.1	0.12997	
18	CL42	OB172	3	0.00005	0.995	0.997	-9.40	5105	10.9	0.13631	
17	CL26	CL32	107	0.00228	0.993	0.997	-13.2	3755	254.0	0.14160	
16	CL29	CL30	99	0.00201	0.991	0.996	-14.9	3151	313.9	0.14923	
15	CL49	CL24	37	0.00088	0.990	0.996	-14.2	3091	71.6	0.15578	
14	CL48	CL21	14	0.00037	0.989	0.995	-12.5	3220	37.8	0.15609	
13	CL28	OB198	19	0.00013	0.989	0.995	-10.4	3455	20.4	0.17617	
12	CL25	CL34	34	0.00118	0.988	0.994	-9.42	3399	140.9	0.18006	
11	CL22	CL13	83	0.00221	0.986	0.992	-9.26	3157	139.4	0.18696	
10	CL18	CL363	5	0.00032	0.986	0.991	-6.58	3438	16.3	0.24723	
9	CL19	CL20	64	0.00419	0.981	0.988	-7.16	2995	206.5	0.25248	
8	CL12	CL23	56	0.00447	0.977	0.985	-6.77	2755	139.7	0.27863	
7	CL16	CL17	206	0.01934	0.958	0.980	-12.0	1720	674.9	0.29541	
6	CL15	CL9	101	0.01862	0.939	0.973	-12.9	1410	272.8	0.42922	
5	CL8	CL14	70	0.00989	0.929	0.961	-9.54	1505	100.6	0.45256	
4	CL7	CL11	289	0.05720	0.872	0.939	-12.1	1045	572.5	0.47363	
3	CL5	CL10	75	0.01339	0.858	0.890	-4.43	1401	57.7	0.81574	
2	CL6	CL4	390	0.22542	0.633	0.751	-8.33	798.6	786.1	0.83591	
1	CL2	CL3	465	0.63300	0.000	0.000	0.00	.	798.6	1.52795	

CLUSTERING ON perm1-AVERAGE METHOD
All Vulnerable sections
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL30	CL34	40	0.00034	0.996	0.998	-8.19	6162	75.4	0.11863	
19	CL31	CL50	10	0.00014	0.996	0.998	-7.09	6284	38.4	0.12197	
18	CL26	CL41	95	0.00107	0.995	0.997	-9.02	5234	164.7	0.12285	
17	CL28	CL44	14	0.00019	0.995	0.997	-7.76	5364	42.2	0.12494	
16	CL36	CL27	16	0.00024	0.995	0.996	-6.51	5479	44.7	0.13029	
15	CL32	CL35	53	0.00072	0.994	0.996	-6.33	5195	191.8	0.13070	
14	CL427	CL23	12	0.00034	0.994	0.995	-4.95	5308	55.6	0.17792	
13	CL24	CL17	42	0.00119	0.992	0.995	-5.16	4866	102.2	0.18826	
12	CL21	CL25	145	0.00476	0.988	0.994	-10.0	3268	413.7	0.19614	
11	CL16	CL38	27	0.00096	0.987	0.992	-8.40	3341	70.2	0.19840	
10	CL22	CL40	40	0.00142	0.985	0.991	-6.93	3360	143.6	0.19943	
9	CL13	CL20	82	0.00516	0.980	0.988	-8.20	2796	191.1	0.26543	
8	CL14	CL19	22	0.00153	0.978	0.985	-5.63	2969	53.3	0.27758	
7	CL18	CL12	240	0.02077	0.958	0.980	-11.9	1729	611.3	0.31353	
6	CL10	CL11	67	0.01165	0.946	0.973	-10.9	1610	244.4	0.43501	
5	CL9	CL15	135	0.02527	0.921	0.961	-11.3	1337	408.8	0.45470	
4	CL7	CL5	375	0.17184	0.749	0.939	-23.1	458.5	1028	0.73951	
3	CL6	CL8	89	0.03485	0.714	0.890	-16.7	577.0	179.9	0.74930	
2	CL3	OB198	90	0.00774	0.706	0.751	-3.55	1114	13.2	1.39667	
1	CL4	CL2	465	0.70637	0.000	0.000	0.00	.	1114	1.59875	

CLUSTERING ON perm1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL31	CL37	40	0.00034	0.996	0.998	-8.19	6162	75.4	0.11035	
19	CL26	CL40	95	0.00107	0.995	0.998	-10.3	5076	164.7	0.11220	
18	CL30	CL47	10	0.00014	0.995	0.997	-9.02	5234	38.4	0.11674	
17	CL28	CL44	14	0.00019	0.995	0.997	-7.76	5364	42.2	0.11823	
16	CL36	CL27	16	0.00024	0.995	0.996	-6.51	5479	44.7	0.12216	
15	CL33	CL34	53	0.00072	0.994	0.996	-6.33	5195	191.8	0.12427	
14	CL24	CL17	42	0.00119	0.993	0.995	-6.82	4693	102.2	0.17183	
13	CL427	CL23	12	0.00034	0.992	0.995	-5.16	4866	55.6	0.17281	
12	CL21	CL25	145	0.00476	0.988	0.994	-10.0	3268	413.7	0.18366	
11	CL16	CL38	27	0.00096	0.987	0.992	-8.40	3341	70.2	0.18499	
10	CL22	CL42	40	0.00142	0.985	0.991	-6.93	3360	143.6	0.19015	
9	CL14	CL20	82	0.00516	0.980	0.988	-8.20	2796	191.1	0.24164	
8	CL13	CL18	22	0.00153	0.978	0.985	-5.63	2969	53.3	0.25547	
7	CL19	CL12	240	0.02077	0.958	0.980	-11.9	1729	611.3	0.28974	
6	CL10	CL11	67	0.01165	0.946	0.973	-10.9	1610	244.4	0.40942	
5	CL7	CL15	293	0.03302	0.913	0.961	-12.8	1208	322.9	0.42010	
4	CL6	CL8	89	0.03485	0.878	0.939	-11.2	1108	179.9	0.69867	
3	CL5	CL9	375	0.16409	0.714	0.890	-16.7	577.0	873.1	0.77082	
2	CL4	OB198	90	0.00774	0.706	0.751	-3.55	1114	13.2	1.34756	
1	CL3	CL2	465	0.70637	0.000	0.000	0.00	.	1114	1.50262	

CLUSTERING ON awc1-AVERAGE METHOD
All Vulnerable sections
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL23	OB457	19	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL20	OB458	20	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL19	OB459	21	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL22	OB460	68	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL41	OB461	57	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL30	OB462	74	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL21	OB463	94	0.00000	1.000	0.995	.	.	.	0.00000	T
13	CL16	OB464	58	0.00000	1.000	0.995	.	.	.	0.00000	T
12	CL17	OB465	69	0.00000	1.000	0.994	.	.	.	0.00000	
11	CL14	CL12	163	0.02003	0.980	0.992	-14.6	2221	.	0.34173	T
10	CL24	CL25	18	0.00126	0.979	0.991	-12.5	2324	.	0.34173	T
9	CL13	CL31	119	0.01497	0.964	0.988	-17.4	1515	.	0.34173	T
8	OB198	CL51	3	0.00034	0.963	0.985	-13.9	1719	.	0.34173	T
7	CL36	CL239	67	0.00663	0.957	0.980	-12.3	1690	.	0.34173	
6	CL10	CL18	39	0.00664	0.950	0.973	-9.68	1750	195.2	0.41853	
5	CL11	CL15	237	0.05190	0.898	0.961	-15.3	1015	608.9	0.51486	
4	CL9	CL7	186	0.06654	0.832	0.939	-16.6	759.4	567.0	0.64206	
3	CL5	CL6	276	0.11044	0.721	0.890	-16.3	597.8	379.1	0.93939	
2	CL4	CL8	189	0.01511	0.706	0.751	-3.56	1113	31.9	1.15016	
1	CL3	CL2	465	0.70617	0.000	0.000	0.00	.	1113	1.32192	

CLUSTERING ON awc1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL23	OB457	19	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL20	OB458	20	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL19	OB459	21	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL22	OB460	68	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL41	OB461	57	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL30	OB462	74	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL21	OB463	94	0.00000	1.000	0.995	.	.	.	0.00000	T
13	CL16	OB464	58	0.00000	1.000	0.995	.	.	.	0.00000	T
12	CL17	OB465	69	0.00000	1.000	0.994	.	.	.	0.00000	
11	CL14	CL12	163	0.02003	0.980	0.992	-14.6	2221	.	0.34173	T
10	CL24	CL25	18	0.00126	0.979	0.991	-12.5	2324	.	0.34173	T
9	CL13	CL31	119	0.01497	0.964	0.988	-17.4	1515	.	0.34173	T
8	OB198	CL51	3	0.00034	0.963	0.985	-13.9	1719	.	0.34173	T
7	CL36	CL239	67	0.00663	0.957	0.980	-12.3	1690	.	0.34173	
6	CL10	CL18	39	0.00664	0.950	0.973	-9.68	1750	195.2	0.39869	
5	CL11	CL15	237	0.05190	0.898	0.961	-15.3	1015	608.9	0.48639	
4	CL9	CL7	186	0.06654	0.832	0.939	-16.6	759.4	567.0	0.60010	
3	CL5	CL6	276	0.11044	0.721	0.890	-16.3	597.8	379.1	0.87468	
2	CL4	CL8	189	0.01511	0.706	0.751	-3.56	1113	31.9	1.08950	
1	CL3	CL2	465	0.70617	0.000	0.000	0.00	.	1113	1.20848	

CLUSTERING ON shrink1-AVERAGE METHOD
All Vulnerable sections
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL30	CL40	24	0.00021	0.999	0.998	12.90	24605	95.4	0.09611	
19	CL270	CL27	16	0.00015	0.999	0.998	12.30	22430	95.0	0.09744	
18	CL318	CL271	4	0.00004	0.999	0.997	13.48	22917	.	0.09936	
17	CL72	CL47	22	0.00014	0.999	0.997	13.53	21677	1658	0.11415	
16	CL28	CL25	33	0.00046	0.998	0.996	10.81	17056	150.0	0.12241	
15	CL38	CL45	12	0.00019	0.998	0.996	11.28	16489	158.6	0.12587	
14	CL24	CL102	30	0.00055	0.998	0.995	9.71	13882	169.0	0.13536	
13	CL20	CL39	32	0.00044	0.997	0.995	9.59	12797	49.2	0.14097	
12	CL21	CL26	31	0.00063	0.996	0.994	9.18	11519	68.0	0.15794	
11	CL14	CL23	50	0.00204	0.994	0.992	5.01	8054	122.4	0.21522	
10	CL17	CL15	34	0.00164	0.993	0.991	4.10	6928	149.2	0.23344	
9	CL22	CL18	7	0.00037	0.992	0.988	6.69	7426	26.3	0.23490	
8	CL16	CL13	65	0.00389	0.988	0.985	4.07	5608	193.2	0.25423	
7	CL19	CL12	47	0.00435	0.984	0.980	3.36	4737	182.9	0.32382	
6	CL63	CL8	324	0.03403	0.950	0.973	-9.69	1748	2124	0.41276	
5	CL134	CL9	10	0.00161	0.948	0.961	-4.42	2118	29.0	0.43890	
4	CL10	CL11	84	0.02164	0.927	0.939	-2.87	1947	367.0	0.52427	
3	CL7	CL5	57	0.01574	0.911	0.890	3.72	2368	115.8	0.71921	
2	CL4	CL3	141	0.12785	0.783	0.751	2.97	1673	357.7	1.02035	
1	CL2	CL6	465	0.78327	0.000	0.000	0.00	.	1673	1.47303	

CLUSTERING ON shrink1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL34	OB172	3	0.00002	0.999	0.998	12.90	24605	6.3	0.09227	
19	CL270	CL28	16	0.00015	0.999	0.998	12.30	22430	95.0	0.09404	
18	CL318	CL271	4	0.00004	0.999	0.997	13.48	22917	.	0.09936	
17	CL72	CL47	22	0.00014	0.999	0.997	13.53	21677	1658	0.11356	
16	CL27	CL24	33	0.00046	0.998	0.996	10.81	17056	150.0	0.11662	
15	CL38	CL45	12	0.00019	0.998	0.996	11.28	16489	158.6	0.12410	
14	CL25	CL102	30	0.00055	0.998	0.995	9.71	13882	169.0	0.13042	
13	CL21	CL39	32	0.00044	0.997	0.995	9.59	12797	49.2	0.13071	
12	CL22	CL26	31	0.00063	0.996	0.994	9.18	11519	68.0	0.14661	
11	CL14	CL23	50	0.00204	0.994	0.992	5.01	8054	122.4	0.19873	
10	CL17	CL15	34	0.00164	0.993	0.991	4.10	6928	149.2	0.22131	
9	CL20	CL18	7	0.00037	0.992	0.988	6.69	7426	26.3	0.22475	
8	CL16	CL13	65	0.00389	0.988	0.985	4.07	5608	193.2	0.23571	
7	CL19	CL12	47	0.00435	0.984	0.980	3.36	4737	182.9	0.30923	
6	CL63	CL8	324	0.03403	0.950	0.973	-9.69	1748	2124	0.38981	
5	CL134	CL9	10	0.00161	0.948	0.961	-4.42	2118	29.0	0.42179	
4	CL10	CL11	84	0.02164	0.927	0.939	-2.87	1947	367.0	0.49807	
3	CL7	CL5	57	0.01574	0.911	0.890	3.72	2368	115.8	0.66547	
2	CL4	CL3	141	0.12785	0.783	0.751	2.97	1673	357.7	0.93461	
1	CL2	CL6	465	0.78327	0.000	0.000	0.00	.	1673	1.36001	

CLUSTERING ON inch102 - AVERAGE METHOD
All Vulnerable sections
Average Linkage Cluster Analysis
Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL21	OB455	440	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL20	OB456	441	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL19	OB457	442	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL18	OB458	443	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL17	OB459	444	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL16	OB460	445	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL15	OB461	446	0.00000	1.000	0.995	.	.	.	0.00000	T
13	CL14	OB462	447	0.00000	1.000	0.995	.	.	.	0.00000	T
12	CL13	OB463	448	0.00000	1.000	0.994	.	.	.	0.00000	T
11	CL12	OB464	449	0.00000	1.000	0.992	.	.	.	0.00000	T
10	CL11	OB465	450	0.00000	1.000	0.991	.	.	.	0.00000	
9	OB30	OB50	2	0.00004	1.000	0.988	88.34	148E4	.	0.13378	
8	CL277	CL278	4	0.00031	1.000	0.985	58.36	188E3	.	0.26757	
7	CL317	OB451	3	0.00046	0.999	0.980	49.75	94157	.	0.40135	
6	OB12	CL9	3	0.00063	0.999	0.973	46.10	63654	16.3	0.47300	
5	CL24	OB66	5	0.00154	0.997	0.961	41.09	38436	.	0.66892	
4	CL6	CL8	7	0.00588	0.991	0.939	31.82	17188	30.1	0.93010	
3	CL7	CL5	8	0.01750	0.974	0.890	25.00	8531	52.4	1.50767	
2	CL4	CL3	15	0.08306	0.891	0.751	17.64	3768	41.0	2.44022	
1	CL10	CL2	465	0.89057	0.000	0.000	0.00	.	3768	3.99072	

CLUSTERING ON inch102- CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	OB455	440	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL20	OB456	441	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL19	OB457	442	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL18	OB458	443	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL17	OB459	444	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL16	OB460	445	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL15	OB461	446	0.00000	1.000	0.995	.	.	.	0.00000	T
13	CL14	OB462	447	0.00000	1.000	0.995	.	.	.	0.00000	T
12	CL13	OB463	448	0.00000	1.000	0.994	.	.	.	0.00000	T
11	CL12	OB464	449	0.00000	1.000	0.992	.	.	.	0.00000	T
10	CL11	OB465	450	0.00000	1.000	0.991	.	.	.	0.00000	
9	OB30	OB50	2	0.00004	1.000	0.988	88.34	148E4	.	0.13378	
8	CL277	CL278	4	0.00031	1.000	0.985	58.36	188E3	.	0.26757	
7	CL317	OB451	3	0.00046	0.999	0.980	49.75	94157	.	0.40135	
6	OB12	CL9	3	0.00063	0.999	0.973	46.10	63654	16.3	0.46824	
5	CL24	OB66	5	0.00154	0.997	0.961	41.09	38436	.	0.66892	
4	CL6	CL8	7	0.00588	0.991	0.939	31.82	17188	30.1	0.89189	
3	CL7	CL5	8	0.01750	0.974	0.890	25.00	8531	52.4	1.47163	
2	CL4	CL3	15	0.08306	0.891	0.751	17.64	3768	41.0	2.27194	
1	CL10	CL2	465	0.89057	0.000	0.000	0.00	.	3768	3.77271	

CLUSTERING ON clay2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL34	CL50	20	0.00022	0.997	0.998	-6.66	6817	77.7	0.10602	
19	CL44	CL36	34	0.00036	0.996	0.998	-6.53	6520	100.4	0.11007	
18	CL48	CL26	11	0.00015	0.996	0.997	-5.38	6651	31.4	0.12665	
17	CL31	CL37	22	0.00032	0.996	0.997	-4.75	6541	64.6	0.12724	
16	CL29	CL22	78	0.00146	0.994	0.996	-7.30	5201	176.0	0.14551	
15	CL27	CL32	98	0.00214	0.992	0.996	-10.1	4054	351.5	0.15258	
14	CL25	CL43	30	0.00078	0.991	0.995	-9.34	3977	115.0	0.16521	
13	CL21	CL28	62	0.00129	0.990	0.995	-9.11	3753	101.6	0.18885	
12	CL19	CL24	59	0.00210	0.988	0.994	-9.51	3379	166.7	0.19850	
11	CL20	CL18	31	0.00119	0.987	0.992	-8.20	3385	75.1	0.21509	
10	CL15	CL33	143	0.00586	0.981	0.991	-10.8	2596	283.7	0.22699	
9	CL16	CL23	104	0.00409	0.977	0.988	-10.5	2401	179.8	0.23859	
8	CL30	CL17	34	0.00181	0.975	0.985	-7.96	2546	115.8	0.24493	
7	CL14	CL8	64	0.00856	0.966	0.980	-8.33	2199	161.7	0.38446	
6	CL10	CL13	205	0.02348	0.943	0.973	-11.8	1518	440.2	0.38453	
5	CL11	CL451	33	0.00113	0.942	0.961	-6.36	1862	21.2	0.39017	
4	CL12	CL9	163	0.03115	0.911	0.939	-6.15	1567	543.2	0.46626	
3	CL7	CL5	97	0.03647	0.874	0.890	-2.36	1605	236.9	0.67164	
2	CL4	CL6	368	0.19179	0.682	0.751	-5.23	994.9	939.8	0.76573	
1	CL3	CL2	465	0.68242	0.000	0.000	0.00	.	994.9	1.53382	

CLUSTERING ON clay2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL46	CL36	34	0.00036	0.997	0.998	-6.40	6934	100.4	0.10226	
19	CL454	CL31	23	0.00019	0.996	0.998	-5.57	6942	33.2	0.11558	
18	CL32	CL37	22	0.00032	0.996	0.997	-5.16	6748	64.6	0.11905	
17	CL28	CL25	77	0.00139	0.995	0.997	-7.99	5283	177.8	0.12975	
16	CL34	CL26	13	0.00020	0.995	0.996	-6.63	5435	32.7	0.13105	
15	CL27	CL43	96	0.00193	0.993	0.996	-9.18	4307	306.3	0.13969	
14	CL24	CL44	30	0.00078	0.992	0.995	-8.51	4202	115.0	0.15678	
13	CL29	CL19	64	0.00160	0.990	0.995	-8.87	3812	162.7	0.15852	
12	CL20	CL23	59	0.00210	0.988	0.994	-9.32	3423	166.7	0.18411	
11	CL21	CL16	31	0.00120	0.987	0.992	-8.04	3422	77.5	0.19243	
10	CL15	CL33	142	0.00583	0.981	0.991	-10.7	2622	298.6	0.20846	
9	CL17	CL22	103	0.00400	0.977	0.988	-10.3	2430	182.9	0.21849	
8	CL30	CL18	34	0.00181	0.975	0.985	-7.79	2575	115.8	0.23251	
7	CL14	CL8	64	0.00856	0.967	0.980	-8.20	2217	161.7	0.35291	
6	CL10	CL13	206	0.02400	0.943	0.973	-11.9	1511	455.0	0.35528	
5	CL11	CL451	33	0.00113	0.942	0.961	-6.43	1854	21.2	0.37395	
4	CL12	CL9	162	0.03075	0.911	0.939	-6.12	1570	544.7	0.43608	
3	CL7	CL5	97	0.03647	0.874	0.890	-2.34	1608	236.9	0.62337	
2	CL4	CL6	368	0.19194	0.682	0.751	-5.23	994.9	942.4	0.70075	
1	CL3	CL2	465	0.68242	0.000	0.000	0.00	.	994.9	1.43611	

CLUSTERING ON perm2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL45	CL35	17	0.00015	0.997	0.998	-4.80	7699	63.4	0.10182	
19	CL37	CL28	35	0.00034	0.997	0.998	-4.76	7325	73.9	0.10782	
18	CL38	CL26	54	0.00060	0.996	0.997	-5.51	6595	122.2	0.11641	
17	CL46	CL31	12	0.00019	0.996	0.997	-4.36	6707	56.0	0.12638	
16	CL36	CL24	35	0.00045	0.995	0.996	-3.98	6466	66.9	0.12804	
15	CL30	CL32	20	0.00035	0.995	0.996	-3.03	6453	81.1	0.13393	
14	CL25	CL33	32	0.00054	0.995	0.995	-2.41	6275	82.8	0.14142	
13	CL42	CL23	65	0.00102	0.993	0.995	-2.64	5741	126.3	0.14285	
12	CL22	CL27	107	0.00210	0.991	0.994	-4.38	4735	244.4	0.15095	
11	CL18	CL29	127	0.00480	0.987	0.992	-8.42	3337	477.8	0.20207	
10	CL14	CL20	49	0.00190	0.985	0.991	-7.44	3250	95.8	0.21814	
9	CL21	CL15	31	0.00144	0.983	0.988	-5.49	3345	80.6	0.23214	
8	CL19	CL16	70	0.00483	0.978	0.985	-5.68	2959	282.4	0.26787	
7	CL444	CL17	16	0.00101	0.977	0.980	-2.16	3302	64.3	0.28660	
6	CL12	CL13	172	0.01666	0.961	0.973	-5.92	2247	624.6	0.32799	
5	CL10	CL9	80	0.01819	0.943	0.961	-6.16	1887	296.8	0.50029	
4	CL11	CL6	299	0.07065	0.872	0.939	-12.1	1046	769.9	0.51384	
3	CL8	CL5	150	0.07322	0.799	0.890	-10.6	916.4	374.1	0.73585	
2	CL3	CL7	166	0.07448	0.724	0.751	-2.20	1216	118.1	1.17087	
1	CL4	CL2	465	0.72420	0.000	0.000	0.00	.	1216	1.37791	

CLUSTERING ON perm2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL46	CL35	17	0.00015	0.997	0.998	-4.98	7610	63.4	0.09622	
19	CL37	CL27	35	0.00034	0.997	0.998	-4.92	7248	73.9	0.09981	
18	CL38	CL26	54	0.00060	0.996	0.997	-5.64	6536	122.2	0.10767	
17	CL36	CL24	35	0.00045	0.996	0.997	-5.43	6254	66.9	0.11777	
16	CL44	CL31	12	0.00019	0.995	0.996	-4.10	6416	56.0	0.12168	
15	CL30	CL33	20	0.00035	0.995	0.996	-3.14	6407	81.1	0.12707	
14	CL25	CL34	32	0.00054	0.994	0.995	-2.50	6234	82.8	0.13201	
13	CL45	CL22	65	0.00102	0.993	0.995	-2.73	5710	126.3	0.13262	
12	CL23	CL39	107	0.00207	0.991	0.994	-4.38	4735	231.2	0.14174	
11	CL18	CL29	127	0.00480	0.987	0.992	-8.42	3337	477.8	0.18943	
10	CL14	CL20	49	0.00190	0.985	0.991	-7.44	3250	95.8	0.19904	
9	CL21	CL15	31	0.00144	0.983	0.988	-5.49	3345	80.6	0.21682	
8	CL19	CL17	70	0.00483	0.978	0.985	-5.68	2959	282.4	0.25307	
7	CL444	CL16	16	0.00101	0.977	0.980	-2.16	3302	64.3	0.27910	
6	CL12	CL13	172	0.01666	0.961	0.973	-5.92	2247	624.6	0.30919	
5	CL10	CL9	80	0.01819	0.943	0.961	-6.16	1887	296.8	0.47146	
4	CL11	CL6	299	0.07065	0.872	0.939	-12.1	1046	769.9	0.47368	
3	CL8	CL5	150	0.07322	0.799	0.890	-10.6	916.4	374.1	0.67453	
2	CL3	CL7	166	0.07448	0.724	0.751	-2.20	1216	118.1	1.09321	
1	CL4	CL2	465	0.72420	0.000	0.000	0.00	.	1216	1.25462	

CLUSTERING ON awc2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL24	OB459	36	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL41	OB460	81	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL33	OB461	62	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL18	OB462	63	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL17	OB463	64	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL36	OB464	99	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL19	OB465	82	0.00000	1.000	0.995	.	.	.	0.00000	
13	CL21	CL143	47	0.00556	0.994	0.995	-0.21	6736	.	0.34480	T
12	CL16	CL71	88	0.00894	0.985	0.994	-12.4	2798	.	0.34480	T
11	CL23	CL15	188	0.02402	0.961	0.992	-24.6	1133	.	0.34480	T
10	OB206	OB238	2	0.00026	0.961	0.991	-21.7	1253	.	0.34480	T
9	CL26	CL27	14	0.00146	0.960	0.988	-19.0	1359	.	0.34480	T
8	CL14	CL20	118	0.01282	0.947	0.985	-19.6	1165	.	0.34480	
7	CL10	OB426	3	0.00077	0.946	0.980	-15.7	1342	3.0	0.54518	T
6	CL12	CL30	95	0.00991	0.936	0.973	-13.5	1348	103.1	0.61505	
5	CL11	CL8	306	0.12465	0.812	0.961	-25.1	495.4	1029	0.67359	
4	CL13	CL9	61	0.02046	0.791	0.939	-20.1	582.1	171.9	0.70130	
3	CL5	CL6	401	0.24723	0.544	0.890	-24.9	275.5	547.0	0.97964	
2	CL4	CL3	462	0.48656	0.057	0.751	-28.6	28.2	491.8	1.57605	
1	CL2	CL7	465	0.05735	0.000	0.000	0.00	.	28.2	2.23971	

CLUSTERING ON awc2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL24	OB459	36	0.00000	1.000	0.998	.	.	.	0.00000	T
19	CL41	OB460	81	0.00000	1.000	0.998	.	.	.	0.00000	T
18	CL33	OB461	62	0.00000	1.000	0.997	.	.	.	0.00000	T
17	CL18	OB462	63	0.00000	1.000	0.997	.	.	.	0.00000	T
16	CL17	OB463	64	0.00000	1.000	0.996	.	.	.	0.00000	T
15	CL36	OB464	99	0.00000	1.000	0.996	.	.	.	0.00000	T
14	CL19	OB465	82	0.00000	1.000	0.995	.	.	.	0.00000	
13	CL21	CL143	47	0.00556	0.994	0.995	-0.21	6736	.	0.34480	T
12	CL16	CL71	88	0.00894	0.985	0.994	-12.4	2798	.	0.34480	T
11	CL23	CL15	188	0.02402	0.961	0.992	-24.6	1133	.	0.34480	T
10	OB206	OB238	2	0.00026	0.961	0.991	-21.7	1253	.	0.34480	T
9	CL26	CL27	14	0.00146	0.960	0.988	-19.0	1359	.	0.34480	T
8	CL14	CL20	118	0.01282	0.947	0.985	-19.6	1165	.	0.34480	
7	CL10	OB426	3	0.00077	0.946	0.980	-15.7	1342	3.0	0.51721	T
6	CL12	CL30	95	0.00991	0.936	0.973	-13.5	1348	103.1	0.59557	
5	CL11	CL8	306	0.12465	0.812	0.961	-25.1	495.4	1029	0.63157	
4	CL13	CL9	61	0.02046	0.791	0.939	-20.1	582.1	171.9	0.66341	
3	CL5	CL6	401	0.24723	0.544	0.890	-24.9	275.5	547.0	0.88950	
2	CL4	CL3	462	0.48656	0.057	0.751	-28.6	28.2	491.8	1.46014	
1	CL2	CL7	465	0.05735	0.000	0.000	0.00	.	28.2	2.11286	

CLUSTERING ON shrink2 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL53	CL34	30	0.00017	0.998	0.998	3.36	13162	104.8	0.08343	
19	CL36	CL41	41	0.00024	0.998	0.998	3.06	12235	165.6	0.08849	
18	CL43	CL46	45	0.00034	0.998	0.997	2.43	11102	252.7	0.08912	
17	CL54	CL32	52	0.00059	0.997	0.997	0.85	9441	220.7	0.10894	
16	CL25	CL31	22	0.00036	0.997	0.996	1.05	8997	58.0	0.14080	
15	CL29	CL28	30	0.00055	0.996	0.996	0.76	8273	94.6	0.14138	
14	CL18	CL35	72	0.00140	0.995	0.995	-1.77	6542	211.9	0.14808	
13	CL30	CL22	53	0.00111	0.994	0.995	-2.34	5858	199.2	0.14972	
12	CL24	CL26	30	0.00056	0.993	0.994	-1.07	5885	86.3	0.15249	
11	CL27	CL21	24	0.00064	0.992	0.992	0.34	5935	89.0	0.16932	
10	CL17	CL20	82	0.00231	0.990	0.991	-0.71	5057	196.4	0.18173	
9	CL19	CL13	94	0.00502	0.985	0.988	-3.69	3764	271.4	0.24124	
8	CL16	CL190	26	0.00082	0.984	0.985	-0.78	4084	40.6	0.24702	
7	CL12	CL15	60	0.00547	0.979	0.980	-1.17	3524	217.3	0.30972	
6	CL23	CL10	189	0.01783	0.961	0.973	-5.83	2260	930.1	0.31469	
5	CL11	CL8	50	0.00509	0.956	0.961	-1.95	2491	116.4	0.33765	
4	CL9	CL14	166	0.02461	0.931	0.939	-1.85	2082	469.9	0.40327	
3	CL7	CL5	110	0.05276	0.879	0.890	-1.75	1670	403.4	0.71345	
2	CL4	CL6	355	0.18871	0.690	0.751	-4.72	1030	1220	0.75370	
1	CL3	CL2	465	0.68979	0.000	0.000	0.00	.	1030	1.48517	

CLUSTERING ON shrink2 - CENTROID METHOD

All Vulnerable sections

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL36	CL41	41	0.00024	0.998	0.998	4.73	14397	165.6	0.08400	
19	CL45	CL47	45	0.00034	0.998	0.998	3.48	12579	252.7	0.08567	
18	CL31	CL140	113	0.00060	0.997	0.997	1.17	10227	643.8	0.08854	
17	CL54	CL32	52	0.00059	0.997	0.997	-0.16	8836	220.7	0.10368	
16	CL24	CL29	22	0.00036	0.996	0.996	0.15	8480	58.0	0.13206	
15	CL28	CL26	30	0.00055	0.996	0.996	-0.02	7861	94.6	0.13216	
14	CL19	CL37	72	0.00140	0.995	0.995	-2.35	6299	211.9	0.13898	
13	CL30	CL22	53	0.00111	0.993	0.995	-2.81	5678	199.2	0.14086	
12	CL23	CL25	30	0.00056	0.993	0.994	-1.51	5718	86.3	0.14361	
11	CL17	CL35	76	0.00160	0.991	0.992	-1.83	5146	151.9	0.15013	
10	CL27	CL21	24	0.00064	0.991	0.991	0.11	5334	89.0	0.15983	
9	CL20	CL13	94	0.00502	0.986	0.988	-3.15	3900	271.4	0.22442	
8	CL16	CL190	26	0.00082	0.985	0.985	-0.27	4224	40.6	0.23650	
7	CL12	CL15	60	0.00547	0.979	0.980	-0.79	3612	217.3	0.29091	
6	CL18	CL11	189	0.01834	0.961	0.973	-5.83	2260	1116	0.30601	
5	CL10	CL8	50	0.00509	0.956	0.961	-1.95	2491	116.4	0.30769	
4	CL9	CL14	166	0.02461	0.931	0.939	-1.85	2082	469.9	0.37419	
3	CL7	CL5	110	0.05276	0.879	0.890	-1.75	1670	403.4	0.66995	
2	CL4	CL6	355	0.18871	0.690	0.751	-4.72	1030	1220	0.70383	
1	CL3	CL2	465	0.68979	0.000	0.000	0.00	.	1030	1.38045	

CLUSTERING ON drain- AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL31	CL61	67	0.00147	0.994	0.998	-14.2	4158	316.6	0.15019	
19	CL40	CL26	53	0.00057	0.994	0.998	-14.0	3993	76.6	0.15537	
18	CL37	CL30	106	0.00244	0.991	0.997	-17.3	3029	320.1	0.15900	
17	CL32	CL332	18	0.00039	0.991	0.997	-16.2	3086	75.7	0.16197	
16	CL28	CL308	12	0.00026	0.991	0.996	-14.7	3204	39.0	0.19583	
15	CL23	OB162	7	0.00013	0.991	0.996	-12.8	3393	5.5	0.19736	
14	CL25	CL27	110	0.00411	0.987	0.995	-16.2	2536	305.9	0.21498	
13	CL38	CL20	97	0.00380	0.983	0.995	-17.6	2140	186.4	0.22355	
12	CL29	CL17	54	0.00246	0.980	0.994	-17.1	2043	154.6	0.23650	
11	CL22	CL39	14	0.00085	0.979	0.992	-15.0	2157	49.5	0.25247	
10	CL24	CL15	16	0.00188	0.978	0.991	-13.3	2198	64.9	0.35036	
9	CL18	CL14	216	0.02701	0.951	0.988	-22.2	1095	657.0	0.36727	
8	CL16	CL19	65	0.00593	0.945	0.985	-20.3	1113	293.0	0.38868	
7	CL8	CL13	162	0.03575	0.909	0.980	-23.9	760.9	442.0	0.50256	
6	CL12	OB196	55	0.00113	0.908	0.973	-19.4	902.7	18.2	0.52976	
5	CL10	CL11	30	0.00957	0.898	0.961	-15.3	1014	80.3	0.58989	
4	CL9	CL6	271	0.06863	0.829	0.939	-16.8	747.6	459.0	0.64831	
3	CL5	CL21	32	0.00625	0.823	0.890	-8.32	1076	14.5	0.93730	
2	CL7	CL4	433	0.31793	0.505	0.751	-14.7	473.0	869.7	0.94361	
1	CL2	CL3	465	0.50532	0.000	0.000	0.00	.	473.0	2.08045	

CLUSTERING ON drain - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL30	CL61	76	0.00165	0.993	0.998	-18.0	3241	294.6	0.14524	
19	CL40	CL26	53	0.00057	0.992	0.998	-17.5	3176	76.6	0.14697	
18	OB6	OB176	2	0.00005	0.992	0.997	-15.8	3349	.	0.14999	
17	CL32	CL332	18	0.00039	0.992	0.997	-14.7	3397	75.7	0.15741	
16	CL116	CL27	91	0.00265	0.989	0.996	-17.0	2735	480.6	0.16897	
15	CL23	OB162	7	0.00013	0.989	0.996	-15.2	2902	5.5	0.18571	
14	CL28	CL308	12	0.00026	0.989	0.995	-13.3	3058	39.0	0.19178	
13	CL29	CL17	54	0.00246	0.986	0.995	-14.0	2716	154.6	0.21815	
12	CL24	CL20	155	0.00915	0.977	0.994	-19.3	1763	409.7	0.23404	
11	CL22	CL39	14	0.00085	0.976	0.992	-17.1	1872	49.5	0.23972	
10	CL19	CL21	120	0.01375	0.963	0.991	-21.2	1300	571.0	0.32834	
9	CL25	CL15	16	0.00188	0.961	0.988	-18.7	1393	64.9	0.33247	
8	CL16	CL13	145	0.02264	0.938	0.985	-22.0	988.7	503.5	0.39372	
7	CL14	CL11	26	0.00758	0.930	0.980	-19.7	1022	131.2	0.52179	
6	CL12	CL8	300	0.09458	0.836	0.973	-28.4	467.6	676.9	0.54119	
5	CL9	CL18	18	0.00299	0.833	0.961	-23.2	573.2	20.5	0.62475	
4	CL10	CL6	420	0.24908	0.584	0.939	-31.4	215.6	681.3	0.82108	
3	CL7	CL5	44	0.03356	0.550	0.890	-24.7	282.6	98.6	0.85560	
2	CL4	OB196	421	0.00702	0.543	0.751	-13.0	550.7	7.3	1.27755	
1	CL3	CL2	465	0.54325	0.000	0.000	0.00	.	550.7	1.77869	

CLUSTERING ON wattab - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	OB1	OB146	2	0.00002	0.999	0.998	21.07	42031	.	0.08875	T
19	CL41	CL23	27	0.00028	0.999	0.998	16.44	29414	143.0	0.10312	
18	CL246	CL29	16	0.00017	0.999	0.997	15.42	26014	194.9	0.10910	
17	CL317	CL28	6	0.00008	0.999	0.997	16.10	25655	42.7	0.12198	T
16	CL30	CL25	10	0.00015	0.999	0.996	16.08	24087	52.6	0.12523	
15	CL22	CL24	60	0.00064	0.998	0.996	11.78	17037	97.2	0.12567	
14	CL26	CL31	8	0.00013	0.998	0.995	12.96	17175	45.3	0.13253	
13	CL20	CL325	5	0.00009	0.998	0.995	14.67	17835	16.2	0.14033	
12	CL27	CL18	24	0.00088	0.997	0.994	11.87	13729	100.5	0.20349	
11	CL17	OB149	7	0.00014	0.997	0.992	13.94	14439	8.2	0.20568	
10	CL15	CL19	87	0.00454	0.992	0.991	3.21	6537	283.9	0.25179	
9	CL13	CL253	9	0.00056	0.992	0.988	5.48	6862	36.3	0.25277	
8	CL14	CL250	16	0.00112	0.991	0.985	7.28	6909	104.5	0.26358	
7	CL11	CL16	17	0.00125	0.989	0.980	9.62	7115	46.4	0.28703	
6	CL10	CL21	387	0.04524	0.944	0.973	-11.5	1552	2936	0.41399	
5	CL9	CL8	25	0.00610	0.938	0.961	-7.37	1741	72.1	0.53062	
4	CL7	CL49	29	0.01062	0.927	0.939	-2.74	1964	172.7	0.61053	
3	CL5	CL12	49	0.02527	0.902	0.890	2.04	2130	130.2	0.75086	
2	CL3	CL6	436	0.22777	0.674	0.751	-5.76	959.0	1155	1.18678	
1	CL2	CL4	465	0.67439	0.000	0.000	0.00	.	959.0	2.45335	

CLUSTERING ON wattab - CENTROID METHOD

All Vulnerable sections

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	OB1	OB146	2	0.00002	0.999	0.998	21.07	42031	.	0.08875	T
19	CL41	CL23	27	0.00028	0.999	0.998	16.44	29414	143.0	0.09899	
18	CL246	CL28	16	0.00017	0.999	0.997	15.42	26014	194.9	0.10650	
17	CL22	CL29	60	0.00064	0.998	0.997	9.75	16925	97.2	0.11505	
16	CL317	CL27	6	0.00008	0.998	0.996	10.98	17252	42.7	0.11834	T
15	CL30	CL24	10	0.00015	0.998	0.996	11.78	17037	52.6	0.12080	
14	CL25	CL31	8	0.00013	0.998	0.995	12.96	17175	45.3	0.12820	
13	CL20	CL325	5	0.00009	0.998	0.995	14.67	17835	16.2	0.13313	
12	CL26	CL18	24	0.00088	0.997	0.994	11.87	13729	100.5	0.19600	
11	CL16	OB149	7	0.00014	0.997	0.992	13.94	14439	8.2	0.19723	
10	CL17	CL19	87	0.00454	0.992	0.991	3.21	6537	283.9	0.23783	
9	CL13	CL253	9	0.00056	0.992	0.988	5.48	6862	36.3	0.24259	
8	CL14	CL250	16	0.00112	0.991	0.985	7.28	6909	104.5	0.25517	
7	CL11	CL15	17	0.00125	0.989	0.980	9.62	7115	46.4	0.26584	
6	CL10	CL21	387	0.04524	0.944	0.973	-11.5	1552	2936	0.39451	
5	CL9	CL8	25	0.00610	0.938	0.961	-7.37	1741	72.1	0.49575	
4	CL7	CL49	29	0.01062	0.927	0.939	-2.74	1964	172.7	0.59169	
3	CL5	CL12	49	0.02527	0.902	0.890	2.04	2130	130.2	0.69189	
2	CL3	CL6	436	0.22777	0.674	0.751	-5.76	959.0	1155	1.10225	
1	CL2	CL4	465	0.67439	0.000	0.000	0.00	.	959.0	2.39875	

CLUSTERING ON flood-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL372	CL415	8	0.00002	1.000	0.998	32.85	90882	.	0.05572	
19	CL336	CL292	4	0.00005	1.000	0.998	31.64	79605	.	0.11143	T
18	CL34	CL242	10	0.00011	1.000	0.997	28.69	62053	.	0.11143	
17	CL24	CL20	21	0.00030	0.999	0.997	22.32	38566	93.7	0.12434	
16	CL25	CL22	49	0.00126	0.998	0.996	8.87	15024	384.5	0.15960	
15	CL23	CL19	12	0.00035	0.998	0.996	8.48	13723	53.4	0.18373	
14	OB60	CL21	7	0.00013	0.998	0.995	9.89	14044	35.7	0.18757	
13	CL18	CL26	25	0.00100	0.997	0.995	7.04	10828	184.6	0.20385	
12	OB9	OB461	2	0.00011	0.996	0.994	9.14	11483	.	0.22286	T
11	CL17	CL16	70	0.00393	0.992	0.992	0.52	6006	150.1	0.26969	
10	CL27	OB460	8	0.00042	0.992	0.991	2.72	6329	.	0.33429	
9	CL332	CL12	4	0.00048	0.992	0.988	5.17	6724	9.0	0.35238	
8	CL15	CL29	15	0.00161	0.990	0.985	6.22	6452	50.6	0.40466	
7	CL10	CL14	15	0.00311	0.987	0.980	6.31	5738	71.4	0.45872	
6	CL13	CL11	95	0.01492	0.972	0.973	-0.63	3181	202.9	0.46613	
5	CL28	CL6	430	0.16092	0.811	0.961	-25.2	493.6	3166	0.74669	
4	CL9	OB462	5	0.00274	0.808	0.939	-18.7	647.9	14.0	0.91040	
3	CL7	CL8	30	0.03908	0.769	0.890	-13.0	769.9	191.8	1.13887	
2	CL5	CL3	460	0.44361	0.326	0.751	-21.4	223.5	893.2	2.02850	
1	CL2	CL4	465	0.32560	0.000	0.000	0.00	.	223.5	3.97053	

CLUSTERING ON flood-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL372	CL415	8	0.00002	1.000	0.998	32.85	90882	.	0.05572	
19	CL336	CL292	4	0.00005	1.000	0.998	31.64	79605	.	0.11143	T
18	CL34	CL242	10	0.00011	1.000	0.997	28.69	62053	.	0.11143	
17	CL24	CL20	21	0.00030	0.999	0.997	22.32	38566	93.7	0.11893	
16	CL25	CL22	49	0.00126	0.998	0.996	8.87	15024	384.5	0.15494	
15	CL23	CL19	12	0.00035	0.998	0.996	8.48	13723	53.4	0.17411	
14	OB60	CL21	7	0.00013	0.998	0.995	9.89	14044	35.7	0.18572	
13	CL18	CL26	25	0.00100	0.997	0.995	7.04	10828	184.6	0.19686	
12	OB9	OB461	2	0.00011	0.996	0.994	9.14	11483	.	0.22286	T
11	CL17	CL16	70	0.00393	0.992	0.992	0.52	6006	150.1	0.24901	
10	CL332	CL12	4	0.00048	0.992	0.991	2.60	6281	9.0	0.33429	T
9	CL27	OB460	8	0.00042	0.992	0.988	5.17	6724	.	0.33429	
8	CL15	CL29	15	0.00161	0.990	0.985	6.22	6452	50.6	0.39465	
7	CL13	CL11	95	0.01492	0.975	0.980	-3.70	2985	202.9	0.43347	
6	CL9	CL14	15	0.00311	0.972	0.973	-0.63	3181	71.4	0.43976	
5	CL28	CL7	430	0.16092	0.811	0.961	-25.2	493.6	3166	0.71023	
4	CL10	OB462	5	0.00274	0.808	0.939	-18.7	647.9	14.0	0.89145	
3	CL6	CL8	30	0.03908	0.769	0.890	-13.0	769.9	191.8	1.09945	
2	CL5	CL3	460	0.44361	0.326	0.751	-21.4	223.5	893.2	1.91571	
1	CL2	CL4	465	0.32560	0.000	0.000	0.00	.	223.5	3.90797	

CLUSTERING ON watsoil-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL24	CL378	15	0.00005	1.000	0.998	27.85	65508	11.3	0.08559	
19	CL335	CL37	5	0.00005	1.000	0.998	27.47	60599	45.0	0.10158	T
18	CL324	CL34	4	0.00004	1.000	0.997	27.72	58214	25.0	0.10158	
17	CL32	CL26	44	0.00052	0.999	0.997	17.80	28671	240.4	0.10970	
16	CL22	CL25	37	0.00062	0.998	0.996	12.25	18749	246.9	0.13030	
15	CL42	CL29	18	0.00040	0.998	0.996	10.88	16057	661.0	0.14907	
14	CL350	CL18	6	0.00016	0.998	0.995	11.89	16007	14.3	0.17706	
13	CL17	CL20	59	0.00139	0.996	0.995	6.65	10555	110.6	0.18364	
12	CL19	CL28	9	0.00034	0.996	0.994	7.80	10521	40.1	0.19660	
11	CL242	CL23	13	0.00080	0.995	0.992	7.71	9615	429.0	0.26126	
10	CL15	CL21	32	0.00227	0.993	0.991	4.71	7208	151.9	0.26949	
9	OB156	CL322	3	0.00029	0.993	0.988	7.44	7798	.	0.31873	
8	CL16	CL13	96	0.00885	0.984	0.985	-1.15	3987	295.5	0.32105	
7	CL12	CL11	22	0.00431	0.980	0.980	-0.59	3661	70.5	0.46178	
6	CL297	CL14	9	0.00275	0.977	0.973	2.38	3870	91.1	0.57160	
5	CL38	CL8	399	0.09531	0.882	0.961	-17.7	855.6	3242	0.57576	
4	CL7	CL10	54	0.03162	0.850	0.939	-14.7	870.1	199.3	0.80043	
3	CL6	CL9	12	0.00672	0.843	0.890	-6.22	1242	20.7	0.88962	
2	CL5	CL4	453	0.35574	0.487	0.751	-15.5	440.3	1093	1.40310	
1	CL2	CL3	465	0.48745	0.000	0.000	0.00	.	440.3	3.18178	

CLUSTERING ON watsoil-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL30	OB61	14	0.00003	1.000	0.998	27.85	65508	52.1	0.08275	
19	CL335	CL37	5	0.00005	1.000	0.998	27.47	60599	45.0	0.09960	T
18	CL324	CL34	4	0.00004	1.000	0.997	27.72	58214	25.0	0.09960	
17	CL32	CL26	44	0.00052	0.999	0.997	17.80	28671	240.4	0.10525	
16	CL22	CL25	37	0.00062	0.998	0.996	12.25	18749	246.9	0.12569	
15	CL42	CL29	18	0.00040	0.998	0.996	10.88	16057	661.0	0.14798	
14	CL350	CL18	6	0.00016	0.998	0.995	11.89	16007	14.3	0.16933	
13	CL17	CL21	59	0.00139	0.996	0.995	6.65	10555	110.6	0.16999	
12	CL19	CL28	9	0.00034	0.996	0.994	7.80	10521	40.1	0.18925	
11	CL15	CL20	32	0.00227	0.994	0.992	3.54	7320	151.9	0.25834	
10	CL242	CL23	13	0.00080	0.993	0.991	4.71	7208	429.0	0.25897	
9	CL16	CL13	96	0.00885	0.984	0.988	-4.60	3546	295.5	0.30057	
8	OB156	CL322	3	0.00029	0.984	0.985	-1.15	3987	.	0.31873	
7	CL12	CL10	22	0.00431	0.980	0.980	-0.59	3661	70.5	0.43383	
6	CL38	CL9	399	0.09531	0.884	0.973	-22.9	701.4	3242	0.55072	
5	CL297	CL14	9	0.00275	0.882	0.961	-17.7	855.6	91.1	0.56442	
4	CL7	CL11	54	0.03162	0.850	0.939	-14.7	870.1	199.3	0.75008	
3	CL5	CL8	12	0.00672	0.843	0.890	-6.22	1242	20.7	0.83224	
2	CL6	CL4	453	0.35574	0.487	0.751	-15.5	440.3	1093	1.31727	
1	CL2	CL3	465	0.48745	0.000	0.000	0.00	.	440.3	3.11025	

CLUSTERING ON pan-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL32	CL89	11	0.00005	1.000	0.998	32.97	91637	327.3	0.07579	
19	CL25	CL42	31	0.00017	1.000	0.998	26.82	58046	204.1	0.07803	
18	CL39	CL35	19	0.00012	0.999	0.997	24.73	47864	252.3	0.08128	
17	CL36	CL47	27	0.00008	0.999	0.997	24.55	44603	1344	0.08322	T
16	OB14	CL26	6	0.00003	0.999	0.996	25.89	45764	10.0	0.08834	
15	CL27	CL33	36	0.00022	0.999	0.996	23.62	36948	604.1	0.09043	
14	CL24	CL23	35	0.00038	0.999	0.995	20.28	27718	294.5	0.10379	
13	CL91	CL16	17	0.00020	0.999	0.995	20.42	25972	80.8	0.11516	
12	CL28	CL20	15	0.00017	0.998	0.994	21.29	25400	36.7	0.12241	
11	CL21	CL18	33	0.00043	0.998	0.992	20.45	22069	72.7	0.12246	
10	CL19	CL22	43	0.00048	0.997	0.991	20.28	19899	83.3	0.12314	
9	CL17	CL12	42	0.00131	0.996	0.988	17.27	14786	168.1	0.18889	
8	CL15	CL10	79	0.00278	0.993	0.985	12.65	9798	226.3	0.19555	
7	CL11	CL14	68	0.00391	0.989	0.980	9.75	7172	247.6	0.24619	
6	CL13	CL9	59	0.00388	0.986	0.973	9.85	6279	119.4	0.29405	
5	CL8	CL69	128	0.01185	0.974	0.961	6.34	4265	400.9	0.31912	
4	CL52	CL7	242	0.03489	0.939	0.939	0.08	2359	1690	0.42715	
3	CL6	CL5	187	0.06126	0.878	0.890	-1.88	1656	532.0	0.63455	
2	CL4	CL3	429	0.46600	0.412	0.751	-18.5	323.9	1626	1.07959	
1	CL2	CL73	465	0.41160	0.000	0.000	0.00	.	323.9	1.78698	

CLUSTERING ON pan-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL24	CL42	31	0.00017	1.000	0.998	27.17	62646	204.1	0.07480	
19	CL32	CL89	11	0.00005	1.000	0.998	26.82	58046	327.3	0.07504	
18	CL39	CL26	23	0.00013	0.999	0.997	24.54	47294	74.7	0.07839	
17	CL21	CL35	26	0.00019	0.999	0.997	21.94	37596	74.4	0.08228	
16	CL36	CL47	27	0.00008	0.999	0.996	22.37	36362	1344	0.08254	T
15	OB14	CL25	6	0.00003	0.999	0.996	23.98	37836	10.0	0.08555	
14	CL27	CL33	36	0.00022	0.999	0.995	22.74	32560	604.1	0.08965	
13	CL91	CL15	17	0.00020	0.999	0.995	22.52	29798	80.8	0.10881	
12	CL20	CL22	43	0.00048	0.998	0.994	20.15	23578	83.3	0.11359	
11	CL28	CL19	15	0.00017	0.998	0.992	21.52	23673	36.7	0.11614	
10	CL23	CL18	42	0.00070	0.997	0.991	19.82	19306	160.8	0.12472	
9	CL16	CL11	42	0.00131	0.996	0.988	16.96	14492	168.1	0.17726	
8	CL14	CL12	79	0.00278	0.993	0.985	12.47	9684	226.3	0.18138	
7	CL17	CL10	68	0.00384	0.989	0.980	9.75	7172	225.9	0.23539	
6	CL13	CL9	59	0.00388	0.986	0.973	9.85	6279	119.4	0.27264	
5	CL8	CL69	128	0.01185	0.974	0.961	6.34	4265	400.9	0.30149	
4	CL52	CL7	242	0.03489	0.939	0.939	0.08	2359	1690	0.40688	
3	CL6	CL5	187	0.06126	0.878	0.890	-1.88	1656	532.0	0.59321	
2	CL4	CL3	429	0.46600	0.412	0.751	-18.5	323.9	1626	1.01237	
1	CL2	CL73	465	0.41160	0.000	0.000	0.00	.	323.9	1.69561	

CLUSTERING ON hyd - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL35	CL54	29	0.00015	0.999	0.998	22.46	46035	235.6	0.07057	
19	CL55	CL32	38	0.00008	0.999	0.998	21.95	42206	494.9	0.07349	
18	CL26	CL47	36	0.00018	0.999	0.997	19.55	34106	126.8	0.07442	
17	CL25	CL29	33	0.00020	0.999	0.997	17.87	28802	119.8	0.08049	
16	CL36	CL30	30	0.00020	0.999	0.996	16.92	25455	121.2	0.08499	
15	CL19	CL34	47	0.00024	0.999	0.996	16.14	22660	118.1	0.09187	
14	CL23	CL33	27	0.00024	0.998	0.995	15.96	20891	129.5	0.09571	
13	CL24	CL28	12	0.00013	0.998	0.995	17.22	21081	45.0	0.10393	
12	CL16	CL40	47	0.00063	0.998	0.994	15.14	17004	112.8	0.12444	
11	CL27	CL21	47	0.00072	0.997	0.992	13.93	14433	363.6	0.12677	
10	CL20	CL22	92	0.00289	0.994	0.991	6.93	8334	1440	0.18756	
9	CL17	CL14	60	0.00290	0.991	0.988	4.24	6327	310.9	0.22259	
8	CL18	CL12	83	0.00436	0.987	0.985	1.84	4848	315.8	0.23550	
7	CL15	CL11	94	0.00522	0.981	0.980	0.95	4048	420.3	0.23912	
6	CL63	CL13	88	0.00248	0.979	0.973	3.94	4283	1387	0.24175	
5	CL10	CL9	152	0.02091	0.958	0.961	-1.12	2630	481.4	0.39323	
4	CL8	CL73	131	0.01850	0.940	0.939	0.28	2391	435.8	0.39548	
3	CL6	CL7	182	0.06744	0.872	0.890	-2.64	1576	1350	0.60570	
2	CL5	CL4	283	0.17987	0.692	0.751	-4.55	1042	983.5	0.82305	
1	CL2	CL3	465	0.69230	0.000	0.000	0.00	.	1042	1.31797	

CLUSTERING ON hyd - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL35	CL54	29	0.00015	0.999	0.998	22.69	46723	235.6	0.06868	
19	CL30	CL47	36	0.00018	0.999	0.998	19.59	36165	126.8	0.07057	
18	CL55	CL32	38	0.00008	0.999	0.997	19.70	34441	494.9	0.07121	
17	CL31	CL28	32	0.00017	0.999	0.997	18.44	29906	143.0	0.07129	
16	CL36	CL29	30	0.00020	0.999	0.996	17.40	26257	121.2	0.08094	
15	CL18	CL34	47	0.00024	0.999	0.996	16.53	23248	118.1	0.08783	
14	CL23	CL33	27	0.00024	0.998	0.995	16.29	21353	129.5	0.09165	
13	CL24	CL27	12	0.00013	0.998	0.995	17.53	21514	45.0	0.09859	
12	CL16	CL25	48	0.00068	0.998	0.994	15.04	16891	120.8	0.11880	
11	CL26	CL21	47	0.00072	0.997	0.992	13.86	14360	363.6	0.12260	
10	CL20	CL15	76	0.00251	0.994	0.991	7.89	8874	374.4	0.18031	
9	CL22	CL14	90	0.00296	0.991	0.988	4.78	6555	849.0	0.19046	
8	CL17	CL12	80	0.00399	0.987	0.985	2.66	5112	269.7	0.21955	
7	CL63	CL13	88	0.00248	0.985	0.980	4.14	4983	1387	0.23553	
6	CL19	CL73	84	0.00552	0.979	0.973	4.22	4363	1944	0.24952	
5	CL10	CL11	123	0.01095	0.968	0.961	3.41	3529	347.1	0.29582	
4	CL6	CL8	164	0.03666	0.932	0.939	-1.72	2099	545.0	0.45559	
3	CL5	CL9	213	0.04855	0.883	0.890	-1.06	1747	568.1	0.46556	
2	CL3	CL7	301	0.19516	0.688	0.751	-4.84	1021	843.0	0.85270	
1	CL2	CL4	465	0.68806	0.000	0.000	0.00	.	1021	1.22625	

CLUSTERING ON bd1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL36	CL31	48	0.00073	0.995	0.998	-13.6	4310	.	0.11927	T
19	CL80	CL129	32	0.00040	0.994	0.998	-13.0	4246	.	0.11927	T
18	CL28	CL104	19	0.00048	0.994	0.997	-12.5	4158	50.1	0.16867	
17	CL103	CL27	39	0.00079	0.993	0.997	-12.5	3929	68.7	0.17284	
16	CL51	CL20	77	0.00256	0.990	0.996	-15.3	3075	261.8	0.19092	
15	CL19	CL26	104	0.00405	0.986	0.996	-18.6	2317	277.5	0.22079	
14	CL22	CL29	36	0.00213	0.984	0.995	-18.6	2159	133.6	0.26221	
13	CL24	CL25	69	0.00494	0.979	0.995	-20.4	1778	322.7	0.27072	
12	CL15	CL21	173	0.01401	0.965	0.994	-25.8	1143	377.5	0.30572	
11	CL30	CL18	22	0.00099	0.964	0.992	-23.5	1225	28.7	0.31516	
10	OB171	OB392	2	0.00028	0.964	0.991	-20.6	1353	.	0.35780	
9	CL23	CL14	81	0.00977	0.954	0.988	-21.0	1188	238.3	0.36528	
8	CL11	CL17	61	0.00845	0.946	0.985	-20.0	1138	172.4	0.40534	
7	CL16	CL13	146	0.02781	0.918	0.980	-22.3	854.0	432.5	0.45525	
6	CL9	OB198	82	0.00180	0.916	0.973	-17.9	1003	11.1	0.67883	
5	CL10	OB261	3	0.00124	0.915	0.961	-12.4	1236	4.5	0.67993	
4	CL12	CL6	255	0.10167	0.813	0.939	-18.3	669.1	731.4	0.70227	
3	CL7	CL8	207	0.11366	0.700	0.890	-17.6	537.9	481.3	0.84553	
2	CL3	CL4	462	0.62647	0.073	0.751	-28.2	36.5	964.1	1.25627	
1	CL2	CL5	465	0.07312	0.000	0.000	0.00	.	36.5	2.50456	

CLUSTERING ON bd1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL36	CL31	48	0.00073	0.995	0.998	-13.6	4310	.	0.11927	T
19	CL80	CL129	32	0.00040	0.994	0.998	-13.0	4246	.	0.11927	T
18	CL28	CL104	19	0.00048	0.994	0.997	-12.5	4158	50.1	0.15902	
17	CL103	CL27	39	0.00079	0.993	0.997	-12.5	3929	68.7	0.16300	
16	CL51	CL20	77	0.00256	0.990	0.996	-15.3	3075	261.8	0.18139	
15	CL19	CL26	104	0.00405	0.986	0.996	-18.6	2317	277.5	0.20582	
14	CL22	CL29	36	0.00213	0.984	0.995	-18.6	2159	133.6	0.24847	
13	CL24	CL25	69	0.00494	0.979	0.995	-20.4	1778	322.7	0.25768	
12	CL15	CL21	173	0.01401	0.965	0.994	-25.8	1143	377.5	0.27997	
11	CL30	CL18	22	0.00099	0.964	0.992	-23.5	1225	28.7	0.29712	
10	CL23	CL14	81	0.00977	0.954	0.991	-24.2	1060	238.3	0.33660	
9	OB171	OB392	2	0.00028	0.954	0.988	-21.0	1188	.	0.35780	
8	CL11	CL17	61	0.00845	0.946	0.985	-20.0	1138	172.4	0.37337	
7	CL16	CL13	146	0.02781	0.918	0.980	-22.3	854.0	432.5	0.42104	
6	CL12	CL10	254	0.09838	0.820	0.973	-29.9	417.0	743.0	0.64320	
5	CL9	OB261	3	0.00124	0.818	0.961	-24.6	518.0	4.5	0.65597	
4	CL7	CL8	207	0.11366	0.705	0.939	-25.8	366.7	481.3	0.78286	
3	CL6	OB198	255	0.00509	0.700	0.890	-17.6	537.9	9.8	1.08891	
2	CL4	CL3	462	0.62647	0.073	0.751	-28.2	36.5	964.1	1.12787	
1	CL2	CL5	465	0.07312	0.000	0.000	0.00	.	36.5	2.38562	

CLUSTERING ON cec1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL47	CL33	86	0.00123	0.995	0.998	-11.0	5133	345.2	0.12217	
19	CL29	CL46	27	0.00038	0.995	0.998	-10.5	5012	93.7	0.12244	
18	CL42	CL38	83	0.00110	0.994	0.997	-11.9	4341	344.3	0.12280	
17	CL30	CL23	110	0.00278	0.991	0.997	-15.8	3153	277.8	0.16872	
16	CL27	CL24	30	0.00087	0.990	0.996	-15.3	3066	87.3	0.17680	
15	CL31	CL22	7	0.00024	0.990	0.996	-13.6	3213	22.1	0.18923	
14	CL25	CL32	27	0.00101	0.989	0.995	-12.9	3144	144.7	0.19421	
13	CL26	CL37	31	0.00118	0.988	0.995	-12.1	3076	159.1	0.19664	
12	CL20	CL28	99	0.00175	0.986	0.994	-11.7	2932	104.7	0.20433	
11	CL21	CL19	72	0.00348	0.983	0.992	-12.3	2574	198.4	0.23628	
10	CL18	CL12	182	0.01085	0.972	0.991	-16.8	1744	412.4	0.25969	
9	CL17	OB198	111	0.00030	0.972	0.988	-13.7	1944	8.5	0.28096	
8	CL15	CL48	11	0.00101	0.971	0.985	-10.5	2148	30.7	0.32016	
7	CL14	CL16	57	0.00847	0.962	0.980	-10.3	1934	200.1	0.39666	
6	CL9	CL10	293	0.05073	0.911	0.973	-18.7	943.2	747.7	0.44638	
5	CL13	CL11	103	0.01643	0.895	0.961	-15.8	979.0	271.6	0.44893	
4	CL8	OB171	12	0.00114	0.894	0.939	-9.01	1292	8.7	0.56240	
3	CL7	CL4	69	0.01879	0.875	0.890	-2.26	1616	95.0	0.72886	
2	CL5	CL6	396	0.23062	0.644	0.751	-7.66	838.7	976.9	0.89924	
1	CL3	CL2	465	0.64432	0.000	0.000	0.00	.	838.7	1.68560	

CLUSTERING ON cec1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL28	CL47	27	0.00038	0.996	0.998	-7.80	6325	93.7	0.11455	
19	CL48	CL33	86	0.00123	0.995	0.998	-10.5	5012	345.2	0.11570	
18	CL31	CL41	75	0.00104	0.994	0.997	-11.7	4389	179.6	0.11628	
17	CL27	CL24	30	0.00087	0.993	0.997	-11.9	4076	87.3	0.16406	
16	CL43	CL19	140	0.00416	0.989	0.996	-17.3	2696	342.8	0.17051	
15	CL29	CL22	7	0.00024	0.989	0.996	-15.5	2834	22.1	0.17899	
14	CL37	CL20	42	0.00143	0.987	0.995	-15.2	2709	105.7	0.18545	
13	CL25	CL32	27	0.00101	0.986	0.995	-14.0	2721	144.7	0.18642	
12	CL18	CL23	139	0.00597	0.980	0.994	-17.0	2057	366.3	0.20024	
11	CL21	CL30	58	0.00175	0.979	0.992	-15.6	2079	116.3	0.20070	
10	CL13	CL26	43	0.00339	0.975	0.991	-14.8	1991	103.9	0.27961	
9	CL15	CL46	11	0.00101	0.974	0.988	-12.1	2154	30.7	0.30409	
8	CL12	OB198	140	0.00041	0.974	0.985	-8.68	2428	6.9	0.30917	
7	CL14	CL11	100	0.01143	0.962	0.980	-10.1	1953	245.4	0.32997	
6	CL8	CL16	280	0.04515	0.917	0.973	-17.7	1017	869.2	0.38684	
5	CL17	CL9	41	0.00679	0.910	0.961	-13.3	1169	107.8	0.44229	
4	CL10	CL5	84	0.03199	0.878	0.939	-11.2	1111	187.8	0.59462	
3	CL7	CL6	380	0.17540	0.703	0.890	-17.4	546.9	877.1	0.74315	
2	CL4	OB171	85	0.00578	0.697	0.751	-4.20	1066	10.4	1.16525	
1	CL2	CL3	465	0.69727	0.000	0.000	0.00	.	1066	1.52605	

CLUSTERING ON bedrock-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL21	CL153	14	0.00008	1.000	0.998	37.21	121E3	20.7	0.09440	
19	CL368	CL23	7	0.00006	1.000	0.998	34.83	98072	32.1	0.10322	
18	CL447	OB443	3	0.00005	1.000	0.997	33.88	87164	.	0.13057	T
17	OB249	OB430	2	0.00004	1.000	0.997	33.99	82736	.	0.13057	
16	CL60	CL24	14	0.00040	0.999	0.996	24.09	40683	345.7	0.18174	
15	CL18	CL61	8	0.00024	0.999	0.996	21.78	32761	30.0	0.18465	
14	CL25	OB12	395	0.00016	0.999	0.995	21.63	30262	.	0.19585	
13	CL20	CL19	21	0.00114	0.998	0.995	13.44	16463	110.6	0.24683	
12	CL58	CL17	6	0.00039	0.997	0.994	13.58	15356	42.7	0.26917	
11	OB230	OB247	2	0.00023	0.997	0.992	15.11	15587	.	0.32641	T
10	OB229	OB261	2	0.00023	0.997	0.991	17.01	16082	.	0.32641	
9	CL13	CL22	35	0.00375	0.993	0.988	8.26	8225	89.9	0.34492	
8	CL15	CL16	22	0.00431	0.989	0.985	4.51	5770	122.2	0.45997	
7	CL11	CL41	4	0.00166	0.987	0.980	6.65	5866	14.4	0.64130	
6	CL14	CL9	430	0.06916	0.918	0.973	-17.5	1028	5596	0.73014	
5	CL8	CL12	28	0.01386	0.904	0.961	-14.3	1085	66.3	0.86693	
4	CL10	CL7	6	0.00570	0.898	0.939	-8.26	1359	10.8	1.06172	
3	CL6	CL5	458	0.26679	0.632	0.890	-21.2	396.1	1298	1.59830	
2	CL4	OB260	7	0.01680	0.615	0.751	-9.37	739.1	10.8	2.20226	
1	CL3	CL2	465	0.61485	0.000	0.000	0.00	.	739.1	4.65701	

CLUSTERING ON bedrock-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	CL153	14	0.00008	1.000	0.998	37.21	121E3	20.7	0.08902	
19	CL368	CL23	7	0.00006	1.000	0.998	34.83	98072	32.1	0.09792	
18	CL447	OB443	3	0.00005	1.000	0.997	33.88	87164	.	0.13057	T
17	OB249	OB430	2	0.00004	1.000	0.997	33.99	82736	.	0.13057	
16	CL18	CL61	8	0.00024	0.999	0.996	27.63	51292	30.0	0.17409	
15	CL60	CL24	14	0.00040	0.999	0.996	21.78	32761	345.7	0.17953	
14	CL25	OB12	395	0.00016	0.999	0.995	21.63	30262	.	0.19585	
13	CL20	CL19	21	0.00114	0.998	0.995	13.44	16463	110.6	0.23782	
12	CL58	CL17	6	0.00039	0.997	0.994	13.58	15356	42.7	0.26113	
11	CL13	CL22	35	0.00375	0.994	0.992	2.91	7023	89.9	0.32175	
10	OB230	OB247	2	0.00023	0.993	0.991	5.41	7549	.	0.32641	T
9	OB229	OB261	2	0.00023	0.993	0.988	8.26	8225	.	0.32641	
8	CL16	CL15	22	0.00431	0.989	0.985	4.51	5770	122.2	0.44299	
7	CL10	CL41	4	0.00166	0.987	0.980	6.65	5866	14.4	0.62018	
6	CL14	CL11	430	0.06916	0.918	0.973	-17.5	1028	5596	0.70642	
5	CL8	CL12	28	0.01386	0.904	0.961	-14.3	1085	66.3	0.82592	
4	CL9	CL7	6	0.00570	0.898	0.939	-8.26	1359	10.8	0.99556	
3	CL6	CL5	458	0.26679	0.632	0.890	-21.2	396.1	1298	1.53443	
2	CL4	OB260	7	0.01680	0.615	0.751	-9.37	739.1	10.8	2.13256	
1	CL3	CL2	465	0.61485	0.000	0.000	0.00	.	739.1	4.54854	

CLUSTERING ON salin1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL30	CL37	7	0.00011	0.996	0.998	-7.84	6306	33.1	0.12854	
19	CL26	CL34	68	0.00089	0.995	0.998	-9.48	5369	449.4	0.12872	
18	CL28	CL44	10	0.00014	0.995	0.997	-8.20	5524	40.3	0.13042	
17	CL38	CL25	7	0.00012	0.995	0.997	-6.75	5735	14.6	0.14836	
16	CL22	CL29	35	0.00095	0.994	0.996	-7.52	5125	160.6	0.16643	
15	CL36	CL21	113	0.00274	0.991	0.996	-11.4	3730	185.5	0.19119	
14	OB149	OB178	2	0.00008	0.991	0.995	-9.30	3989	.	0.19213	
13	CL43	OB162	5	0.00017	0.991	0.995	-7.24	4244	96.4	0.22585	
12	CL19	CL24	83	0.00312	0.988	0.994	-9.35	3415	216.0	0.25419	
11	CL15	CL23	311	0.02236	0.966	0.992	-22.8	1279	1202	0.28757	
10	CL20	CL13	12	0.00096	0.965	0.991	-20.3	1384	31.0	0.29910	
9	CL16	CL18	45	0.00271	0.962	0.988	-18.1	1445	88.6	0.30402	
8	OB143	CL14	3	0.00073	0.961	0.985	-14.7	1622	9.2	0.51341	
7	CL12	CL9	128	0.03177	0.930	0.980	-19.9	1007	481.5	0.53417	
6	CL10	CL17	19	0.00718	0.922	0.973	-16.6	1091	84.8	0.63767	
5	CL7	CL11	439	0.20641	0.716	0.961	-31.7	289.9	1323	0.78849	
4	CL8	CL27	5	0.00389	0.712	0.939	-25.4	380.0	14.2	0.90360	
3	CL4	CL350	7	0.01407	0.698	0.890	-17.7	533.9	14.9	1.58252	
2	CL5	CL6	458	0.24177	0.456	0.751	-16.8	388.5	389.3	1.82489	
1	CL2	CL3	465	0.45623	0.000	0.000	0.00	.	388.5	4.02993	

CLUSTERING ON salin1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL30	CL37	7	0.00011	0.997	0.998	-6.83	6740	33.1	0.12409	
19	CL29	CL44	10	0.00014	0.996	0.998	-5.79	6845	40.3	0.12609	
18	CL27	CL26	73	0.00108	0.995	0.997	-8.04	5583	141.4	0.13864	
17	CL38	CL24	7	0.00012	0.995	0.997	-6.59	5794	14.6	0.14050	
16	CL25	CL31	35	0.00095	0.994	0.996	-7.39	5169	160.6	0.15862	
15	CL35	CL23	242	0.00445	0.990	0.996	-14.1	3116	695.2	0.16937	
14	OB149	OB178	2	0.00008	0.990	0.995	-12.0	3337	.	0.19213	
13	CL43	OB162	5	0.00017	0.990	0.995	-9.90	3562	96.4	0.22515	
12	CL21	CL22	79	0.00292	0.987	0.994	-11.1	3036	231.2	0.23617	
11	CL20	CL13	12	0.00096	0.986	0.992	-9.45	3118	31.0	0.27705	
10	CL16	CL19	45	0.00271	0.983	0.991	-9.09	2913	88.6	0.28434	
9	CL18	CL15	315	0.02326	0.960	0.988	-19.1	1357	956.6	0.31021	
8	CL12	CL10	124	0.03030	0.929	0.985	-24.1	859.2	466.7	0.49514	
7	OB143	CL14	3	0.00073	0.929	0.980	-20.1	993.5	9.2	0.50435	
6	CL11	CL17	19	0.00718	0.921	0.973	-16.8	1077	84.8	0.61364	
5	CL8	CL9	439	0.20551	0.716	0.961	-31.7	289.9	1300	0.73203	
4	CL7	CL28	5	0.00389	0.712	0.939	-25.4	380.0	14.2	0.86760	
3	CL4	CL350	7	0.01407	0.698	0.890	-17.7	533.9	14.9	1.51184	
2	CL5	CL6	458	0.24177	0.456	0.751	-16.8	388.5	389.3	1.75496	
1	CL2	CL3	465	0.45623	0.000	0.000	0.00	.	388.5	3.91813	

CLUSTERING ON slope-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL47	CL171	4	0.00006	0.995	0.998	-12.8	4539	33.1	0.12344	
19	CL72	CL32	24	0.00033	0.995	0.998	-12.1	4514	68.3	0.12548	
18	CL27	OB225	9	0.00008	0.994	0.997	-10.6	4718	7.9	0.15513	
17	OB226	OB430	2	0.00005	0.994	0.997	-8.91	4975	.	0.15863	
16	CL38	CL34	5	0.00013	0.994	0.996	-7.30	5199	20.2	0.16249	
15	CL30	CL51	7	0.00018	0.994	0.996	-5.71	5409	39.0	0.16267	
14	CL28	CL29	60	0.00167	0.992	0.995	-7.32	4544	215.1	0.17189	
13	CL23	CL19	44	0.00177	0.991	0.995	-8.17	3993	115.0	0.21040	
12	CL25	CL22	238	0.00436	0.986	0.994	-11.5	2964	332.8	0.21052	
11	CL24	CL26	78	0.00325	0.983	0.992	-12.0	2632	276.5	0.21452	
10	CL33	CL16	11	0.00083	0.982	0.991	-9.74	2791	43.9	0.28011	
9	CL21	CL15	19	0.00193	0.980	0.988	-8.00	2833	87.6	0.33362	
8	CL12	CL11	316	0.03235	0.948	0.985	-19.3	1188	875.7	0.38389	
7	CL13	CL14	104	0.01843	0.929	0.980	-19.9	1006	414.6	0.43514	
6	CL10	CL17	13	0.00142	0.928	0.973	-15.4	1185	14.8	0.47088	
5	CL9	CL18	28	0.00708	0.921	0.961	-11.3	1341	74.8	0.54894	
4	CL8	CL7	420	0.21578	0.705	0.939	-25.8	367.6	1348	0.85044	
3	CL6	CL20	17	0.01066	0.695	0.890	-17.9	525.3	62.9	0.92546	
2	CL5	CL3	45	0.06223	0.632	0.751	-8.37	796.3	117.6	1.27437	
1	CL4	CL2	465	0.63234	0.000	0.000	0.00	.	796.3	2.05026	

CLUSTERING ON slope-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL72	CL32	24	0.00033	0.995	0.998	-13.6	4318	68.3	0.11897	
19	CL46	CL171	4	0.00006	0.995	0.998	-12.1	4514	33.1	0.12162	
18	CL27	OB225	9	0.00008	0.994	0.997	-10.6	4718	7.9	0.14806	
17	CL37	CL34	5	0.00013	0.994	0.997	-9.11	4910	20.2	0.15687	
16	CL28	CL51	7	0.00018	0.994	0.996	-7.64	5084	39.0	0.15731	
15	OB226	OB430	2	0.00005	0.994	0.996	-5.71	5409	.	0.15863	
14	CL29	CL31	60	0.00167	0.992	0.995	-7.32	4544	215.1	0.16150	
13	CL22	CL20	44	0.00177	0.991	0.995	-8.17	3993	115.0	0.19393	
12	CL23	CL24	238	0.00436	0.986	0.994	-11.5	2964	332.8	0.19644	
11	CL25	CL26	78	0.00325	0.983	0.992	-12.0	2632	276.5	0.20221	
10	CL33	CL17	11	0.00083	0.982	0.991	-9.74	2791	43.9	0.26597	
9	CL18	CL16	16	0.00171	0.980	0.988	-7.83	2865	65.9	0.31785	
8	CL13	CL21	56	0.00459	0.976	0.985	-7.39	2644	95.9	0.33597	
7	CL14	CL11	138	0.01863	0.957	0.980	-12.1	1710	404.3	0.35701	
6	CL10	CL15	13	0.00142	0.956	0.973	-7.76	1988	14.8	0.44080	
5	CL12	CL7	376	0.09896	0.857	0.961	-20.7	688.6	1144	0.51267	
4	CL9	CL6	29	0.01710	0.840	0.939	-15.8	805.6	101.4	0.74371	
3	CL5	CL8	432	0.21375	0.626	0.890	-21.4	386.7	663.7	1.00868	
2	CL4	CL19	33	0.02598	0.600	0.751	-10.2	694.7	37.1	1.30944	
1	CL3	CL2	465	0.60007	0.000	0.000	0.00	.	694.7	2.13094	

CLUSTERING ON om1 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL88	CL40	11	0.00017	0.996	0.998	-9.92	5500	129.7	0.13607	
19	CL32	CL38	40	0.00063	0.995	0.998	-10.4	5066	125.1	0.13676	
18	CL24	CL35	98	0.00165	0.993	0.997	-13.1	4008	196.9	0.14679	
17	CL28	CL31	32	0.00058	0.993	0.997	-12.5	3917	63.8	0.15625	
16	CL29	CL33	121	0.00212	0.991	0.996	-14.6	3216	428.5	0.16434	
15	CL42	OB240	5	0.00010	0.991	0.996	-12.7	3417	28.8	0.17034	
14	CL25	CL43	66	0.00182	0.989	0.995	-13.2	3079	160.2	0.18746	
13	CL19	CL23	86	0.00539	0.983	0.995	-16.9	2241	301.3	0.25804	
12	CL21	CL27	21	0.00115	0.982	0.994	-15.4	2289	54.0	0.26383	
11	CL16	CL17	153	0.00989	0.972	0.992	-19.5	1602	418.7	0.31947	
10	CL20	CL349	13	0.00073	0.972	0.991	-16.9	1736	45.3	0.32262	
9	CL22	CL14	87	0.00652	0.965	0.988	-16.8	1580	189.2	0.32874	
8	CL18	CL13	184	0.03040	0.935	0.985	-22.8	935.8	592.2	0.42233	
7	CL12	CL15	26	0.00361	0.931	0.980	-19.5	1033	52.2	0.47892	
6	CL11	CL10	166	0.01002	0.921	0.973	-16.9	1073	114.4	0.48023	
5	CL8	CL9	271	0.08972	0.831	0.961	-23.4	567.2	490.7	0.65398	
4	OB224	OB239	2	0.00180	0.830	0.939	-16.8	748.4	.	0.91323	
3	CL5	CL6	437	0.51218	0.317	0.890	-32.0	107.4	1364	1.14336	
2	CL3	CL7	463	0.23833	0.079	0.751	-28.1	39.8	161.4	1.63058	
1	CL2	CL4	465	0.07913	0.000	0.000	0.00	.	39.8	3.14452	

CLUSTERING ON om1 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL88	CL40	11	0.00017	0.996	0.998	-8.60	5998	129.7	0.13289	
19	CL25	CL35	98	0.00165	0.994	0.998	-12.3	4448	196.9	0.13443	
18	CL29	CL42	55	0.00114	0.993	0.997	-13.5	3909	195.9	0.14071	
17	CL28	CL32	32	0.00058	0.993	0.997	-12.9	3828	63.8	0.14416	
16	CL36	CL33	121	0.00212	0.991	0.996	-14.9	3159	428.5	0.15764	
15	CL30	CL26	66	0.00196	0.989	0.996	-15.7	2801	211.7	0.16657	
14	CL39	OB240	5	0.00010	0.989	0.995	-13.6	2997	28.8	0.16860	
13	CL24	CL21	21	0.00121	0.987	0.995	-12.8	2939	68.1	0.23831	
12	CL18	CL23	86	0.00502	0.982	0.994	-15.4	2289	225.8	0.24236	
11	CL16	CL17	153	0.00989	0.972	0.992	-19.5	1602	418.7	0.30113	
10	CL22	CL15	87	0.00652	0.966	0.991	-19.8	1433	189.2	0.30809	
9	CL20	CL349	13	0.00073	0.965	0.988	-16.8	1580	45.3	0.31676	
8	CL19	CL12	184	0.03040	0.935	0.985	-22.8	935.8	592.2	0.39239	
7	CL11	CL9	166	0.01002	0.925	0.980	-20.9	938.3	114.4	0.44043	
6	CL13	CL14	26	0.00361	0.921	0.973	-16.9	1073	52.2	0.45521	
5	CL8	CL10	271	0.08972	0.831	0.961	-23.4	567.2	490.7	0.59362	
4	OB224	OB239	2	0.00180	0.830	0.939	-16.8	748.4	.	0.91323	
3	CL5	CL7	437	0.51218	0.317	0.890	-32.0	107.4	1364	1.07437	
2	CL3	CL6	463	0.23833	0.079	0.751	-28.1	39.8	161.4	1.50107	
1	CL2	CL4	465	0.07913	0.000	0.000	0.00	.	39.8	3.03628	

CLUSTERING ON om2 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL34	CL126	7	0.00007	0.998	0.998	-1.60	9503	34.5	0.10317	
19	CL26	CL30	158	0.00080	0.997	0.998	-4.25	7571	184.3	0.11273	
18	CL43	CL29	49	0.00058	0.996	0.997	-5.00	6819	142.6	0.11312	
17	CL22	CL32	46	0.00079	0.995	0.997	-6.03	6012	138.1	0.13893	
16	CL21	CL31	46	0.00066	0.995	0.996	-6.10	5625	65.7	0.14784	
15	CL36	CL23	57	0.00121	0.993	0.996	-7.18	4911	199.2	0.14965	
14	CL39	CL56	9	0.00022	0.993	0.995	-5.49	5125	114.3	0.16250	
13	CL27	CL38	22	0.00051	0.993	0.995	-4.25	5166	109.1	0.16341	
12	CL33	CL24	28	0.00071	0.992	0.994	-3.13	5140	113.0	0.16374	
11	CL18	CL19	207	0.00734	0.985	0.992	-10.4	2925	667.5	0.22659	
10	CL28	CL15	76	0.00307	0.982	0.991	-10.2	2704	137.6	0.23998	
9	CL25	CL40	24	0.00044	0.981	0.988	-7.26	2975	100.5	0.24026	
8	CL20	CL14	16	0.00091	0.980	0.985	-4.28	3246	40.3	0.25032	
7	CL13	CL16	68	0.00352	0.977	0.980	-2.60	3209	136.1	0.25853	
6	CL12	CL17	74	0.00569	0.971	0.973	-1.11	3082	213.4	0.29733	
5	CL10	CL11	283	0.05357	0.918	0.961	-11.9	1279	1052	0.49873	
4	CL7	CL6	142	0.04158	0.876	0.939	-11.6	1085	453.3	0.56027	
3	CL5	CL9	307	0.04814	0.828	0.890	-7.86	1110	214.6	0.75214	
2	CL4	CL8	158	0.04292	0.785	0.751	3.13	1689	120.3	0.89403	
1	CL2	CL3	465	0.78486	0.000	0.000	0.00	.	1689	1.40656	

CLUSTERING ON om2 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL35	CL31	34	0.00034	0.997	0.998	-2.15	9166	86.3	0.10318	
19	CL43	CL30	49	0.00058	0.997	0.998	-3.61	7897	142.6	0.10475	
18	CL26	CL29	158	0.00080	0.996	0.997	-5.35	6662	184.3	0.10560	
17	CL50	CL27	27	0.00020	0.996	0.997	-4.25	6756	33.9	0.10566	
16	CL22	CL32	46	0.00079	0.995	0.996	-4.99	6051	138.1	0.12974	
15	CL36	CL25	57	0.00121	0.994	0.996	-6.28	5210	199.2	0.14035	
14	CL33	CL23	28	0.00071	0.993	0.995	-5.75	5037	113.0	0.15491	
13	CL39	CL56	9	0.00022	0.993	0.995	-3.87	5296	114.3	0.16016	
12	CL21	CL38	14	0.00040	0.993	0.994	-2.17	5475	50.7	0.16342	
11	CL17	CL20	61	0.00202	0.991	0.992	-3.08	4741	147.4	0.17648	
10	CL19	CL18	207	0.00734	0.983	0.991	-8.88	2955	667.5	0.21335	
9	CL28	CL15	76	0.00307	0.980	0.988	-8.14	2808	137.6	0.22358	
8	CL24	CL40	24	0.00044	0.980	0.985	-4.76	3145	100.5	0.23711	
7	CL14	CL16	74	0.00569	0.974	0.980	-4.37	2856	213.4	0.27548	
6	CL12	CL13	23	0.00232	0.972	0.973	-0.80	3146	66.6	0.31377	
5	CL9	CL10	283	0.05357	0.918	0.961	-11.8	1289	1052	0.47283	
4	CL11	CL7	135	0.03477	0.883	0.939	-10.5	1163	442.8	0.49116	
3	CL5	CL8	307	0.04814	0.835	0.890	-7.10	1170	214.6	0.71051	
2	CL4	CL6	158	0.05030	0.785	0.751	3.13	1689	162.6	0.77062	
1	CL2	CL3	465	0.78486	0.000	0.000	0.00	.	1689	1.32120	

CLUSTERING ON bd2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL248	CL237	25	0.00028	0.996	0.998	-10.7	5235	.	0.10171	T
19	CL40	CL49	30	0.00031	0.995	0.998	-10.0	5176	.	0.10171	T
18	OB261	OB392	2	0.00002	0.995	0.997	-8.36	5467	.	0.10171	
17	CL24	CL45	31	0.00076	0.994	0.997	-8.76	5022	109.5	0.16081	
16	CL25	CL32	33	0.00082	0.994	0.996	-8.92	4675	85.6	0.17527	
15	CL20	CL33	42	0.00133	0.992	0.996	-9.75	4148	128.1	0.18676	
14	CL28	CL23	79	0.00304	0.989	0.995	-12.6	3198	276.9	0.20178	
13	CL29	CL22	143	0.00559	0.984	0.995	-16.7	2270	504.4	0.20528	
12	CL19	CL27	53	0.00238	0.981	0.994	-16.3	2161	218.7	0.21741	
11	CL26	CL16	52	0.00307	0.978	0.992	-15.9	2040	116.4	0.26358	
10	OB223	CL30	4	0.00024	0.978	0.991	-13.0	2246	16.0	0.27542	
9	CL21	CL15	98	0.00778	0.970	0.988	-14.4	1856	315.8	0.29566	
8	CL10	CL18	6	0.00073	0.969	0.985	-11.1	2074	10.1	0.38055	
7	CL12	CL17	84	0.01146	0.958	0.980	-11.8	1742	241.5	0.39496	
6	CL13	CL14	222	0.03149	0.927	0.973	-15.8	1158	627.3	0.40816	
5	CL11	CL31	55	0.00227	0.924	0.961	-10.6	1403	27.2	0.45565	
4	CL6	CL9	320	0.09820	0.826	0.939	-17.1	729.8	592.8	0.63526	
3	CL7	CL5	139	0.06740	0.759	0.890	-13.8	726.1	418.8	0.73560	
2	CL3	CL4	459	0.61979	0.139	0.751	-26.6	74.7	1179	1.32004	
1	CL2	CL8	465	0.13886	0.000	0.000	0.00	.	74.7	2.43180	

CLUSTERING ON bd2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL248	CL237	25	0.00028	0.996	0.998	-10.7	5235	.	0.10171	T
19	CL40	CL49	30	0.00031	0.995	0.998	-10.0	5176	.	0.10171	T
18	OB261	OB392	2	0.00002	0.995	0.997	-8.36	5467	.	0.10171	
17	CL24	CL45	31	0.00076	0.994	0.997	-8.76	5022	109.5	0.15256	
16	CL25	CL32	33	0.00082	0.994	0.996	-8.92	4675	85.6	0.16494	
15	CL20	CL33	42	0.00133	0.992	0.996	-9.75	4148	128.1	0.17446	
14	CL28	CL23	79	0.00304	0.989	0.995	-12.6	3198	276.9	0.18907	
13	CL29	CL22	143	0.00559	0.984	0.995	-16.7	2270	504.4	0.19258	
12	CL19	CL27	53	0.00238	0.981	0.994	-16.3	2161	218.7	0.20592	
11	CL26	CL16	52	0.00307	0.978	0.992	-15.9	2040	116.4	0.24316	
10	OB223	CL30	4	0.00024	0.978	0.991	-13.0	2246	16.0	0.27122	
9	CL21	CL15	98	0.00778	0.970	0.988	-14.4	1856	315.8	0.27425	
8	CL10	CL18	6	0.00073	0.969	0.985	-11.1	2074	10.1	0.35597	
7	CL12	CL17	84	0.01146	0.958	0.980	-11.8	1742	241.5	0.36876	
6	CL13	CL14	222	0.03149	0.927	0.973	-15.8	1158	627.3	0.37890	
5	CL11	CL31	55	0.00227	0.924	0.961	-10.6	1403	27.2	0.43095	
4	CL6	CL9	320	0.09820	0.826	0.939	-17.1	729.8	592.8	0.57886	
3	CL7	CL5	139	0.06740	0.759	0.890	-13.8	726.1	418.8	0.68591	
2	CL3	CL4	459	0.61979	0.139	0.751	-26.6	74.7	1179	1.21812	
1	CL2	CL8	465	0.13886	0.000	0.000	0.00	.	74.7	2.33228	

CLUSTERING ON cec2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL44	CL49	46	0.00046	0.996	0.998	-7.45	6471	159.7	0.11002	
19	CL54	CL40	15	0.00018	0.996	0.998	-6.52	6522	58.0	0.11079	
18	CL28	CL52	30	0.00052	0.996	0.997	-6.75	6079	116.6	0.13506	
17	CL37	CL35	82	0.00151	0.994	0.997	-9.48	4790	319.3	0.13901	
16	CL29	CL34	62	0.00127	0.993	0.996	-10.6	4196	191.5	0.15152	
15	CL48	CL25	7	0.00013	0.993	0.996	-8.77	4425	24.0	0.15279	
14	CL27	CL33	91	0.00195	0.991	0.995	-10.2	3750	274.9	0.15380	
13	CL36	CL23	21	0.00042	0.990	0.995	-8.55	3894	38.7	0.16988	
12	CL22	CL26	27	0.00110	0.989	0.994	-7.67	3814	93.3	0.20985	
11	CL17	CL24	145	0.00658	0.983	0.992	-12.3	2584	370.4	0.22497	
10	CL14	CL20	137	0.00543	0.977	0.991	-13.5	2177	231.3	0.22537	
9	CL21	CL19	34	0.00201	0.975	0.988	-11.5	2250	136.6	0.24927	
8	CL16	CL18	92	0.00536	0.970	0.985	-10.8	2106	208.3	0.26978	
7	CL15	CL13	28	0.00158	0.968	0.980	-7.42	2336	53.0	0.28602	
6	CL9	CL12	61	0.01124	0.957	0.973	-7.31	2048	171.0	0.44977	
5	CL10	CL11	282	0.05965	0.897	0.961	-15.4	1006	942.2	0.47499	
4	CL7	CL31	30	0.00317	0.894	0.939	-8.92	1300	37.5	0.64367	
3	CL5	CL8	374	0.13725	0.757	0.890	-13.9	719.8	600.3	0.73624	
2	CL6	CL4	91	0.04725	0.710	0.751	-3.29	1132	203.6	0.80336	
1	CL2	CL3	465	0.70979	0.000	0.000	0.00	.	1132	1.60028	

CLUSTERING ON cec2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL55	CL40	15	0.00018	0.997	0.998	-5.99	7122	58.0	0.10520	
19	CL41	CL37	83	0.00103	0.996	0.998	-8.49	5732	244.9	0.10712	
18	CL28	CL54	30	0.00052	0.995	0.997	-8.49	5422	116.6	0.12739	
17	CL36	CL34	82	0.00151	0.994	0.997	-10.8	4394	319.3	0.13114	
16	CL29	CL33	62	0.00127	0.992	0.996	-11.6	3908	191.5	0.14158	
15	CL49	CL25	7	0.00013	0.992	0.996	-9.83	4125	24.0	0.14471	
14	CL35	CL24	21	0.00042	0.992	0.995	-8.43	4224	38.7	0.15902	
13	CL19	CL47	98	0.00160	0.990	0.995	-8.81	3827	109.5	0.17100	
12	CL27	CL23	102	0.00323	0.987	0.994	-10.7	3131	326.1	0.17646	
11	CL21	CL26	27	0.00110	0.986	0.992	-9.16	3178	93.3	0.19802	
10	CL22	CL20	34	0.00201	0.984	0.991	-8.20	3091	136.6	0.23594	
9	CL16	CL18	92	0.00536	0.979	0.988	-9.30	2600	208.3	0.24805	
8	CL15	CL14	28	0.00158	0.977	0.985	-6.69	2769	53.0	0.26420	
7	CL12	CL17	184	0.01476	0.962	0.980	-10.2	1943	440.0	0.27449	
6	CL10	CL11	61	0.01124	0.951	0.973	-9.42	1780	171.0	0.41636	
5	CL7	CL13	282	0.05350	0.897	0.961	-15.4	1006	627.4	0.44058	
4	CL8	CL30	30	0.00317	0.894	0.939	-8.92	1300	37.5	0.62736	
3	CL5	CL9	374	0.13725	0.757	0.890	-13.9	719.8	600.3	0.67752	
2	CL6	CL4	91	0.04725	0.710	0.751	-3.29	1132	203.6	0.73830	
1	CL2	CL3	465	0.70979	0.000	0.000	0.00	.	1132	1.49996	

CLUSTERING ON salin2 AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00000	.	1.00000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 1.414214

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL26	CL34	31	0.00062	0.995	0.998	-11.3	5018	82.3	0.14982	
19	CL25	CL31	166	0.00374	0.992	0.998	-18.7	2931	416.0	0.15880	
18	CL29	CL47	16	0.00025	0.991	0.997	-17.4	3020	34.8	0.16028	
17	CL35	CL27	5	0.00014	0.991	0.997	-15.8	3165	13.4	0.17108	
16	OB149	OB178	2	0.00009	0.991	0.996	-14.0	3350	.	0.20257	
15	CL38	CL24	10	0.00043	0.991	0.996	-12.6	3429	41.7	0.21258	
14	CL32	CL21	116	0.00546	0.985	0.995	-17.5	2317	540.5	0.22920	
13	CL19	CL30	265	0.01276	0.972	0.995	-24.7	1332	567.7	0.23802	
12	CL22	OB192	4	0.00024	0.972	0.994	-22.3	1443	7.9	0.28022	
11	CL17	OB162	6	0.00030	0.972	0.992	-19.7	1573	7.2	0.30282	
10	CL23	CL18	28	0.00285	0.969	0.991	-18.2	1586	133.0	0.32471	
9	CL16	OB171	3	0.00047	0.969	0.988	-15.2	1760	5.3	0.41761	
8	CL14	CL20	147	0.01682	0.952	0.985	-18.1	1289	327.3	0.42312	
7	CL15	CL11	16	0.00290	0.949	0.980	-14.9	1418	41.3	0.45768	
6	CL8	CL13	412	0.09935	0.850	0.973	-27.1	518.4	948.5	0.54628	
5	CL7	CL10	44	0.02710	0.822	0.961	-24.2	532.8	156.2	0.83787	
4	CL9	CL381	5	0.00364	0.819	0.939	-17.8	694.5	19.5	0.86441	
3	CL12	CL4	9	0.01338	0.805	0.890	-10.0	956.3	20.8	1.26838	
2	CL6	CL5	456	0.34702	0.458	0.751	-16.7	391.9	891.7	1.51216	
1	CL2	CL3	465	0.45842	0.000	0.000	0.00	.	391.9	3.57458	

CLUSTERING ON salin2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL27	CL35	31	0.00062	0.995	0.998	-11.3	5018	82.3	0.13797	
19	CL25	CL32	166	0.00374	0.992	0.998	-18.7	2931	416.0	0.14562	
18	CL29	CL45	16	0.00025	0.991	0.997	-17.4	3020	34.8	0.15349	
17	CL34	CL26	5	0.00014	0.991	0.997	-15.8	3165	13.4	0.16290	
16	OB149	OB178	2	0.00009	0.991	0.996	-14.0	3350	.	0.20257	
15	CL37	CL24	10	0.00043	0.991	0.996	-12.6	3429	41.7	0.20426	
14	CL30	CL22	116	0.00546	0.985	0.995	-17.5	2317	540.5	0.21640	
13	CL19	CL31	265	0.01276	0.972	0.995	-24.7	1332	567.7	0.21847	
12	CL21	OB192	4	0.00024	0.972	0.994	-22.3	1443	7.9	0.27178	
11	CL17	OB162	6	0.00030	0.972	0.992	-19.7	1573	7.2	0.28968	
10	CL23	CL18	28	0.00285	0.969	0.991	-18.2	1586	133.0	0.31040	
9	CL14	CL20	147	0.01682	0.952	0.988	-21.7	1138	327.3	0.39942	
8	CL16	OB171	3	0.00047	0.952	0.985	-18.1	1289	5.3	0.40514	
7	CL15	CL11	16	0.00290	0.949	0.980	-14.9	1418	41.3	0.42354	
6	CL9	CL13	412	0.09935	0.850	0.973	-27.1	518.4	948.5	0.49373	
5	CL7	CL10	44	0.02710	0.822	0.961	-24.2	532.8	156.2	0.78582	
4	CL8	CL381	5	0.00364	0.819	0.939	-17.8	694.5	19.5	0.83898	
3	CL12	CL4	9	0.01338	0.805	0.890	-10.0	956.3	20.8	1.18175	
2	CL6	CL5	456	0.34702	0.458	0.751	-16.7	391.9	891.7	1.42309	
1	CL2	CL3	465	0.45842	0.000	0.000	0.00	.	391.9	3.47136	

Step 2.

CLUSTERING ON shrink1 no101-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.23591	0.471823	0.617956	0.61796
2	0.76409	.	0.382044	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL23	CL52	39	0.00350	0.951	0.956	-2.34	451.9	21.7	0.41473	
19	CL33	CL36	40	0.00549	0.945	0.953	-3.48	427.7	51.8	0.42095	
18	CL35	CL24	187	0.02627	0.919	0.950	-11.1	298.2	345.6	0.43027	
17	CL27	OB185	9	0.00062	0.918	0.947	-9.92	314.9	4.4	0.43619	
16	CL28	CL46	11	0.00154	0.917	0.943	-8.89	329.9	14.3	0.44574	
15	CL29	CL22	21	0.00366	0.913	0.939	-8.32	337.9	28.5	0.46575	
14	CL60	CL17	14	0.00291	0.910	0.935	-7.42	351.8	19.5	0.51038	
13	CL21	CL38	22	0.00241	0.908	0.929	-6.24	371.0	15.9	0.51876	
12	CL20	CL25	71	0.01460	0.893	0.923	-7.77	344.5	71.0	0.53224	
11	CL30	CL18	274	0.06358	0.830	0.916	-16.8	221.1	354.7	0.56649	
10	CL19	CL31	47	0.00704	0.823	0.907	-15.6	234.4	31.1	0.59259	
9	CL14	CL16	25	0.00925	0.813	0.896	-14.4	248.4	29.5	0.69221	
8	CL13	CL12	93	0.02515	0.788	0.882	-14.7	243.0	66.8	0.70639	
7	CL10	CL15	68	0.02386	0.764	0.865	-14.3	247.6	67.5	0.73056	
6	CL43	OB392	3	0.00190	0.762	0.842	-10.7	294.6	16.8	0.82159	
5	CL8	CL11	367	0.14508	0.617	0.809	-19.3	185.6	308.4	0.85326	
4	CL5	CL7	435	0.35015	0.267	0.760	-33.4	56.0	416.5	1.33311	
3	CL9	CL6	28	0.01944	0.248	0.679	-29.2	76.1	27.4	1.41160	
2	CL4	CL3	463	0.18416	0.064	0.465	-21.3	31.5	112.9	1.52290	
1	CL2	CL32	465	0.06362	0.000	0.000	0.00	.	31.5	2.81070	

CLUSTERING ON shrink1 no101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL34	CL42	19	0.00130	0.943	0.956	-5.47	390.9	14.7	0.34565	
19	CL21	CL52	49	0.00257	0.941	0.953	-5.22	394.5	25.3	0.36424	
18	CL20	CL27	33	0.00473	0.936	0.950	-5.66	385.7	34.3	0.36914	
17	CL56	CL44	20	0.00240	0.934	0.947	-5.11	394.8	42.9	0.38563	
16	CL30	OB185	9	0.00062	0.933	0.943	-3.83	417.8	4.4	0.40202	
15	CL28	CL43	11	0.00154	0.932	0.939	-2.77	437.9	14.3	0.40455	
14	CL29	CL24	40	0.00821	0.923	0.935	-3.72	418.2	56.2	0.43691	
13	CL17	CL14	60	0.01197	0.911	0.929	-5.30	387.6	40.4	0.45642	
12	CL32	CL23	238	0.04109	0.870	0.923	-12.4	276.4	364.4	0.46616	
11	CL18	CL25	82	0.02190	0.848	0.916	-14.0	254.1	89.9	0.50765	
10	CL16	CL15	20	0.00721	0.841	0.907	-12.9	267.9	31.6	0.58127	
9	CL19	CL12	287	0.07015	0.771	0.896	-19.4	192.0	266.5	0.63285	
8	CL11	CL9	369	0.12397	0.647	0.882	-27.5	119.7	243.9	0.67154	
7	CL8	CL22	379	0.02023	0.627	0.865	-26.0	128.3	24.4	0.69424	
6	CL13	OB177	61	0.00260	0.624	0.842	-22.9	152.5	5.3	0.78287	
5	CL38	OB392	3	0.00190	0.622	0.809	-18.9	189.5	16.8	0.81358	
4	CL10	CL5	23	0.01819	0.604	0.760	-15.0	234.6	28.6	1.27188	
3	CL7	CL6	440	0.37045	0.234	0.679	-29.8	70.5	445.6	1.27893	
2	CL3	CL4	463	0.17013	0.064	0.465	-21.3	31.5	102.4	1.34381	
1	CL2	CL31	465	0.06362	0.000	0.000	0.00	.	31.5	2.72238	

CLUSTERING ON shrink1 no41-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.10194	0.203876	0.550969	0.55097
2	0.89806	.	0.449031	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL25	CL61	55	0.00572	0.945	0.954	-4.48	399.3	43.9	0.39918	
19	CL34	CL51	38	0.00460	0.940	0.952	-5.04	388.1	57.6	0.40911	
18	CL26	CL37	27	0.00117	0.939	0.949	-4.15	403.5	8.1	0.44068	
17	CL30	OB156	245	0.00075	0.938	0.946	-3.03	424.1	7.1	0.44724	
16	CL19	CL36	53	0.00649	0.932	0.942	-3.83	407.6	39.1	0.44801	
15	OB161	OB247	2	0.00047	0.931	0.938	-2.40	434.5	.	0.46662	
14	CL21	CL59	14	0.00137	0.930	0.933	-1.15	459.2	7.4	0.48244	
13	CL22	CL233	8	0.00201	0.928	0.928	0.03	483.6	21.7	0.51579	
12	CL24	CL27	24	0.00271	0.925	0.921	1.17	508.1	23.5	0.53889	
11	CL23	CL18	53	0.01404	0.911	0.914	-0.73	464.6	87.3	0.56342	
10	CL20	CL17	300	0.04839	0.863	0.905	-8.86	317.4	368.2	0.57302	
9	CL16	CL28	61	0.00936	0.853	0.893	-7.90	331.4	35.2	0.63194	
8	CL10	CL11	353	0.06199	0.791	0.880	-13.8	247.5	198.2	0.69594	
7	CL12	CL9	85	0.03416	0.757	0.862	-14.5	237.9	93.6	0.77855	
6	CL13	CL14	22	0.01041	0.747	0.838	-11.9	270.6	33.8	0.78017	
5	CL15	OB392	3	0.00250	0.744	0.805	-7.53	334.5	5.3	0.96228	
4	CL7	CL8	438	0.37112	0.373	0.755	-28.3	91.4	684.9	1.24325	
3	CL6	CL5	25	0.02174	0.351	0.671	-23.6	125.1	25.6	1.52163	
2	CL4	CL3	463	0.26093	0.090	0.416	-19.3	46.0	185.4	1.80681	
1	CL2	CL68	465	0.09038	0.000	0.000	0.00	.	46.0	3.31501	

CLUSTERING ON shrink1 no41-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL43	OB208	4	0.00043	0.945	0.954	-4.31	402.5	6.9	0.36570	
19	CL37	CL50	38	0.00460	0.940	0.952	-4.88	391.1	57.6	0.36959	
18	CL19	CL36	53	0.00649	0.934	0.949	-5.92	371.7	39.1	0.37404	
17	CL28	CL29	27	0.00117	0.933	0.946	-4.92	388.4	8.1	0.38211	
16	CL31	OB156	245	0.00075	0.932	0.942	-3.69	410.3	7.1	0.41894	
15	CL23	CL58	14	0.00137	0.931	0.938	-2.56	431.3	7.4	0.42997	
14	OB161	OB247	2	0.00047	0.930	0.933	-1.01	462.1	.	0.46662	
13	CL24	CL17	49	0.01172	0.918	0.928	-2.82	424.2	76.1	0.47358	
12	CL20	CL233	8	0.00201	0.916	0.921	-1.40	451.7	21.7	0.48344	
11	CL13	CL22	103	0.02621	0.890	0.914	-5.76	368.2	85.7	0.48654	
10	CL21	CL16	271	0.03150	0.859	0.905	-9.53	307.3	282.8	0.55761	
9	CL18	CL26	61	0.00936	0.849	0.893	-8.54	321.4	35.2	0.55903	
8	CL11	CL10	374	0.12554	0.724	0.880	-20.9	171.1	393.8	0.62469	
7	CL25	OB392	4	0.00150	0.722	0.862	-18.0	198.6	8.9	0.68228	
6	CL12	CL15	22	0.01041	0.712	0.838	-15.3	226.8	33.8	0.68885	
5	CL9	CL7	65	0.01165	0.700	0.805	-12.0	268.7	27.3	0.84856	
4	CL6	CL14	24	0.00913	0.691	0.755	-6.93	343.8	11.8	1.07504	
3	CL8	CL5	439	0.33964	0.351	0.671	-23.6	125.2	525.1	1.19287	
2	CL3	CL4	463	0.26110	0.090	0.416	-19.3	46.0	185.6	1.63156	
1	CL2	CL63	465	0.09038	0.000	0.000	0.00	.	46.0	3.24484	

CLUSTERING ON shrink1 inch31-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.19717	0.394342	0.598585	0.59859
2	0.80283	.	0.401415	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL32	CL66	20	0.00252	0.970	0.955	9.43	767.1	60.9	0.37879	
19	CL29	CL25	66	0.00706	0.963	0.953	5.86	650.6	72.8	0.38647	
18	OB29	CL44	3	0.00049	0.963	0.950	6.93	680.9	8.4	0.42191	
17	CL33	CL22	64	0.00921	0.954	0.946	3.29	575.6	99.3	0.43847	
16	CL30	CL35	271	0.00977	0.944	0.943	0.40	503.1	275.3	0.44046	
15	CL27	OB249	3	0.00053	0.943	0.939	1.79	534.9	3.3	0.45155	
14	OB25	OB235	2	0.00054	0.943	0.934	3.30	571.5	.	0.50262	
13	CL19	CL16	337	0.05069	0.892	0.929	-9.75	311.4	521.2	0.53361	
12	CL15	CL51	5	0.00125	0.891	0.922	-8.09	336.1	5.0	0.54834	
11	CL21	OB324	21	0.00124	0.890	0.915	-6.24	365.8	6.6	0.58616	
10	CL17	CL11	85	0.02073	0.869	0.906	-8.06	335.0	87.0	0.64166	
9	CL18	CL20	23	0.00410	0.865	0.895	-6.23	364.5	22.6	0.66743	
8	CL10	CL26	92	0.01335	0.851	0.881	-5.64	374.1	29.2	0.78088	
7	CL57	CL24	5	0.00347	0.848	0.864	-2.82	425.7	26.2	0.83795	
6	CL13	CL9	360	0.07188	0.776	0.840	-8.97	318.1	282.2	0.95485	
5	CL12	CL14	7	0.00570	0.770	0.807	-4.90	385.8	11.2	1.03958	
4	CL8	CL6	452	0.36735	0.403	0.758	-27.1	103.7	759.9	1.18556	
3	CL5	CL7	12	0.01975	0.383	0.676	-22.2	143.6	16.3	1.42235	
2	CL4	CL3	464	0.24628	0.137	0.451	-17.9	73.5	184.5	2.40909	
1	CL2	OB392	465	0.13698	0.000	0.000	0.00	.	73.5	5.68156	

CLUSTERING ON shrink1 inch31-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL24	CL42	19	0.00116	0.966	0.955	6.29	665.0	9.4	0.32607	
19	CL33	CL69	20	0.00252	0.963	0.953	5.96	653.4	60.9	0.35838	
18	CL35	CL22	64	0.00921	0.954	0.950	2.18	548.5	99.3	0.39411	
17	CL29	CL34	271	0.00977	0.944	0.946	-0.84	476.4	275.3	0.41312	
16	OB29	CL41	3	0.00049	0.944	0.943	0.46	504.6	8.4	0.41374	
15	CL25	OB249	3	0.00053	0.943	0.939	1.85	536.4	3.3	0.43039	
14	CL23	CL20	86	0.01406	0.929	0.934	-1.60	456.8	70.7	0.46938	
13	CL15	CL46	5	0.00125	0.928	0.929	-0.17	486.7	5.0	0.49123	
12	OB25	OB235	2	0.00054	0.928	0.922	1.66	527.8	.	0.50262	
11	CL14	CL17	357	0.09016	0.837	0.915	-15.5	233.9	639.1	0.56603	
10	CL18	CL27	71	0.00933	0.828	0.906	-14.6	243.6	41.4	0.58577	
9	CL16	CL19	23	0.00410	0.824	0.895	-12.7	266.9	22.6	0.60416	
8	CL10	OB324	72	0.00162	0.822	0.881	-10.1	302.3	4.6	0.61805	
7	CL56	CL21	5	0.00347	0.819	0.864	-7.30	345.2	26.2	0.81863	
6	CL11	CL9	380	0.06887	0.750	0.840	-11.9	275.5	175.7	0.85988	
5	CL13	CL12	7	0.00570	0.744	0.807	-7.88	334.9	11.2	0.96187	
4	CL8	CL6	452	0.34136	0.403	0.758	-27.1	103.7	630.8	1.14383	
3	CL5	CL7	12	0.01975	0.383	0.676	-22.2	143.6	16.3	1.25340	
2	CL4	CL3	464	0.24628	0.137	0.451	-17.9	73.5	184.5	2.21084	
1	CL2	OB392	465	0.13698	0.000	0.000	0.00	.	73.5	5.64346	

CLUSTERING ON shrink1 inch101-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.07583	0.151655	0.537914	0.53791
2	0.92417	.	0.462086	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL24	CL33	50	0.00102	0.997	0.954	63.40	8283	122.4	0.15218	
19	CL27	CL26	34	0.00082	0.996	0.952	59.06	6783	149.2	0.16507	
18	CL32	CL28	7	0.00019	0.996	0.949	59.48	6846	26.3	0.16610	
17	CL25	CL23	62	0.00188	0.994	0.946	51.96	4883	179.9	0.18103	
16	CL29	CL21	47	0.00217	0.992	0.942	46.24	3770	182.9	0.22897	
15	CL17	CL73	312	0.01586	0.976	0.938	22.44	1322	1965	0.28883	
14	CL144	CL18	10	0.00081	0.975	0.933	23.52	1379	29.0	0.31035	
13	OB62	OB157	2	0.00024	0.975	0.927	25.32	1483	.	0.33123	
12	CL19	CL20	84	0.01082	0.964	0.921	18.93	1116	367.0	0.37071	
11	CL425	OB146	3	0.00042	0.964	0.913	21.04	1215	.	0.38142	
10	OB12	CL22	3	0.00042	0.964	0.904	23.45	1337	16.3	0.38680	
9	OB29	CL320	3	0.00045	0.963	0.893	26.21	1488	.	0.39698	
8	CL16	CL14	57	0.00787	0.955	0.879	24.93	1393	115.8	0.50856	
7	CL11	OB66	4	0.00102	0.954	0.861	28.53	1591	4.9	0.58968	
6	CL12	CL8	141	0.06393	0.890	0.838	10.46	745.0	357.7	0.72149	
5	CL10	CL9	6	0.00387	0.886	0.804	15.25	897.5	17.2	0.81749	
4	CL6	CL15	453	0.38810	0.498	0.754	-21.5	152.6	1634	1.04254	
3	CL13	CL7	6	0.00657	0.492	0.670	-15.1	223.5	15.7	1.11963	
2	CL5	CL3	12	0.04305	0.449	0.406	3.36	376.8	33.1	1.95755	
1	CL4	CL2	465	0.44871	0.000	0.000	0.00	.	376.8	3.20036	

CLUSTERING ON shrink1 inch101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL24	CL33	50	0.00102	0.997	0.954	63.40	8283	122.4	0.14052	
19	CL27	CL25	34	0.00082	0.996	0.952	59.06	6783	149.2	0.15649	
18	CL30	CL28	7	0.00019	0.996	0.949	59.48	6846	26.3	0.15892	
17	CL26	CL23	62	0.00188	0.994	0.946	51.96	4883	179.9	0.16764	
16	CL29	CL22	47	0.00217	0.992	0.942	46.24	3770	182.9	0.21866	
15	CL17	CL73	312	0.01586	0.976	0.938	22.44	1322	1965	0.27214	
14	CL144	CL18	10	0.00081	0.975	0.933	23.52	1379	29.0	0.29825	
13	OB62	OB157	2	0.00024	0.975	0.927	25.32	1483	.	0.33123	
12	CL19	CL20	84	0.01082	0.964	0.921	18.93	1116	367.0	0.35219	
11	CL425	OB146	3	0.00042	0.964	0.913	21.04	1215	.	0.38142	
10	OB12	CL21	3	0.00042	0.964	0.904	23.45	1337	16.3	0.38292	
9	OB29	CL320	3	0.00045	0.963	0.893	26.21	1488	.	0.39698	
8	CL16	CL14	57	0.00787	0.955	0.879	24.93	1393	115.8	0.47056	
7	CL11	OB66	4	0.00102	0.954	0.861	28.53	1591	4.9	0.56160	
6	CL12	CL8	141	0.06393	0.890	0.838	10.46	745.0	357.7	0.66087	
5	CL10	CL9	6	0.00387	0.886	0.804	15.25	897.5	17.2	0.77375	
4	CL6	CL15	453	0.38810	0.498	0.754	-21.5	152.6	1634	0.96289	
3	CL13	CL7	6	0.00657	0.492	0.670	-15.1	223.5	15.7	1.06900	
2	CL5	CL3	12	0.04305	0.449	0.406	3.36	376.8	33.1	1.82451	
1	CL4	CL2	465	0.44871	0.000	0.000	0.00	.	376.8	2.98410	

CLUSTERING ON shrink1 perm1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.57452	1.14903	0.787258	0.78726
2	0.42548	.	0.212742	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL74	CL21	47	0.00226	0.982	0.963	16.38	1271	96.8	0.24182	
19	CL36	CL24	46	0.00201	0.980	0.960	15.31	1207	43.0	0.24778	
18	CL37	CL25	119	0.00632	0.974	0.958	10.49	968.6	224.1	0.25583	
17	CL63	CL27	8	0.00048	0.973	0.955	11.52	1012	11.7	0.26863	
16	CL31	CL39	45	0.00050	0.973	0.952	12.64	1062	14.0	0.27236	
15	CL213	CL32	10	0.00082	0.972	0.949	13.60	1106	26.8	0.31421	
14	CL16	CL42	72	0.00698	0.965	0.945	10.28	950.5	181.0	0.33480	
13	CL19	CL18	165	0.01165	0.953	0.940	5.54	766.1	138.6	0.34757	
12	CL38	CL34	29	0.00089	0.952	0.935	7.12	821.1	37.8	0.35092	
11	CL28	CL22	66	0.00510	0.947	0.929	6.94	813.5	138.5	0.36729	
10	CL12	CL20	76	0.00939	0.938	0.922	5.51	761.7	143.5	0.38731	
9	CL23	CL17	51	0.00353	0.934	0.912	6.89	809.6	51.8	0.39584	
8	CL11	CL13	231	0.03872	0.896	0.901	-1.31	559.5	270.3	0.50238	
7	CL14	CL26	94	0.01924	0.876	0.886	-2.10	540.6	165.0	0.55428	
6	CL10	CL9	127	0.04636	0.830	0.867	-6.23	447.9	274.6	0.65351	
5	CL7	CL29	96	0.00428	0.826	0.839	-2.16	544.5	13.4	0.76784	
4	CL6	CL15	137	0.02832	0.797	0.798	-0.11	604.5	55.8	0.92558	
3	CL8	CL5	327	0.24326	0.554	0.729	-15.7	287.0	746.9	0.99347	
2	CL4	CL3	464	0.53955	0.015	0.592	-25.2	6.8	559.0	1.30697	
1	CL2	OB198	465	0.01450	0.000	0.000	0.00	.	6.8	1.96584	

CLUSTERING ON shrink1 perm1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL28	CL31	48	0.00182	0.980	0.963	14.23	1153	31.5	0.22286	
19	CL29	CL57	46	0.00083	0.979	0.960	14.61	1170	14.2	0.22965	
18	CL36	OB212	3	0.00015	0.979	0.958	15.82	1232	3.5	0.23077	
17	CL114	CL24	117	0.00605	0.973	0.955	11.50	1011	222.5	0.23383	
16	CL33	CL18	46	0.00068	0.972	0.952	12.47	1054	17.6	0.23702	
15	CL20	CL17	165	0.01171	0.961	0.949	6.00	785.2	139.9	0.28252	
14	CL48	CL22	12	0.00083	0.960	0.945	7.25	829.2	19.7	0.29230	
13	CL14	CL25	17	0.00126	0.959	0.940	8.41	871.9	12.8	0.28723	
12	CL212	CL32	10	0.00082	0.958	0.935	9.99	934.0	26.8	0.30101	
11	CL16	CL41	73	0.00725	0.951	0.929	8.50	872.2	169.9	0.31437	
10	CL46	CL30	29	0.00089	0.950	0.922	10.53	953.1	37.8	0.33367	
9	CL10	CL21	76	0.00939	0.940	0.912	9.20	896.8	143.5	0.34845	
8	CL27	CL15	220	0.03630	0.904	0.901	0.75	614.4	292.9	0.45182	
7	CL8	CL13	237	0.01706	0.887	0.886	0.13	598.5	60.7	0.50087	
6	CL11	CL26	95	0.01964	0.867	0.867	0.11	599.7	161.2	0.51915	
5	CL9	CL19	122	0.04263	0.825	0.839	-2.31	540.7	290.3	0.58751	
4	CL5	CL12	132	0.02723	0.797	0.798	-0.10	604.7	57.7	0.82675	
3	CL7	CL6	332	0.24355	0.554	0.729	-15.7	286.7	704.6	0.91279	
2	CL4	CL3	464	0.53932	0.015	0.592	-25.2	6.8	558.5	1.15099	
1	CL2	OB198	465	0.01450	0.000	0.000	0.00	.	6.8	1.83624	

CLUSTERING ON shrink1 awc1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.50627	1.01254	0.753135	0.75313
2	0.49373	.	0.246865	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL24	CL67	33	0.00248	0.962	0.961	1.05	598.7	26.8	0.35164	
19	CL22	CL48	9	0.00100	0.961	0.958	1.73	616.4	12.7	0.36299	
18	CL26	CL32	20	0.00224	0.959	0.956	1.79	616.7	23.3	0.38230	
17	CL43	CL37	114	0.01552	0.944	0.953	-4.14	468.3	275.9	0.39674	
16	CL20	CL25	66	0.00763	0.936	0.950	-5.56	437.5	56.6	0.40977	
15	CL18	CL44	26	0.00245	0.934	0.946	-4.86	451.3	14.0	0.42146	
14	CL27	CL41	28	0.00320	0.930	0.942	-4.27	463.1	35.1	0.42184	
13	CL30	OB430	5	0.00058	0.930	0.937	-2.65	498.3	5.2	0.43280	
12	CL14	CL23	48	0.00610	0.924	0.932	-2.63	498.1	35.0	0.44227	
11	CL34	CL38	165	0.02992	0.894	0.925	-8.30	381.7	452.7	0.45553	
10	CL16	CL17	180	0.03726	0.856	0.917	-13.2	301.6	174.2	0.55532	
9	CL33	CL28	6	0.00225	0.854	0.908	-11.1	333.9	20.8	0.61812	
8	CL21	CL10	203	0.02572	0.828	0.896	-12.2	315.3	65.4	0.65352	
7	CL15	CL19	35	0.00988	0.819	0.880	-10.4	344.5	39.8	0.66498	
6	CL12	CL7	83	0.02921	0.789	0.860	-10.5	344.1	73.5	0.72303	
5	CL11	CL13	170	0.00974	0.780	0.831	-7.08	406.9	39.3	0.75192	
4	CL5	CL39	173	0.00724	0.772	0.787	-1.93	521.5	24.0	0.80802	
3	CL8	CL4	376	0.25080	0.522	0.715	-16.7	251.9	573.6	0.90636	
2	CL6	CL9	89	0.03121	0.490	0.566	-4.85	445.5	42.4	1.25276	
1	CL2	CL3	465	0.49040	0.000	0.000	0.00	.	445.5	1.44393	

CLUSTERING ON shrink1 awc1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL42	CL41	20	0.00175	0.963	0.961	1.49	611.0	26.6	0.29858	
19	CL28	CL67	33	0.00248	0.961	0.958	1.29	604.1	26.8	0.30823	
18	CL47	CL20	33	0.00336	0.957	0.956	0.77	588.6	30.7	0.31463	
17	CL19	CL23	66	0.00763	0.950	0.953	-1.56	527.7	56.6	0.32748	
16	CL43	CL33	114	0.01552	0.934	0.950	-6.22	424.2	275.9	0.36508	
15	CL18	CL21	51	0.00807	0.926	0.946	-7.31	402.3	42.1	0.40104	
14	CL24	CL44	18	0.00280	0.923	0.942	-6.51	417.2	29.4	0.40270	
13	CL27	OB430	5	0.00058	0.923	0.937	-4.89	449.2	5.2	0.40968	
12	CL36	CL34	165	0.02992	0.893	0.932	-10.6	342.7	452.7	0.42216	
11	OB10	CL30	14	0.00078	0.892	0.925	-8.69	374.8	6.2	0.44101	
10	CL17	CL16	180	0.03726	0.855	0.917	-13.5	297.3	174.2	0.45478	
9	CL15	CL11	65	0.01331	0.841	0.908	-13.1	302.3	42.5	0.53029	
8	CL22	CL10	203	0.02572	0.816	0.896	-14.0	288.9	65.4	0.54090	
7	CL26	CL25	6	0.00225	0.813	0.880	-11.1	332.7	20.8	0.59039	
6	CL9	CL14	83	0.02401	0.789	0.860	-10.5	344.1	52.0	0.62862	
5	CL12	CL13	170	0.00974	0.780	0.831	-7.08	406.9	39.3	0.68245	
4	CL5	CL37	173	0.00724	0.772	0.787	-1.93	521.5	24.0	0.75488	
3	CL8	CL4	376	0.25080	0.522	0.715	-16.7	251.9	573.6	0.78928	
2	CL6	CL7	89	0.03121	0.490	0.566	-4.85	445.5	42.4	1.13751	
1	CL2	CL3	465	0.49040	0.000	0.000	0.00	.	445.5	1.25735	

CLUSTERING ON shrink1 no102 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.26795	0.535893	0.633973	0.63397
2	0.73205	.	0.366027	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL30	CL34	102	0.00395	0.929	0.956	-10.8	307.2	32.7	0.38897	
19	CL24	CL39	61	0.00430	0.925	0.953	-10.9	305.0	26.7	0.39262	
18	CL42	CL38	8	0.00107	0.924	0.951	-9.91	318.7	12.9	0.40184	
17	CL28	OB247	4	0.00047	0.923	0.947	-8.67	337.2	2.2	0.42012	
16	CL22	CL27	13	0.00169	0.922	0.944	-7.70	352.1	9.2	0.48407	
15	CL29	CL23	54	0.00900	0.913	0.940	-8.65	335.8	51.8	0.50982	
14	CL40	CL16	30	0.00710	0.906	0.935	-8.81	332.6	40.2	0.55391	
13	CL18	OB177	9	0.00104	0.905	0.930	-7.27	356.8	4.6	0.56195	
12	CL19	CL21	225	0.04625	0.858	0.924	-14.7	249.4	253.2	0.57612	
11	CL15	CL25	75	0.01495	0.843	0.916	-15.0	244.3	51.5	0.58457	
10	CL17	CL26	11	0.00338	0.840	0.908	-13.3	265.3	15.8	0.62743	
9	CL20	CL12	327	0.09927	0.741	0.897	-22.6	162.8	313.2	0.67401	
8	CL13	CL10	20	0.00935	0.731	0.883	-20.9	177.7	21.3	0.78552	
7	OB235	OB263	2	0.00133	0.730	0.866	-17.9	206.4	.	0.78562	
6	CL11	CL31	84	0.01837	0.712	0.843	-16.1	226.5	40.6	0.81699	
5	CL14	CL371	32	0.00791	0.704	0.811	-12.4	273.1	19.7	1.03559	
4	CL6	CL8	104	0.06682	0.637	0.762	-12.6	269.5	93.7	1.14591	
3	CL4	CL9	431	0.39577	0.241	0.681	-29.6	73.4	496.7	1.27221	
2	CL5	CL7	34	0.01143	0.230	0.477	-14.3	138.0	17.2	1.30668	
1	CL3	CL2	465	0.22966	0.000	0.000	0.00	.	138.0	1.52021	

CLUSTERING ON shrink1 no102 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	OB185	CL368	3	0.00033	0.942	0.956	-6.22	380.9	.	0.34001	
19	CL25	CL32	12	0.00122	0.941	0.953	-5.43	394.2	8.2	0.35416	
18	CL46	CL24	129	0.01624	0.925	0.951	-9.66	322.5	193.3	0.35509	
17	CL39	CL34	8	0.00099	0.924	0.947	-8.57	338.7	9.6	0.39036	
16	CL22	CL20	13	0.00169	0.922	0.944	-7.61	353.6	9.2	0.41172	
15	CL23	CL29	75	0.01373	0.908	0.940	-9.80	318.1	72.9	0.43304	
14	CL19	OB177	13	0.00086	0.907	0.935	-8.36	339.8	3.5	0.46604	
13	CL40	CL16	30	0.00710	0.900	0.930	-8.30	339.9	40.2	0.47303	
12	CL15	CL21	94	0.01703	0.883	0.924	-10.1	311.5	51.7	0.51050	
11	CL27	CL31	47	0.00827	0.875	0.916	-9.63	317.6	48.3	0.51362	
10	CL18	CL26	266	0.09705	0.778	0.908	-21.2	177.1	580.9	0.58215	
9	CL28	CL17	11	0.00328	0.775	0.897	-19.2	195.9	14.6	0.59054	
8	CL12	CL10	360	0.11990	0.655	0.883	-27.1	123.8	227.7	0.63284	
7	CL11	CL14	60	0.02110	0.634	0.866	-25.8	132.0	62.6	0.69337	
6	CL13	CL9	41	0.01745	0.616	0.843	-23.6	147.4	39.2	0.70918	
5	OB235	OB263	2	0.00133	0.615	0.811	-19.7	183.6	.	0.78562	
4	CL6	CL371	43	0.00743	0.607	0.762	-15.0	237.7	8.8	0.95078	
3	CL8	CL4	403	0.20410	0.403	0.681	-21.4	156.1	233.4	1.11029	
2	CL3	CL7	463	0.35665	0.047	0.477	-22.2	22.7	276.2	1.25872	
1	CL2	CL5	465	0.04665	0.000	0.000	0.00	.	22.7	2.33122	

CLUSTERING ON shrink1 no42-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.79405	1.58811	0.897027	0.89703
2	0.20595	.	0.102973	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL91	CL21	7	0.00052	0.968	0.972	-3.25	705.5	9.5	0.33634	
19	CL35	CL32	195	0.01300	0.955	0.971	-9.59	524.3	222.1	0.33678	
18	CL29	CL40	32	0.00222	0.953	0.969	-9.37	529.1	38.2	0.33768	
17	CL33	CL42	43	0.00302	0.950	0.967	-9.39	528.0	40.5	0.35733	
16	CL31	CL18	45	0.00342	0.946	0.965	-9.42	526.7	29.4	0.36441	
15	CL22	CL56	25	0.00169	0.945	0.962	-8.58	547.3	14.8	0.36540	
14	CL25	CL69	6	0.00089	0.944	0.959	-7.31	580.9	12.1	0.40106	
13	CL24	OB177	33	0.00058	0.943	0.956	-5.77	623.9	4.8	0.40562	
12	CL26	CL63	15	0.00226	0.941	0.952	-4.75	654.5	29.6	0.42795	
11	CL34	CL28	82	0.00288	0.938	0.947	-3.76	686.0	43.5	0.45382	
10	CL17	CL11	125	0.01989	0.918	0.942	-7.91	566.2	171.6	0.46859	
9	CL13	CL23	42	0.00671	0.911	0.935	-7.24	585.8	52.0	0.52252	
8	CL19	CL10	320	0.05975	0.852	0.926	-16.6	374.6	325.1	0.52371	
7	CL15	CL27	30	0.00509	0.846	0.916	-14.3	420.9	30.2	0.58528	
6	CL7	CL16	75	0.02522	0.821	0.901	-14.4	421.8	101.1	0.66654	
5	CL9	CL12	57	0.01617	0.805	0.881	-12.3	475.0	58.9	0.67476	
4	CL8	CL14	326	0.01418	0.791	0.850	-8.71	581.3	38.5	0.83065	
3	CL4	CL20	333	0.01738	0.774	0.799	-3.38	789.0	42.8	0.84262	
2	CL6	CL5	132	0.09567	0.678	0.674	0.30	974.3	166.4	0.97315	
1	CL2	CL3	465	0.67786	0.000	0.000	0.00	.	974.3	1.43835	

CLUSTERING ON shrink1 no42-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL41	CL38	128	0.00967	0.959	0.972	-8.75	546.1	243.7	0.29705	
19	CL29	CL22	43	0.00256	0.956	0.971	-8.86	542.4	21.4	0.30183	
18	OB208	CL62	4	0.00030	0.956	0.969	-7.72	571.5	12.4	0.30527	
17	CL23	CL57	25	0.00169	0.954	0.967	-7.20	585.0	14.8	0.31314	
16	CL31	CL27	153	0.00882	0.946	0.965	-9.72	519.3	146.8	0.31801	
15	OB235	OB287	2	0.00022	0.945	0.962	-8.28	555.3	.	0.31940	
14	CL34	CL24	45	0.00372	0.942	0.959	-8.13	559.0	44.8	0.32232	
13	CL28	OB177	33	0.00058	0.941	0.956	-6.59	600.6	4.8	0.37115	
12	CL13	CL25	43	0.00485	0.936	0.952	-6.49	603.6	38.8	0.38305	
11	CL14	CL19	88	0.01482	0.921	0.947	-9.21	531.6	86.5	0.39543	
10	CL16	CL20	281	0.05657	0.865	0.942	-19.5	323.2	484.7	0.43397	
9	CL17	CL33	32	0.00568	0.859	0.935	-18.1	347.4	36.2	0.49095	
8	CL9	CL12	75	0.02131	0.838	0.926	-18.7	337.1	76.4	0.51916	
7	CL10	CL11	369	0.10237	0.735	0.916	-27.4	212.1	316.5	0.59531	
6	CL8	CL21	84	0.01773	0.718	0.901	-25.6	233.3	34.2	0.71556	
5	CL18	CL26	9	0.00535	0.712	0.881	-22.1	284.7	49.3	0.74718	
4	CL7	OB202	370	0.00311	0.709	0.850	-17.3	374.7	5.2	0.85000	
3	CL4	CL15	372	0.00862	0.701	0.799	-11.3	540.5	14.2	1.00256	
2	CL3	CL5	381	0.03811	0.662	0.674	-0.84	908.7	60.4	1.00301	
1	CL6	CL2	465	0.66246	0.000	0.000	0.00	.	908.7	1.49434	

CLUSTERING ON shrink1 inch32-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.00967	0.019337	0.504834	0.50483
2	0.99033	.	0.495166	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL38	CL25	17	0.00192	0.955	0.954	0.15	492.0	17.7	0.38536	
19	CL29	CL22	73	0.00448	0.950	0.952	-0.71	471.6	38.9	0.39667	
18	CL32	CL44	7	0.00107	0.949	0.949	0.15	489.4	12.5	0.41430	
17	OB22	CL24	5	0.00058	0.948	0.945	1.31	515.0	3.4	0.44306	
16	CL21	CL26	67	0.00502	0.943	0.942	0.68	499.1	30.0	0.49951	
15	CL28	CL34	12	0.00328	0.940	0.938	0.99	504.8	36.3	0.54266	
14	CL17	CL27	9	0.00226	0.938	0.933	1.85	523.8	11.0	0.55432	
13	CL19	CL31	327	0.06453	0.873	0.927	-13.1	259.7	669.7	0.56681	
12	CL13	CL23	345	0.02260	0.851	0.921	-15.1	234.8	79.3	0.63233	
11	CL16	CL15	79	0.01202	0.839	0.913	-14.9	236.1	46.1	0.64011	
10	CL62	OB27	3	0.00122	0.838	0.904	-12.8	260.6	31.9	0.65550	
9	OB196	OB212	2	0.00103	0.836	0.893	-10.4	291.6	.	0.69286	
8	CL14	CL20	26	0.01156	0.825	0.879	-9.28	307.6	38.3	0.77426	
7	CL8	CL18	33	0.01488	0.810	0.861	-8.05	325.5	22.7	0.91844	
6	CL9	CL59	4	0.00468	0.805	0.837	-4.74	379.8	8.7	1.10080	
5	CL11	OB392	80	0.00557	0.800	0.804	-0.53	459.4	13.5	1.18418	
4	CL5	CL12	425	0.37017	0.430	0.753	-25.3	115.7	991.0	1.22986	
3	CL7	CL10	36	0.01961	0.410	0.669	-20.2	160.5	18.3	1.41382	
2	CL4	CL3	461	0.24359	0.166	0.381	-14.4	92.4	191.4	1.53372	
1	CL2	CL6	465	0.16642	0.000	0.000	0.00	.	92.4	3.23837	

CLUSTERING ON shrink1 inch32-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	TIe
20	CL31	CL21	73	0.00448	0.957	0.954	1.40	521.1	38.9	0.31181	
19	CL75	CL34	60	0.00690	0.950	0.952	-0.71	471.6	123.9	0.34650	
18	CL32	CL42	7	0.00107	0.949	0.949	0.15	489.4	12.5	0.38060	
17	OB22	CL26	5	0.00058	0.948	0.945	1.31	515.0	3.4	0.40889	
16	CL19	CL27	67	0.00502	0.943	0.942	0.68	499.1	30.0	0.43106	
15	CL17	CL25	9	0.00226	0.941	0.938	1.38	514.1	11.0	0.48584	
14	CL28	CL33	12	0.00328	0.938	0.933	1.85	523.8	36.3	0.51055	
13	CL20	CL30	327	0.06453	0.873	0.927	-13.1	259.7	669.7	0.51383	
12	CL16	CL14	79	0.01202	0.861	0.921	-13.3	255.8	46.1	0.52337	
11	CL13	CL23	345	0.02260	0.839	0.913	-14.9	236.1	79.3	0.55433	
10	CL59	OB27	3	0.00122	0.838	0.904	-12.8	260.6	31.9	0.65210	
9	CL15	CL22	26	0.01156	0.826	0.893	-12.0	270.5	38.3	0.67500	
8	OB196	OB212	2	0.00103	0.825	0.879	-9.28	307.6	.	0.69286	
7	CL9	CL18	33	0.01488	0.810	0.861	-8.05	325.5	22.7	0.79127	
6	CL8	CL55	4	0.00468	0.805	0.837	-4.74	379.8	8.7	1.04242	
5	CL12	CL11	424	0.36064	0.445	0.804	-29.1	92.1	998.4	1.14088	
4	CL5	CL7	457	0.19795	0.247	0.753	-33.8	50.3	164.3	1.22472	
3	CL10	CL6	7	0.01670	0.230	0.669	-29.5	69.0	11.9	1.50345	
2	CL4	OB392	458	0.01450	0.216	0.381	-11.5	127.2	8.9	1.83635	
1	CL2	CL3	465	0.21557	0.000	0.000	0.00	.	127.2	2.69327	

CLUSTERING ON shrink1 inch102 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.07583	0.151669	0.537917	0.53792
2	0.92417	.	0.462083	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL34	CL31	7	0.00019	0.996	0.954	57.46	6376	26.3	0.16610	
19	CL25	CL27	62	0.00232	0.994	0.952	47.71	4118	186.7	0.20273	
18	CL320	OB197	3	0.00013	0.994	0.949	48.74	4275	.	0.21418	
17	CL32	CL24	47	0.00217	0.992	0.946	43.35	3351	182.9	0.22897	
16	CL22	CL75	297	0.01002	0.982	0.942	26.73	1605	2703	0.25328	
15	OB157	OB451	2	0.00017	0.982	0.938	28.26	1707	.	0.28380	
14	CL144	CL20	10	0.00081	0.981	0.933	29.16	1764	29.0	0.31035	
13	OB12	CL26	3	0.00032	0.980	0.927	30.85	1884	16.3	0.33446	
12	OB29	CL18	4	0.00034	0.980	0.921	32.71	2024	5.1	0.33878	
11	CL23	OB146	4	0.00037	0.980	0.913	34.80	2190	15.1	0.34348	
10	OB62	CL15	3	0.00037	0.979	0.904	37.21	2394	2.1	0.38728	
9	CL21	CL17	81	0.01156	0.968	0.893	29.53	1711	246.4	0.39509	
8	CL11	OB66	5	0.00083	0.967	0.879	32.53	1909	5.9	0.51415	
7	CL19	CL16	359	0.06227	0.905	0.861	9.64	724.4	1568	0.54935	
6	CL9	CL14	91	0.01500	0.890	0.838	10.31	740.2	82.0	0.67718	
5	CL13	CL12	7	0.00302	0.887	0.804	15.30	899.5	18.8	0.68006	
4	CL10	CL8	8	0.00886	0.878	0.754	21.14	1104	29.7	1.09406	
3	CL6	CL7	450	0.38700	0.491	0.670	-15.1	222.6	1609	1.16872	
2	CL5	CL4	15	0.04165	0.449	0.406	3.39	377.5	37.4	1.73899	
1	CL3	CL2	465	0.44913	0.000	0.000	0.00	.	377.5	2.88121	

CLUSTERING ON shrink1   inch102- CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL33	CL31	7	0.00019	0.996	0.954	57.46	6376	26.3	0.15892	
19	CL25	CL27	62	0.00232	0.994	0.952	47.71	4118	186.7	0.18884	
18	CL320	OB197	3	0.00013	0.994	0.949	48.74	4275	.	0.21418	
17	CL32	CL24	47	0.00217	0.992	0.946	43.35	3351	182.9	0.21866	
16	CL23	CL75	297	0.01002	0.982	0.942	26.73	1605	2703	0.24239	
15	OB157	OB451	2	0.00017	0.982	0.938	28.26	1707	.	0.28380	
14	CL144	CL20	10	0.00081	0.981	0.933	29.16	1764	29.0	0.29825	
13	OB29	CL18	4	0.00034	0.980	0.927	30.82	1882	5.1	0.32339	
12	OB12	CL26	3	0.00032	0.980	0.921	32.71	2024	16.3	0.33110	
11	CL22	OB146	4	0.00037	0.980	0.913	34.80	2190	15.1	0.33792	
10	OB62	CL15	3	0.00037	0.979	0.904	37.21	2394	2.1	0.36035	
9	CL21	CL17	81	0.01156	0.968	0.893	29.53	1711	246.4	0.36868	
8	CL11	OB66	5	0.00083	0.967	0.879	32.53	1909	5.9	0.49001	
7	CL19	CL16	359	0.06227	0.905	0.861	9.64	724.4	1568	0.53069	
6	CL9	CL14	91	0.01500	0.890	0.838	10.31	740.2	82.0	0.62531	
5	CL12	CL13	7	0.00302	0.887	0.804	15.30	899.5	18.8	0.63983	
4	CL10	CL8	8	0.00886	0.878	0.754	21.14	1104	29.7	1.04731	
3	CL6	CL7	450	0.38700	0.491	0.670	-15.1	222.6	1609	1.11208	
2	CL5	CL4	15	0.04165	0.449	0.406	3.39	377.5	37.4	1.60876	
1	CL3	CL2	465	0.44913	0.000	0.000	0.00	.	377.5	2.67920	

CLUSTERING ON shrink1 perm2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.60023	1.20047	0.800117	0.80012
2	0.39977	.	0.199883	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL30	CL57	103	0.00532	0.978	0.963	11.10	1025	260.4	0.23982	
19	CL48	CL86	14	0.00061	0.977	0.961	11.79	1055	31.2	0.25678	
18	CL45	CL38	29	0.00156	0.975	0.959	11.66	1046	55.6	0.26163	
17	CL19	CL28	22	0.00109	0.974	0.956	12.12	1066	18.4	0.27094	
16	CL33	CL26	48	0.00263	0.972	0.953	11.42	1030	56.1	0.27415	
15	CL20	CL31	128	0.00618	0.966	0.950	8.52	902.0	91.8	0.31306	
14	CL223	CL35	10	0.00082	0.965	0.946	9.72	950.1	26.8	0.31398	
13	CL18	CL23	38	0.00239	0.962	0.942	10.08	963.6	29.6	0.33846	
12	CL40	CL36	78	0.00871	0.954	0.937	7.27	847.7	289.4	0.34919	
11	CL15	CL34	144	0.00595	0.948	0.931	6.64	823.0	55.4	0.36353	
10	CL16	CL37	53	0.00213	0.946	0.923	8.13	878.5	22.1	0.37179	
9	CL27	CL17	78	0.00924	0.936	0.914	7.11	838.5	149.3	0.41194	
8	CL13	CL22	84	0.01442	0.922	0.903	5.23	771.0	138.0	0.45778	
7	CL9	CL11	222	0.03702	0.885	0.889	-0.87	587.0	231.8	0.49531	
6	CL12	CL21	94	0.01697	0.868	0.870	-0.34	603.4	132.6	0.58352	
5	CL10	CL7	275	0.05934	0.809	0.843	-5.22	485.9	204.5	0.65423	
4	CL8	CL14	94	0.01613	0.792	0.803	-1.41	586.8	61.7	0.71191	
3	CL6	CL32	96	0.00383	0.789	0.736	6.97	862.0	12.5	0.72957	
2	CL5	CL3	371	0.26527	0.523	0.601	-5.01	508.4	571.9	1.02986	
1	CL4	CL2	465	0.52338	0.000	0.000	0.00	.	508.4	1.41107	

CLUSTERING ON shrink1 perm2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL37	CL54	70	0.00261	0.980	0.963	13.62	1149	127.5	0.22138	
19	CL39	CL28	47	0.00269	0.977	0.961	12.08	1069	59.8	0.23688	
18	CL33	CL86	11	0.00053	0.977	0.959	12.92	1108	13.2	0.23775	
17	CL49	CL18	22	0.00116	0.976	0.956	13.25	1122	21.0	0.22153	
16	CL46	CL32	30	0.00192	0.974	0.953	13.06	1109	59.2	0.25300	
15	CL63	CL41	79	0.00566	0.968	0.950	10.23	974.3	264.5	0.26271	
14	CL20	CL36	95	0.00579	0.962	0.946	8.15	884.9	105.8	0.27000	
13	CL16	CL24	39	0.00243	0.960	0.942	8.57	900.3	26.3	0.28548	
12	CL223	CL31	10	0.00082	0.959	0.937	10.13	963.9	26.8	0.30076	
11	CL25	CL14	168	0.01761	0.941	0.931	3.97	729.6	200.7	0.31456	
10	CL19	CL35	52	0.00210	0.939	0.923	5.55	782.6	21.7	0.32839	
9	CL34	CL21	47	0.00546	0.934	0.914	6.19	804.8	140.1	0.34647	
8	CL11	CL17	190	0.01288	0.921	0.903	4.93	760.9	70.3	0.39186	
7	CL13	CL10	91	0.01482	0.906	0.889	4.20	737.2	103.2	0.39276	
6	CL22	CL12	56	0.00774	0.898	0.870	6.34	812.0	96.6	0.46760	
5	CL15	CL9	126	0.03887	0.860	0.843	2.96	703.8	331.8	0.55317	
4	CL5	CL26	128	0.00329	0.856	0.803	8.88	915.5	7.7	0.62221	
3	CL7	CL8	281	0.12730	0.729	0.736	-0.77	621.3	474.1	0.69282	
2	CL3	CL4	409	0.33289	0.396	0.601	-11.6	303.7	523.2	0.93713	
1	CL2	CL6	465	0.39608	0.000	0.000	0.00	.	303.7	1.36585	

CLUSTERING ON shrink1 awc2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.37284	0.745688	0.686422	0.68642
2	0.62716	.	0.313578	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL34	CL36	31	0.00568	0.920	0.958	-14.3	269.8	55.0	0.46550	
19	CL45	CL27	16	0.00296	0.917	0.955	-13.9	274.3	24.7	0.47060	
18	CL29	CL30	19	0.00323	0.914	0.952	-13.5	279.2	19.4	0.48112	
17	CL32	OB206	10	0.00081	0.913	0.949	-12.4	294.3	6.8	0.48320	
16	CL26	CL20	55	0.01063	0.902	0.946	-13.6	277.0	43.3	0.53786	
15	CL24	CL21	168	0.01785	0.885	0.942	-15.9	246.5	111.4	0.53906	
14	CL18	CL57	22	0.00248	0.882	0.938	-14.8	259.7	8.0	0.55458	
13	CL23	CL35	166	0.03217	0.850	0.933	-18.7	213.4	170.5	0.57179	
12	CL22	CL67	6	0.00172	0.848	0.927	-17.1	230.2	8.8	0.59055	
11	CL19	CL31	20	0.00358	0.845	0.919	-15.6	246.9	12.5	0.59687	
10	CL15	CL17	178	0.01348	0.831	0.911	-15.4	249.0	51.3	0.65853	
9	CL25	CL164	14	0.00295	0.828	0.901	-13.4	274.9	15.5	0.66557	
8	CL13	CL10	344	0.15362	0.675	0.888	-26.4	135.4	427.8	0.76219	
7	CL9	CL16	69	0.02354	0.651	0.871	-25.3	142.4	54.6	0.82209	
6	CL11	CL14	42	0.02253	0.629	0.849	-23.6	155.3	51.7	0.83178	
5	CL7	CL12	75	0.01423	0.614	0.818	-20.5	183.2	18.9	0.93338	
4	CL6	CL5	117	0.09487	0.519	0.771	-21.8	166.1	100.0	1.11896	
3	CL4	CL8	461	0.48277	0.037	0.693	-38.2	8.8	461.3	1.36885	
2	CL3	CL257	463	0.01332	0.023	0.516	-23.6	11.1	6.4	1.42726	
1	CL2	CL53	465	0.02338	0.000	0.000	0.00	.	11.1	1.79667	

CLUSTERING ON shrink1 awc2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	CL38	50	0.00852	0.927	0.958	-12.3	298.1	37.3	0.40973	
19	CL48	CL25	142	0.02421	0.903	0.955	-17.6	230.5	198.6	0.41452	
18	CL43	CL46	17	0.00244	0.900	0.952	-16.8	238.0	19.1	0.43055	
17	CL29	CL36	15	0.00340	0.897	0.949	-16.3	244.1	20.4	0.46806	
16	CL19	CL31	285	0.06907	0.828	0.946	-26.6	144.1	325.6	0.47426	
15	CL22	CL26	21	0.00450	0.824	0.942	-25.8	150.0	18.4	0.49372	
14	CL66	OB392	3	0.00070	0.823	0.938	-24.3	161.1	11.2	0.49503	
13	CL24	CL27	17	0.00387	0.819	0.933	-23.1	170.4	23.0	0.50449	
12	CL13	OB206	18	0.00112	0.818	0.927	-21.4	184.9	2.8	0.52338	
11	CL28	CL33	50	0.01088	0.807	0.919	-20.8	189.8	86.2	0.52612	
10	CL15	CL17	36	0.01058	0.796	0.911	-19.9	197.7	24.4	0.52954	
9	CL18	CL20	67	0.01828	0.778	0.901	-19.6	199.9	49.8	0.57820	
8	CL11	CL257	52	0.00299	0.775	0.888	-17.3	225.0	8.8	0.60082	
7	CL16	CL12	303	0.03319	0.742	0.871	-17.6	219.4	73.1	0.67438	
6	CL8	CL7	355	0.14088	0.601	0.849	-25.4	138.3	262.1	0.85816	
5	CL9	CL14	70	0.01074	0.590	0.818	-22.2	165.7	17.0	0.93132	
4	CL10	CL5	106	0.08910	0.501	0.771	-22.9	154.4	117.4	0.93246	
3	CL4	CL6	461	0.46066	0.041	0.693	-38.1	9.8	424.0	1.14425	
2	CL3	CL164	463	0.01715	0.023	0.516	-23.6	11.1	8.2	1.41348	
1	CL2	CL51	465	0.02338	0.000	0.000	0.00	.	11.1	1.65042	

CLUSTERING ON shrink1 drain- AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.47226	0.944527	0.736132	0.73613
2	0.52774	.	0.263868	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL51	OB242	3	0.00048	0.941	0.960	-8.71	372.0	4.9	0.42351	
19	CL42	OB178	3	0.00049	0.940	0.957	-7.65	390.1	3.6	0.43055	
18	CL23	CL61	25	0.00257	0.938	0.955	-7.30	395.8	13.5	0.45566	
17	CL37	CL25	167	0.02442	0.913	0.952	-13.5	294.9	211.5	0.47403	
16	CL29	CL36	35	0.00681	0.906	0.949	-13.8	290.1	49.7	0.49080	
15	CL21	CL31	14	0.00154	0.905	0.945	-12.6	306.0	6.9	0.53226	
14	CL33	CL26	45	0.00349	0.901	0.941	-11.8	317.3	25.1	0.53595	
13	CL27	CL28	33	0.00649	0.895	0.936	-11.5	320.9	38.7	0.53832	
12	CL34	OB196	126	0.00122	0.894	0.930	-9.88	346.4	10.6	0.55760	
11	CL12	CL14	171	0.03592	0.858	0.924	-14.7	273.9	243.1	0.57336	
10	CL19	CL20	6	0.00196	0.856	0.915	-12.8	300.2	6.5	0.62969	
9	CL17	CL11	338	0.10377	0.752	0.906	-23.4	172.9	334.1	0.65419	
8	CL18	CL16	60	0.02204	0.730	0.893	-22.9	176.5	69.9	0.70022	
7	CL15	CL22	23	0.00906	0.721	0.878	-20.7	197.2	31.2	0.70821	
6	CL13	CL8	93	0.03159	0.689	0.856	-20.0	203.7	55.3	0.76314	
5	CL7	CL10	29	0.00983	0.680	0.827	-16.7	243.9	14.5	0.86869	
4	CL6	CL9	431	0.30634	0.373	0.783	-30.6	91.5	450.5	1.15148	
3	CL5	CL24	33	0.02312	0.350	0.709	-26.1	124.4	25.0	1.33533	
2	CL4	CL3	464	0.33771	0.012	0.554	-24.6	5.8	240.1	1.80062	
1	CL2	OB392	465	0.01238	0.000	0.000	0.00	.	5.8	1.83660	

CLUSTERING ON shrink1 drain - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	OB123	CL56	4	0.00044	0.936	0.960	-10.4	343.6	7.8	0.36869	
19	CL44	CL48	12	0.00157	0.935	0.957	-9.71	354.2	17.4	0.36941	
18	CL38	CL43	188	0.02584	0.909	0.955	-16.0	261.9	320.0	0.40162	
17	CL37	OB178	3	0.00049	0.908	0.952	-14.7	277.3	3.6	0.41200	
16	CL39	CL22	36	0.00273	0.906	0.949	-14.0	287.0	21.3	0.42194	
15	CL30	CL36	35	0.00681	0.899	0.945	-14.1	285.3	49.7	0.42504	
14	CL19	CL25	14	0.00154	0.897	0.941	-12.8	302.8	6.9	0.45714	
13	CL18	CL16	224	0.02884	0.868	0.936	-16.8	248.5	133.5	0.47060	
12	CL21	CL123	14	0.00194	0.866	0.930	-15.3	267.1	9.3	0.51199	
11	CL24	CL23	30	0.00471	0.862	0.924	-14.0	282.9	17.7	0.51235	
10	CL20	CL87	6	0.00171	0.860	0.915	-12.1	310.6	11.6	0.54546	
9	CL27	CL28	138	0.02730	0.833	0.906	-13.9	283.7	132.0	0.54790	
8	CL9	CL13	362	0.12880	0.704	0.893	-25.2	155.2	350.7	0.59155	
7	CL11	CL15	65	0.02833	0.676	0.878	-24.5	159.0	76.0	0.63787	
6	CL12	CL14	28	0.01412	0.661	0.856	-22.2	179.4	42.3	0.68416	
5	CL6	CL17	31	0.00877	0.653	0.827	-18.8	216.1	10.9	0.86651	
4	CL7	OB392	66	0.00351	0.649	0.783	-13.8	284.3	4.3	0.90897	
3	CL8	CL4	428	0.29481	0.354	0.709	-25.9	126.8	397.0	1.10690	
2	CL5	CL10	37	0.03000	0.324	0.554	-12.8	222.3	30.4	1.17662	
1	CL2	CL3	465	0.32437	0.000	0.000	0.00	.	222.3	1.48650	

CLUSTERING ON shrink1 wattab - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.43248	0.864955	0.716239	0.71624
2	0.56752	.	0.283761	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL30	OB257	5	0.00046	0.952	0.959	-3.23	469.1	3.6	0.39568	
19	CL31	CL41	12	0.00177	0.951	0.956	-2.80	477.5	18.3	0.41762	
18	OB10	CL27	9	0.00064	0.950	0.954	-1.76	499.9	3.9	0.44705	
17	CL28	CL47	67	0.01157	0.938	0.951	-5.12	427.0	136.3	0.45408	
16	CL20	CL36	11	0.00185	0.937	0.947	-4.32	442.3	11.7	0.46855	
15	CL34	CL72	4	0.00089	0.936	0.944	-3.06	467.9	9.0	0.47936	
14	CL25	CL115	7	0.00121	0.935	0.939	-1.80	495.0	8.0	0.48175	
13	CL18	CL21	15	0.00348	0.931	0.934	-1.18	508.5	19.0	0.54154	
12	CL19	CL29	21	0.00571	0.925	0.929	-1.06	510.3	27.8	0.58348	
11	CL26	CL17	349	0.06089	0.864	0.922	-13.1	289.5	484.6	0.58472	
10	CL24	CL15	21	0.00496	0.859	0.914	-11.7	309.2	27.7	0.67100	
9	CL14	OB202	8	0.00151	0.858	0.903	-9.39	344.3	4.6	0.68257	
8	CL16	CL13	26	0.00925	0.849	0.891	-8.08	366.3	24.3	0.70573	
7	CL12	CL9	29	0.01207	0.837	0.875	-6.71	391.0	24.9	0.83093	
6	CL23	OB392	38	0.00281	0.834	0.853	-3.21	460.7	15.2	0.84323	
5	CL11	CL10	370	0.05430	0.780	0.823	-5.96	406.6	177.1	0.89320	
4	CL8	CL6	64	0.03900	0.741	0.778	-4.48	438.6	86.8	0.89883	
3	CL7	CL22	31	0.00756	0.733	0.702	3.62	634.1	8.6	1.08333	
2	CL4	CL5	434	0.31480	0.418	0.539	-7.42	332.8	581.2	1.29832	
1	CL2	CL3	465	0.41819	0.000	0.000	0.00	.	332.8	1.97325	

CLUSTERING ON shrink1 wattab - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL28	CL38	12	0.00177	0.949	0.959	-4.82	435.8	18.3	0.37021	
19	OB171	OB178	2	0.00030	0.949	0.956	-3.69	458.1	.	0.37570	
18	CL34	CL49	67	0.01157	0.937	0.954	-7.00	391.9	136.3	0.40580	
17	CL25	CL114	7	0.00121	0.936	0.951	-6.05	408.9	8.0	0.44346	
16	CL18	OB261	68	0.00086	0.935	0.947	-4.88	431.0	3.3	0.44952	
15	CL31	OB257	3	0.00059	0.934	0.944	-3.51	458.3	3.6	0.45467	T
14	CL20	CL29	21	0.00571	0.929	0.939	-3.76	452.2	27.8	0.50738	
13	CL27	CL16	350	0.06303	0.866	0.934	-16.7	242.9	493.4	0.51662	
12	OB10	CL21	14	0.00121	0.865	0.929	-15.1	262.8	4.8	0.54883	
11	CL22	CL15	20	0.00364	0.861	0.922	-13.7	280.9	21.3	0.57562	
10	CL24	CL12	24	0.00858	0.852	0.914	-12.9	291.7	29.7	0.58427	
9	CL14	CL17	28	0.00890	0.843	0.903	-11.8	307.0	20.0	0.62706	
8	OB202	CL71	3	0.00113	0.842	0.891	-9.12	348.6	33.3	0.62758	
7	CL13	CL11	370	0.04403	0.798	0.875	-12.0	302.0	141.9	0.73480	
6	CL10	CL23	61	0.03905	0.759	0.853	-12.9	289.4	106.7	0.78887	
5	CL6	OB392	62	0.00275	0.756	0.823	-8.67	357.2	2.7	0.80465	
4	CL9	CL19	30	0.00698	0.749	0.778	-3.46	459.7	9.4	0.93143	
3	CL4	CL8	33	0.01405	0.735	0.702	3.92	642.0	15.1	1.09326	
2	CL5	CL7	432	0.31131	0.424	0.539	-7.09	341.0	604.0	1.16623	
1	CL2	CL3	465	0.42410	0.000	0.000	0.00	.	341.0	1.79146	

CLUSTERING ON shrink1 flood-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.04223	0.084452	0.521113	0.52111
2	0.95777	.	0.478887	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL39	CL44	55	0.00845	0.958	0.954	2.09	538.4	144.5	0.44243	
19	CL54	CL35	5	0.00093	0.957	0.952	2.88	556.6	13.6	0.44849	
18	CL34	CL41	66	0.00982	0.948	0.949	-0.52	475.1	124.5	0.46133	
17	CL23	OB430	7	0.00070	0.947	0.945	0.60	498.9	3.4	0.47820	
16	CL22	CL48	9	0.00118	0.946	0.942	1.61	521.1	5.6	0.47991	
15	CL32	OB6	4	0.00078	0.945	0.938	2.89	551.2	6.7	0.50877	
14	CL24	CL19	11	0.00240	0.942	0.933	3.64	568.6	10.4	0.54217	
13	CL26	CL25	296	0.05728	0.885	0.927	-10.8	290.5	830.9	0.54485	
12	CL17	OB178	8	0.00106	0.884	0.921	-9.07	314.3	3.7	0.58189	
11	CL13	CL20	351	0.05973	0.824	0.913	-16.9	213.2	234.0	0.63895	
10	CL21	OB462	3	0.00133	0.823	0.904	-14.9	235.2	3.8	0.71055	
9	CL16	CL33	17	0.00931	0.814	0.893	-13.7	249.1	45.6	0.76823	
8	CL18	CL189	69	0.00737	0.806	0.879	-11.8	272.0	33.2	0.80495	
7	CL8	CL12	77	0.01632	0.790	0.861	-10.6	287.3	48.9	0.82679	
6	CL9	CL14	28	0.02045	0.770	0.837	-9.25	306.7	31.5	0.98689	
5	CL15	CL28	6	0.00653	0.763	0.804	-5.26	370.5	21.8	1.10325	
4	CL7	CL11	428	0.36079	0.402	0.753	-26.8	103.4	808.3	1.24437	
3	CL4	CL6	456	0.17602	0.226	0.670	-29.6	67.6	135.8	1.47026	
2	CL5	CL10	9	0.01829	0.208	0.393	-12.4	121.6	13.6	1.59697	
1	CL3	CL2	465	0.20802	0.000	0.000	0.00	.	121.6	2.56339	

CLUSTERING ON shrink1 flood-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL42	CL44	55	0.00845	0.958	0.954	2.09	538.4	144.5	0.40858	
19	CL22	CL48	9	0.00118	0.957	0.952	2.74	553.2	5.6	0.41996	
18	CL52	CL34	5	0.00093	0.956	0.949	3.61	574.0	13.6	0.42384	
17	CL35	CL39	66	0.00982	0.946	0.945	0.39	494.2	124.5	0.42483	
16	CL24	OB430	7	0.00070	0.946	0.942	1.61	521.1	3.4	0.43500	
15	CL23	CL18	11	0.00240	0.943	0.938	2.22	534.5	10.4	0.45229	
14	CL27	OB6	4	0.00078	0.942	0.933	3.64	568.6	6.7	0.49076	
13	CL26	CL32	296	0.05728	0.885	0.927	-10.8	290.5	830.9	0.50369	
12	CL16	OB178	8	0.00106	0.884	0.921	-9.07	314.3	3.7	0.53067	
11	CL13	CL20	351	0.05973	0.824	0.913	-16.9	213.2	234.0	0.54658	
10	CL21	OB462	3	0.00133	0.823	0.904	-14.9	235.2	3.8	0.68140	
9	CL19	CL30	17	0.00931	0.814	0.893	-13.7	249.1	45.6	0.71412	
8	CL17	CL12	74	0.01650	0.797	0.879	-13.0	256.8	67.3	0.73239	
7	CL8	CL189	77	0.00719	0.790	0.861	-10.6	287.3	15.8	0.76071	
6	CL9	CL15	28	0.02045	0.770	0.837	-9.25	306.7	31.5	0.84288	
5	CL25	CL10	5	0.00576	0.764	0.804	-5.17	372.1	9.2	1.05549	
4	CL14	CL6	32	0.01886	0.745	0.753	-1.02	449.0	14.8	1.11811	
3	CL7	CL11	428	0.36079	0.384	0.670	-21.7	144.1	808.3	1.15132	
2	CL3	CL4	460	0.22091	0.163	0.393	-15.0	90.4	166.4	1.31199	
1	CL2	CL5	465	0.16332	0.000	0.000	0.00	.	90.4	2.76779	

CLUSTERING ON shrink1 watsoil-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.18551	0.371027	0.592757	0.59276
2	0.81449	.	0.407243	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL31	CL27	27	0.00313	0.936	0.955	-7.98	343.6	23.5	0.41449	
19	CL34	CL55	47	0.00565	0.931	0.952	-8.66	331.9	77.7	0.43736	
18	CL37	CL36	7	0.00147	0.929	0.950	-7.82	344.4	15.1	0.48082	
17	OB10	CL24	7	0.00078	0.928	0.946	-6.68	362.4	4.2	0.49633	
16	CL22	CL51	25	0.00663	0.922	0.943	-7.25	352.1	59.4	0.54367	
15	CL29	CL30	7	0.00187	0.920	0.939	-6.22	368.6	10.8	0.55643	
14	CL19	CL21	63	0.01143	0.908	0.934	-7.65	343.9	55.0	0.56641	
13	CL354	CL26	5	0.00162	0.907	0.929	-6.26	366.2	14.9	0.58245	
12	CL20	CL46	65	0.02099	0.886	0.922	-9.12	319.2	160.0	0.61243	
11	CL23	CL12	343	0.06256	0.823	0.915	-17.5	211.4	295.3	0.64479	
10	CL18	CL15	14	0.00447	0.819	0.906	-15.9	228.3	11.5	0.67199	
9	CL13	CL28	8	0.00285	0.816	0.895	-13.8	252.6	7.5	0.68376	
8	CL367	CL53	4	0.00226	0.814	0.881	-11.3	285.0	71.9	0.72854	
7	CL17	OB392	8	0.00254	0.811	0.863	-8.34	327.7	9.0	0.85512	
6	CL14	CL7	71	0.01655	0.795	0.840	-6.63	354.9	40.2	0.86764	
5	CL11	CL16	368	0.09315	0.701	0.807	-12.2	270.1	236.8	1.05073	
4	CL6	CL10	85	0.05765	0.644	0.758	-11.6	277.6	88.5	1.20089	
3	CL4	CL5	453	0.36738	0.276	0.675	-27.6	88.2	475.0	1.29952	
2	CL9	CL8	12	0.02446	0.252	0.447	-12.1	155.9	32.9	1.55275	
1	CL3	CL2	465	0.25187	0.000	0.000	0.00	.	155.9	2.44581	

CLUSTERING ON shrink1 watsoil-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL38	CL44	12	0.00135	0.936	0.955	-7.98	343.6	17.4	0.37323	
19	CL33	CL53	47	0.00565	0.931	0.952	-8.66	331.9	77.7	0.40806	
18	CL36	CL37	7	0.00147	0.929	0.950	-7.82	344.4	15.1	0.44595	
17	OB10	CL27	7	0.00078	0.928	0.946	-6.68	362.4	4.2	0.45885	
16	CL19	CL25	63	0.01143	0.917	0.943	-8.62	330.1	55.0	0.47139	
15	CL20	CL55	25	0.00663	0.910	0.939	-8.84	325.9	59.4	0.49656	
14	CL29	CL28	7	0.00187	0.908	0.934	-7.65	343.9	10.8	0.50280	
13	CL18	CL14	14	0.00447	0.904	0.929	-6.97	354.2	11.5	0.54434	
12	CL22	CL46	65	0.02099	0.883	0.922	-9.71	310.5	160.0	0.55546	
11	CL21	CL12	343	0.06256	0.820	0.915	-17.9	207.3	295.3	0.52486	
10	CL354	CL23	5	0.00162	0.819	0.906	-15.9	228.3	14.9	0.56033	
9	CL10	CL24	8	0.00285	0.816	0.895	-13.8	252.6	7.5	0.59370	
8	CL367	CL50	4	0.00226	0.814	0.881	-11.3	285.0	71.9	0.72353	
7	CL13	CL17	21	0.01148	0.802	0.863	-9.52	309.4	20.1	0.75535	
6	CL16	OB392	64	0.00284	0.799	0.840	-6.00	365.6	7.3	0.81786	
5	CL6	CL7	85	0.06242	0.737	0.807	-8.63	322.0	105.1	0.95704	
4	CL11	CL15	368	0.09315	0.644	0.758	-11.6	277.6	236.8	0.96306	
3	CL5	CL4	453	0.36738	0.276	0.675	-27.6	88.2	475.0	1.11101	
2	CL9	CL8	12	0.02446	0.252	0.447	-12.1	155.9	32.9	1.45881	
1	CL3	CL2	465	0.25187	0.000	0.000	0.00	.	155.9	2.23573	

CLUSTERING ON shrink1 pan-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.16019	0.320388	0.580097	0.58010
2	0.83981	.	0.419903	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T I e
20	CL219	CL51	10	0.00081	0.975	0.955	13.77	926.2	29.0	0.31035	
19	CL43	CL32	145	0.01170	0.964	0.952	6.22	656.6	453.2	0.31455	
18	CL86	CL108	6	0.00063	0.963	0.949	7.20	684.6	73.9	0.31534	
17	CL41	CL38	10	0.00095	0.962	0.946	8.07	710.0	21.5	0.32835	
16	CL22	CL30	42	0.00384	0.958	0.942	7.39	686.6	41.6	0.36079	
15	CL65	CL31	44	0.00584	0.952	0.938	6.00	642.8	134.8	0.38680	
14	CL35	CL36	109	0.01436	0.938	0.934	1.59	525.0	277.9	0.39520	
13	CL17	CL29	16	0.00187	0.936	0.928	2.76	552.2	15.1	0.40348	
12	CL21	CL25	25	0.00374	0.932	0.922	3.45	568.1	33.6	0.43153	
11	CL24	CL40	9	0.00214	0.930	0.914	4.93	605.6	18.9	0.53223	
10	CL23	CL16	74	0.01779	0.912	0.905	1.91	527.1	113.4	0.54419	
9	CL10	CL19	219	0.05092	0.862	0.894	-6.65	354.7	248.5	0.59745	
8	CL13	CL14	125	0.01747	0.844	0.881	-6.68	353.4	91.4	0.62061	
7	CL15	CL20	54	0.01155	0.833	0.863	-5.13	379.5	69.1	0.62698	
6	CL11	CL18	15	0.00586	0.827	0.839	-1.99	437.8	21.2	0.69213	
5	CL8	CL28	152	0.04972	0.777	0.806	-3.90	400.6	177.8	0.77707	
4	CL7	CL12	79	0.03413	0.743	0.756	-1.64	443.8	99.1	0.78024	
3	CL9	CL5	371	0.27047	0.472	0.674	-16.6	206.8	533.5	0.96970	
2	CL4	CL6	94	0.07932	0.393	0.437	-3.10	299.8	104.1	1.33573	
1	CL2	CL3	465	0.39303	0.000	0.000	0.00	.	299.8	1.36775	

CLUSTERING ON shrink1 pan-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL21	CL24	159	0.01327	0.960	0.955	2.59	557.7	229.2	0.29517	
19	CL219	CL50	10	0.00081	0.959	0.952	3.42	578.0	29.0	0.29825	
18	CL39	CL36	19	0.00164	0.957	0.949	3.89	588.8	35.6	0.30467	
17	CL82	CL106	6	0.00063	0.957	0.946	4.99	617.5	73.9	0.31116	
16	CL25	CL31	13	0.00147	0.955	0.942	5.75	637.5	16.1	0.32527	
15	CL35	CL30	97	0.00908	0.946	0.938	3.11	563.9	124.2	0.34147	
14	CL60	CL33	44	0.00584	0.940	0.934	2.45	545.7	134.8	0.36488	
13	CL28	CL23	12	0.00180	0.938	0.928	3.62	574.1	16.3	0.39536	
12	CL15	CL27	136	0.01954	0.919	0.922	-0.88	466.6	146.7	0.40369	
11	CL29	CL18	43	0.00958	0.909	0.914	-1.37	455.2	88.7	0.45780	
10	CL22	CL13	24	0.00563	0.904	0.905	-0.42	474.3	30.7	0.46658	
9	CL16	CL17	19	0.00555	0.898	0.894	0.91	502.6	30.1	0.55991	
8	CL14	CL19	54	0.01155	0.887	0.881	1.31	510.4	69.1	0.57346	
7	CL11	CL20	202	0.05416	0.832	0.863	-5.14	379.2	297.8	0.60927	
6	CL7	CL12	338	0.15970	0.673	0.839	-18.9	188.7	419.5	0.67517	
5	CL9	CL26	46	0.02380	0.649	0.806	-16.6	212.6	108.5	0.70359	
4	CL8	CL10	78	0.04029	0.609	0.756	-14.3	239.0	102.4	0.75001	
3	CL6	CL5	384	0.19332	0.415	0.674	-20.2	164.1	230.0	1.05248	
2	CL4	CL3	462	0.38491	0.030	0.437	-22.3	14.5	302.9	1.17363	
1	CL2	CL37	465	0.03041	0.000	0.000	0.00	.	14.5	1.53850	

CLUSTERING ON shrink1 hyd - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.58142	1.16283	0.790708	0.79071
2	0.41858	.	0.209292	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL48	CL36	121	0.00807	0.969	0.963	3.89	724.7	381.6	0.27082	
19	CL33	CL50	21	0.00139	0.967	0.961	4.18	732.9	40.0	0.28927	
18	CL41	CL43	41	0.00289	0.964	0.958	3.60	712.5	65.9	0.29153	
17	CL30	CL39	48	0.00278	0.962	0.956	3.31	701.7	52.9	0.30801	
16	CL31	CL27	43	0.00435	0.957	0.953	2.37	670.7	57.0	0.36788	
15	CL181	CL22	31	0.00199	0.955	0.949	2.92	686.8	166.5	0.39068	
14	CL25	CL29	20	0.00139	0.954	0.945	3.93	717.9	14.2	0.40302	
13	CL35	CL28	18	0.00245	0.951	0.941	4.58	738.2	41.4	0.40782	
12	CL17	CL23	136	0.02146	0.930	0.936	-1.95	547.1	239.7	0.45092	
11	CL18	CL26	65	0.01029	0.920	0.929	-3.03	520.0	94.9	0.45301	
10	CL13	OB191	19	0.00078	0.919	0.922	-0.91	573.0	3.9	0.48432	
9	CL16	CL19	64	0.01287	0.906	0.913	-1.82	549.7	83.8	0.52415	
8	CL24	CL21	9	0.00237	0.904	0.902	0.53	612.6	22.9	0.53359	
7	CL20	CL10	140	0.01722	0.886	0.887	-0.11	596.0	161.0	0.56080	
6	CL11	CL12	201	0.04462	0.842	0.867	-4.51	488.7	175.6	0.59458	
5	CL14	CL9	84	0.01687	0.825	0.840	-2.41	542.1	54.1	0.61209	
4	CL6	CL7	341	0.15950	0.665	0.799	-14.4	305.7	425.2	0.78185	
3	CL5	CL8	93	0.01516	0.650	0.731	-8.23	429.6	30.3	0.79338	
2	CL4	CL15	372	0.11321	0.537	0.594	-3.75	537.2	144.9	1.06619	
1	CL3	CL2	465	0.53711	0.000	0.000	0.00	.	537.2	1.44120	

CLUSTERING ON shrink1 hyd - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL30	CL39	48	0.00278	0.965	0.963	1.68	654.9	52.9	0.26084	
19	CL34	CL48	18	0.00145	0.964	0.961	2.02	663.8	25.3	0.28088	
18	CL32	CL29	19	0.00135	0.963	0.958	2.52	678.0	18.8	0.29139	
17	CL25	CL52	107	0.00582	0.957	0.956	0.64	620.9	81.6	0.29395	
16	CL66	CL19	30	0.00301	0.954	0.953	0.60	618.5	34.0	0.31156	
15	CL27	CL28	43	0.00435	0.949	0.949	0.12	604.2	57.0	0.31689	
14	CL181	CL38	30	0.00128	0.948	0.945	1.25	635.2	341.0	0.33116	
13	CL26	OB269	7	0.00048	0.948	0.941	2.87	682.9	7.8	0.36175	
12	CL17	CL37	119	0.00617	0.942	0.936	2.26	663.5	51.8	0.36423	
11	CL20	CL12	167	0.02471	0.917	0.929	-3.85	500.6	161.1	0.40938	
10	CL18	CL16	49	0.01178	0.905	0.922	-4.66	482.0	68.7	0.48462	
9	CL10	CL15	92	0.02042	0.885	0.913	-6.75	437.1	67.3	0.45487	
8	CL24	CL13	45	0.00616	0.878	0.902	-5.13	472.0	54.0	0.49180	
7	CL23	CL21	9	0.00237	0.876	0.887	-2.28	539.8	22.9	0.49717	
6	CL8	CL11	212	0.03929	0.837	0.867	-5.31	470.8	135.1	0.50711	
5	CL22	OB191	122	0.00117	0.836	0.840	-0.74	584.7	13.3	0.52399	
4	CL6	CL5	334	0.14844	0.687	0.799	-12.5	337.6	439.5	0.66688	
3	CL9	CL7	101	0.01727	0.670	0.731	-6.42	468.9	33.6	0.69913	
2	CL4	CL14	364	0.11556	0.554	0.594	-2.67	576.0	159.7	0.98688	
1	CL3	CL2	465	0.55437	0.000	0.000	0.00	.	576.0	1.27544	

CLUSTERING ON shrink1 bedrock-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.13678	0.273565	0.568391	0.56839
2	0.86322	.	0.431609	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL40	CL36	72	0.01062	0.966	0.955	6.62	667.8	243.4	0.40206	
19	CL26	CL59	7	0.00097	0.965	0.952	7.28	686.1	9.8	0.42498	
18	CL21	CL32	34	0.00493	0.960	0.949	5.62	634.6	33.9	0.44345	
17	OB26	CL49	3	0.00067	0.960	0.946	6.68	664.2	18.5	0.48541	
16	CL31	CL24	50	0.00749	0.952	0.942	4.30	594.5	100.2	0.50579	
15	CL20	CL41	74	0.00185	0.950	0.938	5.05	613.5	9.7	0.52215	
14	CL18	CL30	41	0.00536	0.945	0.933	4.41	594.4	21.0	0.53949	
13	CL19	CL134	9	0.00178	0.943	0.928	5.55	624.0	8.6	0.56077	
12	CL16	CL33	52	0.00259	0.940	0.922	6.55	650.7	11.6	0.61284	
11	CL29	CL14	314	0.05746	0.883	0.914	-7.39	342.7	718.4	0.68461	
10	CL13	CL22	15	0.00547	0.878	0.905	-6.16	362.3	16.9	0.68808	
9	CL15	CL11	388	0.11717	0.760	0.894	-20.1	180.9	461.5	0.75080	
8	CL10	CL17	18	0.00480	0.756	0.880	-17.9	201.8	7.4	0.80588	
7	CL23	OB261	4	0.00222	0.753	0.862	-15.0	233.2	14.7	0.84302	
6	OB229	OB230	2	0.00184	0.752	0.839	-11.5	277.6	.	0.92324	
5	CL9	CL12	440	0.30572	0.446	0.805	-29.2	92.5	584.9	1.31791	
4	CL6	CL7	6	0.00866	0.437	0.756	-25.1	119.3	7.9	1.36630	
3	CL5	CL8	458	0.11205	0.325	0.672	-25.1	111.3	92.9	1.40741	
2	CL4	OB260	7	0.00913	0.316	0.429	-7.56	213.9	3.5	1.72454	
1	CL3	CL2	465	0.31596	0.000	0.000	0.00	.	213.9	3.42070	

CLUSTERING ON shrink1 bedrock-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL40	CL37	72	0.01062	0.967	0.955	7.09	682.3	243.4	0.37719	
19	CL26	CL58	7	0.00097	0.966	0.952	7.74	700.7	9.8	0.39629	
18	CL25	CL27	34	0.00563	0.960	0.949	5.62	634.6	45.5	0.39824	
17	CL18	CL30	41	0.00536	0.955	0.946	4.16	592.3	21.0	0.46277	
16	CL31	CL23	50	0.00749	0.947	0.942	2.14	538.8	100.2	0.46598	
15	CL20	CL39	74	0.00185	0.946	0.938	2.96	557.8	9.7	0.46987	
14	OB26	CL49	3	0.00067	0.945	0.933	4.41	594.4	18.5	0.48109	
13	CL19	CL22	13	0.00328	0.942	0.928	4.94	607.0	14.9	0.48540	
12	CL16	CL32	52	0.00259	0.939	0.922	5.96	633.7	11.6	0.55911	
11	CL28	CL17	314	0.05746	0.882	0.914	-7.69	337.8	718.4	0.61151	
10	CL13	CL14	16	0.00421	0.877	0.905	-6.21	361.5	9.2	0.63308	
9	CL15	CL11	388	0.11717	0.760	0.894	-20.1	180.6	461.5	0.67373	
8	CL10	CL134	18	0.00457	0.756	0.880	-17.9	201.8	6.9	0.77204	
7	CL21	OB261	4	0.00222	0.753	0.862	-15.0	233.2	14.7	0.82903	
6	OB229	OB230	2	0.00184	0.752	0.839	-11.5	277.6	.	0.92324	
5	CL6	CL7	6	0.00866	0.743	0.805	-7.78	332.2	7.9	1.22770	
4	CL9	CL12	440	0.30572	0.437	0.756	-25.1	119.3	584.9	1.24371	
3	CL4	CL8	458	0.11205	0.325	0.672	-25.1	111.3	92.9	1.22608	
2	CL5	OB260	7	0.00913	0.316	0.429	-7.56	213.9	3.5	1.57176	
1	CL3	CL2	465	0.31596	0.000	0.000	0.00	.	213.9	3.26064	

CLUSTERING ON shrink1 salin1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.41205	0.824093	0.706023	0.70602
2	0.58795	.	0.293977	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL26	CL24	88	0.01013	0.942	0.958	-7.66	377.4	63.2	0.44597	
19	CL23	CL260	19	0.00122	0.940	0.956	-6.88	390.6	6.8	0.44700	
18	CL41	CL28	9	0.00156	0.939	0.953	-6.15	403.3	13.7	0.45307	
17	CL34	CL21	25	0.00251	0.936	0.950	-5.68	411.4	10.7	0.45610	
16	CL43	CL29	273	0.04149	0.895	0.947	-15.7	254.6	645.1	0.48496	
15	OB149	OB178	2	0.00052	0.894	0.943	-14.3	271.9	.	0.49093	
14	CL31	CL88	9	0.00202	0.892	0.939	-13.1	287.3	17.8	0.57472	
13	CL20	CL16	361	0.06629	0.826	0.934	-22.6	178.8	287.3	0.58671	
12	CL17	OB10	26	0.00172	0.824	0.928	-21.0	193.1	5.2	0.69853	
11	CL12	CL19	45	0.02074	0.804	0.921	-21.6	185.6	64.2	0.75914	
10	CL15	CL385	4	0.00226	0.801	0.913	-19.8	203.8	8.7	0.76444	
9	OB160	OB171	2	0.00133	0.800	0.902	-17.5	227.9	.	0.78430	
8	CL22	CL11	78	0.03630	0.764	0.890	-18.9	210.9	66.2	0.81880	
7	CL18	CL9	11	0.00538	0.758	0.873	-16.4	239.4	13.1	0.98828	
6	CL8	OB392	79	0.00403	0.754	0.852	-13.2	281.7	4.0	1.08622	
5	CL13	CL14	370	0.05161	0.703	0.821	-13.9	271.7	125.0	1.23774	
4	CL6	CL5	449	0.33384	0.369	0.775	-30.2	89.8	522.6	1.24828	
3	OB143	CL7	12	0.01080	0.358	0.699	-25.0	128.8	11.9	1.71021	
2	CL3	CL10	16	0.03622	0.322	0.531	-12.0	219.6	22.4	1.82920	
1	CL4	CL2	465	0.32174	0.000	0.000	0.00	.	219.6	2.45049	

CLUSTERING ON shrink1 salin1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL34	CL66	31	0.00198	0.942	0.958	-7.40	382.0	16.0	0.41197	
19	CL41	CL23	290	0.04276	0.899	0.956	-18.7	221.7	483.7	0.41545	
18	CL36	CL30	10	0.00223	0.897	0.953	-18.0	229.6	17.4	0.45532	
17	CL24	CL49	6	0.00136	0.896	0.950	-16.9	240.9	12.5	0.48694	
16	OB149	OB178	2	0.00052	0.895	0.947	-15.6	256.1	.	0.49093	
15	CL18	CL260	12	0.00174	0.894	0.943	-14.5	270.0	5.4	0.49264	
14	CL21	CL17	33	0.00560	0.888	0.939	-14.0	275.1	18.3	0.51426	
13	CL22	CL19	360	0.06753	0.820	0.934	-23.3	172.2	288.1	0.52709	
12	CL32	CL85	9	0.00202	0.818	0.928	-21.7	185.7	17.8	0.54946	
11	CL14	CL20	64	0.02938	0.789	0.921	-23.3	169.8	88.2	0.65306	
10	CL12	CL29	21	0.01127	0.778	0.913	-22.4	177.0	54.9	0.71289	
9	CL16	CL385	4	0.00226	0.776	0.902	-20.3	197.0	8.7	0.72396	
8	OB160	OB171	2	0.00133	0.774	0.890	-17.8	223.9	.	0.78430	
7	CL11	OB392	65	0.00313	0.771	0.873	-15.0	257.1	3.9	0.85877	
6	CL13	CL10	381	0.06815	0.703	0.852	-18.1	217.2	155.0	0.89264	
5	CL15	CL8	14	0.00702	0.696	0.821	-14.5	263.2	13.3	0.97465	
4	CL6	CL7	446	0.31052	0.385	0.775	-29.4	96.4	478.8	1.13904	
3	CL4	CL5	460	0.16349	0.222	0.699	-31.4	65.9	122.4	1.67159	
2	OB143	CL9	5	0.00968	0.212	0.531	-16.9	124.7	10.5	1.67555	
1	CL3	CL2	465	0.21224	0.000	0.000	0.00	.	124.7	3.15518	

CLUSTERING ON shrink1 slope-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.02213	0.044261	0.511065	0.51107
2	0.97787	.	0.488935	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL49	CL74	30	0.00366	0.960	0.954	2.82	556.2	82.5	0.38895	
19	CL57	CL32	54	0.00674	0.953	0.952	0.58	500.7	83.9	0.40200	
18	CL43	CL29	259	0.03367	0.919	0.949	-10.4	299.0	612.8	0.41472	
17	OB430	CL272	3	0.00053	0.919	0.945	-9.20	316.2	.	0.42920	
16	CL31	CL51	9	0.00145	0.917	0.942	-8.14	331.6	17.3	0.44194	
15	CL20	CL24	43	0.00569	0.912	0.938	-8.12	331.1	33.7	0.46842	
14	CL21	CL23	56	0.01123	0.900	0.933	-9.24	313.2	61.4	0.52004	
13	CL30	CL28	13	0.00305	0.897	0.927	-8.16	328.8	23.8	0.55061	
12	CL19	CL27	62	0.00843	0.889	0.921	-8.08	329.1	43.8	0.58799	
11	OB10	OB392	2	0.00084	0.888	0.913	-6.14	359.8	.	0.62441	
10	CL14	CL16	65	0.00877	0.879	0.904	-5.62	367.9	23.9	0.63447	
9	CL15	CL18	302	0.05712	0.822	0.893	-12.5	263.3	283.7	0.68569	
8	CL12	CL22	73	0.01931	0.803	0.879	-12.3	265.7	62.6	0.77104	
7	CL13	CL194	15	0.00418	0.799	0.861	-9.57	302.6	12.2	0.79971	
6	CL9	CL10	367	0.13554	0.663	0.837	-19.4	180.6	331.0	0.89002	
5	CL25	CL7	20	0.01495	0.648	0.804	-16.3	211.8	28.6	1.04601	
4	CL5	CL17	23	0.01258	0.636	0.753	-11.8	267.9	10.6	1.20110	
3	CL8	CL6	440	0.34598	0.290	0.669	-26.7	94.1	464.6	1.27646	
2	CL11	CL4	25	0.02297	0.267	0.386	-8.46	168.3	13.8	1.83618	
1	CL3	CL2	465	0.26655	0.000	0.000	0.00	.	168.3	1.88076	

CLUSTERING ON shrink1 slope-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL46	CL65	31	0.00362	0.954	0.954	0.10	491.0	60.9	0.33072	
19	CL21	CL30	17	0.00197	0.953	0.952	0.41	496.9	12.4	0.33327	
18	CL44	CL20	104	0.01234	0.940	0.949	-3.53	413.1	136.0	0.36273	
17	CL53	CL24	47	0.00640	0.934	0.945	-4.46	394.7	61.0	0.36556	
16	CL37	CL25	43	0.00461	0.929	0.942	-4.53	392.6	50.5	0.40540	
15	CL31	CL49	9	0.00145	0.928	0.938	-3.41	412.4	17.3	0.41056	
14	OB430	CL272	3	0.00053	0.927	0.933	-1.88	441.6	.	0.42920	
13	CL18	CL26	299	0.06381	0.863	0.927	-14.9	238.0	477.2	0.46719	
12	CL29	CL28	13	0.00305	0.860	0.921	-13.5	253.6	23.8	0.50581	
11	CL22	CL15	34	0.00780	0.852	0.913	-12.7	262.4	37.9	0.52302	
10	OB10	OB392	2	0.00084	0.852	0.904	-10.6	290.3	.	0.62441	
9	CL11	CL23	39	0.00733	0.844	0.893	-9.24	309.2	17.9	0.62460	
8	CL17	CL19	64	0.02316	0.821	0.879	-9.82	299.8	92.8	0.65597	
7	CL8	CL16	107	0.03864	0.783	0.861	-11.5	274.7	86.4	0.59040	
6	CL12	CL194	15	0.00418	0.778	0.837	-8.21	322.4	12.2	0.74810	
5	CL9	CL6	54	0.04434	0.734	0.804	-8.49	317.4	74.1	0.97442	
4	CL7	CL13	406	0.37239	0.362	0.753	-28.8	87.0	795.4	1.04708	
3	CL4	CL5	460	0.26467	0.097	0.669	-35.0	24.8	190.3	1.13505	
2	CL10	CL14	5	0.01086	0.086	0.386	-18.9	43.6	23.8	1.44921	
1	CL3	CL2	465	0.08609	0.000	0.000	0.00	.	43.6	2.00951	

CLUSTERING ON shrink1 om1 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.48162	0.963246	0.740811	0.74081
2	0.51838	.	0.259189	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL25	CL32	36	0.00339	0.945	0.960	-7.24	400.9	22.1	0.41323	
19	CL51	OB240	4	0.00051	0.944	0.958	-6.20	420.0	6.3	0.41448	
18	CL39	CL22	33	0.00378	0.941	0.955	-6.37	415.8	24.6	0.42865	
17	CL30	CL35	31	0.00362	0.937	0.952	-6.33	415.8	29.5	0.44169	
16	CL36	CL26	138	0.02436	0.913	0.949	-12.3	312.3	184.5	0.49242	
15	CL23	CL386	164	0.00201	0.911	0.945	-11.3	327.1	23.6	0.50606	
14	CL17	CL21	40	0.00614	0.904	0.941	-11.2	328.2	26.5	0.54746	
13	CL64	CL27	5	0.00142	0.903	0.936	-9.80	350.5	13.0	0.55664	
12	CL16	CL20	174	0.02919	0.874	0.931	-14.1	285.1	98.6	0.60323	
11	CL82	CL57	7	0.00261	0.871	0.924	-12.5	307.0	80.0	0.60368	
10	CL18	CL14	73	0.02192	0.849	0.916	-14.0	284.8	66.3	0.65409	
9	CL31	CL12	205	0.03499	0.814	0.906	-16.6	249.9	85.1	0.66359	
8	CL13	CL19	9	0.00417	0.810	0.894	-14.4	278.5	12.0	0.74576	
7	CL15	CL24	169	0.01469	0.795	0.878	-13.1	296.7	146.9	0.87461	
6	CL9	CL7	374	0.23864	0.557	0.857	-29.3	115.3	592.4	0.88025	
5	CL10	CL8	82	0.01703	0.540	0.828	-26.6	134.8	26.2	0.89859	
4	CL11	OB239	8	0.00537	0.534	0.784	-22.1	176.3	11.6	1.23152	
3	CL5	CL4	90	0.04611	0.488	0.710	-18.5	220.4	52.6	1.37806	
2	CL3	CL6	464	0.46156	0.027	0.557	-24.2	12.7	416.7	1.42649	
1	CL2	OB224	465	0.02667	0.000	0.000	0.00	.	12.7	2.58617	

CLUSTERING ON shrink1 om1 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL58	CL21	32	0.00318	0.944	0.960	-7.49	396.2	21.6	0.33756	
19	CL30	CL34	125	0.01814	0.926	0.958	-12.6	310.2	181.0	0.36794	
18	CL31	CL36	31	0.00362	0.922	0.955	-12.4	312.7	29.5	0.37594	
17	CL50	OB240	4	0.00051	0.922	0.952	-11.2	330.6	6.3	0.39895	
16	CL25	CL40	75	0.00823	0.914	0.949	-12.0	316.8	39.3	0.40962	
15	CL33	CL77	14	0.00208	0.912	0.945	-11.1	331.5	22.3	0.41067	
14	CL20	CL18	63	0.01253	0.899	0.941	-12.5	309.0	51.8	0.42972	
13	CL24	OB191	6	0.00081	0.898	0.936	-10.9	332.5	3.8	0.47499	
12	CL15	CL49	17	0.00249	0.896	0.931	-9.56	353.9	11.3	0.48363	
11	CL16	CL19	200	0.05287	0.843	0.924	-17.2	243.6	193.9	0.51154	
10	CL14	CL23	65	0.00228	0.841	0.916	-15.3	266.6	5.2	0.52181	
9	CL61	CL17	7	0.00222	0.838	0.906	-13.2	295.7	14.6	0.54846	
8	CL10	CL22	74	0.01507	0.823	0.894	-12.6	304.2	34.5	0.66504	
7	CL11	CL32	359	0.21568	0.608	0.878	-29.4	118.2	643.2	0.75159	
6	CL7	CL13	365	0.01427	0.593	0.857	-27.1	134.0	15.4	0.74908	
5	CL8	CL9	81	0.01732	0.576	0.828	-24.3	156.3	27.6	0.79260	
4	CL6	CL12	382	0.08155	0.495	0.784	-24.5	150.3	86.8	1.07924	
3	CL5	CL4	463	0.45035	0.044	0.710	-38.7	10.7	410.7	1.25036	
2	OB224	OB239	2	0.00403	0.040	0.557	-23.7	19.4	.	1.36666	
1	CL3	CL2	465	0.04013	0.000	0.000	0.00	.	19.4	2.16223	

CLUSTERING ON shrink1 om2 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.11953	0.239061	0.559765	0.55977
2	0.88047	.	0.440235	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL40	OB392	6	0.00048	0.961	0.955	3.59	580.4	6.8	0.38242	
19	CL38	CL84	46	0.00335	0.958	0.952	2.99	563.3	69.7	0.40316	
18	CL35	CL21	48	0.00535	0.953	0.949	1.61	527.4	35.5	0.41247	
17	CL70	CL39	7	0.00119	0.951	0.946	2.47	547.1	27.1	0.42101	
16	CL30	CL47	7	0.00096	0.950	0.942	3.54	573.0	11.4	0.42645	
15	CL28	OB7	5	0.00056	0.950	0.938	4.91	608.0	4.4	0.43015	
14	CL23	CL26	35	0.00511	0.945	0.933	4.39	592.5	41.4	0.43508	
13	CL29	CL22	200	0.01098	0.934	0.928	2.02	530.4	162.3	0.43780	
12	CL19	CL63	79	0.01559	0.918	0.921	-0.97	461.7	186.8	0.47184	
11	CL31	CL32	41	0.00622	0.912	0.914	-0.54	469.8	62.0	0.48411	
10	CL16	CL57	11	0.00211	0.910	0.905	1.31	509.7	12.6	0.49557	
9	CL13	CL24	233	0.02315	0.887	0.894	-1.59	445.7	179.1	0.50634	
8	CL17	CL15	12	0.00319	0.883	0.880	0.76	494.7	13.5	0.58718	
7	CL11	CL14	76	0.02508	0.858	0.862	-0.68	462.5	96.1	0.65301	
6	CL18	CL12	127	0.04198	0.816	0.838	-3.38	408.1	152.9	0.67106	
5	CL7	CL10	87	0.01870	0.798	0.805	-1.03	453.3	33.1	0.81451	
4	CL20	CL5	93	0.01759	0.780	0.755	3.26	545.0	23.7	0.96660	
3	CL6	CL9	360	0.35983	0.420	0.672	-19.7	167.4	996.2	1.09899	
2	CL8	CL4	105	0.04721	0.373	0.422	-3.49	275.5	53.7	1.16192	
1	CL2	CL3	465	0.37303	0.000	0.000	0.00	.	275.5	1.29783	

CLUSTERING ON shrink1 om2 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL39	OB392	6	0.00048	0.961	0.955	3.54	579.1	6.8	0.36486	
19	CL53	CL26	30	0.00445	0.957	0.952	2.36	547.2	54.3	0.37433	
18	CL22	CL23	53	0.00827	0.948	0.949	-0.29	483.4	47.9	0.38225	
17	CL38	CL65	73	0.01147	0.937	0.946	-3.49	416.0	268.0	0.38359	
16	CL29	CL21	200	0.01098	0.926	0.942	-5.71	374.3	162.3	0.39443	
15	CL28	CL40	7	0.00096	0.925	0.938	-4.43	396.4	11.4	0.39536	
14	CL67	CL37	7	0.00119	0.924	0.933	-3.10	420.6	27.1	0.40210	
13	CL25	OB7	5	0.00056	0.923	0.928	-1.44	453.0	4.4	0.40358	
12	CL14	CL36	17	0.00309	0.920	0.921	-0.37	474.5	20.0	0.41728	
11	CL16	CL27	233	0.02315	0.897	0.914	-4.28	395.4	179.1	0.43546	
10	CL15	CL52	11	0.00211	0.895	0.905	-2.40	430.4	12.6	0.43873	
9	CL12	CL18	70	0.01691	0.878	0.894	-3.40	410.1	51.2	0.55213	
8	CL17	CL81	79	0.00747	0.870	0.880	-1.88	438.8	39.6	0.55925	
7	CL20	CL31	37	0.00707	0.863	0.862	0.27	482.6	65.5	0.57113	
6	CL7	CL10	48	0.01463	0.849	0.838	1.80	515.3	46.5	0.63275	
5	CL6	CL19	78	0.03212	0.817	0.805	1.73	512.3	68.1	0.63529	
4	CL9	CL8	149	0.08251	0.734	0.755	-2.46	424.4	197.5	0.71817	
3	CL4	CL11	382	0.38699	0.347	0.672	-23.9	122.8	746.7	0.99393	
2	CL3	CL5	460	0.29989	0.047	0.422	-21.4	23.0	210.7	1.03639	
1	CL2	CL13	465	0.04729	0.000	0.000	0.00	.	23.0	1.48934	

CLUSTERING ON shrink1 bd2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.78123	1.56246	0.890615	0.89061
2	0.21877	.	0.109385	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	OB223	OB287	2	0.00020	0.964	0.971	-5.03	631.9	.	0.30681	
19	CL48	CL35	17	0.00153	0.963	0.970	-4.73	640.0	34.2	0.33357	
18	OB10	CL86	4	0.00036	0.962	0.968	-3.64	672.4	25.1	0.33884	
17	CL30	CL22	31	0.00229	0.960	0.966	-3.59	673.2	24.8	0.34141	
16	CL21	CL37	62	0.00365	0.956	0.964	-4.09	657.0	33.7	0.36214	
15	CL31	CL25	41	0.00434	0.952	0.961	-4.69	638.6	50.6	0.36936	
14	CL23	CL27	261	0.03527	0.917	0.958	-15.5	382.3	489.4	0.40741	
13	CL18	CL32	6	0.00112	0.916	0.955	-14.1	409.1	9.1	0.47921	
12	CL24	CL16	94	0.01762	0.898	0.951	-16.6	362.8	122.9	0.50367	
11	CL17	CL15	72	0.01349	0.885	0.946	-17.4	347.9	74.5	0.50809	
10	CL11	CL43	74	0.00143	0.883	0.940	-15.5	382.1	3.9	0.51241	
9	CL28	CL49	7	0.00218	0.881	0.933	-13.5	421.8	29.6	0.56402	
8	CL12	OB236	95	0.00135	0.880	0.925	-11.0	477.0	4.1	0.62657	
7	CL8	CL19	112	0.01912	0.860	0.913	-11.4	470.8	61.2	0.64513	
6	CL7	CL14	373	0.13795	0.723	0.898	-24.6	239.1	476.5	0.75306	
5	CL20	CL54	5	0.00327	0.719	0.877	-20.9	294.7	37.2	0.81225	
4	CL10	CL13	80	0.01329	0.706	0.846	-17.0	369.0	35.4	0.83950	
3	CL9	CL5	12	0.00708	0.699	0.794	-10.7	536.2	11.6	0.90065	
2	CL4	CL3	92	0.03914	0.660	0.669	-0.69	897.8	63.2	1.11712	
1	CL2	CL6	465	0.65977	0.000	0.000	0.00	.	897.8	1.57034	

CLUSTERING ON shrink1 bd2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T I e
20	CL47	CL37	17	0.00153	0.954	0.971	-10.4	490.7	34.2	0.30273	
19	OB223	OB287	2	0.00020	0.954	0.970	-9.31	516.7	.	0.30681	
18	CL36	CL34	99	0.00157	0.953	0.968	-8.77	529.3	29.3	0.30832	
17	OB10	CL80	4	0.00036	0.952	0.966	-7.57	559.1	25.1	0.33551	
16	CL21	CL71	71	0.00188	0.950	0.964	-7.00	573.9	11.7	0.34029	
15	CL53	CL25	11	0.00130	0.949	0.961	-6.04	599.6	25.7	0.34439	
14	CL22	CL49	43	0.00460	0.945	0.958	-6.35	590.6	35.0	0.35127	
13	CL23	CL18	272	0.03582	0.909	0.955	-15.9	374.9	407.3	0.36329	
12	CL14	CL15	54	0.00583	0.903	0.951	-15.5	382.8	25.8	0.39284	
11	CL27	CL39	36	0.00144	0.901	0.946	-13.8	415.2	12.5	0.42023	
10	CL17	CL29	6	0.00112	0.900	0.940	-11.8	456.6	9.1	0.44182	
9	CL12	CL11	90	0.02305	0.877	0.933	-14.2	407.4	88.5	0.49761	
8	CL16	CL20	88	0.01698	0.860	0.925	-14.6	402.0	95.8	0.53588	
7	CL8	CL13	360	0.10682	0.753	0.913	-25.1	233.3	416.6	0.61052	
6	CL19	CL46	5	0.00252	0.751	0.898	-22.0	276.8	28.0	0.69767	
5	CL6	CL48	8	0.00479	0.746	0.877	-18.3	338.0	10.1	0.76979	
4	CL9	OB236	91	0.00299	0.743	0.846	-13.5	444.7	5.8	0.83688	
3	CL4	CL10	97	0.01724	0.726	0.794	-8.07	611.8	32.4	0.84307	
2	CL3	CL5	105	0.03703	0.689	0.669	1.52	1025	50.5	1.07814	
1	CL2	CL7	465	0.68890	0.000	0.000	0.00	.	1025	1.40217	

CLUSTERING ON shrink1 cec2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.89547	1.79094	0.947735	0.94774
2	0.10453	.	0.052265	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL27	OB169	11	0.00026	0.969	0.980	-9.44	728.5	3.4	0.28783	
19	CL43	CL40	6	0.00046	0.968	0.979	-8.54	759.0	9.4	0.29513	
18	CL31	CL32	16	0.00092	0.967	0.977	-7.89	782.0	15.1	0.30689	
17	CL34	CL25	37	0.00159	0.966	0.976	-7.58	792.6	25.4	0.30810	
16	CL39	CL35	43	0.00185	0.964	0.974	-7.32	802.3	28.6	0.32721	
15	CL47	CL28	30	0.00286	0.961	0.972	-7.49	795.7	38.9	0.37482	
14	CL16	CL17	80	0.00809	0.953	0.970	-10.1	704.8	76.2	0.37720	
13	CL22	CL26	7	0.00068	0.952	0.968	-8.67	753.8	6.3	0.37923	
12	CL29	CL21	290	0.03680	0.916	0.965	-19.7	446.8	522.4	0.38687	
11	CL20	CL30	29	0.00392	0.912	0.961	-18.7	468.7	48.3	0.41135	
10	CL19	CL421	8	0.00124	0.910	0.957	-16.8	514.0	11.2	0.46545	
9	CL15	CL18	46	0.00694	0.904	0.952	-16.1	533.8	45.7	0.46685	
8	CL14	CL23	83	0.00222	0.901	0.946	-14.0	596.1	10.9	0.48999	
7	CL11	CL9	75	0.01639	0.885	0.938	-14.5	586.9	60.6	0.57560	
6	CL8	OB202	84	0.00135	0.884	0.928	-11.2	696.6	5.9	0.60687	
5	CL6	CL12	374	0.12138	0.762	0.913	-24.1	368.6	584.8	0.73045	
4	CL7	CL10	83	0.01261	0.750	0.890	-14.4	460.0	26.9	0.75587	
3	CL4	CL13	90	0.01955	0.730	0.844	-10.2	624.6	33.2	0.94033	
2	CL3	OB166	91	0.00311	0.727	0.712	1.23	1232	3.9	0.95623	
1	CL2	CL5	465	0.72692	0.000	0.000	0.00	.	1232	1.61780	

CLUSTERING ON shrink1 cec2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL47	CL31	21	0.00146	0.971	0.980	-7.64	792.5	23.9	0.26188	
19	CL38	CL35	64	0.00471	0.967	0.979	-9.77	716.7	77.0	0.26454	
18	CL42	CL34	6	0.00046	0.966	0.977	-8.78	749.8	9.4	0.26800	
17	CL19	CL75	66	0.00065	0.965	0.976	-7.85	782.9	4.9	0.27907	
16	CL26	CL30	39	0.00371	0.962	0.974	-8.68	752.9	47.1	0.29792	
15	CL49	OB169	6	0.00033	0.961	0.972	-7.35	801.2	11.2	0.30504	
14	CL27	CL25	280	0.03134	0.930	0.970	-19.0	461.6	536.0	0.32247	
13	CL16	CL15	45	0.00272	0.927	0.968	-18.1	480.9	16.6	0.34862	
12	CL20	CL29	25	0.00197	0.925	0.965	-16.9	510.8	16.2	0.36893	
11	CL32	CL17	77	0.00612	0.919	0.961	-16.7	517.0	46.3	0.38802	
10	CL23	OB171	7	0.00060	0.919	0.957	-14.7	571.1	4.9	0.40421	
9	CL18	CL421	8	0.00124	0.917	0.952	-12.6	633.4	11.2	0.43709	
8	CL11	CL22	80	0.00244	0.915	0.946	-10.5	702.8	11.7	0.44253	
7	CL13	CL12	70	0.01504	0.900	0.938	-11.2	686.7	70.2	0.46600	
6	CL14	CL21	299	0.01852	0.881	0.928	-11.6	682.5	113.0	0.49141	
5	CL8	CL9	88	0.01227	0.869	0.913	-9.71	764.0	51.4	0.62558	
4	CL5	CL6	387	0.16190	0.707	0.890	-17.2	371.3	623.3	0.74326	
3	CL7	CL10	77	0.01608	0.691	0.844	-12.7	517.0	39.1	0.76574	
2	CL3	OB166	78	0.00260	0.689	0.712	-1.78	1024	4.2	0.78231	
1	CL2	CL4	465	0.68859	0.000	0.000	0.00	.	1024	1.56873	

CLUSTERING ON shrink1 salin2 AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.52411	1.04821	0.762053	0.76205
2	0.47589	.	0.237947	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL38	CL35	55	0.00689	0.933	0.961	-12.2	326.9	71.4	0.41327	
19	CL34	CL200	6	0.00107	0.932	0.959	-11.3	340.0	13.2	0.45205	
18	CL32	OB162	7	0.00071	0.931	0.956	-10.3	356.9	5.9	0.46259	
17	CL46	OB392	6	0.00076	0.931	0.954	-9.14	375.6	13.1	0.47158	
16	CL24	CL37	14	0.00198	0.929	0.950	-8.32	389.5	10.9	0.50299	
15	CL23	CL27	313	0.02689	0.902	0.947	-14.1	295.0	194.6	0.53250	
14	CL29	CL22	43	0.00915	0.893	0.943	-14.5	288.3	57.1	0.53657	
13	OB149	CL404	3	0.00095	0.892	0.938	-13.0	310.0	.	0.57369	
12	CL14	CL17	49	0.00510	0.887	0.933	-12.2	321.8	14.3	0.58989	
11	CL16	CL18	21	0.00613	0.880	0.926	-11.4	334.3	21.3	0.64547	
10	CL20	CL15	368	0.06874	0.812	0.918	-19.9	217.9	307.3	0.66585	
9	CL11	CL26	32	0.01194	0.800	0.909	-19.0	227.6	27.8	0.73437	
8	CL13	CL21	5	0.00224	0.798	0.897	-16.6	257.1	5.2	0.73849	
7	CL9	OB10	33	0.00315	0.794	0.882	-13.8	294.9	3.9	0.96603	
6	CL8	OB160	6	0.00277	0.792	0.861	-10.5	348.7	3.1	0.96703	
5	CL10	CL19	374	0.02508	0.766	0.833	-8.95	377.5	61.4	1.06508	
4	CL12	CL7	82	0.07363	0.693	0.790	-10.8	346.7	118.3	1.07995	
3	CL4	CL5	456	0.42085	0.272	0.718	-30.4	86.3	635.8	1.38233	
2	CL28	CL6	9	0.02098	0.251	0.573	-16.7	155.2	22.2	1.64369	
1	CL3	CL2	465	0.25103	0.000	0.000	0.00	.	155.2	2.77075	

CLUSTERING ON shrink1 salin2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL49	CL30	17	0.00231	0.934	0.961	-11.8	333.7	18.9	0.38967	
19	OB171	OB178	2	0.00034	0.934	0.959	-10.7	351.1	.	0.39667	
18	CL27	CL20	44	0.00736	0.927	0.956	-11.8	332.5	42.3	0.40469	
17	CL29	OB162	7	0.00071	0.926	0.954	-10.6	350.4	5.9	0.43703	
16	CL32	CL33	34	0.00352	0.922	0.950	-10.2	356.2	46.1	0.43772	
15	CL25	CL36	14	0.00198	0.921	0.947	-9.25	372.2	10.9	0.44123	
14	CL26	CL16	314	0.03716	0.883	0.943	-16.5	262.7	265.6	0.53328	
13	CL15	CL17	21	0.00613	0.877	0.938	-15.9	269.1	21.3	0.55183	
12	OB149	CL19	3	0.00090	0.876	0.933	-14.2	291.8	2.6	0.55822	
11	CL22	CL14	372	0.07017	0.806	0.926	-22.8	188.8	278.8	0.57667	
10	CL13	CL21	36	0.01546	0.791	0.918	-22.5	191.0	36.7	0.64030	
9	CL12	CL404	5	0.00229	0.788	0.909	-20.3	212.4	5.6	0.66529	
8	CL18	OB392	45	0.00265	0.786	0.897	-18.0	239.4	7.8	0.79299	
7	CL200	CL24	5	0.00354	0.782	0.882	-15.3	274.1	33.5	0.82699	
6	CL9	OB160	6	0.00277	0.779	0.861	-11.9	324.4	3.1	0.87843	
5	CL8	CL10	81	0.07005	0.709	0.833	-14.8	280.7	117.5	0.90143	
4	CL5	CL11	453	0.40849	0.301	0.790	-34.4	66.1	656.9	1.19363	
3	OB10	CL6	7	0.00772	0.293	0.718	-29.5	95.8	6.1	1.44555	
2	CL4	CL7	458	0.05973	0.233	0.573	-17.4	141.0	39.3	1.67390	
1	CL2	CL3	465	0.23344	0.000	0.000	0.00	.	141.0	2.80272	

Step 3.

CLUSTERING ON shrink1 wattab no101-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.63986	0.843974	0.546619	0.54662
2	0.79588	0.231624	0.265294	0.81191
3	0.56426	.	0.188086	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL25	CL26	319	0.04553	0.818	0.887	-14.6	105.2	146.8	0.57148	
19	CL44	OB247	18	0.00124	0.817	0.883	-13.8	110.4	11.3	0.57301	
18	CL31	OB202	8	0.00114	0.816	0.878	-12.8	116.3	3.7	0.60246	
17	CL21	CL32	22	0.00550	0.810	0.873	-12.5	119.4	17.3	0.60481	
16	CL40	CL39	9	0.00325	0.807	0.867	-11.7	125.0	16.7	0.63962	
15	CL38	CL23	35	0.00808	0.799	0.861	-11.6	127.6	23.2	0.65359	
14	CL56	OB161	3	0.00120	0.798	0.853	-10.3	136.7	6.3	0.66316	
13	CL28	CL50	17	0.00299	0.795	0.845	-9.12	145.7	10.1	0.69364	
12	CL22	CL20	340	0.02742	0.767	0.836	-11.4	135.7	61.1	0.71770	
11	CL16	CL24	17	0.00681	0.760	0.825	-10.5	144.0	14.5	0.75017	
10	CL18	CL43	10	0.00365	0.757	0.813	-8.90	157.2	9.0	0.80431	
9	CL11	CL13	34	0.01600	0.741	0.798	-8.72	162.8	24.1	0.85260	
8	CL15	CL19	53	0.03140	0.709	0.781	-10.1	159.3	70.9	0.88394	
7	CL9	CL10	44	0.01569	0.694	0.760	-8.89	172.8	14.9	0.94106	
6	CL17	CL14	25	0.00824	0.685	0.732	-6.19	199.9	14.3	0.97792	
5	CL8	CL12	393	0.16978	0.516	0.696	-19.0	122.4	284.6	1.10347	
4	CL5	CL6	418	0.10803	0.408	0.646	-22.9	105.7	105.9	1.22617	
3	CL7	CL4	462	0.35356	0.054	0.561	-33.1	13.2	274.6	1.63451	
2	CL3	OB392	463	0.01118	0.043	0.412	-21.5	20.7	5.4	1.75311	
1	CL2	CL79	465	0.04279	0.000	0.000	0.00	.	20.7	2.34045	

CLUSTERING ON shrink1 wattab no101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL25	OB202	6	0.00080	0.876	0.887	-2.96	165.4	2.6	0.47253	
19	CL60	CL39	12	0.00174	0.874	0.883	-2.21	172.2	13.2	0.49219	
18	CL26	CL37	276	0.04749	0.827	0.878	-10.9	125.5	202.0	0.52288	
17	CL18	CL21	351	0.07523	0.752	0.873	-20.8	84.7	184.5	0.54402	
16	CL28	CL22	20	0.00585	0.746	0.867	-20.3	87.8	16.3	0.54599	
15	CL23	CL99	18	0.00242	0.743	0.861	-19.3	93.0	6.8	0.56163	
14	OB161	OB247	2	0.00072	0.743	0.853	-17.9	100.1	.	0.57765	
13	CL16	CL27	42	0.01639	0.726	0.845	-18.4	99.9	35.2	0.60241	
12	CL24	CL20	13	0.00511	0.721	0.836	-17.4	106.4	14.2	0.60575	
11	CL34	CL12	28	0.00984	0.711	0.825	-16.7	111.8	19.3	0.57249	
10	CL40	CL11	33	0.00737	0.704	0.813	-15.5	120.1	9.6	0.63497	
9	CL17	CL19	363	0.02736	0.676	0.798	-16.4	119.2	44.8	0.73966	
8	CL14	OB392	3	0.00183	0.675	0.781	-14.0	135.4	2.6	0.79906	
7	CL10	CL45	35	0.00531	0.669	0.760	-11.7	154.5	5.6	0.80809	
6	CL48	CL15	20	0.00584	0.663	0.732	-8.77	181.0	12.7	0.86787	
5	CL6	CL8	23	0.01215	0.651	0.696	-5.62	214.8	15.3	1.03966	
4	CL9	CL5	386	0.10335	0.548	0.646	-10.9	186.3	143.4	1.05290	
3	CL13	CL4	428	0.18604	0.362	0.561	-16.1	131.0	190.9	1.06744	
2	CL7	CL3	463	0.31914	0.043	0.412	-21.5	20.7	230.6	1.51276	
1	CL2	CL72	465	0.04279	0.000	0.000	0.00	.	20.7	2.23273	

CLUSTERING ON shrink1 wattab no41-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.49185	0.549457	0.497283	0.49728
2	0.94239	0.376635	0.314131	0.81141
3	0.56576	.	0.188586	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL24	OB463	4	0.00079	0.889	0.885	1.21	187.6	1.9	0.55324	
19	CL42	CL26	34	0.00668	0.882	0.880	0.61	185.8	25.1	0.59248	
18	CL28	CL30	307	0.02873	0.854	0.875	-4.89	153.3	125.7	0.59974	
17	OB247	OB392	2	0.00086	0.853	0.870	-3.78	162.1	.	0.63329	
16	CL49	CL22	15	0.00221	0.851	0.864	-2.86	170.3	12.0	0.63416	
15	CL34	OB161	3	0.00120	0.849	0.857	-1.63	181.2	3.2	0.67782	
14	CL25	CL52	20	0.00304	0.846	0.849	-0.67	191.0	7.9	0.70921	
13	CL41	CL27	14	0.00544	0.841	0.841	-0.05	199.0	16.4	0.71456	
12	CL18	CL33	348	0.06234	0.779	0.832	-9.02	144.7	197.8	0.73094	
11	OB177	CL17	3	0.00134	0.777	0.821	-7.28	158.3	1.6	0.75384	
10	CL13	CL14	34	0.01299	0.764	0.808	-7.03	163.8	21.4	0.79868	
9	CL12	CL16	363	0.02926	0.735	0.793	-8.65	158.0	60.0	0.81094	
8	CL20	CL15	7	0.00334	0.732	0.775	-6.37	177.9	5.3	0.81625	
7	CL10	CL21	41	0.01114	0.720	0.753	-4.63	196.7	12.5	0.85998	
6	CL8	CL23	22	0.01227	0.708	0.725	-2.35	222.8	22.1	0.93986	
5	CL19	CL11	37	0.00972	0.698	0.688	1.35	266.3	19.5	1.04545	
4	CL5	CL9	400	0.15118	0.547	0.637	-9.98	185.7	258.9	1.16016	
3	CL4	CL6	422	0.15927	0.388	0.551	-13.7	146.4	164.4	1.49699	
2	CL7	CL3	463	0.32736	0.061	0.375	-20.1	29.9	246.6	1.61325	
1	CL2	CL143	465	0.06063	0.000	0.000	0.00	.	29.9	2.74540	

CLUSTERING ON shrink1 wattab no41-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL53	OB253	13	0.00111	0.855	0.885	-6.99	137.9	8.2	0.52831	
19	OB161	OB208	2	0.00061	0.854	0.880	-5.97	145.2	.	0.53274	
18	CL23	OB463	11	0.00118	0.853	0.875	-5.00	152.6	4.0	0.54868	
17	CL19	OB247	3	0.00089	0.852	0.870	-3.90	161.4	1.5	0.55730	
16	CL41	CL26	17	0.00545	0.847	0.864	-3.66	165.3	13.4	0.59867	
15	CL21	CL25	54	0.01955	0.827	0.857	-5.99	153.8	56.1	0.60011	
14	CL16	CL33	32	0.01296	0.814	0.849	-6.75	152.0	24.5	0.61416	
13	CL20	OB227	14	0.00157	0.813	0.841	-5.35	163.4	7.3	0.62644	
12	CL14	CL22	39	0.01004	0.803	0.832	-5.24	167.4	12.0	0.63672	
11	CL31	CL13	335	0.02822	0.774	0.821	-7.69	155.8	86.9	0.69864	
10	CL11	CL18	346	0.02281	0.752	0.808	-8.80	152.9	56.0	0.70491	
9	CL12	CL47	41	0.00450	0.747	0.793	-7.02	168.4	4.3	0.74068	
8	CL29	CL17	5	0.00316	0.744	0.775	-4.68	189.6	5.1	0.78136	
7	OB177	OB392	2	0.00135	0.743	0.753	-1.58	220.2	.	0.79097	
6	CL15	CL7	56	0.00512	0.737	0.725	1.75	257.8	7.1	0.78485	
5	CL8	CL24	20	0.01026	0.727	0.688	5.48	306.5	19.2	0.79687	
4	CL6	CL10	402	0.17792	0.549	0.637	-9.78	187.2	343.6	0.92542	
3	CL5	CL133	22	0.01410	0.535	0.551	-1.56	265.9	14.1	1.34130	
2	CL9	CL4	443	0.32465	0.210	0.375	-11.5	123.4	332.3	1.42283	
1	CL2	CL3	465	0.21050	0.000	0.000	0.00	.	123.4	1.52645	

CLUSTERING ON shrink1 wattab inch31-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.45604	0.413653	0.485348	0.48535
2	1.04239	0.540827	0.347464	0.83281
3	0.50156	.	0.167188	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL26	OB249	6	0.00075	0.929	0.886	14.46	307.3	2.4	0.51507	
19	CL22	CL40	40	0.00517	0.924	0.882	13.57	301.3	16.0	0.52433	
18	CL32	OB202	8	0.00101	0.923	0.877	14.51	315.2	4.3	0.56068	
17	CL29	CL27	11	0.00169	0.921	0.871	15.27	327.8	7.4	0.57252	
16	CL25	CL55	318	0.05588	0.865	0.866	-0.02	192.5	493.9	0.58873	
15	CL17	CL31	26	0.00595	0.859	0.859	0.12	196.6	19.9	0.59109	
14	CL21	CL63	12	0.00248	0.857	0.852	1.17	207.9	10.5	0.64130	
13	CL19	CL16	358	0.03890	0.818	0.843	-4.85	169.4	127.0	0.64956	
12	CL20	CL111	8	0.00237	0.816	0.834	-3.44	182.3	7.0	0.66892	
11	CL23	CL18	29	0.00805	0.808	0.823	-2.83	190.7	24.2	0.68156	
10	CL74	CL47	5	0.00232	0.805	0.811	-0.98	209.2	18.9	0.69329	
9	CL15	CL24	48	0.02013	0.785	0.796	-1.82	208.4	53.9	0.74272	
8	CL12	CL30	10	0.00361	0.782	0.779	0.49	233.7	6.1	0.83232	
7	CL11	CL45	31	0.00504	0.777	0.757	3.11	265.3	8.5	0.88596	
6	CL13	CL14	370	0.03121	0.745	0.729	2.35	268.7	75.2	0.90185	
5	CL9	CL6	418	0.18058	0.565	0.693	-14.3	149.2	339.4	1.13212	
4	CL8	CL10	15	0.01912	0.546	0.642	-10.7	184.6	22.5	1.28435	
3	CL5	CL7	449	0.28034	0.265	0.562	-22.2	83.4	295.4	1.62581	
2	CL3	CL4	464	0.17382	0.092	0.366	-18.3	46.6	109.3	1.89972	
1	CL2	OB392	465	0.09151	0.000	0.000	0.00	.	46.6	4.66161	

CLUSTERING ON shrink1 wattab inch31-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL30	OB249	6	0.00075	0.926	0.886	13.16	293.6	2.4	0.45583	
19	CL26	OB257	19	0.00099	0.925	0.882	14.03	306.1	2.9	0.49288	
18	CL22	CL25	36	0.00986	0.915	0.877	11.55	284.0	52.6	0.51138	
17	CL31	OB202	8	0.00101	0.914	0.871	12.60	298.5	4.3	0.51781	
16	CL17	CL104	10	0.00186	0.912	0.866	13.44	311.7	6.1	0.51924	
15	CL21	CL59	322	0.06233	0.850	0.859	-1.94	182.2	497.5	0.52798	
14	CL24	CL15	356	0.03401	0.816	0.852	-6.88	153.9	104.2	0.50654	
13	CL38	CL54	14	0.00263	0.813	0.843	-5.67	164.2	14.8	0.59690	
12	CL19	CL41	31	0.01134	0.802	0.834	-5.78	166.9	37.6	0.59796	
11	CL20	CL106	8	0.00237	0.800	0.823	-4.19	181.3	7.0	0.60507	
10	CL12	CL39	33	0.00305	0.797	0.811	-2.47	198.1	4.7	0.61346	
9	CL14	CL13	370	0.02573	0.771	0.796	-4.06	191.8	61.3	0.66567	
8	CL66	CL43	5	0.00232	0.769	0.779	-1.57	216.9	18.9	0.66996	
7	CL10	CL16	43	0.01577	0.753	0.757	-0.61	232.5	23.4	0.69047	
6	CL11	CL27	10	0.00361	0.749	0.729	2.94	274.3	6.1	0.72338	
5	CL18	CL9	406	0.14424	0.605	0.693	-10.3	176.1	296.8	1.00995	
4	CL6	CL8	15	0.01912	0.586	0.642	-6.54	217.4	22.5	1.15357	
3	CL7	CL5	449	0.32053	0.265	0.562	-22.2	83.4	373.2	1.38295	
2	CL3	CL4	464	0.17382	0.092	0.366	-18.3	46.6	109.3	1.66681	
1	CL2	OB392	465	0.09151	0.000	0.000	0.00	.	46.6	4.61263	

CLUSTERING ON shrink1 wattab inch101-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.43264	0.403869	0.477548	0.47755
2	1.02877	0.490192	0.342925	0.82047
3	0.53858	.	0.179528	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL27	OB61	3	0.00052	0.954	0.885	28.16	486.7	1.9	0.45993	
19	CL28	CL37	21	0.00380	0.950	0.880	27.08	473.6	27.8	0.47641	
18	CL25	CL36	344	0.04042	0.910	0.875	10.11	265.4	482.5	0.47947	
17	OB202	CL81	3	0.00075	0.909	0.870	11.25	280.1	33.3	0.51498	
16	CL43	OB66	3	0.00083	0.908	0.864	12.48	296.4	7.8	0.54878	
15	CL23	CL17	10	0.00195	0.906	0.857	13.43	311.0	7.5	0.56482	
14	CL24	CL22	26	0.00617	0.900	0.850	13.15	312.8	24.3	0.57623	
13	CL18	CL34	356	0.01856	0.882	0.841	9.53	280.5	93.6	0.66271	
12	CL32	OB392	38	0.00187	0.880	0.832	11.05	301.2	15.2	0.68850	
11	CL19	CL31	23	0.00324	0.876	0.821	12.42	322.2	10.3	0.71107	
10	CL14	CL12	64	0.02600	0.851	0.808	8.47	287.6	86.8	0.73389	
9	CL21	CL20	6	0.00285	0.848	0.793	10.61	317.1	8.2	0.74064	
8	CL16	OB146	4	0.00170	0.846	0.775	13.48	358.5	3.6	0.77343	
7	CL11	CL15	33	0.01477	0.831	0.753	14.03	375.8	33.0	0.82737	
6	OB62	OB157	2	0.00173	0.829	0.726	18.44	446.5	.	0.89583	
5	CL10	CL13	420	0.20936	0.620	0.689	-8.21	187.7	656.6	1.05582	
4	CL6	CL8	6	0.00455	0.616	0.637	-2.60	246.0	4.2	1.06983	
3	CL5	CL7	453	0.28458	0.331	0.554	-17.7	114.3	345.7	1.59643	
2	CL9	CL4	12	0.02944	0.302	0.360	-4.56	199.9	22.4	1.66883	
1	CL3	CL2	465	0.30153	0.000	0.000	0.00	.	199.9	2.67269	

CLUSTERING ON shrink1 wattab inch101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL32	OB257	11	0.00077	0.910	0.885	7.71	237.8	4.9	0.44303	
19	OB10	CL30	14	0.00080	0.910	0.880	8.68	249.1	4.8	0.44812	
18	OB12	CL83	3	0.00058	0.909	0.875	9.80	262.5	29.6	0.45063	
17	CL20	CL19	25	0.00626	0.903	0.870	9.12	259.8	28.8	0.48575	
16	CL23	CL25	28	0.00593	0.897	0.864	8.75	260.0	20.0	0.51199	
15	OB202	CL80	3	0.00075	0.896	0.857	10.12	276.9	33.3	0.51242	
14	CL40	OB66	3	0.00083	0.895	0.850	11.59	296.3	7.8	0.53744	
13	CL22	CL33	357	0.01853	0.877	0.841	8.19	267.7	91.1	0.60883	
12	CL17	CL31	62	0.02655	0.850	0.832	3.80	233.6	101.4	0.64248	
11	CL18	CL21	6	0.00285	0.847	0.821	5.32	251.8	8.2	0.66418	
10	CL12	OB392	63	0.00189	0.845	0.808	7.32	276.4	2.7	0.66677	
9	CL14	OB146	4	0.00170	0.844	0.793	9.71	307.6	3.6	0.72511	
8	CL16	CL28	30	0.00465	0.839	0.775	11.90	340.2	9.4	0.76051	
7	CL8	CL15	33	0.00937	0.830	0.753	13.69	371.8	15.1	0.89264	
6	OB62	OB157	2	0.00173	0.828	0.726	18.09	441.7	.	0.89583	
5	CL6	CL9	6	0.00455	0.823	0.689	23.39	536.1	4.2	0.88939	
4	CL10	CL13	420	0.20783	0.616	0.637	-2.60	246.0	644.3	0.94889	
3	CL4	CL7	453	0.28458	0.331	0.554	-17.7	114.3	345.7	1.46897	
2	CL11	CL5	12	0.02944	0.302	0.360	-4.56	199.9	22.4	1.50878	
1	CL3	CL2	465	0.30153	0.000	0.000	0.00	.	199.9	2.44621	

CLUSTERING ON shrink1 wattab perm1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.80879	0.975032	0.602932	0.60293
2	0.83376	0.476319	0.277921	0.88085
3	0.35744	.	0.119148	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL42	OB317	7	0.00062	0.920	0.899	6.99	268.2	4.6	0.44213	
19	CL27	CL33	15	0.00233	0.917	0.895	7.33	275.0	18.8	0.44400	
18	CL28	CL37	87	0.01293	0.904	0.890	4.20	248.8	96.4	0.44643	
17	CL35	CL21	20	0.00385	0.901	0.885	4.33	253.6	21.3	0.50736	
16	CL22	CL64	209	0.00341	0.897	0.880	4.71	261.1	16.5	0.50974	
15	CL24	CL25	16	0.00216	0.895	0.874	5.57	274.0	9.9	0.54169	
14	CL26	CL20	58	0.00623	0.889	0.868	5.40	277.2	33.8	0.56493	
13	CL16	CL14	267	0.04060	0.848	0.860	-2.67	210.4	171.7	0.56994	
12	CL19	CL31	50	0.01101	0.837	0.852	-3.08	211.7	63.0	0.57763	
11	CL23	OB202	8	0.00122	0.836	0.843	-1.34	231.3	5.2	0.60781	
10	CL12	OB392	51	0.00159	0.834	0.832	0.56	254.6	4.0	0.68340	
9	CL30	CL34	14	0.00303	0.831	0.818	2.47	280.9	17.2	0.68543	
8	CL17	CL9	34	0.01203	0.819	0.803	3.02	296.0	31.5	0.71163	
7	CL8	CL11	42	0.01228	0.807	0.783	4.09	319.2	18.3	0.82557	
6	CL18	CL15	103	0.03174	0.775	0.759	2.60	316.7	108.4	0.82792	
5	CL13	CL6	370	0.18532	0.590	0.726	-15.6	165.5	414.4	0.89792	
4	CL10	CL5	421	0.22345	0.367	0.681	-28.7	88.9	252.4	1.21303	
3	OB198	OB227	2	0.00368	0.363	0.611	-19.2	131.5	.	1.30624	
2	CL4	CL3	423	0.01606	0.347	0.454	-7.03	245.8	11.3	1.62040	
1	CL7	CL2	465	0.34677	0.000	0.000	0.00	.	245.8	1.63060	

CLUSTERING ON shrink1 wattab perm1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL27	OB261	52	0.00062	0.905	0.899	2.06	223.9	3.4	0.38211	
19	CL28	OB317	6	0.00061	0.905	0.895	3.04	235.2	2.7	0.41296	
18	CL40	CL22	20	0.00385	0.901	0.890	3.09	238.9	21.3	0.42453	
17	CL26	CL59	211	0.00340	0.897	0.885	3.39	245.1	16.2	0.44866	
16	OB10	CL33	14	0.00081	0.897	0.880	4.55	259.7	4.8	0.45041	
15	CL25	CL24	16	0.00216	0.894	0.874	5.42	272.5	9.9	0.45378	
14	CL17	CL20	263	0.04168	0.853	0.868	-3.36	201.0	190.6	0.48143	
13	CL16	CL37	49	0.01149	0.841	0.860	-4.06	199.7	74.0	0.51632	
12	CL14	CL19	269	0.00676	0.835	0.852	-3.59	207.7	18.0	0.51721	
11	CL23	OB202	8	0.00122	0.833	0.843	-1.85	227.0	5.2	0.56799	
10	CL13	OB392	50	0.00156	0.832	0.832	0.05	250.0	4.0	0.60683	
9	CL18	CL32	32	0.01204	0.820	0.818	0.24	259.2	40.1	0.61030	
8	CL9	CL30	34	0.00302	0.817	0.803	2.53	290.9	4.5	0.60997	
7	CL8	CL11	42	0.01228	0.804	0.783	3.62	314.0	18.3	0.66313	
6	CL21	CL15	102	0.03193	0.773	0.759	2.15	311.7	110.0	0.74101	
5	CL12	CL6	371	0.18490	0.588	0.726	-15.9	163.9	406.2	0.76160	
4	CL10	CL5	421	0.22110	0.367	0.681	-28.7	88.9	248.2	1.07897	
3	OB198	OB227	2	0.00368	0.363	0.611	-19.2	131.5	.	1.30624	
2	CL4	CL3	423	0.01606	0.347	0.454	-7.03	245.8	11.3	1.36807	
1	CL7	CL2	465	0.34677	0.000	0.000	0.00	.	245.8	1.45110	

CLUSTERING ON shrink1 wattab awc1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.71991	0.823588	0.573303	0.57330
2	0.89632	0.512550	0.298774	0.87208
3	0.38377	.	0.127924	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	OB202	CL31	3	0.00075	0.876	0.895	-5.02	166.1	2.1	0.55148	
19	CL24	CL156	158	0.00201	0.874	0.891	-4.36	172.5	6.9	0.55282	
18	CL72	CL53	5	0.00144	0.873	0.887	-3.50	180.7	9.6	0.56675	
17	CL29	CL34	160	0.00705	0.866	0.882	-3.87	180.8	30.2	0.61799	
16	CL25	OB257	13	0.00124	0.865	0.876	-2.79	191.3	3.6	0.62115	
15	CL35	OB203	6	0.00141	0.863	0.870	-1.66	202.9	7.1	0.65621	
14	CL19	CL27	213	0.05683	0.806	0.864	-11.0	144.5	189.7	0.67779	
13	CL17	CL51	171	0.01646	0.790	0.856	-12.0	141.7	61.4	0.68112	
12	CL16	CL57	15	0.00274	0.787	0.847	-10.7	152.4	6.8	0.69235	
11	CL12	CL22	24	0.00762	0.780	0.838	-9.97	160.6	15.1	0.72038	
10	CL13	CL105	173	0.00379	0.776	0.826	-8.44	175.0	10.5	0.73383	
9	CL18	CL15	11	0.00460	0.771	0.813	-6.76	192.1	10.1	0.75154	
8	CL21	CL23	37	0.01511	0.756	0.796	-6.27	202.4	37.7	0.75542	
7	CL10	CL14	386	0.17406	0.582	0.776	-22.4	106.3	359.9	0.80112	
6	CL11	CL40	27	0.00657	0.575	0.751	-19.9	124.4	8.5	0.88859	
5	CL6	CL9	38	0.02372	0.552	0.718	-18.2	141.6	24.7	1.05322	
4	CL8	OB392	38	0.00409	0.548	0.671	-13.5	186.1	5.1	1.07584	
3	CL5	CL4	76	0.10518	0.442	0.599	-13.1	183.3	85.1	1.35746	
2	CL3	CL7	462	0.41631	0.026	0.432	-22.4	12.5	344.2	1.52890	
1	CL2	CL20	465	0.02619	0.000	0.000	0.00	.	12.5	1.61651	

CLUSTERING ON shrink1 wattab awc1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL29	CL34	15	0.00306	0.858	0.895	-9.21	141.5	13.7	0.46181	
19	OB202	CL25	3	0.00075	0.857	0.891	-8.25	148.7	2.1	0.51242	
18	CL27	CL68	39	0.01088	0.846	0.887	-9.30	144.8	40.8	0.51717	
17	CL73	CL43	5	0.00144	0.845	0.882	-8.34	152.5	9.6	0.52774	
16	CL30	CL35	160	0.00705	0.838	0.876	-8.39	154.6	30.2	0.53203	
15	CL26	OB257	13	0.00124	0.837	0.870	-7.21	164.6	3.6	0.55916	
14	CL15	CL21	22	0.00733	0.829	0.864	-7.07	168.5	17.9	0.56559	
13	CL16	CL46	172	0.01715	0.812	0.856	-8.47	162.8	63.8	0.59708	
12	CL20	CL18	54	0.01748	0.795	0.847	-9.57	159.3	34.0	0.61179	
11	CL14	CL45	24	0.00303	0.792	0.838	-8.14	172.4	4.2	0.61890	
10	CL13	CL22	367	0.15458	0.637	0.826	-24.4	88.7	399.9	0.62643	
9	CL33	OB203	6	0.00141	0.636	0.813	-22.5	99.4	7.1	0.62728	
8	CL17	CL9	11	0.00460	0.631	0.796	-20.6	111.6	10.1	0.62566	
7	CL11	CL38	27	0.00657	0.624	0.776	-18.5	126.9	8.5	0.75608	
6	CL7	CL8	38	0.02372	0.601	0.751	-17.6	138.1	24.7	0.83906	
5	CL12	OB392	55	0.00344	0.597	0.718	-13.9	170.6	4.1	0.90154	
4	CL10	CL97	369	0.00839	0.589	0.671	-9.47	220.1	10.4	0.98945	
3	CL5	CL4	424	0.25662	0.332	0.599	-20.3	114.9	307.8	1.11527	
2	CL6	CL19	41	0.02176	0.310	0.432	-8.06	208.5	14.3	1.34759	
1	CL2	CL3	465	0.31049	0.000	0.000	0.00	.	208.5	1.38810	

CLUSTERING ON shrink1 wattab no102 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.65978	0.886819	0.553260	0.55326
2	0.77296	0.205706	0.257654	0.81091
3	0.56726	.	0.189085	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL31	CL21	8	0.00177	0.872	0.888	-4.14	158.9	5.6	0.56152	
19	CL23	CL24	308	0.05810	0.813	0.883	-14.4	108.0	208.4	0.56696	
18	CL39	CL37	11	0.00224	0.811	0.879	-13.6	113.0	9.5	0.57142	
17	CL30	CL48	39	0.00752	0.804	0.873	-13.6	114.6	28.4	0.60940	
16	CL29	CL51	33	0.00346	0.800	0.868	-12.8	119.9	11.9	0.62008	
15	CL25	CL22	25	0.00629	0.794	0.861	-12.4	123.8	15.4	0.64234	
14	CL16	CL18	44	0.01072	0.783	0.854	-12.6	125.3	26.7	0.69383	
13	CL27	CL54	20	0.00307	0.780	0.846	-11.4	133.7	8.2	0.70993	
12	CL33	CL58	7	0.00321	0.777	0.837	-10.2	143.4	14.4	0.71439	
11	CL19	CL73	316	0.01548	0.761	0.826	-10.5	144.9	33.8	0.76500	
10	CL17	OB392	40	0.00236	0.759	0.814	-8.69	159.3	5.2	0.81517	
9	CL15	CL10	65	0.02789	0.731	0.799	-10.1	155.0	49.7	0.82484	
8	CL12	OB161	8	0.00207	0.729	0.782	-7.68	175.7	2.9	0.83232	
7	CL14	CL26	47	0.00629	0.723	0.760	-5.35	199.1	10.0	0.84999	
6	CL13	CL20	28	0.01320	0.710	0.733	-3.26	224.3	25.5	0.86954	
5	CL11	CL7	363	0.13970	0.570	0.698	-14.3	152.4	259.9	1.03922	
4	CL6	CL8	36	0.02040	0.550	0.647	-10.9	187.5	21.0	1.08031	
3	CL9	CL5	428	0.22816	0.321	0.563	-18.8	109.4	244.8	1.18291	
2	CL3	CL4	464	0.30002	0.021	0.417	-22.5	10.1	204.2	1.66720	
1	CL2	OB235	465	0.02134	0.000	0.000	0.00	.	10.1	2.33481	

CLUSTERING ON shrink1 wattab no102 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL70	CL24	306	0.05801	0.811	0.888	-16.0	100.2	203.0	0.46822	
19	CL26	CL49	37	0.00671	0.804	0.883	-15.9	101.5	26.4	0.49828	
18	CL31	OB202	7	0.00096	0.803	0.879	-14.9	107.1	3.1	0.50937	
17	CL21	CL25	44	0.00759	0.795	0.873	-14.9	108.7	17.2	0.51873	
16	CL28	CL56	19	0.00559	0.790	0.868	-14.5	112.4	44.6	0.52315	
15	CL37	OB392	9	0.00115	0.789	0.861	-13.3	119.8	7.0	0.54677	
14	CL20	CL16	325	0.02662	0.762	0.854	-15.6	111.0	56.3	0.58755	
13	CL15	CL19	46	0.01120	0.751	0.846	-15.5	113.4	27.5	0.59910	
12	OB161	OB247	2	0.00082	0.750	0.837	-13.9	123.5	.	0.61817	
11	CL36	CL48	17	0.00296	0.747	0.826	-12.4	134.0	10.4	0.62345	
10	CL23	CL59	18	0.00536	0.742	0.814	-11.1	145.1	11.5	0.63212	
9	CL10	CL11	35	0.01439	0.727	0.799	-10.6	151.9	23.7	0.61795	
8	CL9	CL18	42	0.01112	0.716	0.782	-9.35	164.6	12.0	0.66513	
7	CL17	CL391	46	0.00549	0.711	0.760	-6.94	187.4	9.2	0.81602	
6	CL7	CL12	48	0.00567	0.705	0.733	-3.88	219.3	8.0	0.82821	
5	CL14	CL6	373	0.14419	0.561	0.698	-15.2	146.8	246.1	0.89436	
4	CL13	CL5	419	0.18075	0.380	0.647	-25.1	94.2	192.9	1.01193	
3	CL4	CL30	422	0.01381	0.366	0.563	-15.9	133.4	10.1	1.03701	
2	CL8	CL3	464	0.34480	0.021	0.417	-22.5	10.1	251.3	1.44711	
1	CL2	OB235	465	0.02134	0.000	0.000	0.00	.	10.1	2.22756	

CLUSTERING ON shrink1 wattab no42-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.15947	1.52200	0.719822	0.71982
2	0.63746	0.43439	0.212488	0.93231
3	0.20307	.	0.067690	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL48	CL154	7	0.00169	0.895	0.919	-7.33	200.4	18.8	0.50471	
19	CL21	CL35	19	0.00258	0.893	0.915	-6.93	206.3	8.4	0.52032	
18	CL52	CL33	31	0.00624	0.887	0.912	-7.43	205.4	36.2	0.52223	
17	CL27	CL64	85	0.00244	0.884	0.908	-6.83	213.6	9.2	0.52426	
16	CL41	OB257	5	0.00087	0.883	0.904	-5.76	226.4	5.6	0.52914	
15	CL36	CL24	20	0.00473	0.878	0.899	-5.56	232.4	18.0	0.57849	
14	CL29	CL17	334	0.06110	0.817	0.894	-16.4	155.3	263.9	0.58236	
13	CL18	CL69	36	0.00636	0.811	0.888	-15.9	161.7	18.6	0.66629	
12	CL19	CL16	24	0.00515	0.806	0.881	-15.1	171.0	12.4	0.67781	
11	CL22	OB202	11	0.00155	0.804	0.874	-13.5	186.6	4.2	0.68679	
10	CL14	CL20	341	0.00989	0.794	0.865	-13.1	195.4	23.9	0.70790	
9	CL15	CL44	22	0.00307	0.791	0.854	-11.4	216.2	6.3	0.72444	
8	CL10	CL28	351	0.01585	0.776	0.842	-11.3	225.6	36.4	0.72614	
7	CL23	OB227	20	0.00196	0.774	0.826	-8.73	260.8	5.2	0.74919	
6	CL8	CL7	371	0.03604	0.738	0.806	-10.4	258.0	75.3	0.80878	
5	CL12	CL13	60	0.02497	0.713	0.780	-7.72	285.1	44.9	0.81009	
4	CL9	CL11	33	0.01354	0.699	0.740	-4.53	356.9	23.9	0.81550	
3	CL5	OB392	61	0.00209	0.697	0.674	2.51	531.2	2.2	0.84499	
2	CL3	CL6	432	0.33178	0.365	0.541	-10.3	266.3	524.6	1.35200	
1	CL4	CL2	465	0.36515	0.000	0.000	0.00	.	266.3	1.81832	

CLUSTERING ON shrink1 wattab no42-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL34	CL29	319	0.03999	0.859	0.919	-16.1	142.1	180.4	0.44825	
19	CL48	CL149	7	0.00169	0.857	0.915	-15.4	148.3	18.8	0.47759	
18	CL40	CL27	20	0.00473	0.852	0.912	-15.2	151.5	18.0	0.47806	
17	CL24	CL70	37	0.00472	0.847	0.908	-15.0	155.5	19.2	0.50325	
16	CL25	CL38	22	0.00571	0.842	0.904	-14.8	159.2	22.3	0.50989	
15	CL54	OB392	12	0.00111	0.841	0.899	-13.7	169.5	9.6	0.52921	
14	CL41	CL22	6	0.00167	0.839	0.894	-12.6	180.7	7.9	0.53913	
13	CL21	CL14	23	0.00545	0.833	0.888	-12.0	188.5	14.1	0.53408	
12	CL20	CL60	322	0.00403	0.829	0.881	-11.1	200.3	11.7	0.56103	
11	CL18	CL23	30	0.00955	0.820	0.874	-11.0	206.7	21.0	0.57664	
10	CL12	CL19	329	0.01016	0.810	0.865	-10.7	215.1	28.5	0.58651	
9	CL15	CL17	49	0.01347	0.796	0.854	-10.7	222.8	40.6	0.58734	
8	CL10	CL16	351	0.03091	0.765	0.842	-12.7	212.9	78.4	0.58969	
7	CL8	CL39	359	0.01313	0.752	0.826	-11.7	231.7	27.6	0.62395	
6	CL13	CL9	72	0.03145	0.721	0.806	-12.5	237.0	51.7	0.68274	
5	CL11	CL36	32	0.00492	0.716	0.780	-7.39	289.7	6.6	0.78008	
4	CL5	OB202	33	0.00369	0.712	0.740	-3.15	380.2	4.2	0.93932	
3	CL6	CL7	431	0.34004	0.372	0.674	-22.7	136.9	568.2	1.14692	
2	CL3	OB227	432	0.00697	0.365	0.541	-10.3	266.3	5.0	1.27336	
1	CL4	CL2	465	0.36515	0.000	0.000	0.00	.	266.3	1.66229	

CLUSTERING ON shrink1 wattab inch32-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.43259	0.432593	0.477529	0.47753
2	0.99999	0.432578	0.333332	0.81086
3	0.56742	.	0.189139	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL39	CL27	24	0.00496	0.878	0.884	-1.40	168.9	19.7	0.56233	
19	CL30	CL54	13	0.00258	0.876	0.879	-0.86	174.5	12.4	0.57326	
18	CL28	CL24	44	0.00948	0.866	0.874	-1.88	170.2	40.9	0.58432	
17	OB196	OB212	2	0.00075	0.865	0.869	-0.74	180.1	.	0.59094	
16	CL26	CL38	9	0.00278	0.863	0.863	0.03	188.0	8.3	0.65713	
15	CL50	CL21	32	0.00710	0.856	0.856	-0.06	190.4	16.2	0.72662	
14	CL23	CL56	326	0.01733	0.838	0.848	-2.08	179.7	68.9	0.73806	
13	CL19	CL20	37	0.01440	0.824	0.840	-3.12	176.1	32.8	0.76465	
12	CL13	CL53	39	0.00354	0.820	0.830	-1.91	188.0	4.4	0.80200	
11	CL29	OB161	4	0.00199	0.818	0.819	-0.22	204.4	6.0	0.81754	
10	CL14	CL15	358	0.07126	0.747	0.807	-9.19	149.3	213.1	0.88570	
9	CL17	CL128	4	0.00315	0.744	0.792	-7.22	165.5	8.1	0.90688	
8	CL16	CL87	11	0.00546	0.738	0.774	-5.20	184.3	9.4	0.95755	
7	CL12	CL22	43	0.01026	0.728	0.751	-3.34	204.5	12.1	0.96414	
6	CL18	OB392	45	0.00374	0.724	0.723	0.15	241.3	8.4	0.99417	
5	CL6	CL10	403	0.16024	0.564	0.686	-13.6	148.9	301.3	1.08242	
4	CL8	CL11	15	0.01368	0.550	0.634	-9.37	188.2	13.3	1.20876	
3	CL7	CL5	446	0.32614	0.224	0.548	-23.9	66.8	346.0	1.55098	
2	CL4	CL9	19	0.02523	0.199	0.360	-11.6	115.1	13.9	1.58110	
1	CL3	CL2	465	0.19911	0.000	0.000	0.00	.	115.1	1.89953	

CLUSTERING ON shrink1 wattab inch32-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL38	CL47	17	0.00261	0.896	0.884	3.31	200.9	10.7	0.49461	
19	CL37	OB202	4	0.00082	0.895	0.879	4.28	210.7	3.7	0.50484	
18	CL29	CL20	26	0.00798	0.887	0.874	3.30	206.0	25.0	0.56087	
17	CL31	CL35	9	0.00278	0.884	0.869	3.90	213.4	8.3	0.56822	
16	OB196	OB212	2	0.00075	0.883	0.863	5.15	226.5	.	0.59094	
15	CL30	CL39	298	0.01780	0.865	0.856	2.20	206.8	108.0	0.59883	
14	CL52	CL24	32	0.00710	0.858	0.848	2.19	210.2	16.2	0.62505	
13	CL22	CL43	26	0.00425	0.854	0.840	3.01	220.5	9.5	0.73114	
12	CL21	CL15	357	0.11371	0.740	0.830	-14.0	117.5	463.5	0.73187	
11	CL17	CL14	41	0.01639	0.724	0.819	-14.2	119.1	25.2	0.73573	
10	CL23	OB161	4	0.00199	0.722	0.807	-12.4	131.3	6.0	0.78530	
9	CL13	CL19	30	0.00980	0.712	0.792	-11.3	141.1	16.9	0.80986	
8	CL11	CL10	45	0.01047	0.702	0.774	-9.90	153.6	10.1	0.81651	
7	CL16	CL127	4	0.00315	0.699	0.751	-7.17	176.9	8.1	0.85541	
6	CL18	CL9	56	0.04410	0.654	0.723	-8.64	173.9	57.1	0.85701	
5	CL12	CL8	402	0.14528	0.509	0.686	-18.5	119.3	227.3	0.91839	
4	CL77	CL7	6	0.00797	0.501	0.634	-14.1	154.4	7.9	1.17798	
3	CL6	CL5	458	0.35270	0.149	0.548	-28.1	40.3	330.4	1.29024	
2	CL3	OB392	459	0.00983	0.139	0.360	-15.4	74.6	5.4	1.51192	
1	CL2	CL4	465	0.13871	0.000	0.000	0.00	.	74.6	2.33100	

CLUSTERING ON shrink1 wattab inch102 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.43268	0.411739	0.477561	0.47756
2	1.02094	0.474571	0.340315	0.81788
3	0.54637	.	0.182124	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	OB66	OB450	2	0.00047	0.953	0.884	27.84	480.0	.	0.46657	
19	CL29	CL40	21	0.00380	0.950	0.880	26.78	467.6	27.8	0.47641	
18	CL27	CL37	341	0.04044	0.909	0.875	9.96	263.4	481.6	0.48230	
17	OB202	CL84	3	0.00075	0.908	0.869	11.11	277.9	33.3	0.51498	
16	CL45	CL20	4	0.00093	0.908	0.863	12.30	293.9	3.2	0.53103	
15	CL24	CL17	10	0.00195	0.906	0.857	13.27	308.4	7.5	0.56482	
14	CL25	CL22	26	0.00617	0.899	0.849	13.00	310.3	24.3	0.57623	
13	CL23	CL21	7	0.00245	0.897	0.841	14.12	328.0	8.8	0.65011	
12	CL18	CL36	353	0.01855	0.878	0.831	10.77	297.6	93.0	0.66294	
11	CL33	OB392	38	0.00187	0.877	0.820	12.52	322.4	15.2	0.68850	
10	CL19	CL32	23	0.00324	0.873	0.808	14.20	348.5	10.3	0.71107	
9	CL14	CL11	64	0.02600	0.847	0.793	10.62	316.3	86.8	0.73389	
8	CL10	CL15	33	0.01477	0.833	0.775	10.58	324.6	33.0	0.82737	
7	CL26	OB157	3	0.00187	0.831	0.753	14.02	374.5	5.9	0.82791	
6	CL16	OB146	5	0.00224	0.828	0.725	18.32	443.3	4.5	0.85793	
5	CL7	CL6	8	0.00609	0.822	0.688	23.28	532.4	6.2	1.04652	
4	CL9	CL12	417	0.20925	0.613	0.636	-2.79	243.5	652.3	1.05632	
3	CL13	CL5	15	0.02816	0.585	0.553	3.30	325.6	23.1	1.49185	
2	CL4	CL8	450	0.28422	0.301	0.360	-4.61	199.1	343.2	1.59631	
1	CL2	CL3	465	0.30074	0.000	0.000	0.00	.	199.1	2.41350	

CLUSTERING ON shrink1 wattab inch102- CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL33	OB257	11	0.00077	0.910	0.884	7.53	235.7	4.9	0.44303	
19	OB10	CL31	14	0.00080	0.909	0.880	8.50	246.9	4.8	0.44812	
18	OB66	OB450	2	0.00047	0.908	0.875	9.65	260.5	.	0.46657	
17	CL43	CL18	4	0.00093	0.907	0.869	10.74	274.4	3.2	0.46395	
16	CL20	CL19	25	0.00626	0.901	0.863	10.19	272.8	28.8	0.48575	
15	CL24	CL27	28	0.00593	0.895	0.857	9.95	274.6	20.0	0.51199	
14	OB202	CL83	3	0.00075	0.894	0.849	11.44	294.0	33.3	0.51242	
13	CL23	CL21	7	0.00245	0.892	0.841	12.59	311.1	8.8	0.57574	
12	CL22	CL35	354	0.01852	0.873	0.831	9.45	284.3	90.5	0.60882	
11	CL16	CL32	62	0.02655	0.847	0.820	5.33	251.2	101.4	0.64248	
10	CL11	OB392	63	0.00189	0.845	0.808	7.33	275.7	2.7	0.66677	
9	CL15	CL29	30	0.00465	0.840	0.793	9.07	300.1	9.4	0.76051	
8	CL17	OB146	5	0.00224	0.838	0.775	11.80	338.1	4.5	0.80552	
7	CL25	OB157	3	0.00187	0.836	0.753	15.26	389.9	5.9	0.80564	
6	CL7	CL8	8	0.00609	0.830	0.725	18.72	448.8	6.2	0.86785	
5	CL9	CL14	33	0.00937	0.821	0.688	22.92	526.9	15.1	0.89264	
4	CL10	CL12	417	0.20771	0.613	0.636	-2.79	243.5	640.1	0.94923	
3	CL13	CL6	15	0.02816	0.585	0.553	3.30	325.6	23.1	1.32287	
2	CL4	CL5	450	0.28422	0.301	0.360	-4.61	199.1	343.2	1.46843	
1	CL2	CL3	465	0.30074	0.000	0.000	0.00	.	199.1	2.19236	

CLUSTERING ON shrink1 wattab perm2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.84771	1.04380	0.615905	0.61590
2	0.80392	0.45555	0.267972	0.88388
3	0.34837	.	0.116123	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL39	CL33	135	0.00826	0.923	0.900	7.70	279.4	79.3	0.43753	
19	CL29	CL37	15	0.00232	0.920	0.896	8.02	286.2	18.7	0.44315	
18	CL27	CL28	13	0.00089	0.919	0.892	8.96	300.1	4.3	0.44384	
17	CL24	CL36	15	0.00207	0.917	0.887	9.54	310.9	11.4	0.45797	
16	CL26	CL20	198	0.02690	0.890	0.882	2.35	243.4	158.2	0.47388	
15	CL34	CL35	98	0.00203	0.888	0.876	3.27	256.0	13.4	0.54873	
14	CL16	CL66	201	0.00289	0.886	0.870	4.08	268.5	9.5	0.55666	
13	CL25	CL22	24	0.00517	0.880	0.862	4.43	277.3	22.7	0.56788	
12	CL15	CL31	144	0.04009	0.840	0.854	-2.89	216.7	236.9	0.61164	
11	CL19	CL23	58	0.01338	0.827	0.845	-3.51	216.9	57.1	0.62411	
10	CL17	CL21	20	0.00575	0.821	0.834	-2.40	232.1	18.3	0.69375	
9	CL11	OB392	59	0.00185	0.819	0.821	-0.29	258.5	4.0	0.73721	
8	CL18	CL13	37	0.01414	0.805	0.805	-0.03	269.8	37.2	0.73727	
7	CL10	OB227	21	0.00189	0.803	0.786	2.92	311.7	3.2	0.77016	
6	CL12	CL14	345	0.16676	0.637	0.762	-15.5	160.8	449.0	0.79844	
5	CL8	CL40	39	0.00368	0.633	0.730	-11.8	198.2	4.9	0.80338	
4	CL6	CL7	366	0.04807	0.585	0.685	-11.5	216.4	56.9	0.95295	
3	CL5	OB202	40	0.00446	0.580	0.616	-3.42	319.4	5.4	1.11664	
2	CL9	CL4	425	0.23947	0.341	0.464	-7.88	239.4	263.9	1.19595	
1	CL3	CL2	465	0.34084	0.000	0.000	0.00	.	239.4	1.64648	

CLUSTERING ON shrink1 wattab perm2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL42	CL84	8	0.00089	0.896	0.900	-1.13	202.0	6.4	0.37018	
19	CL26	OB261	44	0.00062	0.895	0.896	-0.15	212.3	2.8	0.38297	
18	CL45	CL30	15	0.00247	0.893	0.892	0.37	219.5	16.4	0.39210	
17	CL25	OB257	13	0.00074	0.892	0.887	1.46	231.9	3.4	0.43229	
16	OB10	CL35	14	0.00081	0.891	0.882	2.63	245.9	4.8	0.44871	
15	CL29	CL20	24	0.00517	0.886	0.876	2.68	250.6	22.7	0.47411	
14	CL21	CL61	207	0.00288	0.883	0.870	3.50	262.9	9.5	0.47538	
13	CL39	CL28	92	0.00206	0.881	0.862	4.68	279.8	15.5	0.49399	
12	CL14	CL13	299	0.07501	0.806	0.854	-9.03	171.5	280.9	0.52271	
11	CL17	CL16	27	0.00828	0.798	0.845	-8.48	179.4	34.6	0.53385	
10	CL18	CL22	20	0.00575	0.792	0.834	-7.30	192.9	18.3	0.59652	
9	CL10	OB227	21	0.00189	0.790	0.821	-5.24	215.0	3.2	0.67882	
8	CL11	CL19	71	0.03372	0.757	0.805	-7.63	203.1	96.7	0.68375	
7	CL8	OB392	72	0.00216	0.755	0.786	-4.87	234.7	2.6	0.71213	
6	CL15	CL32	26	0.00429	0.750	0.762	-1.76	275.8	9.9	0.73432	
5	CL12	CL9	320	0.05444	0.696	0.730	-4.59	263.1	103.3	0.80230	
4	CL5	CL34	366	0.12597	0.570	0.685	-13.0	203.6	199.7	0.85245	
3	CL6	OB202	27	0.00389	0.566	0.616	-4.71	301.2	6.6	0.96820	
2	CL7	CL4	438	0.28653	0.279	0.464	-11.3	179.5	300.7	1.05114	
1	CL2	CL3	465	0.27943	0.000	0.000	0.00	.	179.5	1.59658	

CLUSTERING ON shrink1 wattab awc2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.72851	1.00497	0.576169	0.57617
2	0.72354	0.17558	0.241179	0.81735
3	0.54795	.	0.182651	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL33	CL61	11	0.00190	0.868	0.890	-5.56	154.0	7.0	0.53783	
19	OB206	CL111	3	0.00096	0.867	0.886	-4.64	161.6	11.2	0.58625	
18	CL38	OB227	6	0.00105	0.866	0.881	-3.66	169.9	3.6	0.58881	
17	CL21	CL35	171	0.01982	0.846	0.876	-6.63	154.0	76.0	0.63530	
16	CL26	CL17	325	0.09961	0.747	0.870	-20.8	88.2	297.3	0.66233	
15	CL20	CL50	18	0.00608	0.740	0.864	-20.3	91.7	17.8	0.67736	
14	CL24	CL57	11	0.00273	0.738	0.857	-19.2	97.6	7.6	0.69913	
13	CL23	CL28	18	0.00654	0.731	0.849	-18.5	102.5	17.7	0.72657	
12	CL27	CL22	65	0.01696	0.714	0.840	-18.8	102.9	47.0	0.74584	
11	CL15	CL30	20	0.00279	0.711	0.829	-17.4	111.9	4.2	0.75028	
10	CL11	OB392	21	0.00219	0.709	0.817	-15.6	123.3	2.8	0.83991	
9	CL16	CL12	390	0.10460	0.605	0.803	-23.9	87.2	164.0	0.85909	
8	CL18	OB202	7	0.00258	0.602	0.786	-21.9	98.8	5.8	0.88531	
7	CL10	CL25	33	0.01895	0.583	0.765	-20.9	106.8	27.9	0.91797	
6	CL13	CL14	29	0.01788	0.565	0.739	-19.3	119.4	26.2	0.94537	
5	CL9	CL40	393	0.01311	0.552	0.704	-16.6	141.8	14.5	1.12511	
4	CL6	CL8	36	0.02036	0.532	0.654	-13.3	174.5	16.9	1.13446	
3	CL5	CL19	396	0.01655	0.515	0.572	-5.25	245.5	17.8	1.25953	
2	CL4	CL7	69	0.07918	0.436	0.434	0.16	358.0	52.3	1.32077	
1	CL2	CL3	465	0.43604	0.000	0.000	0.00	.	358.0	1.59800	

CLUSTERING ON shrink1 wattab awc2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL66	CL31	12	0.00216	0.857	0.890	-7.93	140.7	14.5	0.47217	
19	CL40	CL26	22	0.00502	0.852	0.886	-7.85	142.9	20.6	0.49402	
18	CL32	CL19	273	0.02373	0.829	0.881	-11.2	127.1	68.8	0.52169	
17	CL24	CL49	18	0.00608	0.822	0.876	-11.1	129.7	17.8	0.57443	
16	CL17	CL30	20	0.00253	0.820	0.870	-10.2	136.3	3.8	0.57141	
15	CL18	CL28	294	0.02974	0.790	0.864	-13.6	121.0	69.5	0.59487	
14	CL22	CL131	14	0.00264	0.788	0.857	-12.5	128.6	7.5	0.59801	
13	CL20	CL38	58	0.01589	0.772	0.849	-13.2	127.3	48.2	0.62238	
12	CL27	CL48	11	0.00273	0.769	0.840	-11.9	137.0	7.6	0.62245	
11	CL16	CL21	22	0.00321	0.766	0.829	-10.5	148.4	4.3	0.63955	
10	CL15	CL13	352	0.10011	0.666	0.817	-20.3	100.6	185.4	0.69242	
9	CL10	CL25	396	0.07854	0.587	0.803	-25.4	81.0	104.0	0.68254	
8	CL14	CL29	20	0.00880	0.578	0.786	-23.9	89.5	18.4	0.69709	
7	CL11	CL33	34	0.01890	0.559	0.765	-22.9	96.9	27.2	0.75142	
6	CL8	CL12	31	0.01744	0.542	0.739	-21.3	108.6	21.6	0.75501	
5	CL6	OB202	32	0.00355	0.538	0.704	-17.8	134.1	2.6	0.92225	
4	CL5	CL7	66	0.07944	0.459	0.654	-19.7	130.3	59.5	1.05735	
3	CL9	OB227	397	0.00640	0.453	0.572	-10.4	190.9	6.7	1.22021	
2	CL3	CL108	399	0.01330	0.439	0.434	0.39	362.7	13.8	1.24505	
1	CL4	CL2	465	0.43924	0.000	0.000	0.00	.	362.7	1.34141	

CLUSTERING ON shrink1 wattab drain- AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.07089	1.45122	0.690295	0.69030
2	0.61966	0.31021	0.206554	0.89685
3	0.30945	.	0.103150	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Time
20	CL46	CL41	34	0.00389	0.892	0.908	-4.77	194.3	26.1	0.46991	
19	CL26	OB6	15	0.00091	0.892	0.905	-3.89	203.6	3.0	0.53969	
18	OB202	CL69	4	0.00093	0.891	0.901	-2.95	214.0	7.8	0.55217	
17	CL21	CL54	7	0.00139	0.889	0.897	-2.07	224.7	4.4	0.55855	
16	CL20	CL27	67	0.01511	0.874	0.892	-4.58	207.8	63.7	0.56211	
15	CL24	OB257	8	0.00101	0.873	0.886	-3.41	221.1	3.5	0.57039	
14	CL29	CL22	304	0.06045	0.813	0.881	-13.8	150.4	261.2	0.57463	
13	CL30	CL15	18	0.00407	0.809	0.874	-13.0	159.1	12.7	0.58934	
12	CL16	CL28	75	0.00864	0.800	0.866	-12.7	164.6	19.4	0.66703	
11	CL14	CL25	325	0.02691	0.773	0.858	-14.8	154.6	63.9	0.69237	
10	CL19	CL34	17	0.00305	0.770	0.848	-13.3	169.2	8.9	0.71347	
9	OB10	CL23	15	0.00192	0.768	0.836	-11.3	188.7	5.9	0.74089	
8	CL9	CL12	90	0.02660	0.741	0.822	-12.4	187.2	49.4	0.84666	
7	CL10	CL18	21	0.00793	0.733	0.804	-10.6	210.1	16.2	0.86457	
6	CL13	CL17	25	0.01183	0.722	0.782	-8.68	238.0	22.4	0.87264	
5	CL8	CL11	415	0.18645	0.535	0.753	-23.4	132.4	325.1	0.95954	
4	CL6	CL7	46	0.03561	0.500	0.712	-21.9	153.4	38.0	1.06642	
3	CL5	CL62	418	0.01932	0.480	0.648	-14.1	213.5	19.0	1.32579	
2	CL3	OB392	419	0.00882	0.471	0.519	-3.16	413.0	8.3	1.51591	
1	CL4	CL2	465	0.47147	0.000	0.000	0.00	.	413.0	1.81016	

CLUSTERING ON shrink1 wattab drain - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Time
20	CL55	CL32	8	0.00159	0.871	0.908	-10.3	157.4	9.8	0.42977	
19	CL38	CL21	337	0.07685	0.794	0.905	-23.0	95.3	259.3	0.46092	
18	CL31	OB6	15	0.00091	0.793	0.901	-22.0	100.6	3.0	0.47567	
17	CL22	CL41	7	0.00139	0.791	0.897	-21.1	106.2	4.4	0.47574	
16	CL33	CL25	17	0.00413	0.787	0.892	-20.5	110.7	15.1	0.48247	
15	CL16	OB257	18	0.00095	0.786	0.886	-19.3	118.2	1.9	0.48397	
14	CL19	CL20	345	0.00815	0.778	0.881	-19.0	121.7	15.6	0.49196	
13	CL35	CL34	14	0.00207	0.776	0.874	-17.8	130.5	8.2	0.52877	
12	OB202	CL68	4	0.00093	0.775	0.866	-16.3	141.9	7.8	0.53531	
11	CL14	CL26	366	0.02716	0.748	0.858	-18.2	134.7	51.4	0.56415	
10	CL13	CL24	48	0.01694	0.731	0.848	-18.3	137.4	56.7	0.62951	
9	CL18	CL28	17	0.00305	0.728	0.836	-16.5	152.5	8.9	0.63274	
8	CL10	OB392	49	0.00191	0.726	0.822	-14.4	173.0	2.9	0.67336	
7	CL11	OB196	367	0.00230	0.724	0.804	-11.8	200.0	3.8	0.73217	
6	CL15	CL17	25	0.01183	0.712	0.782	-9.89	226.9	22.4	0.73793	
5	CL9	CL12	21	0.00793	0.704	0.753	-6.69	273.5	16.2	0.75399	
4	CL6	CL5	46	0.03561	0.668	0.712	-5.58	309.7	38.0	0.85077	
3	CL8	CL7	416	0.17757	0.491	0.648	-13.4	222.7	288.8	0.97623	
2	CL3	CL53	419	0.01935	0.471	0.519	-3.16	413.0	18.7	1.22763	
1	CL4	CL2	465	0.47147	0.000	0.000	0.00	.	413.0	1.62447	

CLUSTERING ON shrink1 wattab flood-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.68281	0.724588	0.560938	0.56094
2	0.95823	0.599265	0.319409	0.88035
3	0.35896	.	0.119654	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL58	OB461	3	0.00098	0.852	0.896	-10.7	134.5	5.7	0.60059	
19	CL35	CL25	12	0.00281	0.849	0.892	-10.2	139.2	9.1	0.60240	
18	CL38	CL33	6	0.00221	0.847	0.888	-9.45	145.2	6.7	0.66603	
17	CL43	OB392	35	0.00182	0.845	0.883	-8.56	152.4	15.4	0.67881	
16	CL17	CL28	39	0.00598	0.839	0.877	-8.41	155.8	32.8	0.69591	
15	CL22	CL16	62	0.02275	0.816	0.871	-11.1	142.6	58.9	0.73897	
14	CL24	CL31	16	0.00479	0.811	0.865	-10.4	149.2	13.3	0.76426	
13	CL21	OB202	9	0.00216	0.809	0.857	-9.19	159.7	3.8	0.82477	
12	CL66	OB156	3	0.00201	0.807	0.849	-7.77	172.3	16.0	0.84578	
11	CL14	CL18	22	0.00891	0.798	0.839	-7.31	179.6	13.3	0.86753	
10	CL26	CL44	348	0.01227	0.786	0.827	-7.14	185.6	36.2	0.90653	
9	CL10	CL19	360	0.03496	0.751	0.814	-9.86	171.9	92.4	0.94864	
8	CL13	CL20	12	0.00687	0.744	0.798	-8.17	189.8	9.4	0.97783	
7	CL11	OB171	23	0.00304	0.741	0.778	-5.50	218.5	2.9	0.98580	
6	CL29	CL12	7	0.00692	0.734	0.753	-2.72	253.5	11.1	1.07639	
5	CL15	CL9	422	0.20567	0.528	0.720	-20.4	128.9	399.3	1.08805	
4	CL6	CL8	19	0.01998	0.509	0.673	-17.3	159.0	14.0	1.28658	
3	CL7	CL5	445	0.20678	0.302	0.601	-22.2	99.8	204.8	1.63911	
2	CL4	OB462	20	0.00982	0.292	0.423	-8.72	190.9	4.0	1.71404	
1	CL3	CL2	465	0.29190	0.000	0.000	0.00	.	190.9	2.12270	

CLUSTERING ON shrink1 wattab flood-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL23	CL56	22	0.00220	0.866	0.896	-7.76	150.9	6.1	0.52932	
19	CL52	OB461	3	0.00098	0.865	0.892	-6.84	158.3	5.7	0.58364	
18	CL38	CL33	6	0.00221	0.862	0.888	-6.14	164.8	6.7	0.58438	
17	CL18	CL29	9	0.00359	0.859	0.883	-5.66	170.4	6.0	0.64507	
16	CL25	CL17	22	0.01011	0.849	0.877	-6.45	168.0	16.6	0.66418	
15	CL20	CL27	84	0.03445	0.814	0.871	-11.4	140.9	110.3	0.70158	
14	CL22	CL64	14	0.00795	0.806	0.865	-11.2	144.4	21.0	0.73322	
13	CL21	OB202	9	0.00216	0.804	0.857	-10.0	154.7	3.8	0.75137	
12	CL15	OB392	85	0.00250	0.802	0.849	-8.67	166.5	3.5	0.76649	
11	CL28	CL36	323	0.01282	0.789	0.839	-8.79	169.6	44.5	0.77739	
10	CL11	CL14	337	0.03612	0.753	0.827	-11.9	153.9	102.6	0.79030	
9	CL62	OB156	3	0.00201	0.751	0.814	-9.90	171.6	16.0	0.83709	
8	CL12	CL10	422	0.20540	0.545	0.798	-28.0	78.3	398.3	0.83787	
7	CL13	CL19	12	0.00687	0.538	0.778	-26.1	89.0	9.4	0.84172	
6	CL16	OB171	23	0.00304	0.535	0.753	-23.4	105.8	2.9	0.85847	
5	CL26	CL9	7	0.00692	0.528	0.720	-20.4	128.9	11.1	0.96757	
4	CL5	CL7	19	0.01998	0.509	0.673	-17.3	159.0	14.0	1.02397	
3	CL6	CL8	445	0.20678	0.302	0.601	-22.2	99.8	204.8	1.48305	
2	CL4	OB462	20	0.00982	0.292	0.423	-8.72	190.9	4.0	1.54864	
1	CL3	CL2	465	0.29190	0.000	0.000	0.00	.	190.9	1.88103	

CLUSTERING ON shrink1 wattab watsoil-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.84965	1.02244	0.616550	0.61655
2	0.82721	0.50408	0.275738	0.89229
3	0.32314	.	0.107713	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL32	CL42	10	0.00275	0.890	0.901	-3.18	190.3	14.2	0.57228	
19	OB202	CL51	4	0.00098	0.889	0.898	-2.30	199.3	5.9	0.57274	
18	CL26	CL48	11	0.00245	0.887	0.893	-1.75	206.3	6.5	0.61279	
17	CL27	CL52	22	0.00233	0.885	0.889	-1.09	214.7	6.5	0.63453	
16	CL80	CL50	4	0.00169	0.883	0.884	-0.16	225.8	10.9	0.65412	
15	OB156	CL19	5	0.00128	0.882	0.878	0.97	239.5	2.9	0.66819	
14	CL41	OB392	7	0.00170	0.880	0.872	2.11	254.3	9.2	0.70501	
13	CL24	CL25	15	0.00488	0.875	0.864	2.57	263.9	14.3	0.71915	
12	CL33	CL17	312	0.03348	0.842	0.856	-3.10	218.8	168.3	0.72272	
11	CL16	CL69	6	0.00242	0.839	0.847	-1.62	236.9	4.6	0.74289	
10	CL23	CL14	85	0.01079	0.828	0.836	-1.54	244.0	29.0	0.74894	
9	CL20	CL18	21	0.01032	0.818	0.824	-1.03	256.3	19.3	0.82473	
8	CL10	CL12	397	0.14950	0.669	0.808	-18.6	131.7	431.6	0.83886	
7	CL21	CL36	18	0.00937	0.659	0.789	-16.9	147.6	19.3	0.92645	
6	CL9	CL7	39	0.03307	0.626	0.766	-17.0	153.7	32.5	1.11291	
5	CL11	CL15	11	0.01375	0.612	0.734	-14.4	181.7	17.4	1.21067	
4	CL8	CL13	412	0.07580	0.537	0.690	-16.6	177.9	105.1	1.23616	
3	CL6	CL4	451	0.26459	0.272	0.620	-24.9	86.3	268.7	1.53380	
2	CL38	CL5	14	0.03228	0.240	0.464	-13.4	146.0	18.2	1.91086	
1	CL3	CL2	465	0.23969	0.000	0.000	0.00	.	146.0	2.31239	

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	OB227	CL69	4	0.00082	0.893	0.901	-2.42	195.8	8.8	0.50517	
19	CL30	CL36	10	0.00275	0.890	0.898	-2.03	201.3	14.2	0.50559	
18	CL28	CL50	11	0.00245	0.888	0.893	-1.48	208.4	6.5	0.51065	
17	OB202	CL52	4	0.00098	0.887	0.889	-0.46	219.8	5.9	0.54986	
16	CL45	CL21	326	0.03785	0.849	0.884	-7.93	168.5	177.2	0.56781	
15	CL25	CL39	70	0.00826	0.841	0.878	-8.16	169.9	29.1	0.59101	
14	OB156	CL17	5	0.00128	0.840	0.872	-6.91	181.6	2.9	0.60871	
13	CL22	CL20	15	0.00488	0.835	0.864	-6.23	190.2	14.3	0.62149	
12	CL71	CL47	4	0.00169	0.833	0.856	-4.78	205.4	10.9	0.62597	
11	CL12	CL67	6	0.00242	0.831	0.847	-3.29	222.6	4.6	0.64931	
10	CL19	CL18	21	0.01032	0.820	0.836	-3.05	230.7	19.3	0.67621	
9	CL15	CL16	396	0.14283	0.677	0.824	-20.1	119.7	418.1	0.75830	
8	CL23	CL33	18	0.00937	0.668	0.808	-18.7	131.4	19.3	0.83610	
7	CL10	CL8	39	0.03307	0.635	0.789	-19.3	132.8	32.5	0.88976	
6	CL7	CL13	54	0.05201	0.583	0.766	-20.9	128.3	33.8	1.05536	
5	CL11	CL14	11	0.01375	0.569	0.734	-18.4	152.0	17.4	1.08162	
4	CL6	CL9	450	0.28893	0.280	0.690	-34.7	59.9	316.1	1.18768	
3	CL4	OB392	451	0.00834	0.272	0.620	-24.9	86.3	5.4	1.39248	
2	CL31	CL5	14	0.03228	0.240	0.464	-13.4	146.0	18.2	1.78239	
1	CL3	CL2	465	0.23969	0.000	0.000	0.00	.	146.0	2.02370	

CLUSTERING ON shrink1 wattab pan-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.61060	0.759159	0.536867	0.53687
2	0.85144	0.313484	0.283814	0.82068
3	0.53796	.	0.179319	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL37	CL30	16	0.00385	0.909	0.887	6.54	234.4	17.7	0.56005	
19	CL38	CL21	198	0.03763	0.872	0.883	-2.85	168.1	169.0	0.57505	
18	CL34	CL35	30	0.00830	0.863	0.878	-3.54	166.0	47.0	0.58258	
17	CL39	OB463	112	0.00141	0.862	0.873	-2.56	174.6	9.6	0.60358	
16	CL33	OB202	7	0.00126	0.861	0.867	-1.46	184.7	5.0	0.62521	
15	CL27	CL56	8	0.00213	0.858	0.860	-0.45	194.9	8.6	0.63136	
14	CL23	CL78	42	0.01353	0.845	0.853	-1.75	189.0	103.8	0.63387	
13	CL18	OB392	31	0.00136	0.844	0.845	-0.31	203.1	3.0	0.65514	
12	CL19	CL36	215	0.01975	0.824	0.836	-2.31	192.5	49.9	0.65565	
11	CL14	CL17	154	0.03886	0.785	0.825	-6.89	165.7	162.4	0.65972	
10	CL32	CL24	19	0.00626	0.779	0.813	-5.68	177.9	27.5	0.74301	
9	CL20	CL15	24	0.00862	0.770	0.798	-4.54	190.9	18.1	0.76135	
8	CL22	CL45	14	0.00386	0.766	0.781	-2.31	213.9	11.0	0.78956	
7	CL8	CL9	38	0.01377	0.752	0.759	-1.05	232.0	18.2	0.82458	
6	CL12	CL11	369	0.18241	0.570	0.732	-18.1	121.7	373.3	0.83505	
5	CL13	CL10	50	0.02931	0.541	0.696	-16.8	135.4	56.8	0.90025	
4	CL7	CL16	45	0.01603	0.525	0.646	-13.1	169.6	15.8	0.98125	
3	CL5	CL6	419	0.17992	0.345	0.564	-17.4	121.5	180.4	1.19425	
2	CL4	OB236	46	0.00666	0.338	0.405	-4.77	236.5	4.9	1.37334	
1	CL2	CL3	465	0.33809	0.000	0.000	0.00	.	236.5	1.59875	

CLUSTERING ON shrink1 wattab pan-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL37	CL30	21	0.00359	0.876	0.887	-2.89	165.8	17.9	0.50686	
19	CL36	CL38	9	0.00175	0.874	0.883	-2.15	172.6	9.1	0.51088	
18	CL24	CL35	30	0.00830	0.866	0.878	-2.88	170.1	47.0	0.51140	
17	CL21	CL52	198	0.00556	0.861	0.873	-2.84	172.8	14.4	0.51429	
16	CL17	CL41	307	0.09099	0.770	0.867	-17.2	100.0	286.9	0.54797	
15	CL23	CL73	44	0.01388	0.756	0.860	-17.7	99.4	94.8	0.55554	
14	CL18	OB392	31	0.00136	0.754	0.853	-16.4	106.5	3.0	0.57157	
13	CL28	CL48	8	0.00213	0.752	0.845	-15.2	114.4	8.6	0.57358	
12	CL26	OB202	12	0.00147	0.751	0.836	-13.7	124.1	4.3	0.60973	
11	CL25	CL19	21	0.00851	0.742	0.825	-12.9	130.7	22.7	0.61949	
10	CL14	CL34	46	0.01828	0.724	0.813	-13.1	132.6	45.3	0.64775	
9	CL11	CL12	33	0.01420	0.710	0.798	-12.6	139.4	21.5	0.65684	
8	CL9	CL13	41	0.01053	0.699	0.781	-11.2	151.8	10.7	0.61605	
7	CL15	OB463	45	0.00186	0.697	0.759	-8.42	175.9	4.0	0.66502	
6	CL16	CL20	328	0.04085	0.657	0.732	-9.53	175.5	68.3	0.69440	
5	CL22	OB236	5	0.00233	0.654	0.696	-5.26	217.6	9.3	0.82227	
4	CL6	CL7	373	0.12499	0.529	0.646	-12.7	172.7	179.9	0.85605	
3	CL10	CL4	419	0.17170	0.358	0.564	-16.6	128.5	170.9	0.98627	
2	CL3	CL5	424	0.03007	0.327	0.405	-5.49	225.4	21.4	1.18818	
1	CL8	CL2	465	0.32744	0.000	0.000	0.00	.	225.4	1.42548	

CLUSTERING ON shrink1 wattab hyd - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.87882	1.14933	0.626274	0.62627
2	0.72949	0.33780	0.243163	0.86944
3	0.39169	.	0.130563	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL40	CL76	15	0.00210	0.905	0.899	1.80	222.2	13.4	0.50159	
19	CL29	CL73	40	0.00323	0.901	0.895	1.97	226.5	21.5	0.50597	
18	CL96	OB253	3	0.00072	0.901	0.890	3.00	238.5	10.2	0.50803	
17	OB10	CL24	13	0.00101	0.900	0.886	4.01	251.1	3.5	0.56040	
16	CL25	CL36	14	0.00290	0.897	0.880	4.55	260.1	10.7	0.57500	
15	CL26	CL19	70	0.01686	0.880	0.874	1.37	235.5	68.3	0.58375	
14	CL18	CL30	7	0.00180	0.878	0.868	2.50	250.0	5.7	0.59148	
13	CL17	CL21	24	0.00513	0.873	0.861	2.93	258.9	14.2	0.59466	
12	CL16	CL37	26	0.00643	0.867	0.852	3.24	267.4	19.4	0.60643	
11	CL23	CL22	288	0.08622	0.780	0.843	-10.8	161.3	393.4	0.61507	
10	CL20	CL174	17	0.00255	0.778	0.832	-9.15	177.0	9.2	0.63265	
9	CL11	CL10	305	0.02034	0.757	0.819	-9.75	178.0	39.6	0.71081	
8	CL12	CL46	28	0.00416	0.753	0.803	-7.71	199.3	7.4	0.81937	
7	CL15	CL35	99	0.05461	0.699	0.784	-11.7	177.0	148.9	0.86303	
6	CL13	OB392	25	0.00285	0.696	0.759	-8.56	210.0	5.0	0.90348	
5	CL7	CL9	404	0.20790	0.488	0.727	-24.3	109.6	314.0	0.99525	
4	CL14	OB202	8	0.00371	0.484	0.681	-20.1	144.3	6.6	1.04625	
3	CL8	CL6	53	0.04617	0.438	0.612	-14.4	180.1	67.9	1.05556	
2	CL3	CL4	61	0.03078	0.407	0.471	-4.29	318.1	20.7	1.25957	
1	CL2	CL5	465	0.40727	0.000	0.000	0.00	.	318.1	1.58320	

CLUSTERING ON shrink1 wattab hyd - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL25	CL32	13	0.00227	0.909	0.899	3.15	233.5	8.3	0.47736	
19	CL24	CL40	166	0.03878	0.870	0.895	-6.35	165.9	209.9	0.48462	
18	CL87	OB253	3	0.00072	0.869	0.890	-5.32	174.9	10.2	0.49994	
17	CL18	CL28	7	0.00180	0.868	0.886	-4.47	183.4	5.7	0.49328	
16	CL19	CL33	200	0.03222	0.835	0.880	-9.81	151.8	87.1	0.51469	
15	CL16	CL93	202	0.00209	0.833	0.874	-8.80	160.6	4.0	0.49465	
14	CL20	CL34	17	0.00363	0.830	0.868	-7.97	168.9	9.3	0.52443	
13	OB10	CL23	21	0.00114	0.828	0.861	-6.56	181.9	2.6	0.52631	
12	CL14	CL36	29	0.00846	0.820	0.852	-6.33	187.6	20.2	0.52823	
11	CL21	CL173	17	0.00255	0.817	0.843	-4.84	203.3	9.2	0.57880	
10	CL22	CL11	168	0.02090	0.797	0.832	-6.24	197.9	102.0	0.56334	
9	CL26	CL68	34	0.00516	0.791	0.819	-4.70	216.2	20.5	0.58261	
8	CL13	CL9	55	0.02184	0.770	0.803	-5.37	218.0	51.0	0.62478	
7	CL10	CL15	370	0.15771	0.612	0.784	-20.6	120.3	357.1	0.63161	
6	CL8	OB392	56	0.00186	0.610	0.759	-17.7	143.6	2.3	0.66236	
5	CL12	CL35	31	0.00416	0.606	0.727	-14.2	176.7	6.0	0.71823	
4	CL5	OB202	32	0.00395	0.602	0.681	-9.31	232.3	4.9	0.97244	
3	CL4	CL17	39	0.02403	0.578	0.612	-3.30	316.2	28.3	0.98518	
2	CL6	CL7	426	0.25497	0.323	0.471	-9.28	220.8	294.9	1.10281	
1	CL3	CL2	465	0.32287	0.000	0.000	0.00	.	220.8	1.44794	

CLUSTERING ON shrink1 wattab bedrock-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.43668	0.392661	0.478892	0.47889
2	1.04402	0.524709	0.348005	0.82690
3	0.51931	.	0.173102	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Time
20	CL29	OB202	8	0.00101	0.908	0.885	6.65	230.6	4.6	0.55731	
19	CL31	CL30	21	0.00333	0.904	0.881	6.79	234.6	20.2	0.55972	
18	CL23	CL45	15	0.00366	0.901	0.876	6.93	238.8	15.8	0.56908	
17	CL25	CL36	14	0.00184	0.899	0.870	7.74	249.1	8.1	0.57492	
16	CL17	CL39	41	0.01086	0.888	0.864	6.01	237.6	54.8	0.61315	
15	CL24	CL21	335	0.03873	0.849	0.858	-1.85	181.2	189.0	0.61874	
14	CL18	CL27	18	0.00321	0.846	0.851	-0.92	190.8	7.1	0.66504	
13	CL16	OB392	42	0.00146	0.845	0.842	0.51	204.9	3.1	0.67209	
12	CL22	CL20	29	0.00805	0.837	0.833	0.76	210.9	24.9	0.67845	
11	CL43	OB261	4	0.00174	0.835	0.822	2.51	229.6	12.2	0.74921	
10	CL15	CL19	356	0.03594	0.799	0.809	-1.82	200.9	112.1	0.75319	
9	OB229	OB230	2	0.00122	0.798	0.795	0.52	224.8	.	0.75382	
8	CL33	CL12	40	0.01432	0.783	0.777	1.06	236.2	28.7	0.77253	
7	CL8	CL44	42	0.00426	0.779	0.755	3.84	269.3	5.1	0.85723	
6	CL13	CL10	398	0.15841	0.621	0.727	-12.7	150.3	370.3	1.08917	
5	CL9	CL11	6	0.00587	0.615	0.691	-9.00	183.6	7.2	1.13180	
4	CL6	CL14	416	0.07669	0.538	0.639	-11.1	179.1	93.9	1.16558	
3	CL5	OB260	7	0.00652	0.532	0.558	-2.52	262.3	3.6	1.45479	
2	CL7	CL4	458	0.32088	0.211	0.361	-10.9	123.7	323.2	1.54638	
1	CL2	CL3	465	0.21081	0.000	0.000	0.00	.	123.7	2.82910	

CLUSTERING ON shrink1 wattab bedrock-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Time
20	CL34	CL29	20	0.00244	0.893	0.885	2.18	196.0	15.1	0.47150	
19	CL45	CL23	22	0.00572	0.888	0.881	1.79	195.5	29.7	0.49306	
18	CL24	CL32	28	0.00593	0.882	0.876	1.47	195.8	20.0	0.51199	
17	OB202	CL116	3	0.00075	0.881	0.870	2.61	207.0	33.3	0.51242	
16	CL19	CL30	24	0.00245	0.878	0.864	3.40	216.2	5.5	0.55700	
15	CL22	CL20	336	0.02903	0.849	0.858	-1.84	181.3	126.7	0.59835	
14	CL21	CL26	35	0.00888	0.840	0.851	-2.08	182.8	19.9	0.64358	
13	CL14	CL205	37	0.00305	0.837	0.842	-0.97	194.1	4.5	0.61149	
12	CL16	CL36	51	0.02311	0.814	0.833	-3.44	180.6	73.2	0.64964	
11	CL12	OB392	52	0.00180	0.813	0.822	-1.73	196.8	2.3	0.65310	
10	CL39	OB261	4	0.00174	0.811	0.809	0.23	216.6	12.2	0.73432	
9	OB229	OB230	2	0.00122	0.810	0.795	2.61	242.3	.	0.75382	
8	CL18	CL41	30	0.00465	0.805	0.777	4.79	269.4	9.4	0.76051	
7	CL15	CL13	373	0.10091	0.704	0.755	-6.99	181.6	283.3	0.83809	
6	CL8	CL17	33	0.00937	0.695	0.727	-4.36	208.8	15.1	0.89264	
5	CL11	CL7	425	0.18658	0.508	0.691	-19.1	118.8	288.6	0.97389	
4	CL9	CL10	6	0.00587	0.502	0.639	-14.5	155.0	7.2	1.01057	
3	CL4	OB260	7	0.00652	0.496	0.558	-5.73	227.0	3.6	1.32803	
2	CL5	CL6	458	0.28486	0.211	0.361	-10.9	123.7	265.8	1.46908	
1	CL2	CL3	465	0.21081	0.000	0.000	0.00	.	123.7	2.66339	

CLUSTERING ON shrink1 wattab salin1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.90227	1.29624	0.634089	0.63409
2	0.60603	0.11432	0.202009	0.83610
3	0.49170	.	0.163902	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	OB160	CL40	5	0.00103	0.878	0.897	-5.11	168.2	4.0	0.58467	
19	OB202	CL131	3	0.00105	0.877	0.893	-4.23	176.2	38.0	0.60805	
18	CL32	CL27	18	0.00578	0.871	0.888	-4.41	177.4	21.2	0.64047	
17	CL34	CL71	4	0.00155	0.869	0.883	-3.50	186.3	6.1	0.64734	
16	CL42	CL35	52	0.01080	0.859	0.878	-4.59	181.7	48.7	0.65866	
15	CL28	CL38	330	0.02047	0.838	0.872	-7.35	166.4	79.5	0.66538	
14	CL26	CL19	11	0.00354	0.835	0.866	-6.51	175.0	8.4	0.73408	
13	CL22	CL16	63	0.01279	0.822	0.858	-7.22	173.7	28.4	0.73599	
12	OB24	CL18	19	0.00171	0.820	0.850	-5.76	187.7	2.9	0.74120	
11	CL21	CL36	16	0.00797	0.812	0.840	-5.21	196.2	19.8	0.82666	
10	CL24	CL14	25	0.01263	0.799	0.829	-5.20	201.5	21.6	0.85539	
9	CL13	OB392	64	0.00274	0.797	0.815	-3.24	223.4	4.2	0.89163	
8	CL9	CL15	394	0.14980	0.647	0.799	-19.5	119.6	397.0	0.93698	
7	CL8	CL12	413	0.04807	0.599	0.780	-21.3	114.0	63.8	0.96703	
6	CL20	OB171	6	0.00319	0.596	0.755	-18.5	135.2	7.1	0.98534	
5	CL10	CL11	41	0.04334	0.552	0.722	-18.5	141.9	42.6	1.21243	
4	CL5	CL6	47	0.02747	0.525	0.676	-16.1	169.7	14.0	1.37106	
3	CL7	CL4	460	0.34607	0.179	0.601	-28.6	50.3	335.0	1.63510	
2	OB143	CL17	5	0.01460	0.164	0.477	-17.3	91.0	21.3	2.08671	
1	CL3	CL2	465	0.16419	0.000	0.000	0.00	.	91.0	2.98117	

CLUSTERING ON shrink1 wattab salin1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	OB160	CL39	5	0.00103	0.865	0.897	-8.13	149.9	4.0	0.54563	
19	CL49	CL25	12	0.00367	0.861	0.893	-7.81	153.7	11.0	0.56491	
18	CL34	CL37	334	0.02115	0.840	0.888	-10.9	138.1	74.8	0.58520	
17	CL18	CL26	355	0.02903	0.811	0.883	-14.8	120.2	85.4	0.58385	
16	CL29	CL63	4	0.00155	0.809	0.878	-13.8	127.2	6.1	0.59993	
15	OB202	CL128	3	0.00105	0.808	0.872	-12.6	135.6	38.0	0.60540	
14	CL21	CL22	50	0.01782	0.791	0.866	-13.9	131.0	45.3	0.64039	
13	CL19	CL27	26	0.01172	0.779	0.858	-14.1	132.7	21.4	0.64867	
12	CL23	CL14	61	0.01902	0.760	0.850	-15.0	130.3	27.2	0.69954	
11	CL13	CL15	29	0.00628	0.754	0.840	-14.0	138.8	6.5	0.73611	
10	CL12	OB392	62	0.00251	0.751	0.829	-12.3	152.5	2.5	0.76952	
9	OB24	CL151	3	0.00190	0.749	0.815	-10.3	170.2	117.1	0.81230	
8	CL36	CL20	10	0.00712	0.742	0.799	-8.67	187.8	20.1	0.81284	
7	CL8	OB171	11	0.00302	0.739	0.780	-6.02	216.2	2.7	0.87849	
6	CL10	CL17	417	0.19288	0.546	0.755	-22.7	110.5	377.9	0.92075	
5	CL9	OB143	4	0.00327	0.543	0.722	-19.4	136.6	3.4	1.00635	
4	CL11	CL7	40	0.04001	0.503	0.676	-18.0	155.4	33.6	1.07887	
3	CL6	CL5	421	0.03085	0.472	0.601	-11.1	206.5	31.5	1.34397	
2	CL4	CL3	461	0.31112	0.161	0.477	-17.5	88.8	271.5	1.40569	
1	CL2	CL16	465	0.16089	0.000	0.000	0.00	.	88.8	3.06800	

CLUSTERING ON shrink1 wattab slope-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.47388	0.456319	0.491295	0.49129
2	1.01757	0.509015	0.339189	0.83048
3	0.50855	.	0.169517	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL38	CL59	16	0.00240	0.897	0.886	2.92	202.9	12.2	0.54150	
19	CL20	CL40	28	0.00617	0.890	0.882	2.35	201.2	22.8	0.56567	
18	CL31	OB456	20	0.00109	0.889	0.877	3.31	211.2	4.4	0.56658	
17	CL36	CL26	274	0.02568	0.864	0.871	-1.82	177.3	139.0	0.57429	
16	CL28	OB202	5	0.00104	0.863	0.865	-0.67	187.8	3.8	0.59169	
15	CL17	CL35	291	0.02212	0.840	0.859	-3.89	169.3	81.0	0.65232	
14	CL22	CL259	15	0.00279	0.838	0.852	-2.87	179.0	10.4	0.66049	
13	CL18	CL21	45	0.01474	0.823	0.843	-3.97	175.0	42.1	0.67847	
12	CL16	CL24	7	0.00201	0.821	0.834	-2.49	188.7	4.3	0.68566	
11	CL23	CL32	63	0.00990	0.811	0.823	-2.24	194.8	27.4	0.70761	
10	CL19	CL30	37	0.01196	0.799	0.811	-2.05	201.0	27.8	0.75086	
9	OB10	OB392	2	0.00124	0.798	0.796	0.28	224.9	.	0.76003	
8	CL10	CL48	39	0.00363	0.794	0.778	2.62	251.9	4.9	0.79797	
7	CL15	CL11	354	0.10995	0.684	0.757	-9.61	165.4	291.0	0.83110	
6	CL8	CL12	46	0.01812	0.666	0.729	-8.06	183.1	22.7	1.01798	
5	CL14	CL39	18	0.00986	0.656	0.693	-4.60	219.5	23.8	1.01963	
4	CL13	CL7	399	0.14359	0.513	0.642	-13.8	161.6	209.0	1.07110	
3	CL6	CL4	445	0.33320	0.179	0.562	-27.0	50.5	314.3	1.54440	
2	CL3	CL5	463	0.15919	0.020	0.371	-22.1	9.6	89.6	1.66313	
1	CL2	CL9	465	0.02023	0.000	0.000	0.00	.	9.6	1.72964	

CLUSTERING ON shrink1 wattab slope-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL39	CL57	16	0.00240	0.872	0.886	-3.58	159.5	12.2	0.47794	
19	CL20	CL43	28	0.00617	0.866	0.882	-3.86	159.8	22.8	0.45702	
18	CL28	CL21	6	0.00159	0.864	0.877	-2.99	167.3	4.9	0.52594	
17	OB226	CL259	3	0.00079	0.863	0.871	-1.87	177.0	618.4	0.52595	
16	CL25	OB257	22	0.00130	0.862	0.865	-0.77	187.1	3.3	0.56169	
15	CL24	CL38	287	0.02195	0.840	0.859	-3.95	168.9	89.5	0.56428	
14	CL16	OB456	23	0.00132	0.839	0.852	-2.63	180.5	3.0	0.56532	
13	CL15	CL29	338	0.06979	0.769	0.843	-12.6	125.4	214.0	0.61149	
12	CL18	OB202	7	0.00147	0.768	0.834	-11.0	136.0	2.5	0.62995	
11	CL22	CL14	58	0.02540	0.742	0.823	-12.6	130.7	55.8	0.65154	
10	CL63	CL23	24	0.00488	0.737	0.811	-11.1	141.9	12.4	0.65663	
9	CL19	CL41	30	0.00415	0.733	0.796	-9.33	156.6	8.7	0.71790	
8	CL10	CL17	27	0.00652	0.727	0.778	-7.49	173.5	11.4	0.75323	
7	OB10	OB392	2	0.00124	0.725	0.757	-4.47	201.6	.	0.76003	
6	CL9	CL12	37	0.01785	0.708	0.729	-2.96	222.1	28.5	0.85419	
5	CL8	CL32	30	0.00978	0.698	0.693	0.67	265.5	12.9	0.91675	
4	CL11	CL13	396	0.18315	0.515	0.642	-13.6	162.9	313.4	0.92645	
3	CL4	CL5	426	0.18935	0.325	0.562	-18.5	111.3	180.7	1.25509	
2	CL6	CL3	463	0.30501	0.020	0.371	-22.1	9.6	208.8	1.44173	
1	CL2	CL7	465	0.02023	0.000	0.000	0.00	.	9.6	1.53523	

CLUSTERING ON shrink1 wattab om1 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.82949	1.15095	0.609829	0.60983
2	0.67854	0.18657	0.226180	0.83601
3	0.49197	.	0.163991	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL28	CL89	14	0.00243	0.882	0.894	-3.20	175.8	8.5	0.56641	
19	CL32	CL47	20	0.00383	0.879	0.890	-3.02	179.3	15.6	0.59935	
18	CL27	CL29	61	0.00619	0.872	0.886	-3.31	179.8	19.7	0.63049	
17	CL37	OB240	6	0.00135	0.871	0.881	-2.35	189.2	6.0	0.64509	
16	CL19	CL35	183	0.02463	0.846	0.875	-6.38	165.0	157.1	0.66715	
15	CL16	CL23	323	0.10952	0.737	0.869	-21.8	90.0	343.2	0.68517	
14	CL18	CL30	71	0.01177	0.725	0.862	-21.7	91.5	29.8	0.68572	
13	CL21	OB202	13	0.00171	0.723	0.855	-20.5	98.5	3.4	0.73148	
12	CL20	CL44	16	0.00312	0.720	0.846	-19.2	106.1	7.1	0.73556	
11	CL12	CL17	22	0.00671	0.714	0.836	-18.2	113.1	11.7	0.75974	
10	CL50	CL158	8	0.00489	0.709	0.824	-16.8	123.0	58.3	0.77231	
9	CL15	CL31	327	0.00835	0.700	0.811	-15.6	133.2	12.8	0.83116	
8	CL22	CL14	87	0.03030	0.670	0.794	-16.4	132.6	56.3	0.87351	
7	CL11	CL13	35	0.01677	0.653	0.774	-15.4	143.8	21.8	0.89211	
6	CL8	CL24	93	0.01592	0.637	0.749	-13.7	161.4	18.6	0.96866	
5	CL9	CL10	335	0.02804	0.609	0.715	-12.4	179.4	41.2	1.07069	
4	CL6	CL5	428	0.25339	0.356	0.667	-28.3	84.9	309.7	1.10376	
3	CL7	OB239	36	0.00435	0.352	0.592	-18.7	125.3	3.5	1.14795	
2	CL4	CL3	464	0.33363	0.018	0.459	-23.1	8.5	237.7	1.71950	
1	CL2	OB224	465	0.01797	0.000	0.000	0.00	.	8.5	2.16088	

CLUSTERING ON shrink1 wattab om1 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL24	OB257	19	0.00112	0.874	0.894	-5.27	162.6	2.4	0.52483	
19	CL37	CL42	20	0.00383	0.870	0.890	-5.03	166.2	15.6	0.52729	
18	CL35	CL21	17	0.00391	0.866	0.886	-4.73	170.5	8.6	0.54473	
17	CL19	CL29	183	0.02463	0.842	0.881	-8.64	148.9	157.1	0.56631	
16	CL23	OB6	14	0.00134	0.840	0.875	-7.58	157.6	3.5	0.57929	
15	CL16	CL18	31	0.01184	0.829	0.869	-8.39	155.3	20.5	0.59822	
14	CL17	CL27	347	0.13742	0.691	0.862	-25.4	77.6	403.3	0.60714	
13	CL14	CL31	353	0.01007	0.681	0.855	-25.0	80.4	13.8	0.62926	
12	CL45	CL30	10	0.00412	0.677	0.846	-23.9	86.3	16.3	0.63099	
11	CL12	CL156	14	0.00473	0.672	0.836	-22.6	93.1	9.2	0.61976	
10	CL20	CL32	55	0.02354	0.649	0.824	-23.0	93.3	62.9	0.66262	
9	CL22	OB240	7	0.00173	0.647	0.811	-21.1	104.4	4.3	0.68347	
8	CL10	CL9	62	0.01564	0.631	0.794	-20.3	111.8	19.9	0.76443	
7	CL15	CL40	33	0.00545	0.626	0.774	-18.1	127.7	5.9	0.82056	
6	CL13	CL11	367	0.04363	0.582	0.749	-18.9	127.9	57.5	0.86696	
5	CL7	OB202	34	0.00391	0.578	0.715	-15.4	157.7	3.6	0.96704	
4	CL8	CL6	429	0.23074	0.348	0.667	-28.9	81.9	257.0	1.00464	
3	CL5	OB239	35	0.00453	0.343	0.592	-19.2	120.6	3.9	1.04013	
2	CL4	CL3	464	0.32507	0.018	0.459	-23.1	8.5	228.6	1.52661	
1	CL2	OB224	465	0.01797	0.000	0.000	0.00	.	8.5	2.04411	

CLUSTERING ON shrink1 wattab om2 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.43882	0.415260	0.479608	0.47961
2	1.02357	0.485955	0.341188	0.82080
3	0.53761	.	0.179203	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL48	CL25	8	0.00111	0.898	0.885	3.65	205.5	4.7	0.51308	
19	CL29	CL46	55	0.00702	0.891	0.880	2.83	201.9	34.6	0.53095	
18	OB202	CL68	4	0.00088	0.890	0.875	3.86	212.3	7.6	0.53789	
17	CL49	CL24	10	0.00260	0.887	0.870	4.49	220.2	11.8	0.56781	
16	CL28	CL43	226	0.02019	0.867	0.864	0.77	195.2	98.4	0.61833	
15	CL22	OB241	5	0.00114	0.866	0.857	2.01	207.5	2.9	0.63045	
14	CL23	CL40	7	0.00222	0.864	0.850	3.13	219.8	7.7	0.63330	
13	CL31	CL34	42	0.01129	0.852	0.841	2.34	217.5	50.9	0.63726	
12	CL27	CL19	147	0.04240	0.810	0.832	-4.03	175.5	143.1	0.65138	
11	CL21	CL18	11	0.00327	0.807	0.821	-2.58	189.5	8.4	0.66452	
10	CL11	CL17	21	0.00656	0.800	0.808	-1.44	202.4	11.2	0.73097	
9	CL20	CL15	13	0.00541	0.795	0.794	0.20	220.7	12.3	0.76733	
8	CL13	OB392	43	0.00230	0.792	0.776	2.78	249.2	4.7	0.81029	
7	CL8	CL9	56	0.01817	0.774	0.754	3.23	261.8	30.0	0.85232	
6	CL10	CL26	27	0.01142	0.763	0.726	5.63	295.3	14.7	0.91179	
5	CL16	CL12	373	0.25046	0.512	0.689	-18.5	120.8	613.2	0.92469	
4	CL14	CL54	9	0.00685	0.506	0.637	-14.0	157.1	12.4	1.08029	
3	CL7	CL5	429	0.18906	0.316	0.555	-18.7	107.0	178.3	1.16691	
2	CL4	CL6	36	0.02602	0.290	0.362	-5.47	189.5	21.3	1.19832	
1	CL2	CL3	465	0.29045	0.000	0.000	0.00	.	189.5	1.67683	

CLUSTERING ON shrink1 wattab om2 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL59	OB239	5	0.00072	0.891	0.885	1.63	190.8	6.0	0.45707	
19	OB199	CL32	4	0.00070	0.890	0.880	2.63	200.5	3.0	0.46547	
18	CL24	OB236	8	0.00084	0.889	0.875	3.68	210.9	3.0	0.47109	
17	CL54	CL20	10	0.00260	0.887	0.870	4.31	218.8	11.8	0.49092	
16	CL21	CL17	20	0.00582	0.881	0.864	4.19	221.0	12.0	0.51987	
15	CL28	CL25	145	0.04258	0.838	0.857	-3.95	166.5	149.0	0.53796	
14	CL29	CL27	229	0.02226	0.816	0.850	-6.50	153.7	104.5	0.54437	
13	CL18	CL19	12	0.00343	0.812	0.841	-5.43	163.2	9.3	0.54608	
12	CL34	CL13	24	0.00650	0.806	0.832	-4.72	171.1	14.5	0.50121	
11	CL23	CL35	7	0.00222	0.804	0.821	-3.08	185.9	7.7	0.54829	
10	CL26	OB202	6	0.00145	0.802	0.808	-1.07	205.2	4.6	0.63541	
9	CL12	CL40	54	0.02343	0.779	0.794	-2.39	200.8	54.1	0.63852	
8	CL9	OB241	55	0.00212	0.777	0.776	0.17	227.1	2.4	0.70766	
7	CL16	CL10	26	0.01128	0.765	0.754	1.82	249.1	15.7	0.75309	
6	CL14	CL15	374	0.25114	0.514	0.726	-22.1	97.2	606.5	0.81009	
5	CL8	OB392	56	0.00283	0.511	0.689	-18.6	120.4	3.2	0.81699	
4	CL7	CL46	28	0.00686	0.505	0.637	-14.1	156.5	6.2	0.92565	
3	CL5	CL6	430	0.18875	0.316	0.555	-18.7	106.7	177.1	0.94818	
2	CL11	CL4	35	0.02493	0.291	0.362	-5.43	190.0	20.9	1.01626	
1	CL2	CL3	465	0.29096	0.000	0.000	0.00	.	190.0	1.44418	

CLUSTERING ON shrink1 wattab bd2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.02789	1.25575	0.675962	0.67596
2	0.77213	0.57215	0.257378	0.93334
3	0.19998	.	0.066660	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL36	CL46	37	0.00363	0.914	0.915	-0.39	249.9	28.9	0.47939	
19	CL27	CL45	6	0.00109	0.913	0.912	0.38	260.7	4.5	0.50836	
18	CL30	CL44	74	0.01071	0.902	0.908	-1.86	243.4	56.5	0.52285	
17	OB202	CL35	4	0.00088	0.902	0.904	-0.86	256.6	4.0	0.55266	
16	CL22	CL28	19	0.00407	0.898	0.900	-0.74	262.2	17.0	0.55341	
15	CL31	CL18	317	0.04668	0.851	0.895	-10.6	183.4	216.3	0.55580	
14	CL40	CL20	61	0.01744	0.833	0.890	-12.5	173.6	89.7	0.60127	
13	CL15	CL37	334	0.02323	0.810	0.884	-15.0	160.8	65.7	0.67469	
12	CL16	CL26	21	0.00268	0.808	0.877	-13.7	172.8	6.0	0.69431	
11	CL21	CL34	9	0.00358	0.804	0.869	-12.5	186.2	15.4	0.70239	
10	CL29	CL38	14	0.00344	0.800	0.859	-11.1	202.8	14.6	0.73897	
9	CL11	CL24	11	0.00277	0.798	0.849	-9.29	224.8	4.5	0.75635	
8	CL12	CL10	35	0.01409	0.784	0.835	-8.95	236.4	26.7	0.78490	
7	CL19	CL17	10	0.00478	0.779	0.819	-6.76	268.8	11.3	0.78642	
6	CL23	CL14	74	0.02183	0.757	0.799	-5.31	286.0	48.3	0.80424	
5	CL6	CL9	85	0.02391	0.733	0.770	-4.44	315.9	31.6	0.96240	
4	CL8	CL7	45	0.02842	0.705	0.728	-2.61	366.7	30.8	1.11615	
3	CL5	OB392	86	0.00439	0.700	0.658	4.70	539.8	4.3	1.12607	
2	CL3	CL13	420	0.34548	0.355	0.508	-9.32	254.6	623.5	1.23093	
1	CL4	CL2	465	0.35482	0.000	0.000	0.00	.	254.6	1.64165	

CLUSTERING ON shrink1 wattab bd2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL37	CL33	14	0.00225	0.904	0.915	-3.67	220.9	10.4	0.42782	
19	CL26	CL40	6	0.00109	0.903	0.912	-2.87	230.8	4.5	0.43607	
18	CL32	CL48	90	0.01133	0.892	0.908	-4.96	216.6	51.9	0.44704	
17	OB10	CL20	15	0.00081	0.891	0.904	-3.93	228.7	2.2	0.44772	
16	CL29	CL36	19	0.00407	0.887	0.900	-3.71	234.6	17.0	0.45160	
15	CL39	CL18	333	0.06575	0.821	0.895	-16.1	147.5	293.4	0.48193	
14	OB202	CL30	4	0.00088	0.820	0.890	-14.8	158.3	4.0	0.52118	
13	CL16	CL34	31	0.01062	0.810	0.884	-15.1	160.2	28.8	0.57880	
12	CL35	CL19	23	0.00648	0.803	0.877	-14.4	168.0	28.4	0.58241	
11	CL17	CL22	61	0.01664	0.786	0.869	-15.2	167.2	45.3	0.58424	
10	CL21	CL115	5	0.00183	0.785	0.859	-13.5	184.2	12.7	0.59470	
9	CL10	CL25	8	0.00321	0.781	0.849	-11.8	203.8	7.3	0.63018	
8	CL15	CL12	356	0.04721	0.734	0.835	-15.7	180.4	110.5	0.71349	
7	CL13	CL27	33	0.00423	0.730	0.819	-13.4	206.4	6.1	0.72279	
6	CL7	CL14	37	0.00932	0.721	0.799	-9.24	236.8	12.0	0.77868	
5	CL6	CL24	39	0.00510	0.716	0.770	-6.31	289.3	5.1	0.78957	
4	CL11	CL9	69	0.02341	0.692	0.728	-3.92	345.5	35.5	0.87634	
3	CL4	OB392	70	0.00357	0.689	0.658	3.34	510.8	3.6	0.91618	
2	CL3	CL8	426	0.33954	0.349	0.508	-9.62	248.3	534.1	1.16044	
1	CL5	CL2	465	0.34905	0.000	0.000	0.00	.	248.3	1.50549	

CLUSTERING ON shrink1 wattab cec2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.21225	1.52894	0.737418	0.73742
2	0.68331	0.57888	0.227771	0.96519
3	0.10443	.	0.034811	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL26	CL45	13	0.00126	0.917	0.933	-5.85	260.4	5.1	0.45482	
19	CL38	CL29	262	0.00508	0.912	0.930	-6.48	258.1	33.3	0.46266	
18	CL25	CL47	85	0.00117	0.911	0.927	-5.71	269.9	4.9	0.46283	
17	CL58	OB392	6	0.00074	0.910	0.924	-4.73	284.8	7.8	0.47284	
16	CL46	CL41	5	0.00113	0.909	0.920	-3.81	300.3	6.4	0.51755	
15	CL21	CL27	39	0.00452	0.905	0.917	-3.86	305.6	20.0	0.52539	
14	CL60	CL24	11	0.00265	0.902	0.912	-3.20	320.0	13.4	0.54496	
13	CL28	CL17	17	0.00399	0.898	0.907	-2.81	332.3	16.8	0.57714	
12	CL22	CL23	13	0.00275	0.895	0.902	-1.89	352.7	9.0	0.58746	
11	CL19	CL18	347	0.07464	0.821	0.895	-13.3	208.0	393.2	0.60507	
10	CL20	OB166	14	0.00119	0.820	0.888	-11.8	229.7	3.6	0.60699	
9	CL40	CL16	21	0.00471	0.815	0.879	-10.6	251.0	23.2	0.62939	
8	CL13	CL15	56	0.01808	0.797	0.867	-10.8	256.0	47.8	0.73084	
7	CL14	OB202	12	0.00196	0.795	0.852	-8.54	295.8	4.4	0.76730	
6	CL10	CL34	16	0.00373	0.791	0.832	-5.89	347.7	9.6	0.78026	
5	CL11	CL9	368	0.04158	0.750	0.805	-6.95	344.2	102.4	0.82191	
4	CL12	CL6	29	0.01595	0.734	0.763	-3.52	423.2	28.2	0.87036	
3	CL4	CL7	41	0.01937	0.714	0.694	2.24	577.3	20.1	0.95008	
2	CL8	CL5	424	0.31296	0.401	0.554	-9.12	310.3	577.2	1.33171	
1	CL3	CL2	465	0.40126	0.000	0.000	0.00	.	310.3	1.76321	

CLUSTERING ON shrink1 wattab cec2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL45	OB261	29	0.00067	0.913	0.933	-7.44	245.1	4.0	0.40179	
19	CL40	OB257	4	0.00053	0.912	0.930	-6.52	257.6	3.0	0.40327	
18	CL20	CL24	36	0.00432	0.908	0.927	-6.76	259.3	22.6	0.42164	
17	CL35	OB244	85	0.00077	0.907	0.924	-5.79	273.6	3.2	0.42433	
16	CL59	OB392	6	0.00074	0.906	0.920	-4.74	290.0	7.8	0.45383	
15	CL37	CL32	5	0.00113	0.905	0.917	-3.72	307.3	6.4	0.46809	
14	CL61	CL23	11	0.00265	0.903	0.912	-3.06	321.7	13.4	0.47484	
13	CL21	CL16	20	0.00415	0.898	0.907	-2.72	333.4	14.2	0.47896	
12	CL26	CL19	14	0.00288	0.896	0.902	-1.85	353.3	9.1	0.48398	
11	CL22	CL17	347	0.07464	0.821	0.895	-13.2	208.2	393.2	0.51944	
10	CL25	OB166	13	0.00113	0.820	0.888	-11.8	230.1	3.6	0.53238	
9	CL41	CL15	21	0.00471	0.815	0.879	-10.6	251.3	23.2	0.53585	
8	CL13	CL18	56	0.01826	0.797	0.867	-10.8	256.1	48.7	0.57409	
7	CL11	CL9	368	0.04158	0.755	0.852	-13.1	235.6	102.4	0.69799	
6	CL14	OB202	12	0.00196	0.753	0.832	-10.4	280.4	4.4	0.70376	
5	CL10	CL29	15	0.00375	0.750	0.805	-6.95	344.2	10.2	0.70840	
4	CL12	CL5	29	0.01598	0.734	0.763	-3.52	423.2	28.3	0.71543	
3	CL4	CL6	41	0.01937	0.714	0.694	2.24	577.3	20.1	0.72768	
2	CL3	CL8	97	0.14572	0.569	0.554	0.99	610.0	145.0	1.19509	
1	CL2	CL7	465	0.56851	0.000	0.000	0.00	.	610.0	1.31078	

CLUSTERING ON shrink1 wattab salin2 AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.02336	1.45110	0.674454	0.67445
2	0.57226	0.16789	0.190754	0.86521
3	0.40437	.	0.134791	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.44949

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL27	CL30	81	0.01789	0.878	0.903	-6.94	168.3	72.9	0.58396	
19	CL39	CL44	18	0.00311	0.875	0.899	-6.57	173.1	14.6	0.60643	
18	CL20	CL338	83	0.00222	0.873	0.895	-5.91	180.0	4.8	0.60877	
17	OB10	CL23	10	0.00120	0.871	0.891	-4.94	189.6	3.7	0.61371	
16	CL17	CL29	16	0.00439	0.867	0.886	-4.62	195.0	11.2	0.65193	
15	OB24	CL38	6	0.00143	0.866	0.880	-3.52	206.9	6.1	0.66555	
14	CL28	CL33	5	0.00195	0.864	0.874	-2.43	219.6	5.1	0.69260	
13	OB2	CL21	15	0.00161	0.862	0.867	-1.13	235.2	3.5	0.70618	
12	CL26	OB160	9	0.00175	0.860	0.859	0.29	253.4	4.5	0.73106	
11	CL31	CL19	318	0.02984	0.830	0.850	-3.90	222.2	135.4	0.73523	
10	CL22	CL13	21	0.00853	0.822	0.839	-3.34	233.2	16.5	0.81667	
9	CL18	CL11	401	0.14087	0.681	0.827	-20.2	121.7	404.5	0.82432	
8	CL10	CL24	24	0.00724	0.674	0.812	-18.6	134.8	8.3	0.95189	
7	CL9	CL15	407	0.01700	0.657	0.793	-17.7	146.0	24.4	0.95968	
6	CL8	CL12	33	0.02442	0.632	0.770	-16.9	157.9	24.5	1.11176	
5	CL6	CL16	49	0.03844	0.594	0.739	-16.7	168.2	27.7	1.16609	
4	CL7	OB392	408	0.00903	0.585	0.696	-12.6	216.5	12.2	1.50671	
3	CL5	CL4	457	0.38135	0.203	0.629	-28.7	59.0	421.3	1.63961	
2	CL3	CL62	460	0.03396	0.170	0.507	-17.9	94.5	19.6	1.74996	
1	CL2	CL14	465	0.16953	0.000	0.000	0.00	.	94.5	2.91758	

CLUSTERING ON shrink1 wattab salin2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL58	CL21	14	0.00332	0.840	0.903	-15.0	122.8	15.4	0.47388	
19	CL38	OB199	9	0.00093	0.839	0.899	-14.1	129.0	3.9	0.49210	
18	CL41	CL26	9	0.00242	0.836	0.895	-13.4	134.5	8.3	0.52967	
17	CL27	CL19	15	0.00436	0.832	0.891	-13.0	138.8	13.2	0.53027	
16	OB10	CL17	16	0.00123	0.831	0.886	-11.9	147.1	2.0	0.55084	
15	CL30	CL338	39	0.00287	0.828	0.880	-11.1	154.7	10.6	0.59278	
14	CL23	CL28	5	0.00195	0.826	0.874	-9.96	164.8	5.1	0.61339	
13	OB2	CL20	15	0.00161	0.824	0.867	-8.66	176.9	3.5	0.63303	
12	CL15	OB392	40	0.00188	0.823	0.859	-7.26	190.9	5.5	0.66851	
11	CL254	CL55	5	0.00236	0.820	0.850	-5.77	207.1	33.5	0.67524	
10	OB24	CL24	10	0.00179	0.818	0.839	-3.96	227.9	4.2	0.67937	
9	CL22	CL13	21	0.00853	0.810	0.827	-3.08	242.8	16.5	0.67943	
8	CL10	OB202	11	0.00230	0.808	0.812	-0.74	274.0	4.0	0.76541	
7	CL9	CL8	32	0.01762	0.790	0.793	-0.55	287.1	20.4	0.75247	
6	CL12	CL25	398	0.12432	0.666	0.770	-13.5	182.8	336.0	0.89533	
5	CL7	CL16	48	0.04793	0.618	0.739	-14.5	185.8	41.3	1.02101	
4	CL5	CL18	57	0.03094	0.587	0.696	-12.5	218.2	16.1	0.97312	
3	CL4	CL6	455	0.37692	0.210	0.629	-28.4	61.4	419.0	1.32433	
2	CL3	CL11	460	0.04034	0.170	0.507	-17.9	94.5	23.5	1.37567	
1	CL2	CL14	465	0.16953	0.000	0.000	0.00	.	94.5	2.81986	

Step 4.

CLUSTERING ON shrink1 wattab perm1 no101-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.89671	0.796989	0.474178	0.47418
2	1.09972	0.435132	0.274931	0.74911
3	0.66459	0.325613	0.166147	0.91526
4	0.33898	.	0.084744	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL35	CL80	20	0.00235	0.827	0.830	-0.56	112.2	8.0	0.62219	
19	CL24	OB317	254	0.00130	0.826	0.825	0.31	117.6	2.8	0.64094	
18	CL28	CL47	13	0.00417	0.822	0.819	0.61	121.3	15.3	0.64301	
17	CL57	CL23	15	0.00426	0.818	0.813	0.99	125.5	11.8	0.64729	
16	CL36	CL29	26	0.00825	0.809	0.806	0.63	127.0	28.4	0.66444	
15	CL53	OB198	51	0.00178	0.808	0.799	1.73	134.8	10.2	0.67933	
14	CL55	CL27	30	0.00295	0.805	0.791	2.71	142.8	17.0	0.68353	
13	CL18	CL37	20	0.00637	0.798	0.782	3.14	149.0	13.0	0.71236	
12	CL20	CL25	27	0.00841	0.790	0.772	3.34	154.7	21.8	0.72897	
11	CL19	CL16	280	0.03252	0.757	0.761	-0.65	141.6	67.5	0.75101	
10	CL17	CL12	42	0.01267	0.745	0.748	-0.61	147.4	18.8	0.77352	
9	CL13	CL22	23	0.00448	0.740	0.733	1.13	162.3	5.8	0.80991	
8	CL21	CL14	65	0.03683	0.703	0.716	-1.98	154.7	102.2	0.82951	
7	CL11	CL15	331	0.11763	0.586	0.695	-14.4	107.9	219.0	0.90414	
6	CL8	CL7	396	0.17302	0.413	0.669	-28.3	64.5	192.6	1.07592	
5	CL6	CL9	419	0.07797	0.335	0.635	-27.3	57.8	59.4	1.16184	
4	CL5	OB227	420	0.00800	0.327	0.588	-24.5	74.5	5.3	1.48526	
3	CL10	CL4	462	0.28530	0.041	0.512	-32.4	10.0	194.9	1.51745	
2	CL3	OB392	463	0.00913	0.032	0.358	-21.4	15.4	4.4	1.61381	
1	CL2	CL118	465	0.03223	0.000	0.000	0.00	.	15.4	2.06132	

CLUSTERING ON shrink1 wattab perm1 no101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL24	CL31	42	0.01232	0.824	0.830	-1.22	109.8	34.9	0.52242	
19	CL25	CL22	265	0.02916	0.795	0.825	-5.97	96.1	65.6	0.52817	
18	CL48	CL35	21	0.00541	0.790	0.819	-5.80	98.7	23.8	0.54141	
17	CL18	CL23	28	0.00651	0.783	0.813	-5.75	101.1	14.4	0.53624	
16	CL53	OB463	3	0.00085	0.782	0.806	-4.59	107.6	4.3	0.54469	
15	CL55	CL17	33	0.00553	0.777	0.799	-4.17	111.9	9.1	0.54995	
14	CL19	CL30	286	0.02736	0.749	0.791	-7.31	103.8	50.4	0.57113	
13	CL52	CL21	32	0.00299	0.746	0.782	-6.20	110.9	15.1	0.60806	
12	CL63	OB198	51	0.00178	0.745	0.772	-4.74	120.1	10.2	0.64945	
11	CL14	CL13	318	0.05740	0.687	0.761	-11.4	99.8	95.2	0.68022	
10	CL15	CL64	35	0.00407	0.683	0.748	-9.90	109.0	5.5	0.70741	
9	CL36	CL43	12	0.00661	0.677	0.733	-8.53	119.2	28.5	0.72489	
8	CL16	CL9	15	0.00520	0.671	0.716	-6.62	133.4	6.8	0.70924	
7	CL11	CL12	369	0.13428	0.537	0.695	-19.6	88.6	190.8	0.84192	
6	CL8	CL103	17	0.00723	0.530	0.669	-17.3	103.5	7.1	0.97498	
5	CL10	CL20	77	0.08162	0.448	0.635	-18.8	93.4	111.2	0.99592	
4	CL7	CL6	386	0.08274	0.366	0.588	-21.5	88.5	76.5	1.08685	
3	CL5	CL4	463	0.34880	0.017	0.512	-33.7	3.9	253.4	1.12275	
2	CL3	OB227	464	0.00761	0.009	0.358	-22.6	4.2	3.6	1.33053	
1	CL2	OB392	465	0.00909	0.000	0.000	0.00	.	4.2	1.45354	

CLUSTERING ON shrink1 wattab perm1 no41-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.82594	0.773478	0.456485	0.45649
2	1.05246	0.285097	0.263116	0.71960
3	0.76737	0.413136	0.191841	0.91144
4	0.35423	.	0.088557	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL34	CL77	20	0.00231	0.852	0.825	6.33	134.7	7.8	0.61829	
19	CL57	CL36	14	0.00410	0.848	0.820	6.49	138.0	16.3	0.62114	
18	CL39	OB253	20	0.00133	0.846	0.814	7.44	144.9	4.5	0.62507	
17	OB177	CL23	3	0.00102	0.845	0.808	8.55	153.1	1.4	0.66281	
16	CL27	CL33	276	0.04923	0.796	0.801	-0.96	116.9	139.6	0.68463	
15	CL19	CL20	34	0.00975	0.786	0.794	-1.37	118.3	21.2	0.69353	
14	CL18	CL21	70	0.02354	0.763	0.785	-4.05	111.6	108.8	0.70491	
13	CL42	OB161	3	0.00133	0.762	0.776	-2.63	120.3	4.0	0.70890	
12	CL22	CL38	20	0.00391	0.758	0.766	-1.48	128.7	8.0	0.71383	
11	CL12	CL16	296	0.02351	0.734	0.755	-3.41	125.4	43.6	0.74999	
10	CL28	CL67	15	0.00593	0.728	0.741	-2.17	135.4	18.4	0.75391	
9	CL15	CL26	41	0.00904	0.719	0.726	-1.14	146.0	13.4	0.76816	
8	CL11	CL14	366	0.12775	0.591	0.708	-15.5	94.5	211.0	0.89050	
7	CL25	CL17	37	0.00730	0.584	0.687	-13.5	107.2	19.2	0.91039	
6	CL13	CL10	18	0.00624	0.578	0.660	-10.9	125.7	8.5	0.92948	
5	CL7	CL8	403	0.14031	0.438	0.626	-18.8	89.5	152.6	1.14838	
4	CL6	CL220	20	0.00978	0.428	0.578	-15.5	114.9	9.8	1.22290	
3	CL9	CL5	444	0.26464	0.163	0.492	-25.2	45.0	214.9	1.46393	
2	CL3	OB227	445	0.00794	0.155	0.344	-13.8	85.1	4.3	1.50608	
1	CL2	CL4	465	0.15520	0.000	0.000	0.00	.	85.1	1.62166	

CLUSTERING ON shrink1 wattab perm1 no41-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	CL44	32	0.00972	0.828	0.825	0.66	112.9	24.2	0.53206	
19	CL23	CL38	289	0.05042	0.778	0.820	-8.12	86.7	125.7	0.55485	
18	CL20	CL68	34	0.00258	0.775	0.814	-7.40	90.7	3.8	0.56426	
17	CL45	OB253	20	0.00133	0.774	0.808	-6.40	95.8	4.5	0.57064	
16	CL75	OB198	47	0.00139	0.772	0.801	-5.33	101.6	11.0	0.57419	
15	OB247	OB392	2	0.00073	0.772	0.794	-4.04	108.7	.	0.58223	
14	OB177	CL15	3	0.00102	0.771	0.785	-2.68	116.6	1.4	0.59546	
13	CL18	CL24	41	0.00904	0.762	0.776	-2.60	120.4	13.4	0.60116	
12	CL19	CL17	309	0.03110	0.731	0.766	-5.92	111.7	55.4	0.62110	
11	CL22	CL29	21	0.00923	0.721	0.755	-5.42	117.5	18.2	0.64514	
10	CL34	OB161	3	0.00133	0.720	0.741	-3.47	130.0	4.0	0.68124	
9	CL11	CL10	24	0.00510	0.715	0.726	-1.80	142.9	5.5	0.67109	
8	CL9	CL59	28	0.00876	0.706	0.708	-0.33	156.9	8.8	0.76995	
7	CL26	CL14	37	0.00730	0.699	0.687	1.89	177.2	19.2	0.78387	
6	CL12	CL16	356	0.11570	0.583	0.660	-10.2	128.4	194.7	0.81117	
5	CL7	CL6	393	0.13972	0.443	0.626	-18.4	91.6	157.5	0.98343	
4	CL5	CL8	421	0.12286	0.321	0.578	-24.2	72.5	98.8	1.04429	
3	CL13	CL4	462	0.26719	0.053	0.492	-31.4	13.0	180.9	1.28808	
2	CL3	OB227	463	0.00778	0.046	0.344	-20.5	22.1	3.8	1.34500	
1	CL2	CL212	465	0.04561	0.000	0.000	0.00	.	22.1	2.30503	

CLUSTERING ON shrink1 wattab perm1 inch31-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.83271	0.788814	0.458178	0.45818
2	1.04390	0.251053	0.260974	0.71915
3	0.79284	0.462298	0.198211	0.91736
4	0.33055	.	0.082637	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL28	CL36	28	0.00624	0.863	0.827	9.01	147.9	28.3	0.55285	
19	CL25	OB224	7	0.00099	0.862	0.822	9.96	155.2	2.7	0.58161	
18	CL56	OB198	50	0.00133	0.861	0.816	10.90	162.9	9.6	0.58908	
17	CL24	CL29	248	0.00380	0.857	0.810	11.24	168.1	11.8	0.58972	
16	CL89	CL71	5	0.00176	0.855	0.803	12.25	177.1	16.6	0.60751	
15	CL17	CL23	269	0.01774	0.838	0.796	9.22	165.9	52.4	0.61074	
14	CL34	CL69	21	0.00244	0.835	0.788	10.31	175.9	11.2	0.61533	
13	CL27	CL72	18	0.00261	0.833	0.779	11.52	187.4	8.7	0.65212	
12	CL14	CL21	29	0.00827	0.824	0.768	11.54	193.3	25.9	0.68032	
11	CL19	CL38	9	0.00262	0.822	0.757	13.16	209.3	5.9	0.72139	
10	CL13	CL31	27	0.01088	0.811	0.744	13.13	216.8	29.7	0.74874	
9	CL20	CL22	74	0.02998	0.781	0.729	9.46	203.1	76.4	0.76227	
8	CL10	CL18	77	0.03007	0.751	0.711	6.75	196.7	80.4	0.77917	
7	CL15	CL8	346	0.11601	0.635	0.690	-7.78	132.7	240.1	0.84731	
6	CL9	CL7	420	0.19503	0.440	0.663	-22.0	72.1	239.4	1.05550	
5	CL11	CL16	14	0.01284	0.427	0.629	-20.0	85.7	19.7	1.08222	
4	CL6	OB227	421	0.00782	0.419	0.580	-16.5	110.9	6.1	1.45444	
3	CL4	CL12	450	0.21648	0.203	0.492	-22.7	58.7	173.1	1.51181	
2	CL3	CL5	464	0.13326	0.069	0.346	-19.1	34.5	77.2	1.73774	
1	CL2	OB392	465	0.06938	0.000	0.000	0.00	.	34.5	4.07386	

CLUSTERING ON shrink1 wattab perm1 inch31-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL40	OB253	15	0.00092	0.854	0.827	6.48	137.0	3.4	0.47873	
19	CL25	CL24	272	0.01347	0.841	0.822	4.30	130.6	38.2	0.48504	
18	CL19	OB204	273	0.00110	0.839	0.816	5.29	137.5	2.7	0.50564	
17	CL29	OB224	7	0.00099	0.838	0.810	6.40	145.3	2.7	0.51767	
16	CL20	CL64	17	0.00239	0.836	0.803	7.26	152.6	7.8	0.56034	
15	CL79	CL67	5	0.00176	0.834	0.796	8.39	161.8	16.6	0.58346	
14	CL22	CL28	61	0.02301	0.811	0.788	4.80	149.1	65.1	0.59368	
13	CL41	OB198	60	0.00156	0.810	0.779	6.24	160.3	8.3	0.60684	
12	CL17	CL27	9	0.00262	0.807	0.768	7.63	172.3	5.9	0.62517	
11	CL16	CL18	290	0.02851	0.779	0.757	3.94	159.6	70.3	0.64293	
10	CL21	CL60	28	0.00361	0.775	0.744	5.59	174.1	9.1	0.67171	
9	CL13	CL38	69	0.01598	0.759	0.729	5.22	179.5	75.7	0.68837	
8	CL11	CL9	359	0.12435	0.635	0.711	-10.8	113.4	253.0	0.71943	
7	CL10	OB202	29	0.00300	0.632	0.690	-8.19	130.9	5.8	0.84907	
6	CL14	CL8	420	0.19185	0.440	0.663	-22.0	72.1	233.3	0.92393	
5	CL12	CL15	14	0.01284	0.427	0.629	-20.0	85.7	19.7	0.96266	
4	CL6	OB227	421	0.00782	0.419	0.580	-16.5	110.9	6.1	1.34892	
3	CL4	CL7	450	0.21648	0.203	0.492	-22.7	58.7	173.1	1.36056	
2	CL3	CL5	464	0.13326	0.069	0.346	-19.1	34.5	77.2	1.50895	
1	CL2	OB392	465	0.06938	0.000	0.000	0.00	.	34.5	4.01635	

CLUSTERING ON shrink1 wattab perm1 inch101-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.81706	0.734827	0.454266	0.45427
2	1.08224	0.338623	0.270559	0.72482
3	0.74361	0.386527	0.185903	0.91073
4	0.35709	.	0.089272	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL29	CL42	50	0.00825	0.901	0.825	21.85	213.5	63.0	0.50024	
19	CL33	OB202	8	0.00091	0.900	0.820	22.83	223.6	5.2	0.52638	
18	CL23	CL21	300	0.05249	0.848	0.814	7.78	146.4	235.8	0.53278	
17	CL20	OB392	51	0.00119	0.847	0.808	8.85	154.5	4.0	0.59184	
16	CL40	CL46	14	0.00227	0.844	0.801	9.74	162.3	17.2	0.59360	
15	CL41	OB198	48	0.00138	0.843	0.794	10.97	172.5	10.1	0.59863	
14	OB29	CL26	3	0.00096	0.842	0.785	12.45	184.8	2.5	0.61471	
13	CL25	CL16	34	0.00903	0.833	0.776	12.05	187.8	31.5	0.61629	
12	CL27	CL14	6	0.00217	0.831	0.766	13.57	202.2	4.8	0.68911	
11	CL13	CL19	42	0.00921	0.822	0.755	13.61	209.0	18.3	0.71496	
10	CL22	OB146	4	0.00148	0.820	0.741	15.81	230.4	4.2	0.71525	
9	CL24	CL15	59	0.01753	0.803	0.726	14.61	231.7	101.8	0.73238	
8	CL18	CL9	359	0.10972	0.693	0.708	-2.38	147.3	268.0	0.84601	
7	OB62	OB157	2	0.00182	0.691	0.687	0.65	170.7	.	0.91861	
6	CL7	CL10	6	0.00347	0.688	0.660	4.21	202.0	3.5	0.96991	
5	CL17	CL8	410	0.16634	0.521	0.626	-11.4	125.2	249.8	1.04936	
4	CL11	CL5	452	0.26111	0.260	0.578	-28.6	54.0	251.4	1.41427	
3	CL4	OB227	453	0.00763	0.252	0.495	-19.6	78.0	4.7	1.46594	
2	CL12	CL6	12	0.02211	0.230	0.343	-8.67	138.6	19.3	1.46698	
1	CL3	CL2	465	0.23035	0.000	0.000	0.00	.	138.6	2.36582	

CLUSTERING ON shrink1 wattab perm1 inch101-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL24	CL30	267	0.00510	0.879	0.825	14.09	170.1	18.1	0.44923	
19	CL60	OB66	3	0.00063	0.878	0.820	15.16	178.9	7.9	0.46732	
18	CL33	OB202	8	0.00091	0.877	0.814	16.23	188.2	5.2	0.49189	
17	CL21	OB392	50	0.00117	0.876	0.808	17.31	198.3	4.0	0.52553	
16	CL28	CL41	32	0.00903	0.867	0.801	16.07	195.5	40.1	0.52853	
15	CL16	CL40	34	0.00226	0.865	0.794	17.05	205.9	4.5	0.52825	
14	CL15	CL18	42	0.00921	0.856	0.785	16.17	205.8	18.3	0.57429	
13	OB29	CL23	3	0.00096	0.855	0.776	17.84	221.8	2.5	0.57780	
12	CL25	CL13	6	0.00217	0.853	0.766	19.37	238.3	4.8	0.57883	
11	CL29	CL22	92	0.01767	0.835	0.755	16.94	229.7	86.6	0.62671	
10	CL19	OB146	4	0.00148	0.833	0.741	19.19	253.1	4.2	0.67593	
9	CL20	CL11	359	0.13618	0.697	0.726	-4.49	131.3	420.2	0.67953	
8	CL10	OB157	5	0.00264	0.695	0.708	-2.10	148.5	3.6	0.87463	
7	OB62	CL8	6	0.00265	0.692	0.687	0.81	171.5	2.2	0.85840	
6	CL17	CL9	409	0.16389	0.528	0.660	-16.4	102.7	249.7	0.93080	
5	OB198	OB227	2	0.00276	0.525	0.626	-11.0	127.3	.	1.13123	
4	CL6	CL5	411	0.01226	0.513	0.578	-7.27	161.9	11.6	1.19537	
3	CL14	CL4	453	0.26066	0.252	0.495	-19.6	78.0	247.3	1.25974	
2	CL12	CL7	12	0.02211	0.230	0.343	-8.67	138.6	19.3	1.30750	
1	CL3	CL2	465	0.23035	0.000	0.000	0.00	.	138.6	2.13810	

CLUSTERING ON shrink1 wattab perm1 perm1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.57171	1.55627	0.642927	0.64293
2	1.01544	0.60259	0.253860	0.89679
3	0.41285	0.41285	0.103212	1.00000
4	0.00000	.	0.000000	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL26	CL35	166	0.00799	0.936	0.904	12.02	342.6	68.5	0.41426	
19	CL39	CL24	20	0.00289	0.933	0.900	11.92	345.7	20.8	0.44139	
18	CL51	CL29	6	0.00102	0.932	0.896	12.75	361.0	7.6	0.44561	
17	CL37	CL32	73	0.01377	0.918	0.892	8.53	314.9	131.5	0.47187	
16	CL28	CL31	104	0.01967	0.899	0.887	3.39	265.5	180.1	0.47869	
15	CL21	CL23	15	0.00175	0.897	0.881	4.35	279.7	7.9	0.50317	
14	CL16	CL18	110	0.00406	0.893	0.875	4.75	289.1	13.5	0.54272	
13	CL25	OB202	8	0.00107	0.892	0.868	6.18	310.4	5.7	0.56674	
12	CL22	OB392	16	0.00123	0.891	0.860	7.72	335.1	5.8	0.59187	
11	CL33	CL40	14	0.00229	0.888	0.851	9.15	361.0	16.8	0.59697	
10	CL19	CL11	34	0.00905	0.879	0.841	8.97	368.1	31.1	0.61852	
9	CL12	CL17	89	0.01822	0.861	0.828	6.96	353.1	62.4	0.67133	
8	CL14	CL20	276	0.10854	0.752	0.814	-9.57	198.5	468.0	0.70381	
7	CL10	CL13	42	0.00988	0.743	0.795	-7.95	220.2	19.2	0.73697	
6	CL27	OB198	42	0.00231	0.740	0.772	-4.70	261.7	14.0	0.76550	
5	CL8	CL15	291	0.02761	0.713	0.741	-3.98	285.2	45.2	0.81620	
4	CL9	CL5	380	0.19112	0.522	0.699	-18.7	167.5	291.4	0.96292	
3	CL6	OB227	43	0.00395	0.518	0.630	-9.96	247.9	18.2	0.99420	
2	CL4	CL3	423	0.23578	0.282	0.484	-12.0	181.7	219.6	1.32425	
1	CL7	CL2	465	0.28182	0.000	0.000	0.00	.	181.7	1.50222	

CLUSTERING ON shrink1 wattab perm1 perm1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL43	CL71	145	0.00232	0.939	0.904	13.29	358.6	22.9	0.37228	
19	CL49	CL66	13	0.00187	0.937	0.900	13.62	367.4	22.5	0.37598	
18	CL25	CL20	204	0.02737	0.909	0.896	4.09	264.1	211.6	0.38910	
17	OB10	CL36	14	0.00062	0.909	0.892	5.20	279.1	4.8	0.39203	
16	CL23	CL33	106	0.01900	0.890	0.887	0.84	241.8	150.6	0.41255	
15	CL19	CL24	16	0.00185	0.888	0.881	1.80	254.8	7.9	0.41994	
14	CL17	CL22	50	0.00861	0.879	0.875	1.08	252.9	65.3	0.44509	
13	CL41	CL15	19	0.00252	0.877	0.868	2.13	268.2	8.1	0.48132	
12	CL21	CL35	32	0.00904	0.868	0.860	1.75	270.4	39.4	0.52882	
11	CL12	CL28	39	0.00622	0.862	0.851	2.30	282.6	13.5	0.50127	
10	CL14	OB392	51	0.00121	0.860	0.841	4.26	311.5	4.0	0.53564	
9	CL16	CL13	125	0.02103	0.839	0.828	2.18	297.8	64.8	0.55027	
8	CL11	CL34	41	0.00312	0.836	0.814	4.38	333.4	5.2	0.61653	
7	CL9	CL18	329	0.13632	0.700	0.795	-13.3	178.0	389.5	0.63877	
6	CL29	OB198	42	0.00231	0.698	0.772	-10.2	211.8	14.0	0.74064	
5	CL10	CL7	380	0.17215	0.525	0.741	-22.9	127.3	243.8	0.95106	
4	CL8	OB202	42	0.00391	0.522	0.699	-18.7	167.5	5.9	0.96366	
3	CL6	OB227	43	0.00395	0.518	0.630	-9.96	247.9	18.2	0.96909	
2	CL5	CL3	423	0.23578	0.282	0.484	-12.0	181.7	219.6	1.19000	
1	CL4	CL2	465	0.28182	0.000	0.000	0.00	.	181.7	1.30816	

CLUSTERING ON shrink1 wattab perm1 no102 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.88848	0.734249	0.472119	0.47212
2	1.15423	0.504296	0.288557	0.76068
3	0.64993	0.342568	0.162483	0.92316
4	0.30736	.	0.076841	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL21	CL57	14	0.00247	0.844	0.833	2.62	126.9	10.9	0.56798	
19	CL37	CL23	264	0.04450	0.800	0.828	-5.80	98.9	114.4	0.58813	
18	CL28	CL29	27	0.00468	0.795	0.822	-5.52	102.0	13.2	0.59549	
17	CL31	CL27	46	0.00858	0.786	0.816	-5.87	103.1	27.1	0.59864	
16	CL46	OB198	47	0.00146	0.785	0.810	-4.83	109.3	9.3	0.61770	
15	CL25	CL83	19	0.00211	0.783	0.803	-3.81	115.9	5.2	0.61794	
14	CL35	CL82	20	0.00234	0.781	0.795	-2.72	123.4	8.2	0.61891	
13	CL33	CL87	15	0.00418	0.776	0.786	-1.83	130.7	14.6	0.65050	
12	CL13	CL14	35	0.01064	0.766	0.776	-1.94	134.6	22.8	0.70488	
11	CL19	CL32	266	0.00301	0.763	0.765	-0.50	145.9	5.4	0.73001	
10	CL12	CL24	42	0.00904	0.754	0.753	0.13	154.7	12.9	0.77516	
9	CL11	CL15	285	0.03078	0.723	0.738	-2.53	148.7	54.9	0.80174	
8	CL20	CL18	41	0.01782	0.705	0.721	-2.55	156.1	37.1	0.80661	
7	CL9	CL16	332	0.11871	0.586	0.701	-15.1	108.2	197.7	0.93761	
6	CL8	CL22	43	0.00516	0.581	0.675	-10.7	127.4	5.7	0.95322	
5	CL7	CL6	375	0.10662	0.475	0.641	-17.1	103.9	110.7	1.04860	
4	CL17	CL5	421	0.16945	0.305	0.594	-26.4	67.5	145.4	1.16665	
3	CL10	CL4	463	0.28089	0.024	0.518	-33.4	5.7	186.3	1.50796	
2	CL3	OB227	464	0.00816	0.016	0.356	-22.2	7.6	3.9	1.54493	
1	CL2	OB235	465	0.01607	0.000	0.000	0.00	.	7.6	2.05624	

CLUSTERING ON shrink1 wattab perm1 no102 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL25	CL29	46	0.00823	0.796	0.833	-7.61	91.3	25.4	0.51344	
19	CL33	CL116	30	0.00479	0.791	0.828	-7.40	93.8	12.8	0.51653	
18	CL26	CL71	18	0.00213	0.789	0.822	-6.64	98.3	5.4	0.52688	
17	CL51	CL69	17	0.00224	0.787	0.816	-5.82	103.3	10.3	0.54302	
16	OB161	OB247	2	0.00064	0.786	0.810	-4.63	110.0	.	0.54408	
15	CL36	CL87	18	0.00403	0.782	0.803	-3.96	115.3	11.4	0.54837	
14	CL15	CL17	35	0.01081	0.771	0.795	-4.38	117.0	23.4	0.53550	
13	CL49	OB198	47	0.00146	0.770	0.786	-3.01	125.9	9.3	0.58805	
12	CL14	CL24	42	0.00904	0.761	0.776	-2.81	130.9	12.9	0.59961	
11	CL21	CL19	44	0.01717	0.744	0.765	-3.75	131.6	35.2	0.64604	
10	CL23	CL18	279	0.03040	0.713	0.753	-6.39	125.7	56.2	0.64723	
9	CL10	OB317	280	0.00195	0.711	0.738	-4.33	140.4	3.0	0.67335	
8	CL9	CL11	324	0.08101	0.630	0.721	-12.7	111.3	118.6	0.70303	
7	CL16	CL427	4	0.00234	0.628	0.701	-10.2	128.8	7.3	0.73659	
6	CL8	CL13	371	0.13008	0.498	0.675	-18.4	91.0	155.1	0.85746	
5	CL20	CL6	417	0.17098	0.327	0.641	-28.3	55.8	153.6	0.98451	
4	CL5	CL7	421	0.02169	0.305	0.594	-26.4	67.5	14.3	1.12702	
3	CL12	CL4	463	0.28089	0.024	0.518	-33.4	5.7	186.3	1.30627	
2	CL3	OB227	464	0.00816	0.016	0.356	-22.2	7.6	3.9	1.37763	
1	CL2	OB235	465	0.01607	0.000	0.000	0.00	.	7.6	1.93292	

CLUSTERING ON shrink1 wattab perm1 no42-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.60969	1.77401	0.652423	0.65242
2	0.83568	0.46880	0.208920	0.86134
3	0.36688	0.17913	0.091720	0.95306
4	0.18775	.	0.046937	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL102	OB317	4	0.00075	0.877	0.872	1.29	166.4	11.8	0.49160	
19	CL49	CL32	20	0.00356	0.873	0.868	1.37	170.4	17.6	0.50359	
18	CL21	CL34	68	0.00483	0.868	0.864	1.16	173.2	18.2	0.53580	
17	CL26	CL20	195	0.00317	0.865	0.859	1.51	179.5	11.0	0.55209	
16	CL27	CL55	35	0.00661	0.858	0.854	1.05	181.5	27.6	0.55423	
15	CL17	CL18	263	0.04245	0.816	0.849	-7.30	142.5	136.5	0.58437	
14	CL24	CL23	24	0.00388	0.812	0.843	-6.69	149.9	12.4	0.58884	
13	CL15	CL30	268	0.00436	0.808	0.836	-6.05	158.2	9.3	0.61246	
12	CL19	CL65	22	0.00233	0.805	0.829	-4.87	170.5	6.3	0.63148	
11	CL25	OB202	11	0.00138	0.804	0.820	-3.35	186.3	4.7	0.64328	
10	CL14	CL16	59	0.01852	0.786	0.811	-4.23	185.1	41.7	0.70873	
9	CL12	CL11	33	0.01063	0.775	0.799	-3.95	196.2	24.0	0.72354	
8	CL28	OB198	86	0.00199	0.773	0.786	-2.02	222.2	7.2	0.72814	
7	CL10	OB392	60	0.00159	0.771	0.769	0.39	257.4	2.1	0.74027	
6	CL8	CL22	101	0.02539	0.746	0.748	-0.25	269.5	85.0	0.77265	
5	CL13	CL88	270	0.00496	0.741	0.720	3.09	328.9	10.3	0.84002	
4	CL5	CL6	371	0.15523	0.586	0.681	-8.89	217.3	302.6	0.85536	
3	CL9	CL7	93	0.10255	0.483	0.618	-11.6	216.0	133.8	1.21007	
2	CL4	OB227	372	0.00804	0.475	0.491	-1.08	419.1	8.6	1.44453	
1	CL3	CL2	465	0.47512	0.000	0.000	0.00	.	419.1	1.45990	

CLUSTERING ON shrink1 wattab perm1 no42-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL56	CL45	63	0.00521	0.861	0.872	-2.90	145.5	27.4	0.41592	
19	CL52	OB257	5	0.00066	0.861	0.868	-1.99	153.0	5.5	0.43615	
18	CL20	CL44	68	0.00429	0.856	0.864	-1.96	156.8	16.2	0.46339	
17	CL22	CL18	282	0.05042	0.806	0.859	-11.8	116.3	141.0	0.47609	
16	CL17	CL27	287	0.00420	0.802	0.854	-11.3	121.1	7.9	0.44514	
15	CL29	CL68	36	0.00624	0.796	0.849	-11.2	125.0	26.4	0.48218	
14	CL24	CL19	22	0.00421	0.791	0.843	-10.6	131.5	16.1	0.50283	
13	CL21	CL25	30	0.00742	0.784	0.836	-10.5	136.6	21.1	0.50832	
12	CL16	OB317	288	0.00120	0.783	0.829	-9.09	148.3	2.2	0.52773	
11	CL14	CL15	58	0.01833	0.764	0.820	-10.5	147.3	43.3	0.55802	
10	CL11	OB392	59	0.00155	0.763	0.811	-7.64	162.6	2.1	0.60489	
9	CL34	OB198	64	0.00163	0.761	0.799	-5.99	181.7	7.4	0.62060	
8	CL12	CL23	304	0.02844	0.733	0.786	-7.76	179.0	53.0	0.65972	
7	CL8	CL62	308	0.00759	0.725	0.769	-6.25	201.4	12.2	0.66785	
6	CL13	CL49	32	0.00376	0.721	0.748	-3.69	237.7	6.5	0.68215	
5	CL7	CL9	372	0.13262	0.589	0.720	-15.0	164.6	229.5	0.76200	
4	CL6	OB202	33	0.00316	0.586	0.681	-8.90	217.2	4.6	0.86896	
3	CL4	CL10	92	0.10151	0.484	0.618	-11.5	216.8	134.5	1.05491	
2	CL3	CL5	464	0.47549	0.009	0.491	-23.8	4.0	425.8	1.22295	
1	CL2	OB227	465	0.00861	0.000	0.000	0.00	.	4.0	1.41468	

CLUSTERING ON shrink1 wattab perm1 inch32-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.81403	0.795674	0.453509	0.45351
2	1.01836	0.204085	0.254590	0.70810
3	0.81428	0.460946	0.203569	0.91167
4	0.35333	.	0.088332	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL44	CL31	26	0.00600	0.857	0.824	7.84	140.2	24.8	0.57372	
19	CL66	CL30	22	0.00440	0.852	0.819	7.89	143.2	12.5	0.61376	
18	CL32	OB198	56	0.00152	0.851	0.813	8.79	150.1	6.4	0.64349	
17	CL33	CL21	229	0.01989	0.831	0.807	5.25	137.8	68.8	0.69603	
16	CL24	CL17	302	0.08983	0.741	0.800	-10.3	85.7	240.2	0.74021	
15	CL25	CL26	13	0.00534	0.736	0.793	-9.74	89.6	14.2	0.74139	
14	CL20	CL77	28	0.00354	0.732	0.784	-8.82	94.9	7.7	0.75179	
13	CL16	CL19	324	0.02972	0.703	0.775	-11.6	89.0	44.8	0.78233	
12	CL14	OB161	29	0.00206	0.701	0.765	-10.2	96.4	3.6	0.78970	
11	CL27	CL96	9	0.00351	0.697	0.753	-8.81	104.5	8.7	0.79124	
10	CL11	CL130	11	0.00381	0.693	0.740	-7.27	114.3	5.4	0.84297	
9	CL22	OB202	27	0.00268	0.691	0.725	-5.28	127.2	6.1	0.86256	
8	CL12	CL9	56	0.03369	0.657	0.707	-7.29	125.0	58.3	0.90366	
7	CL13	CL18	380	0.13280	0.524	0.685	-19.8	84.1	194.9	0.93759	
6	CL15	OB227	14	0.00334	0.521	0.659	-17.0	99.7	4.2	1.00169	
5	CL10	CL6	25	0.02361	0.497	0.624	-13.5	113.7	23.6	1.14751	
4	CL8	CL38	58	0.01109	0.486	0.576	-9.80	145.3	9.5	1.28189	
3	CL4	CL7	438	0.30070	0.185	0.485	-23.5	52.6	280.9	1.38927	
2	CL3	CL5	463	0.12798	0.057	0.342	-19.8	28.2	72.5	1.44731	
1	CL2	CL23	465	0.05735	0.000	0.000	0.00	.	28.2	2.68753	

CLUSTERING ON shrink1 wattab perm1 inch32-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL33	OB253	18	0.00120	0.842	0.824	4.03	124.8	2.9	0.54228	
19	CL74	CL24	24	0.00543	0.837	0.819	3.92	126.8	14.1	0.56435	
18	CL32	OB198	52	0.00141	0.835	0.813	4.86	133.2	7.3	0.57653	
17	CL23	CL48	55	0.02072	0.814	0.807	1.54	122.9	70.4	0.59215	
16	CL22	CL20	278	0.02621	0.788	0.800	-2.31	111.4	67.7	0.60098	
15	CL16	CL19	302	0.03556	0.753	0.793	-7.10	97.8	72.6	0.61111	
14	CL27	CL26	9	0.00377	0.749	0.784	-6.22	103.5	10.3	0.66144	
13	CL17	CL31	57	0.00374	0.745	0.775	-5.20	110.1	5.6	0.67039	
12	CL28	CL63	28	0.00363	0.742	0.765	-4.01	118.1	8.5	0.67348	
11	CL67	OB161	3	0.00135	0.740	0.753	-2.25	129.3	9.0	0.68539	
10	CL14	CL120	11	0.00381	0.736	0.740	-0.66	141.2	5.4	0.73483	
9	CL15	CL18	354	0.11346	0.623	0.725	-14.1	94.1	206.3	0.77029	
8	CL12	OB202	29	0.00301	0.620	0.707	-12.0	106.5	5.5	0.85027	
7	CL10	CL25	19	0.01556	0.604	0.685	-11.0	116.6	20.7	0.88271	
6	CL7	CL11	22	0.00867	0.596	0.659	-8.51	135.2	5.8	0.88123	
5	CL13	CL9	411	0.18906	0.407	0.624	-21.2	78.8	222.5	0.94521	
4	CL5	CL6	433	0.12315	0.283	0.576	-26.8	60.8	92.3	1.16971	
3	CL4	CL8	462	0.21589	0.068	0.485	-30.4	16.7	138.7	1.35749	
2	CL3	OB227	463	0.01019	0.057	0.342	-19.8	28.2	5.0	1.53952	
1	CL2	CL21	465	0.05735	0.000	0.000	0.00	.	28.2	2.58487	

CLUSTERING ON shrink1 wattab perm1 inch102 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.81607	0.764121	0.454019	0.45402
2	1.05195	0.276610	0.262988	0.71701
3	0.77534	0.418714	0.193836	0.91084
4	0.35663	.	0.089157	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL24	CL23	297	0.05247	0.848	0.825	5.48	130.7	234.0	0.53415	
19	CL22	OB392	51	0.00119	0.847	0.819	6.38	137.0	4.0	0.59184	
18	CL42	CL48	14	0.00227	0.845	0.814	7.10	142.9	17.2	0.59360	
17	CL43	OB198	48	0.00138	0.843	0.807	8.12	150.6	10.1	0.59863	
16	CL32	CL69	5	0.00167	0.842	0.800	9.17	159.0	10.3	0.60340	
15	CL26	CL18	34	0.00903	0.833	0.793	8.52	159.8	31.5	0.61629	
14	CL16	CL28	7	0.00158	0.831	0.785	9.83	170.5	3.1	0.63306	
13	OB62	OB451	2	0.00090	0.830	0.776	11.47	183.9	.	0.64462	
12	CL27	OB146	4	0.00146	0.829	0.765	13.16	199.0	4.9	0.70640	
11	CL15	CL21	42	0.00921	0.819	0.754	13.22	205.9	18.3	0.71496	
10	CL25	CL17	59	0.01753	0.802	0.741	11.74	204.6	101.8	0.73238	
9	CL13	OB157	3	0.00153	0.800	0.725	14.25	228.4	1.7	0.79809	
8	CL12	OB450	5	0.00183	0.798	0.707	17.19	258.7	2.7	0.80640	
7	CL20	CL10	356	0.10934	0.689	0.686	0.50	169.2	265.2	0.84590	
6	CL9	CL8	8	0.00465	0.684	0.659	3.88	199.2	4.4	0.97123	
5	CL19	CL7	407	0.16652	0.518	0.625	-11.6	123.6	248.8	1.05071	
4	CL14	CL6	15	0.02112	0.497	0.577	-8.81	151.7	18.2	1.32933	
3	CL11	CL5	449	0.26090	0.236	0.490	-20.5	71.3	249.8	1.41477	
2	CL3	OB227	450	0.00762	0.228	0.343	-8.81	137.0	4.7	1.46590	
1	CL2	CL4	465	0.22832	0.000	0.000	0.00	.	137.0	2.14203	

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL35	OB202	8	0.00091	0.878	0.825	13.79	168.0	5.2	0.49189	
19	CL22	OB392	50	0.00117	0.876	0.819	14.70	175.8	4.0	0.52553	
18	CL30	CL43	32	0.00903	0.867	0.814	13.30	172.1	40.1	0.52853	
17	CL18	CL42	34	0.00226	0.865	0.807	14.07	179.7	4.5	0.52825	
16	CL29	CL65	5	0.00167	0.864	0.800	15.10	189.4	10.3	0.56885	
15	CL16	CL25	7	0.00158	0.862	0.793	16.29	200.7	3.1	0.50646	
14	CL17	CL20	42	0.00921	0.853	0.785	15.46	200.9	18.3	0.57429	
13	CL31	CL23	92	0.01767	0.835	0.776	12.71	190.7	86.6	0.62671	
12	OB62	OB451	2	0.00090	0.834	0.765	14.56	207.2	.	0.64462	
11	CL24	OB146	4	0.00146	0.833	0.754	16.50	226.0	4.9	0.67282	
10	CL21	CL13	356	0.13575	0.697	0.741	-6.80	116.3	415.8	0.67942	
9	CL11	OB450	5	0.00183	0.695	0.725	-4.69	130.0	2.7	0.72848	
8	CL12	OB157	3	0.00153	0.694	0.707	-2.14	147.8	1.7	0.73011	
7	CL8	CL9	8	0.00465	0.689	0.686	0.47	169.1	4.4	0.75828	
6	CL19	CL10	406	0.16406	0.525	0.659	-16.7	101.4	248.6	0.93175	
5	OB198	OB227	2	0.00276	0.522	0.625	-11.2	125.7	.	1.13123	
4	CL15	CL7	15	0.02112	0.501	0.577	-8.38	154.3	18.2	1.14567	
3	CL6	CL5	408	0.01224	0.489	0.490	-0.17	220.9	11.5	1.19454	
2	CL14	CL3	450	0.26045	0.228	0.343	-8.81	137.0	245.6	1.25966	
1	CL2	CL4	465	0.22832	0.000	0.000	0.00	.	137.0	1.91027	

CLUSTERING ON shrink1 wattab perm1 awc2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.16484	1.31541	0.541209	0.54121
2	0.84943	0.20448	0.212357	0.75357
3	0.64495	0.30416	0.161237	0.91480
4	0.34078	.	0.085196	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL28	CL71	18	0.00457	0.851	0.836	3.64	133.9	17.6	0.58806	
19	CL35	CL83	11	0.00206	0.849	0.831	4.29	139.4	7.6	0.60755	
18	CL42	CL23	125	0.03482	0.814	0.826	-2.42	115.3	151.7	0.61123	
17	CL20	CL55	20	0.00190	0.812	0.820	-1.56	121.2	3.8	0.62426	
16	CL31	CL39	18	0.00493	0.807	0.813	-1.22	125.5	17.3	0.63251	
15	CL32	CL25	85	0.01089	0.797	0.806	-1.96	125.9	38.0	0.64700	
14	CL30	CL27	18	0.00495	0.792	0.799	-1.38	131.8	15.1	0.67321	
13	CL17	CL43	22	0.00242	0.789	0.790	-0.19	141.0	4.3	0.68945	
12	CL22	CL18	276	0.07834	0.711	0.781	-11.3	101.2	166.7	0.69548	
11	CL15	OB198	86	0.00210	0.709	0.770	-9.81	110.5	5.1	0.76628	
10	CL13	CL37	34	0.01417	0.695	0.757	-9.80	115.0	27.1	0.79205	
9	CL16	CL19	29	0.01358	0.681	0.743	-9.43	121.7	26.2	0.82416	
8	CL11	CL14	104	0.03266	0.648	0.726	-11.2	120.4	70.9	0.86014	
7	CL12	CL8	380	0.14872	0.500	0.706	-24.6	76.2	196.1	0.89916	
6	CL9	OB202	30	0.00328	0.496	0.681	-22.1	90.5	3.3	1.00353	
5	CL7	CL24	396	0.04759	0.449	0.649	-20.0	93.6	42.6	1.02696	
4	CL6	CL10	64	0.05774	0.391	0.604	-20.8	98.7	57.9	1.13596	
3	CL5	CL21	400	0.01889	0.372	0.531	-13.4	136.9	15.4	1.21929	
2	CL3	OB227	401	0.00809	0.364	0.408	-3.17	265.0	6.3	1.47498	
1	CL4	CL2	465	0.36402	0.000	0.000	0.00	.	265.0	1.50410	

CLUSTERING ON shrink1 wattab perm1 awc2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	CL40	20	0.00190	0.844	0.836	1.81	126.5	3.8	0.49521	
19	CL48	CL23	128	0.03591	0.808	0.831	-4.89	104.2	149.5	0.52289	
18	CL22	CL19	285	0.07797	0.730	0.826	-16.8	71.1	159.5	0.50650	
17	CL30	CL113	14	0.00207	0.728	0.820	-15.9	74.9	7.5	0.52897	
16	CL27	OB426	4	0.00094	0.727	0.813	-14.9	79.7	2.8	0.54031	
15	CL37	CL68	11	0.00206	0.725	0.806	-13.9	84.7	7.6	0.54053	
14	CL20	CL29	22	0.00242	0.722	0.799	-12.8	90.3	4.3	0.55518	
13	CL17	CL39	20	0.00665	0.716	0.790	-12.3	94.9	17.8	0.60603	
12	CL14	CL46	34	0.01417	0.702	0.781	-12.6	96.8	27.1	0.65075	
11	CL26	CL28	91	0.02423	0.677	0.770	-14.1	95.3	80.4	0.65287	
10	CL13	CL15	31	0.01332	0.664	0.757	-13.8	99.9	21.6	0.65994	
9	CL18	CL11	376	0.14746	0.517	0.743	-27.5	60.9	206.3	0.70426	
8	CL25	OB206	17	0.00223	0.514	0.726	-25.6	69.1	7.0	0.74162	
7	CL9	CL8	393	0.04862	0.466	0.706	-27.6	66.5	45.1	0.83281	
6	CL10	OB202	32	0.00305	0.463	0.681	-25.2	79.0	2.9	0.85455	
5	CL6	CL12	66	0.05976	0.403	0.649	-23.5	77.6	58.7	0.91710	
4	OB198	CL16	5	0.00324	0.400	0.604	-20.1	102.3	6.0	0.96927	
3	CL7	CL4	398	0.02222	0.377	0.531	-13.0	140.1	18.5	1.02183	
2	CL5	CL3	464	0.36937	0.008	0.408	-23.0	3.8	274.1	1.23033	
1	CL2	OB227	465	0.00808	0.000	0.000	0.00	.	3.8	1.37103	

CLUSTERING ON shrink1 wattab perm1 drain- AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.48924	1.62199	0.622311	0.62231
2	0.86725	0.35519	0.216813	0.83912
3	0.51207	0.38063	0.128017	0.96714
4	0.13144	.	0.032859	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL77	CL55	5	0.00121	0.865	0.873	-1.95	149.9	8.3	0.52444	
19	CL28	CL23	258	0.03382	0.831	0.869	-7.97	121.9	104.9	0.54578	
18	CL29	CL66	84	0.00184	0.829	0.865	-7.34	127.7	6.6	0.54862	
17	CL31	CL34	46	0.01029	0.819	0.860	-8.16	126.6	48.3	0.58583	
16	CL20	OB253	6	0.00110	0.818	0.855	-7.26	134.4	2.7	0.61908	
15	CL26	CL51	17	0.00231	0.816	0.849	-6.48	142.1	8.8	0.62159	
14	CL19	CL25	265	0.00705	0.808	0.843	-6.42	146.4	15.7	0.64335	
13	CL17	OB392	47	0.00148	0.807	0.836	-5.29	157.5	3.4	0.67103	
12	CL72	OB463	4	0.00156	0.805	0.828	-4.03	170.5	13.2	0.70856	
11	CL18	OB198	85	0.00201	0.803	0.818	-2.68	185.5	6.7	0.73591	
10	CL14	CL32	282	0.02865	0.775	0.808	-5.40	173.9	61.8	0.76449	
9	CL15	CL21	21	0.00644	0.768	0.795	-4.28	189.0	16.9	0.77785	
8	CL22	CL16	24	0.00891	0.759	0.780	-3.18	206.1	20.2	0.80959	
7	CL10	CL11	367	0.16851	0.591	0.761	-19.7	110.3	331.9	0.89572	
6	CL8	CL9	45	0.02573	0.565	0.738	-19.2	119.3	34.2	0.92966	
5	OB10	CL13	48	0.00331	0.562	0.707	-16.1	147.5	7.2	0.94324	
4	CL5	CL7	415	0.16621	0.396	0.663	-25.3	100.6	181.5	1.11820	
3	CL4	CL12	419	0.01594	0.380	0.597	-17.3	141.4	12.2	1.15850	
2	CL3	OB227	420	0.00854	0.371	0.468	-6.34	273.3	6.3	1.51551	
1	CL6	CL2	465	0.37116	0.000	0.000	0.00	.	273.3	1.65320	

CLUSTERING ON shrink1 wattab perm1 drain - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL21	CL143	261	0.01549	0.825	0.873	-9.91	110.7	39.1	0.40606	
19	CL43	CL42	14	0.00156	0.824	0.869	-9.28	115.8	8.2	0.45950	
18	CL22	CL57	88	0.00182	0.822	0.865	-8.64	121.4	5.1	0.46420	
17	CL20	CL23	270	0.00920	0.813	0.860	-9.21	121.6	20.3	0.49527	
16	CL26	CL101	18	0.00274	0.810	0.855	-8.59	127.6	11.3	0.50466	
15	CL19	CL32	46	0.01243	0.798	0.849	-9.45	126.7	54.7	0.54408	
14	CL27	OB253	12	0.00121	0.796	0.843	-8.39	135.7	4.3	0.55243	
13	CL15	OB392	47	0.00144	0.795	0.836	-7.26	146.0	2.9	0.58338	
12	CL24	CL76	21	0.00378	0.791	0.828	-6.36	156.0	9.9	0.58370	
11	CL14	OB463	13	0.00137	0.790	0.818	-4.92	170.6	3.8	0.58769	
10	CL16	CL37	20	0.00294	0.787	0.808	-3.51	186.7	7.7	0.61522	
9	CL12	CL10	41	0.02140	0.765	0.795	-4.70	186.1	40.2	0.69611	
8	CL18	OB198	89	0.00211	0.763	0.780	-2.59	210.6	5.7	0.70287	
7	CL17	CL11	283	0.02768	0.736	0.761	-3.75	212.5	57.1	0.71951	
6	CL7	CL8	372	0.17232	0.563	0.738	-19.4	118.5	322.0	0.76842	
5	CL9	OB202	42	0.00350	0.560	0.707	-16.2	146.3	3.3	0.91205	
4	CL13	CL6	419	0.16385	0.396	0.663	-25.2	100.8	173.3	0.95445	
3	CL4	CL64	422	0.01482	0.381	0.597	-17.2	142.3	11.2	1.07448	
2	CL3	OB227	423	0.00848	0.373	0.468	-6.25	275.1	6.2	1.40410	
1	CL5	CL2	465	0.37273	0.000	0.000	0.00	.	275.1	1.50444	

CLUSTERING ON shrink1 wattab perm1 flood-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.87301	0.532872	0.468254	0.46825
2	1.34014	0.880989	0.335035	0.80329
3	0.45915	0.131462	0.114788	0.91808
4	0.32769	.	0.081923	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL39	CL28	14	0.00236	0.859	0.839	4.94	142.3	5.2	0.68132	
19	CL30	OB171	24	0.00170	0.857	0.834	5.66	148.5	4.7	0.70140	
18	CL36	CL24	289	0.08797	0.769	0.829	-11.4	87.5	343.1	0.71435	
17	CL92	OB156	3	0.00152	0.768	0.823	-10.5	92.4	16.0	0.73383	
16	CL27	OB202	6	0.00164	0.766	0.817	-9.47	97.9	3.5	0.73734	
15	CL19	OB392	25	0.00189	0.764	0.810	-8.44	104.0	4.5	0.74082	
14	CL21	CL25	22	0.00671	0.757	0.802	-8.10	108.2	13.1	0.75496	
13	CL29	OB198	86	0.00215	0.755	0.794	-6.89	116.2	5.3	0.77388	
12	CL20	CL45	19	0.00817	0.747	0.784	-6.51	121.6	16.2	0.82404	
11	CL12	CL13	105	0.02812	0.719	0.774	-8.99	116.1	54.4	0.84969	
10	CL18	CL26	293	0.00955	0.709	0.762	-8.37	123.3	17.1	0.87766	
9	CL41	CL16	10	0.00664	0.703	0.748	-7.07	134.7	12.4	0.90641	
8	CL10	CL11	398	0.17328	0.529	0.731	-24.8	73.4	270.4	0.91452	
7	CL22	OB462	4	0.00262	0.527	0.711	-22.6	85.0	4.0	0.95498	
6	CL14	CL15	47	0.03225	0.494	0.687	-22.9	89.8	51.0	0.96173	
5	CL9	CL17	13	0.00587	0.489	0.655	-17.2	109.9	5.2	0.98364	
4	CL23	CL7	7	0.00865	0.480	0.611	-13.8	141.8	8.3	1.22322	
3	CL5	CL4	20	0.01838	0.462	0.543	-7.31	198.0	10.3	1.31316	
2	CL6	CL8	445	0.24215	0.219	0.353	-9.96	130.2	219.9	1.37297	
1	CL2	CL3	465	0.21945	0.000	0.000	0.00	.	130.2	1.90466	

CLUSTERING ON shrink1 wattab perm1 flood-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL30	CL21	13	0.00281	0.849	0.839	2.34	131.3	5.1	0.62024	
19	CL29	OB171	23	0.00160	0.847	0.834	3.10	137.2	4.8	0.62381	
18	CL37	CL25	71	0.00634	0.841	0.829	2.78	138.7	24.5	0.62409	
17	CL18	CL24	297	0.09189	0.749	0.823	-13.4	83.4	311.9	0.62815	
16	CL71	OB461	3	0.00118	0.748	0.817	-12.4	88.7	9.1	0.64016	
15	CL19	OB392	24	0.00188	0.746	0.810	-11.4	94.3	4.7	0.67381	
14	CL28	OB202	6	0.00164	0.744	0.802	-10.2	100.9	3.5	0.67528	
13	CL34	OB198	86	0.00215	0.742	0.794	-9.00	108.3	5.3	0.71073	
12	CL86	OB156	3	0.00152	0.740	0.784	-7.55	117.5	16.0	0.72631	
11	CL13	CL44	91	0.01115	0.729	0.774	-7.43	122.3	26.6	0.73996	
10	CL17	CL11	388	0.17173	0.558	0.762	-26.1	63.7	291.8	0.75629	
9	CL14	CL16	9	0.00530	0.552	0.748	-24.7	70.3	7.7	0.78434	
8	CL22	CL15	46	0.03142	0.521	0.731	-25.6	71.0	50.2	0.79692	
7	CL10	CL20	401	0.03601	0.485	0.711	-26.5	71.8	35.2	0.81495	
6	CL38	CL12	7	0.00525	0.480	0.687	-24.2	84.6	11.1	0.84262	
5	CL6	CL9	16	0.01286	0.467	0.655	-19.1	100.6	10.1	0.87052	
4	CL8	CL7	447	0.24166	0.225	0.611	-32.8	44.6	213.9	1.16559	
3	CL5	OB227	17	0.00668	0.218	0.543	-24.0	64.5	3.3	1.28362	
2	CL3	OB462	18	0.00775	0.211	0.353	-10.6	123.5	3.3	1.37958	
1	CL4	CL2	465	0.21059	0.000	0.000	0.00	.	123.5	1.68034	

CLUSTERING ON shrink1 wattab perm1 watsoil-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.03904	0.816908	0.509760	0.50976
2	1.22213	0.782177	0.305533	0.81529
3	0.43995	0.141074	0.109988	0.92528
4	0.29888	.	0.074720	1.00000

The data have been standardized to mean 0 and variance 1
Root-Mean-Square Total-Sample Standard Deviation = 1
Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL33	CL38	85	0.00520	0.874	0.844	7.83	162.4	18.9	0.57059	
19	CL27	CL68	206	0.00232	0.872	0.840	8.34	168.2	10.5	0.58532	
18	OB156	CL25	5	0.00098	0.871	0.835	9.30	177.0	2.6	0.59113	
17	CL21	CL57	22	0.00459	0.866	0.829	9.31	181.0	12.0	0.61009	
16	CL26	CL81	16	0.00312	0.863	0.823	9.85	188.5	8.7	0.63338	
15	CL19	CL24	229	0.02384	0.839	0.816	5.15	167.6	96.0	0.64166	
14	CL22	CL99	6	0.00182	0.837	0.809	6.29	178.5	4.6	0.64359	
13	CL31	CL15	300	0.08670	0.751	0.801	-8.96	113.3	258.5	0.71894	
12	CL29	CL23	21	0.00777	0.743	0.792	-8.52	118.9	18.7	0.71927	
11	CL20	OB198	86	0.00207	0.741	0.782	-7.02	129.7	6.2	0.75001	
10	CL17	OB392	23	0.00215	0.739	0.770	-5.32	142.8	3.7	0.80739	
9	CL14	CL45	10	0.00552	0.733	0.756	-3.89	156.5	11.1	0.83554	
8	CL13	CL11	386	0.16752	0.566	0.740	-22.5	85.0	296.8	0.89826	
7	CL16	OB227	17	0.00304	0.563	0.721	-20.3	98.1	5.6	0.93125	
6	CL12	CL10	44	0.03333	0.529	0.697	-18.0	103.2	46.6	1.01135	
5	CL9	CL18	15	0.01210	0.517	0.666	-15.9	123.1	13.6	1.07712	
4	CL8	CL7	403	0.06418	0.453	0.623	-17.3	127.2	65.1	1.13929	
3	CL6	CL4	447	0.22196	0.231	0.555	-23.9	69.4	188.9	1.37732	
2	CL46	CL5	18	0.02249	0.208	0.384	-12.0	121.9	14.9	1.57646	
1	CL3	CL2	465	0.20844	0.000	0.000	0.00	.	121.9	1.94475	

CLUSTERING ON shrink1 wattab perm1 watsoil-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	OB10	CL24	16	0.00093	0.837	0.844	-1.66	120.6	2.1	0.47865	
19	OB202	CL76	4	0.00087	0.837	0.840	-0.74	126.8	7.0	0.52004	
18	CL52	CL33	13	0.00325	0.833	0.835	-0.29	131.4	13.2	0.52171	
17	OB156	CL19	5	0.00098	0.832	0.829	0.74	139.0	2.6	0.53310	
16	CL102	CL70	4	0.00127	0.831	0.823	1.80	147.2	10.9	0.54310	
15	CL25	CL35	20	0.00644	0.825	0.816	1.79	151.1	17.4	0.54656	
14	CL27	OB392	41	0.00130	0.823	0.809	3.05	161.6	6.1	0.55646	
13	CL18	CL82	16	0.00326	0.820	0.801	4.02	171.6	7.4	0.55661	
12	CL16	CL93	6	0.00182	0.818	0.792	5.46	185.4	4.6	0.56233	
11	CL20	CL14	57	0.02089	0.797	0.782	3.06	178.6	69.2	0.64894	
10	CL26	OB198	87	0.00209	0.795	0.770	4.86	196.3	6.2	0.70011	
9	CL21	CL10	353	0.14404	0.651	0.756	-15.3	106.4	365.8	0.71395	
8	CL12	CL46	10	0.00552	0.646	0.740	-13.6	119.0	11.1	0.73016	
7	CL13	OB227	17	0.00296	0.643	0.721	-11.2	137.3	4.7	0.85476	
6	CL8	CL17	15	0.01210	0.631	0.697	-8.11	156.7	13.6	0.91770	
5	CL11	CL9	410	0.18705	0.444	0.666	-21.9	91.7	238.7	0.94036	
4	CL5	CL7	427	0.06720	0.376	0.623	-23.4	92.7	55.0	0.97730	
3	CL15	CL6	35	0.05105	0.325	0.555	-18.2	111.4	45.8	1.17544	
2	CL3	CL4	462	0.29133	0.034	0.384	-21.6	16.3	198.8	1.44547	
1	CL2	CL43	465	0.03399	0.000	0.000	0.00	.	16.3	1.62663	

CLUSTERING ON shrink1 wattab perm1 pan-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.81161	0.413014	0.452902	0.45290
2	1.39860	0.847520	0.349649	0.80255
3	0.55108	0.312358	0.137769	0.94032
4	0.23872	.	0.059680	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL40	CL89	8	0.00160	0.871	0.844	7.26	158.8	8.4	0.54761	
19	CL23	OB392	29	0.00098	0.870	0.839	8.17	166.5	2.9	0.55598	
18	CL28	CL41	73	0.01057	0.860	0.834	6.45	161.4	55.5	0.55647	
17	CL21	CL25	194	0.03181	0.828	0.828	-0.04	134.9	92.8	0.57153	
16	CL33	CL47	87	0.00399	0.824	0.822	0.41	140.2	15.7	0.57707	
15	CL18	OB463	74	0.00117	0.823	0.816	1.59	149.4	3.5	0.59327	
14	CL29	OB202	12	0.00134	0.822	0.808	2.85	159.8	4.8	0.62997	
13	CL31	CL22	21	0.00638	0.815	0.800	3.14	166.2	22.2	0.63944	
12	CL45	CL34	22	0.00509	0.810	0.791	3.88	175.7	27.4	0.65877	
11	CL13	CL14	33	0.01107	0.799	0.781	3.59	180.5	21.5	0.73954	
10	CL16	OB198	88	0.00204	0.797	0.769	4.68	198.5	6.8	0.73992	
9	CL11	CL20	41	0.00796	0.789	0.755	5.50	213.2	10.4	0.74557	
8	CL10	CL26	103	0.02387	0.765	0.739	4.05	212.7	76.3	0.75182	
7	CL17	CL15	268	0.09323	0.672	0.719	-6.00	156.3	201.8	0.77443	
6	CL19	CL12	51	0.02369	0.648	0.693	-5.57	169.2	61.9	0.78217	
5	CL7	CL8	371	0.19817	0.450	0.659	-20.8	94.1	269.3	0.96433	
4	CL6	OB236	52	0.00493	0.445	0.612	-17.0	123.3	5.8	1.16547	
3	CL4	CL5	423	0.16991	0.275	0.541	-20.5	87.7	138.3	1.17023	
2	CL9	CL3	464	0.26721	0.008	0.342	-22.6	3.8	170.3	1.49961	
1	CL2	OB227	465	0.00803	0.000	0.000	0.00	.	3.8	1.53754	

CLUSTERING ON shrink1 wattab perm1 pan-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL29	CL31	34	0.00752	0.857	0.844	3.17	139.8	33.6	0.46611	
19	CL22	CL37	104	0.00404	0.853	0.839	3.28	143.2	11.1	0.49368	
18	CL30	CL109	42	0.01015	0.842	0.834	1.98	140.5	83.3	0.49412	
17	CL39	CL74	8	0.00160	0.841	0.828	2.88	147.8	8.4	0.49680	
16	CL23	CL26	200	0.03712	0.804	0.822	-3.82	122.5	107.0	0.50510	
15	CL33	CL21	21	0.00638	0.797	0.816	-3.67	126.4	22.2	0.53659	
14	CL15	CL32	32	0.00891	0.788	0.808	-3.87	129.2	18.3	0.53510	
13	CL14	CL17	40	0.00791	0.780	0.800	-3.72	133.9	11.4	0.53541	
12	CL20	OB392	35	0.00126	0.779	0.791	-2.21	145.3	2.8	0.54957	
11	CL12	CL46	55	0.01707	0.762	0.781	-3.33	145.4	46.3	0.55778	
10	CL19	CL28	120	0.02262	0.739	0.769	-4.33	143.5	58.4	0.61524	
9	CL18	CL16	242	0.06404	0.675	0.755	-10.4	118.6	127.2	0.65425	
8	CL24	OB236	5	0.00175	0.674	0.739	-8.43	134.8	9.3	0.71278	
7	CL10	CL9	362	0.19399	0.480	0.719	-24.1	70.4	275.8	0.74900	
6	CL11	CL7	417	0.16766	0.312	0.693	-33.0	41.6	143.8	0.90260	
5	CL13	OB202	41	0.00355	0.308	0.659	-30.8	51.3	4.0	0.91842	
4	CL6	CL8	422	0.02580	0.283	0.612	-29.2	60.6	16.6	1.10075	
3	OB198	OB227	2	0.00276	0.280	0.541	-20.2	89.8	.	1.13123	
2	CL4	CL3	424	0.01320	0.267	0.342	-5.96	168.4	8.2	1.24057	
1	CL5	CL2	465	0.26673	0.000	0.000	0.00	.	168.4	1.28655	

CLUSTERING ON shrink1 wattab perm1 bedrock-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.82246	0.759770	0.455615	0.45561
2	1.06269	0.295400	0.265672	0.72129
3	0.76729	0.419727	0.191822	0.91311
4	0.34756	.	0.086890	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL33	OB198	42	0.00120	0.844	0.826	4.14	126.3	8.0	0.56548	
19	CL26	OB223	10	0.00100	0.843	0.820	5.09	132.6	3.0	0.57151	
18	CL23	OB392	42	0.00111	0.841	0.815	6.09	139.6	3.1	0.58612	
17	CL57	CL65	14	0.00227	0.839	0.808	6.89	146.1	17.2	0.59360	
16	CL19	CL30	26	0.00563	0.834	0.802	6.97	149.9	16.5	0.60261	
15	CL31	CL17	34	0.00903	0.825	0.794	6.41	151.0	31.5	0.61629	
14	CL21	CL32	283	0.02239	0.802	0.786	3.19	140.6	56.1	0.64945	
13	OB229	OB230	2	0.00092	0.801	0.777	4.76	151.8	.	0.65325	
12	CL53	OB261	4	0.00131	0.800	0.767	6.43	164.6	9.6	0.65333	
11	CL15	CL24	42	0.00921	0.791	0.755	6.67	171.5	18.3	0.71496	
10	CL16	CL71	28	0.00316	0.788	0.742	8.43	187.4	5.9	0.73070	
9	CL22	CL20	62	0.02467	0.763	0.727	6.29	183.4	109.3	0.73184	
8	CL14	CL9	345	0.10006	0.663	0.709	-6.79	128.3	198.5	0.84250	
7	CL8	CL10	373	0.07543	0.587	0.688	-13.3	108.7	96.5	1.00051	
6	CL13	CL12	6	0.00507	0.582	0.661	-10.5	128.0	8.1	1.03965	
5	CL18	CL7	415	0.14663	0.436	0.627	-19.1	88.8	159.1	1.10130	
4	CL6	OB260	7	0.00500	0.431	0.578	-15.3	116.2	3.3	1.28348	
3	CL11	CL5	457	0.26335	0.167	0.493	-24.9	46.4	215.2	1.43492	
2	CL3	OB227	458	0.00750	0.160	0.344	-13.5	88.1	4.2	1.46984	
1	CL2	CL4	465	0.15983	0.000	0.000	0.00	.	88.1	2.49286	

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL25	OB223	24	0.00108	0.875	0.826	12.66	163.6	2.6	0.51015	
19	CL22	OB392	42	0.00111	0.874	0.820	13.59	171.3	3.1	0.51315	
18	CL33	CL59	32	0.00903	0.865	0.815	12.24	168.0	40.1	0.52853	
17	CL18	CL57	34	0.00226	0.862	0.808	13.01	175.4	4.5	0.52825	
16	CL27	CL31	246	0.02353	0.839	0.802	8.26	155.8	85.1	0.54506	
15	CL17	CL21	42	0.00921	0.830	0.794	7.60	156.5	18.3	0.57429	
14	CL46	OB261	4	0.00131	0.828	0.786	8.97	167.4	9.6	0.63690	
13	CL20	CL60	26	0.00325	0.825	0.777	10.03	177.7	7.6	0.63891	
12	CL13	CL53	28	0.00341	0.822	0.767	11.25	189.7	6.5	0.65287	
11	OB229	OB230	2	0.00092	0.821	0.755	13.28	207.9	.	0.65325	
10	CL30	CL23	98	0.02365	0.797	0.742	10.43	198.6	94.7	0.65722	
9	CL16	CL10	344	0.12830	0.669	0.727	-8.62	115.1	316.5	0.65170	
8	CL9	CL12	372	0.07516	0.594	0.709	-15.4	95.4	97.9	0.82064	
7	CL11	CL14	6	0.00507	0.589	0.688	-13.1	109.2	8.1	0.93928	
6	CL19	CL8	414	0.14606	0.443	0.661	-24.9	72.9	160.7	0.94757	
5	OB198	OB227	2	0.00276	0.440	0.627	-18.7	90.3	.	1.13123	
4	CL7	OB260	7	0.00500	0.435	0.578	-14.9	118.2	3.3	1.16379	
3	CL6	CL5	416	0.01200	0.423	0.493	-6.53	169.2	9.5	1.18275	
2	CL15	CL3	458	0.26291	0.160	0.344	-13.5	88.1	212.3	1.26448	
1	CL2	CL4	465	0.15983	0.000	0.000	0.00	.	88.1	2.31910	

CLUSTERING ON shrink1 wattab perm1 salin1-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.19342	1.24931	0.548355	0.54836
2	0.94411	0.43757	0.236028	0.78438
3	0.50654	0.15061	0.126634	0.91102
4	0.35593	.	0.088983	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL49	OB202	7	0.00121	0.838	0.839	-0.40	120.8	6.1	0.60455	
19	CL29	CL27	21	0.00565	0.832	0.834	-0.55	122.7	15.3	0.63739	
18	CL25	CL22	282	0.02969	0.802	0.829	-5.56	106.7	73.4	0.64658	
17	CL28	CL24	16	0.00213	0.800	0.823	-4.74	112.1	6.0	0.64692	
16	CL32	OB198	53	0.00156	0.799	0.817	-3.73	118.7	5.7	0.65735	
15	CL39	CL42	51	0.01003	0.789	0.810	-4.24	119.9	43.0	0.66616	
14	CL31	CL20	21	0.00610	0.782	0.803	-3.87	124.8	16.9	0.67364	
13	CL19	CL15	72	0.02145	0.761	0.794	-6.02	119.9	44.0	0.75653	
12	CL51	CL26	10	0.00534	0.756	0.785	-5.19	127.4	20.0	0.77108	
11	CL13	OB392	73	0.00191	0.754	0.774	-3.61	139.0	2.4	0.79264	
10	CL18	CL17	298	0.02783	0.726	0.762	-6.00	133.9	54.9	0.80478	
9	CL10	CL16	351	0.10466	0.621	0.748	-17.6	93.5	188.8	0.86383	
8	CL12	OB171	11	0.00228	0.619	0.732	-15.5	106.1	2.7	0.86842	
7	CL21	OB143	4	0.00253	0.616	0.712	-13.1	122.7	4.6	0.93199	
6	CL11	CL9	424	0.19514	0.421	0.688	-29.4	66.8	231.6	1.06254	
5	CL14	CL8	32	0.02473	0.397	0.656	-28.4	75.6	32.6	1.06947	
4	CL6	CL7	428	0.02429	0.372	0.613	-23.0	91.1	18.7	1.39098	
3	CL4	OB227	429	0.00855	0.364	0.548	-15.1	132.1	6.3	1.51751	
2	CL3	CL5	461	0.24020	0.124	0.413	-17.6	65.3	173.7	1.59155	
1	CL2	CL23	465	0.12352	0.000	0.000	0.00	.	65.3	2.78505	

CLUSTERING ON shrink1 wattab perm1 salin1-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL30	CL51	20	0.00499	0.791	0.839	-9.92	88.5	15.8	0.52477	
19	CL32	CL42	47	0.01327	0.777	0.834	-11.2	86.6	47.1	0.52650	
18	CL23	CL24	16	0.00213	0.775	0.829	-10.4	90.8	6.0	0.53175	
17	CL50	OB134	3	0.00088	0.774	0.823	-9.39	96.2	3.8	0.55377	
16	CL27	CL20	27	0.00740	0.767	0.817	-9.37	98.6	14.0	0.57550	
15	CL19	OB392	48	0.00145	0.766	0.810	-8.27	105.0	2.6	0.58536	
14	CL33	OB198	53	0.00156	0.764	0.803	-7.08	112.4	5.7	0.60805	
13	CL22	CL18	314	0.02871	0.735	0.794	-10.1	104.7	53.4	0.66225	
12	CL15	CL391	50	0.00376	0.732	0.785	-9.02	112.3	6.6	0.67433	
11	CL48	CL26	10	0.00534	0.726	0.774	-7.99	120.5	20.0	0.70396	
10	CL13	CL14	367	0.10945	0.617	0.762	-20.1	81.4	188.6	0.74830	
9	CL11	OB171	11	0.00228	0.615	0.748	-18.4	90.9	2.7	0.76208	
8	CL16	OB202	28	0.00298	0.612	0.732	-16.4	102.8	3.8	0.84612	
7	CL17	OB143	4	0.00253	0.609	0.712	-14.0	118.9	4.6	0.88471	
6	CL8	CL9	39	0.02704	0.582	0.688	-13.9	127.8	30.0	0.89130	
5	CL12	CL10	417	0.16651	0.415	0.656	-26.8	81.7	196.1	0.93696	
4	CL5	CL7	421	0.02426	0.391	0.613	-21.5	98.7	19.5	1.19195	
3	CL6	CL4	460	0.25961	0.132	0.548	-28.9	35.0	195.8	1.29902	
2	CL3	OB227	461	0.00807	0.124	0.413	-17.6	65.3	4.3	1.37019	
1	CL2	CL21	465	0.12352	0.000	0.000	0.00	.	65.3	2.68820	

CLUSTERING ON shrink1 wattab perm1 slope-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.82550	0.740102	0.456374	0.45637
2	1.08540	0.331071	0.271349	0.72772
3	0.75432	0.419543	0.188581	0.91630
4	0.33478	.	0.083695	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL24	CL38	16	0.00247	0.865	0.827	9.40	149.8	7.4	0.53581	
19	CL31	OB253	17	0.00099	0.864	0.822	10.35	157.1	4.3	0.54292	
18	CL22	CL23	231	0.03828	0.825	0.816	2.04	124.4	128.6	0.58791	
17	CL19	CL42	19	0.00247	0.823	0.810	2.81	130.2	8.8	0.64389	
16	CL28	CL25	31	0.00588	0.817	0.803	2.92	133.8	17.1	0.65335	
15	CL20	CL335	18	0.00286	0.814	0.796	3.80	140.9	6.4	0.69067	
14	CL27	CL30	57	0.01943	0.795	0.788	1.40	134.4	57.0	0.69642	
13	CL33	CL17	93	0.02409	0.771	0.779	-1.44	126.7	82.9	0.71975	
12	CL21	CL14	59	0.00273	0.768	0.769	-0.09	136.4	4.0	0.74342	
11	CL13	CL26	106	0.01832	0.750	0.757	-1.29	136.0	34.7	0.75934	
10	CL40	CL15	30	0.01253	0.737	0.744	-1.17	141.8	27.8	0.76369	
9	CL16	CL77	33	0.00381	0.733	0.729	0.70	156.8	7.4	0.77851	
8	CL18	CL11	337	0.12975	0.604	0.711	-14.5	99.4	241.9	0.82549	
7	OB392	CL32	4	0.00240	0.601	0.690	-12.0	115.1	9.0	0.88490	
6	CL10	CL7	34	0.01138	0.590	0.664	-8.56	132.0	13.0	1.05465	
5	CL12	CL8	396	0.18490	0.405	0.629	-21.7	78.3	207.6	1.10929	
4	OB198	OB227	2	0.00286	0.402	0.581	-18.0	103.3	.	1.15182	
3	CL5	CL6	430	0.14864	0.253	0.497	-19.6	78.4	110.6	1.29783	
2	CL3	CL4	432	0.01250	0.241	0.344	-8.00	147.0	7.4	1.47610	
1	CL9	CL2	465	0.24098	0.000	0.000	0.00	.	147.0	1.53611	

CLUSTERING ON shrink1 wattab perm1 slope-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL24	CL28	229	0.03848	0.827	0.827	-0.04	111.9	133.6	0.45936	
19	CL96	OB202	3	0.00061	0.826	0.822	0.99	117.9	6.9	0.46107	
18	CL29	OB456	36	0.00106	0.825	0.816	1.99	124.2	3.1	0.50395	
17	CL23	CL35	15	0.00209	0.823	0.810	2.84	130.3	8.4	0.52917	
16	CL30	CL334	15	0.00210	0.821	0.803	3.78	137.4	6.0	0.52955	
15	CL21	CL18	62	0.02499	0.796	0.796	0.06	125.5	64.7	0.61972	
14	CL32	CL62	26	0.00323	0.793	0.788	1.00	132.8	9.8	0.63709	
13	OB10	OB392	2	0.00093	0.792	0.779	2.54	143.3	.	0.65820	
12	CL38	CL17	95	0.02402	0.768	0.769	-0.12	136.2	82.0	0.66417	
11	CL12	CL27	111	0.02558	0.742	0.757	-2.53	130.8	48.5	0.65831	
10	CL20	CL11	340	0.12874	0.614	0.744	-17.9	80.3	232.8	0.63207	
9	CL42	CL16	27	0.01349	0.600	0.729	-17.3	85.5	36.4	0.68527	
8	CL14	CL19	29	0.00569	0.594	0.711	-15.6	95.7	13.0	0.70029	
7	CL9	CL22	30	0.00732	0.587	0.690	-13.6	108.5	8.8	0.79297	
6	CL15	CL13	64	0.00694	0.580	0.664	-9.57	126.8	8.8	0.91170	
5	CL6	CL10	404	0.20096	0.379	0.629	-23.7	70.2	217.3	0.93039	
4	CL5	CL7	434	0.14064	0.239	0.581	-30.2	48.1	100.7	1.08092	
3	OB198	OB227	2	0.00286	0.236	0.497	-20.8	71.2	.	1.15182	
2	CL4	CL3	436	0.01253	0.223	0.344	-9.27	133.0	7.3	1.20847	
1	CL2	CL8	465	0.22314	0.000	0.000	0.00	.	133.0	1.37980	

CLUSTERING ON shrink1 wattab perm1 om1 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.26283	1.42073	0.565706	0.56571
2	0.84209	0.29987	0.210523	0.77623
3	0.54222	0.18936	0.135555	0.91178
4	0.35286	.	0.088215	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL39	CL66	11	0.00262	0.849	0.840	1.99	131.2	12.0	0.59106	
19	OB239	OB240	2	0.00078	0.848	0.835	2.95	138.0	.	0.60080	
18	CL26	CL22	28	0.00602	0.842	0.830	2.70	139.8	15.5	0.60529	
17	CL32	CL85	40	0.00566	0.836	0.824	2.64	142.8	21.5	0.61972	
16	CL29	CL25	258	0.07271	0.763	0.818	-10.2	96.6	195.6	0.66189	
15	CL21	CL46	24	0.00532	0.758	0.811	-9.74	100.7	11.9	0.67661	
14	CL44	OB198	71	0.00181	0.756	0.804	-8.60	107.6	9.2	0.68679	
13	CL28	CL17	56	0.01729	0.739	0.796	-9.79	106.6	45.0	0.71806	
12	CL14	CL23	75	0.00694	0.732	0.786	-9.18	112.5	30.1	0.74551	
11	CL18	CL67	30	0.00367	0.728	0.776	-7.91	121.7	6.3	0.78236	
10	CL13	CL31	62	0.01009	0.718	0.764	-7.40	128.9	15.3	0.80518	
9	CL16	CL15	282	0.03490	0.683	0.750	-10.1	123.0	53.4	0.81623	
8	CL9	CL12	357	0.14905	0.534	0.733	-24.6	74.9	218.9	0.91459	
7	CL11	CL19	32	0.00493	0.529	0.714	-22.7	85.9	7.1	0.92437	
6	CL8	CL20	368	0.03196	0.497	0.689	-22.9	90.8	29.6	1.02255	
5	CL7	OB202	33	0.00390	0.493	0.658	-19.8	112.0	4.7	1.05822	
4	CL10	CL6	430	0.20886	0.285	0.616	-29.3	61.1	187.4	1.16978	
3	CL4	OB227	431	0.00868	0.276	0.550	-20.9	88.0	5.4	1.54567	
2	CL3	CL5	464	0.26217	0.014	0.426	-22.9	6.5	167.3	1.60186	
1	CL2	OB224	465	0.01378	0.000	0.000	0.00	.	6.5	1.92252	

CLUSTERING ON shrink1 wattab perm1 om1 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL26	CL38	262	0.07566	0.769	0.840	-13.9	77.9	200.0	0.52513	
19	CL32	CL62	10	0.00254	0.766	0.835	-13.2	81.3	11.4	0.52971	
18	CL25	CL27	51	0.01624	0.750	0.830	-14.7	78.9	56.1	0.56218	
17	CL55	CL57	72	0.00266	0.747	0.824	-13.9	82.9	13.4	0.56325	
16	CL22	CL30	24	0.00702	0.740	0.818	-13.8	85.4	16.6	0.57303	
15	CL16	CL70	26	0.00222	0.738	0.811	-12.8	90.7	3.2	0.52780	
14	CL20	CL15	288	0.03547	0.703	0.804	-16.4	82.0	52.6	0.58984	
13	CL28	OB240	7	0.00129	0.701	0.796	-15.2	88.5	4.3	0.59197	
12	CL18	CL13	58	0.01067	0.691	0.786	-15.0	92.0	18.0	0.63409	
11	CL17	OB198	73	0.00178	0.689	0.776	-13.5	100.6	7.7	0.64667	
10	CL21	CL61	30	0.00367	0.685	0.764	-12.0	110.1	6.3	0.67538	
9	CL14	CL402	290	0.00464	0.681	0.750	-10.5	121.5	5.9	0.73584	
8	CL9	CL19	300	0.02392	0.657	0.733	-11.2	125.0	30.1	0.75764	
7	CL8	CL11	373	0.15902	0.498	0.714	-25.6	75.7	211.2	0.79269	
6	CL10	OB239	31	0.00314	0.495	0.689	-23.1	89.9	4.6	0.86749	
5	CL6	OB202	32	0.00375	0.491	0.658	-20.0	110.9	4.9	0.94734	
4	CL12	CL7	431	0.21351	0.277	0.616	-29.8	59.0	189.9	0.99341	
3	CL4	CL5	463	0.25546	0.022	0.550	-34.2	5.2	163.0	1.41053	
2	CL3	OB227	464	0.00817	0.014	0.426	-22.9	6.5	3.9	1.37810	
1	CL2	OB224	465	0.01378	0.000	0.000	0.00	.	6.5	1.78969	

CLUSTERING ON shrink1 wattab perm1 om2 - AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	1.88202	0.762178	0.470506	0.47051
2	1.11985	0.465553	0.279962	0.75047
3	0.65429	0.310458	0.163573	0.91404
4	0.34384	.	0.085959	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL34	CL26	55	0.00655	0.867	0.829	9.46	152.6	25.7	0.52282	
19	CL32	OB241	5	0.00085	0.866	0.824	10.45	160.2	2.9	0.54637	
18	CL33	CL58	7	0.00167	0.864	0.819	11.28	167.6	7.6	0.54938	
17	CL44	CL46	43	0.00888	0.856	0.812	10.19	165.8	47.6	0.56584	
16	CL30	CL23	17	0.00415	0.851	0.806	10.55	171.5	11.9	0.61104	
15	CL24	CL20	142	0.03205	0.819	0.799	4.35	145.8	87.7	0.62310	
14	CL31	CL19	13	0.00408	0.815	0.790	5.07	153.1	12.3	0.66653	
13	CL16	CL21	23	0.00485	0.810	0.782	5.78	161.0	9.0	0.67588	
12	CL40	OB198	73	0.00181	0.809	0.772	7.33	174.0	8.7	0.68719	
11	CL12	CL22	93	0.02541	0.783	0.760	4.22	164.0	98.2	0.71395	
10	CL17	OB392	44	0.00179	0.781	0.748	6.20	180.7	4.6	0.71767	
9	CL15	CL47	152	0.01454	0.767	0.733	6.03	187.5	25.7	0.73160	
8	CL10	CL14	57	0.01376	0.753	0.715	6.48	199.1	29.0	0.74358	
7	CL25	CL11	223	0.09894	0.654	0.694	-5.81	144.4	246.7	0.78504	
6	CL13	CL76	25	0.00442	0.650	0.668	-2.68	170.3	6.2	0.85961	
5	CL7	CL9	375	0.21416	0.436	0.635	-19.8	88.7	278.4	0.94685	
4	CL18	CL6	32	0.01624	0.419	0.588	-17.1	111.0	20.7	0.98629	
3	CL8	CL5	432	0.18018	0.239	0.512	-21.3	72.6	143.2	1.14760	
2	CL4	CL3	464	0.23021	0.009	0.355	-22.6	4.2	139.8	1.57099	
1	CL2	OB227	465	0.00892	0.000	0.000	0.00	.	4.2	1.60324	

CLUSTERING ON shrink1 wattab perm1 om2 - CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL22	CL48	147	0.01766	0.839	0.829	2.24	122.2	68.3	0.43759	
19	CL28	CL21	20	0.00441	0.835	0.824	2.38	125.2	11.6	0.45221	
18	CL25	CL26	12	0.00259	0.832	0.819	3.02	130.4	9.2	0.47463	
17	CL47	CL18	24	0.00488	0.827	0.812	3.22	134.1	14.3	0.43418	
16	CL32	CL51	7	0.00167	0.826	0.806	4.25	141.7	7.6	0.47510	
15	CL36	CL56	88	0.01734	0.808	0.799	1.98	135.5	82.1	0.56856	
14	CL30	OB202	6	0.00126	0.807	0.790	3.32	145.1	3.7	0.59212	
13	CL17	CL27	56	0.02096	0.786	0.782	0.84	138.4	56.1	0.59551	
12	CL15	CL109	92	0.00671	0.779	0.772	1.42	145.5	16.9	0.63770	
11	CL13	OB392	57	0.00180	0.778	0.760	3.14	158.7	2.4	0.65119	
10	CL11	OB241	58	0.00185	0.776	0.748	5.10	174.9	2.4	0.66008	
9	CL19	CL64	22	0.00355	0.772	0.733	7.05	193.2	6.2	0.67270	
8	CL20	CL12	239	0.11108	0.661	0.715	-7.93	127.3	269.7	0.67484	
7	CL8	CL23	370	0.19375	0.467	0.694	-26.2	67.0	260.4	0.72885	
6	CL9	CL14	28	0.01129	0.456	0.668	-24.4	77.0	16.7	0.74545	
5	CL16	CL6	35	0.01835	0.438	0.635	-19.6	89.5	19.1	0.87181	
4	CL10	CL7	428	0.19181	0.246	0.588	-30.1	50.1	159.5	0.94207	
3	OB198	OB227	2	0.00293	0.243	0.512	-21.1	74.1	.	1.16682	
2	CL4	CL3	430	0.01372	0.229	0.355	-9.38	137.7	8.3	1.26446	
1	CL5	CL2	465	0.22924	0.000	0.000	0.00	.	137.7	1.28188	

CLUSTERING ON shrink1 wattab perm1 bd2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.55172	1.66081	0.637930	0.63793
2	0.89091	0.51284	0.222728	0.86066
3	0.37807	0.19877	0.094518	0.95518
4	0.17930	.	0.044824	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL26	CL58	83	0.01014	0.876	0.871	1.22	164.8	41.1	0.52359	
19	CL24	CL40	39	0.00793	0.868	0.867	0.08	162.4	41.9	0.54009	
18	CL36	OB253	15	0.00110	0.867	0.863	0.93	170.7	5.7	0.56040	
17	CL25	CL22	205	0.00618	0.860	0.858	0.49	172.5	21.3	0.57281	
16	CL23	CL41	21	0.00201	0.858	0.853	1.25	181.3	5.9	0.60267	
15	CL30	CL50	9	0.00276	0.856	0.848	1.91	190.4	14.3	0.61944	
14	CL18	CL31	81	0.01592	0.840	0.842	-0.52	181.6	74.1	0.63627	
13	CL17	CL20	288	0.06448	0.775	0.835	-11.7	129.9	193.5	0.64122	
12	CL42	CL54	14	0.00260	0.773	0.828	-9.18	139.9	14.4	0.64309	
11	CL27	CL21	8	0.00257	0.770	0.819	-8.05	152.0	7.4	0.64747	
10	CL15	CL28	11	0.00218	0.768	0.809	-6.67	167.2	4.4	0.67716	
9	CL16	CL12	35	0.01061	0.757	0.798	-6.28	177.8	26.4	0.68262	
8	CL19	OB392	40	0.00184	0.755	0.784	-4.33	201.6	4.7	0.72650	
7	CL14	OB198	82	0.00212	0.753	0.766	-1.99	233.0	5.2	0.76895	
6	CL8	CL10	51	0.01967	0.734	0.745	-1.60	252.8	41.1	0.87574	
5	CL13	CL7	370	0.16795	0.566	0.716	-16.7	149.7	317.3	0.91552	
4	CL9	CL11	43	0.01540	0.550	0.676	-13.8	188.0	22.1	0.91761	
3	CL4	CL6	94	0.10963	0.441	0.612	-14.2	181.9	115.9	1.23422	
2	CL5	OB227	371	0.00762	0.433	0.480	-3.17	353.6	7.7	1.41399	
1	CL3	CL2	465	0.43298	0.000	0.000	0.00	.	353.6	1.43401	

CLUSTERING ON shrink1 wattab perm1 bd2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL34	CL30	18	0.00282	0.865	0.871	-1.62	150.5	15.8	0.42594	
19	CL29	CL27	48	0.00889	0.856	0.867	-2.85	147.8	37.6	0.46637	
18	CL46	CL23	286	0.05327	0.803	0.863	-13.2	107.3	155.8	0.46675	
17	OB202	CL40	4	0.00080	0.802	0.858	-12.2	113.7	4.9	0.49739	
16	CL25	CL43	31	0.00799	0.794	0.853	-12.5	115.6	28.3	0.50195	
15	CL20	OB253	19	0.00111	0.793	0.848	-11.4	123.3	3.3	0.52085	
14	CL22	CL17	8	0.00257	0.791	0.842	-10.5	131.1	7.4	0.54567	
13	CL26	CL36	9	0.00276	0.788	0.835	-9.52	139.9	14.3	0.56598	
12	CL13	CL21	11	0.00218	0.786	0.828	-7.20	151.0	4.4	0.55547	
11	CL35	OB198	56	0.00148	0.784	0.819	-5.90	165.0	8.5	0.59197	
10	CL16	CL37	33	0.00321	0.781	0.809	-4.67	180.4	6.1	0.62982	
9	CL18	CL15	305	0.03107	0.750	0.798	-7.30	171.0	59.9	0.63605	
8	CL14	CL31	10	0.00286	0.747	0.784	-5.50	192.9	4.7	0.64423	
7	CL10	CL8	43	0.01656	0.731	0.766	-5.18	207.0	24.8	0.70752	
6	CL19	CL12	59	0.01955	0.711	0.745	-4.65	225.9	42.2	0.71190	
5	CL6	OB392	60	0.00237	0.709	0.716	-1.02	279.7	3.0	0.74850	
4	CL9	CL11	361	0.13283	0.576	0.676	-11.4	208.6	239.5	0.80705	
3	CL7	CL5	103	0.11782	0.458	0.612	-13.0	195.2	129.0	1.04465	
2	CL3	CL4	464	0.45016	0.008	0.480	-23.7	3.7	383.7	1.14160	
1	CL2	OB227	465	0.00783	0.000	0.000	0.00	.	3.7	1.34898	

CLUSTERING ON shrink1 wattab perm1 cec2-AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.71198	1.86286	0.677994	0.67799
2	0.84911	0.47726	0.212278	0.89027
3	0.37185	0.30479	0.092963	0.98323
4	0.06706	.	0.016765	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	Tie
20	CL82	CL29	11	0.00211	0.905	0.896	2.76	223.0	13.4	0.48546	
19	CL23	OB156	4	0.00061	0.904	0.892	3.60	234.2	1.7	0.49264	
18	CL30	CL27	13	0.00195	0.902	0.888	4.09	243.1	8.0	0.49361	
17	CL37	CL25	17	0.00299	0.899	0.884	4.33	250.3	16.6	0.50046	
16	CL28	CL61	196	0.00328	0.896	0.879	4.59	258.2	16.2	0.50709	
15	CL16	CL40	256	0.03706	0.859	0.874	-3.52	195.9	179.3	0.52525	
14	CL26	OB166	14	0.00090	0.858	0.868	-2.35	209.9	3.5	0.52738	
13	CL34	CL19	17	0.00321	0.855	0.862	-1.56	222.0	13.6	0.59954	
12	CL15	CL21	262	0.00538	0.850	0.855	-1.08	232.6	15.3	0.60117	
11	CL17	CL22	60	0.01552	0.834	0.846	-2.44	228.2	51.8	0.66039	
10	CL14	CL47	16	0.00282	0.831	0.836	-1.01	249.0	9.6	0.67862	
9	CL20	OB202	12	0.00170	0.830	0.825	0.90	277.4	4.8	0.71078	
8	CL31	OB198	84	0.00196	0.828	0.811	3.11	313.4	9.3	0.71376	
7	CL18	CL10	29	0.01197	0.816	0.794	3.85	337.6	27.9	0.75524	
6	CL8	CL13	101	0.02994	0.786	0.772	2.15	336.5	113.7	0.79794	
5	CL7	CL9	41	0.01502	0.771	0.744	4.13	386.4	20.4	0.83654	
4	CL12	CL6	363	0.15964	0.611	0.704	-8.98	241.4	377.5	0.84990	
3	CL5	CL11	101	0.11385	0.497	0.640	-12.3	228.4	147.0	1.20803	
2	CL4	OB227	364	0.00777	0.489	0.510	-1.40	443.8	9.0	1.41664	
1	CL3	CL2	465	0.48939	0.000	0.000	0.00	.	443.8	1.44142	

CLUSTERING ON shrink1 wattab perm1 cec2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	Tie
20	CL35	OB156	5	0.00062	0.904	0.896	2.55	221.3	3.5	0.42320	
19	CL37	OB253	3	0.00052	0.904	0.892	3.42	232.7	2.6	0.42426	
18	CL34	CL19	16	0.00179	0.902	0.888	3.96	241.9	8.6	0.41320	
17	CL30	CL27	14	0.00186	0.900	0.884	4.55	252.3	7.0	0.42823	
16	CL32	CL49	252	0.03758	0.863	0.879	-4.03	187.8	192.0	0.43673	
15	CL16	CL59	256	0.00275	0.860	0.874	-3.37	197.1	8.1	0.40265	
14	CL15	CL22	262	0.00538	0.854	0.868	-3.17	203.6	15.3	0.46138	
13	CL36	OB166	13	0.00085	0.854	0.862	-1.86	219.5	3.6	0.46177	
12	CL17	CL47	21	0.00433	0.849	0.855	-1.16	231.9	14.2	0.46400	
11	CL21	CL25	60	0.01579	0.833	0.846	-2.57	227.1	53.6	0.52418	
10	CL20	OB202	6	0.00106	0.832	0.836	-0.80	251.0	3.7	0.54376	
9	CL12	CL13	34	0.01145	0.821	0.825	-0.74	261.3	26.9	0.57512	
8	CL38	CL18	99	0.02478	0.796	0.811	-2.57	254.9	108.8	0.65467	
7	CL9	CL40	36	0.00403	0.792	0.794	-0.32	290.8	5.4	0.70360	
6	CL14	CL8	361	0.15716	0.635	0.772	-17.0	159.7	393.0	0.71236	
5	CL7	CL10	42	0.01652	0.618	0.744	-15.0	186.4	21.0	0.86337	
4	CL5	CL11	102	0.11541	0.503	0.704	-17.0	155.5	142.7	1.04103	
3	OB198	OB227	2	0.00276	0.500	0.640	-12.1	231.2	.	1.13124	
2	CL6	CL3	363	0.01149	0.489	0.510	-1.44	442.6	13.7	1.15779	
1	CL4	CL2	465	0.48876	0.000	0.000	0.00	.	442.6	1.19334	

CLUSTERING ON shrink1 wattab perm1 salin2 AVERAGE METHOD

Eigenvalues of the Correlation Matrix

	Eigenvalue	Difference	Proportion	Cumulative
1	2.32960	1.42067	0.582400	0.58240
2	0.90893	0.50432	0.227232	0.80963
3	0.40461	0.04775	0.101152	0.91078
4	0.35686	.	0.089216	1.00000

The data have been standardized to mean 0 and variance 1

Root-Mean-Square Total-Sample Standard Deviation = 1

Root-Mean-Square Distance Between Observations = 2.828427

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm RMS Dist	T i e
20	CL34	OB202	6	0.00099	0.831	0.847	-3.66	115.4	4.5	0.56259	
19	CL22	CL39	16	0.00329	0.828	0.842	-3.28	119.3	11.1	0.56504	
18	CL27	CL26	13	0.00148	0.827	0.837	-2.43	125.3	4.7	0.57305	
17	OB2	CL28	11	0.00118	0.825	0.832	-1.45	132.4	4.7	0.59307	
16	CL38	CL47	5	0.00146	0.824	0.826	-0.45	140.1	5.1	0.60017	
15	CL36	OB160	9	0.00131	0.823	0.819	0.68	149.1	4.4	0.63407	
14	CL35	OB198	53	0.00157	0.821	0.812	1.87	159.2	6.5	0.65224	
13	CL17	CL20	17	0.00485	0.816	0.804	2.48	167.3	13.8	0.65893	
12	CL30	CL13	23	0.00697	0.809	0.795	2.81	174.7	12.3	0.75490	
11	CL23	CL24	338	0.11424	0.695	0.785	-14.3	103.5	276.6	0.79601	
10	CL21	CL89	6	0.00352	0.691	0.774	-12.9	113.3	11.7	0.79847	
9	CL18	CL14	66	0.02291	0.669	0.761	-13.7	115.0	77.9	0.81098	
8	CL11	CL9	404	0.13348	0.535	0.745	-26.0	75.1	182.1	0.93870	
7	CL12	CL15	32	0.01840	0.517	0.726	-25.4	81.6	24.8	0.96810	
6	CL7	CL19	48	0.02851	0.488	0.703	-25.3	87.6	27.3	1.01115	
5	CL8	CL10	410	0.03291	0.455	0.673	-25.0	96.1	31.0	1.31146	
4	CL6	OB392	49	0.00706	0.448	0.633	-18.6	124.8	4.3	1.42878	
3	CL5	OB227	411	0.00820	0.440	0.570	-11.2	181.5	7.2	1.47369	
2	CL4	CL3	460	0.30922	0.131	0.438	-17.9	69.7	254.0	1.51727	
1	CL2	CL16	465	0.13079	0.000	0.000	0.00	.	69.7	2.58450	

CLUSTERING ON shrink1 wattab perm1 salin2-CENTROID METHOD

NCL	-Clusters Joined-		FREQ	SPRSQ	RSQ	ERSQ	CCC	PSF	PST2	Norm Cent Dist	T i e
20	CL25	OB253	15	0.00102	0.829	0.847	-4.21	113.4	3.2	0.50469	
19	CL30	CL35	5	0.00146	0.827	0.842	-3.43	118.8	5.1	0.53155	
18	CL49	OB134	3	0.00082	0.827	0.837	-2.44	125.3	3.7	0.53266	
17	OB24	CL18	4	0.00101	0.826	0.832	-1.42	132.5	2.0	0.55836	
16	OB2	CL21	16	0.00127	0.824	0.826	-0.38	140.4	2.7	0.56070	
15	CL29	CL16	22	0.00630	0.818	0.819	-0.32	144.4	13.0	0.57860	
14	CL39	OB160	9	0.00131	0.817	0.812	0.92	154.5	4.4	0.58464	
13	CL36	OB198	54	0.00157	0.815	0.804	2.24	166.0	6.5	0.61005	
12	CL31	CL20	270	0.02574	0.789	0.795	-1.17	154.3	64.8	0.64923	
11	CL28	CL12	349	0.11703	0.672	0.785	-17.2	93.2	245.8	0.66650	
10	CL17	CL79	7	0.00462	0.668	0.774	-15.9	101.6	10.4	0.79040	
9	CL15	CL22	38	0.02546	0.642	0.761	-17.0	102.3	39.1	0.79856	
8	CL9	CL14	47	0.01934	0.623	0.745	-16.9	107.8	16.7	0.78532	
7	CL11	CL13	403	0.12912	0.494	0.726	-27.4	74.5	174.7	0.80036	
6	OB202	OB227	2	0.00234	0.491	0.703	-25.0	88.7	.	1.04172	
5	CL7	CL10	410	0.03356	0.458	0.673	-24.7	97.1	31.7	1.06373	
4	CL8	CL6	49	0.01262	0.445	0.633	-18.8	123.3	8.0	1.23535	
3	CL4	CL5	459	0.30750	0.138	0.570	-29.4	36.9	254.4	1.27669	
2	CL3	OB392	460	0.00698	0.131	0.438	-17.9	69.7	3.7	1.27366	
1	CL2	CL19	465	0.13079	0.000	0.000	0.00	.	69.7	2.47684	

3. Results of the Canonical Discriminant Analysis.

3a. CDA of Cluster results from Average method with data from 12 of 19 clusters.

```
           Cluster analysis of data from the Well Inventory as of:
             January 14, 1999 and NRCS tables as of April 22 1999
         1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
                      Rainfall not used to remove sections
                    Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
                                          09:24 Wednesday, September 1, 1999

                       Canonical Discriminant Analysis

                  452 Observations        451 DF Total
                    4 Variables           440 DF Within Classes
                   12 Classes              11 DF Between Classes


                            Class Level Information

                CLUSTER     Frequency        Weight     Proportion

                      1            83       83.0000       0.183628
                      2            12       12.0000       0.026549
                      3            71       71.0000       0.157080
                      4           123      123.0000       0.272124
                      5            58       58.0000       0.128319
                      7            18       18.0000       0.039823
                      8            15       15.0000       0.033186
                     10            29       29.0000       0.064159
                     11            11       11.0000       0.024336
                     12            15       15.0000       0.033186
                     13             9        9.0000       0.019912
                     14             8        8.0000       0.017699
           Cluster analysis of data from the Well Inventory as of:           79
             January 14, 1999 and NRCS tables as of April 22 1999
         1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
                      Rainfall not used to remove sections
                    Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
                                          09:24 Wednesday, September 1, 1999

                       Canonical Discriminant Analysis

                  Multivariate Statistics and F Approximations

                             S=4    M=3    N=217.5

  Statistic                    Value          F      Num DF    Den DF  Pr > F

  Wilks' Lambda             0.00091214   199.0158        44  1673.807  0.0001
  Pillai's Trace            3.13068040   144.0520        44      1760  0.0001
  Hotelling-Lawley Trace   23.74189350   234.9908        44      1742  0.0001
  Roy's Greatest Root      10.48340526   419.3362        11       440  0.0001

          NOTE: F Statistic for Roy's Greatest Root is an upper bound.
```

Cluster analysis of data from the Well Inventory as of: 80
January 14, 1999 and NRCS tables as of April 22 1999
1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
Rainfall not used to remove sections
Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
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Canonical Discriminant Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approx Standard Error	Squared Canonical Correlation
1	0.955467	.	0.004101	0.912918
2	0.945223	.	0.005017	0.893446
3	0.887692	0.885991	0.009983	0.787997
4	0.732339	0.728834	0.021834	0.536320

Eigenvalues of INV(E)*H
= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	10.4834	2.0985	0.4416	0.4416
2	8.3849	4.6680	0.3532	0.7947
3	3.7169	2.5603	0.1566	0.9513
4	1.1567	.	0.0487	1.0000

Test of H0: The canonical correlations in the
current row and all that follow are zero

	Likelihood Ratio	Approx F	Num DF	Den DF	Pr > F
1	0.00091214	199.0158	44	1673.807	0.0001
2	0.01047443	159.7730	30	1286.293	0.0001
3	0.09830171	106.7978	18	878	0.0001
4	0.46368030	63.6162	8	440	0.0001

Total Canonical Structure

	CAN1	CAN2	CAN3	CAN4
SHRINK1	0.564725	0.464960	-0.639258	0.237167
WATTAB	0.896574	0.308602	0.312176	0.058870
PAN	-0.679232	0.658915	0.275751	0.168628
PERM1	-0.060483	-0.858888	0.354413	0.364753

Between Canonical Structure

	CAN1	CAN2	CAN3	CAN4
SHRINK1	0.589965	0.480532	-0.620456	0.189906
WATTAB	0.904200	0.307890	0.292499	0.045506
PAN	-0.690153	0.662331	0.260309	0.131326

PERM1 -0.063327 -0.889634 0.344756 0.292719

Cluster analysis of data from the Well Inventory as of: 81
January 14, 1999 and NRCS tables as of April 22 1999
1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
Rainfall not used to remove sections
Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
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Canonical Discriminant Analysis

Pooled Within Canonical Structure

	CAN1	CAN2	CAN3	CAN4
SHRINK1	0.412108	0.375327	-0.727875	0.399368
WATTAB	0.826737	0.314775	0.449146	0.125262
PAN	-0.589162	0.632216	0.373198	0.337512
PERM1	-0.043644	-0.685565	0.399032	0.607346

Total-Sample Standardized Canonical Coefficients

	CAN1	CAN2	CAN3	CAN4
SHRINK1	0.491813559	0.542529837	-1.795057022	1.827114916
WATTAB	2.317482621	1.011746093	1.875657194	0.076256906
PAN	-1.458130948	1.911183706	0.945333554	1.431446603
PERM1	-0.019713712	-1.399602521	0.427410041	2.114676754

Pooled Within-Class Standardized Canonical Coefficients

	CAN1	CAN2	CAN3	CAN4
SHRINK1	0.2013505053	0.2221139594	-.7349037693	0.7480284039
WATTAB	0.7508650331	0.3278060240	0.6077134685	0.0247072595
PAN	-.5022351541	0.6582835682	0.3256084400	0.4930440617
PERM1	-.0081621174	-.5794809362	0.1769616497	0.8755449116

Raw Canonical Coefficients

	CAN1	CAN2	CAN3	CAN4
SHRINK1	0.997302349	1.100145108	-3.640026899	3.705034081
WATTAB	9.832728286	4.292685666	7.958129820	0.323546521
PAN	-4.720079526	6.186645372	3.060115801	4.633700293
PERM1	-0.007554716	-0.536357622	0.163792670	0.810389363

Cluster analysis of data from the Well Inventory as of: 82
January 14, 1999 and NRCS tables as of April 22 1999
1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
Rainfall not used to remove sections
Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
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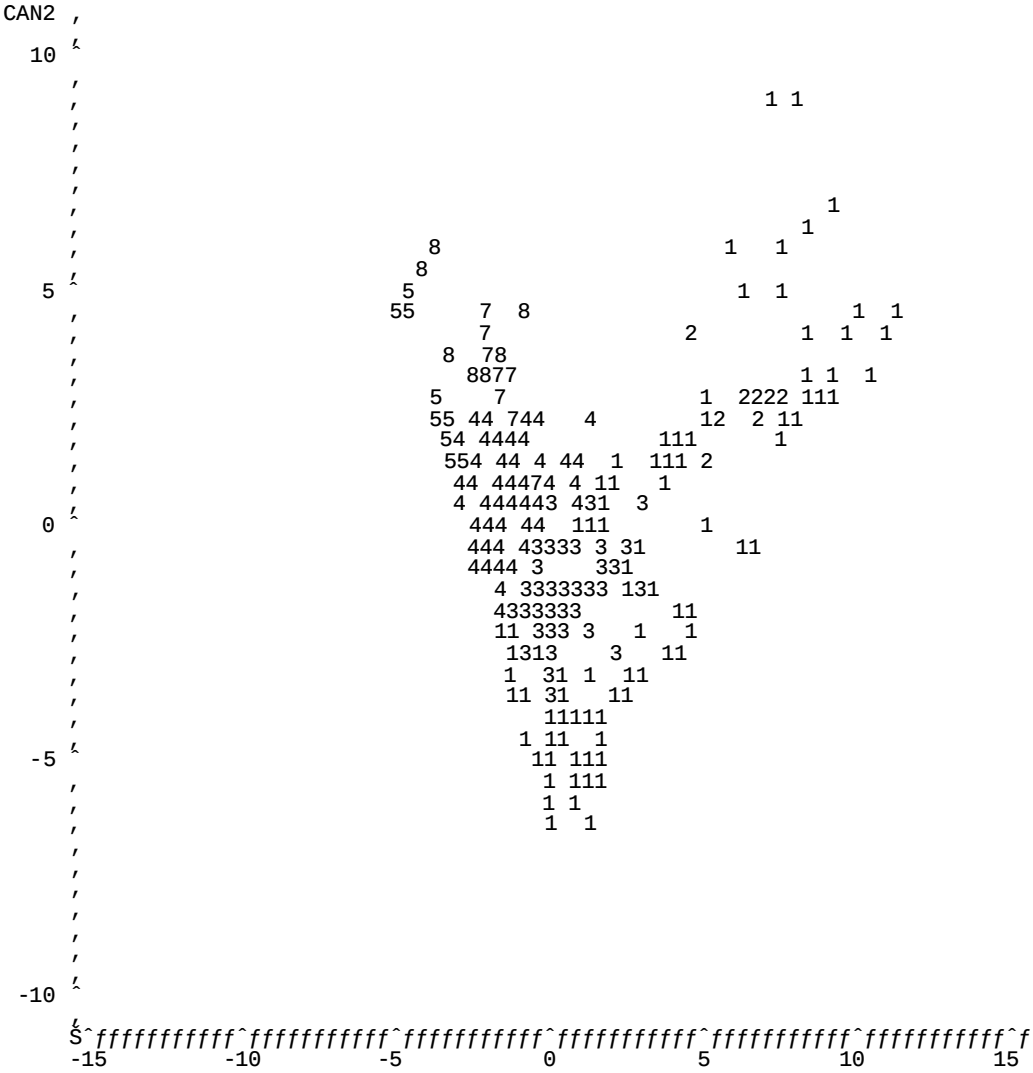
Canonical Discriminant Analysis

Class Means on Canonical Variables

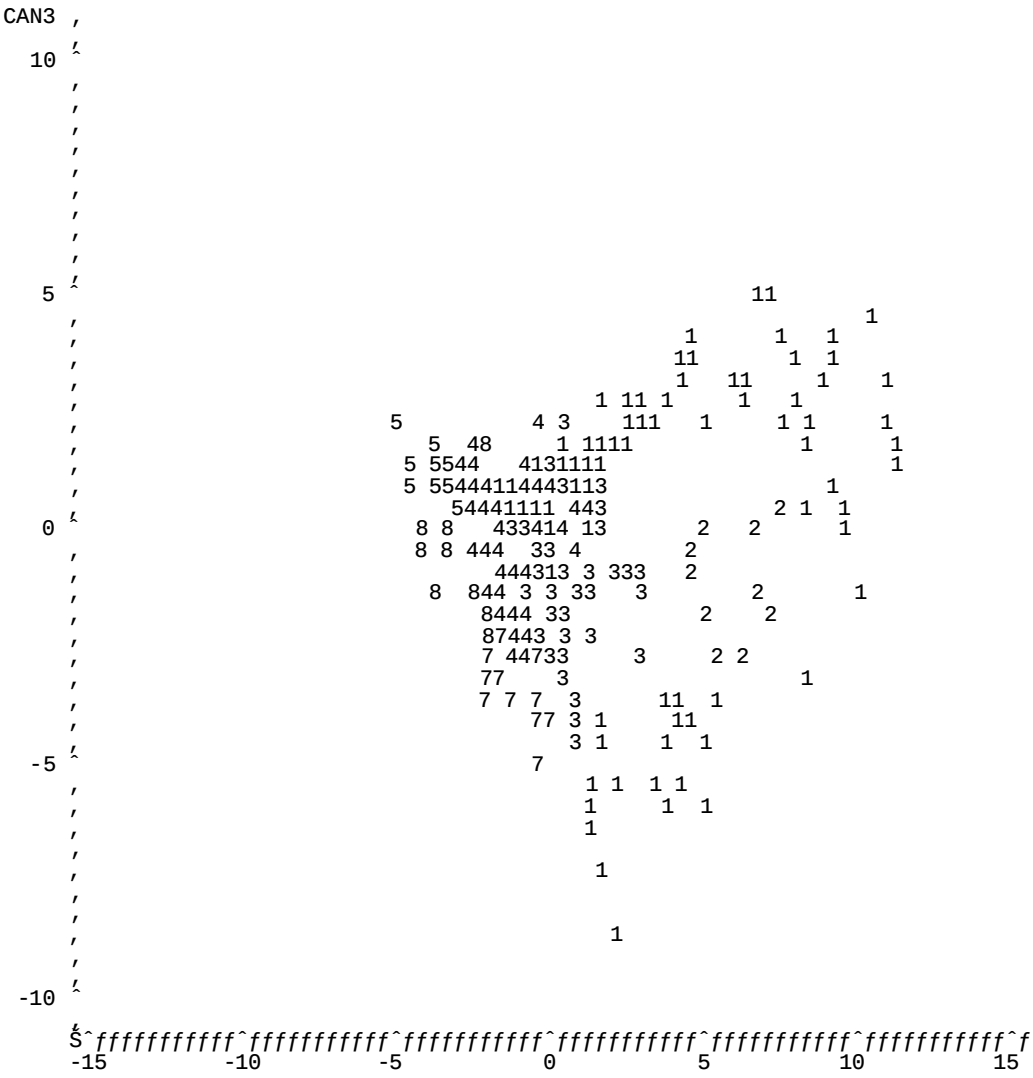
CLUSTER	CAN1	CAN2	CAN3	CAN4
1	0.316149517	-4.508936147	0.833604160	1.299347048
2	6.082094403	2.608764364	-0.856617630	-0.147127127
3	0.260538549	-1.799400168	-0.959306201	-1.643348312
4	-1.678442355	0.355141251	0.188463686	-0.444732612
5	-4.049457633	3.326641110	1.609621674	0.057348521
7	-1.106400217	2.576891330	-3.538438195	1.382768897
8	-2.882339932	4.116061559	-0.590161650	1.882342318
10	2.619695420	0.877685524	-5.111903625	0.390848278
11	9.290560876	2.997959626	3.576199738	-1.360389136
12	3.990181154	-1.498098351	3.065981894	-0.661401803
13	9.845655652	4.078896684	0.353548495	0.868746579
14	7.514065066	6.659047907	3.117696440	1.822545131

Plot of CAN2*CAN1. Symbol is value of CLUSTER.



NOTE: 253 obs hidden.

Plot of CAN3*CAN1. Symbol is value of CLUSTER.



NOTE: 268 obs hidden.

3b. Determination of Canonical Variates for the means of each cluster.

Cluster analysis of data from the Well Inventory as of: 85
January 14, 1999 and NRCS tables as of April 22 1999
1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
Rainfall not used to remove sections
Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
Means for raw data for 12 clusters and 4 variables
09:24 Wednesday, September 1, 1999

OBS	CLUSTER	_TYPE_	_FREQ_	MSHSW1	MWATAB	MPAN	MPERM1	CV1	CV2	CV3
1	1	0	83	0.00831	0.07253	0.05422	7.79084	0.40634	-3.52309	1.98899
2	2	0	12	1.15917	0.53583	0.05250	0.56917	6.17259	3.59487	0.29873
3	3	0	71	0.23521	0.04451	0.06310	3.08268	0.35094	-0.81337	0.19605
4	4	0	123	0.16512	0.02472	0.41821	2.85959	-1.58804	1.34117	1.34381
5	5	0	58	0.02466	0.00000	0.84121	1.71259	-3.95901	4.31270	2.76495
6	7	0	18	1.07611	0.00389	0.44944	0.77944	-1.01590	3.56296	-2.38308
7	8	0	15	0.65200	0.03467	0.79933	1.32200	-2.79187	5.10211	0.56518
8	10	0	29	1.40862	0.13483	0.00345	0.53310	2.71021	1.86377	-3.95653
9	11	0	11	0.70636	0.88818	0.01000	1.24455	9.38102	3.98406	4.73153
10	12	0	15	0.05600	0.43467	0.04467	5.06333	4.08048	-0.51214	4.22134
11	13	0	9	1.48778	0.86000	0.00000	0.49111	9.93615	5.06499	1.50890
12	14	0	8	1.16000	0.87875	0.46375	0.50750	7.60455	7.64514	4.27303

3c. Application of the profiling algorithm to data from 12 of 19 clusters with circular tolerance intervals.

Cluster analysis of data from the Well Inventory as of:
January 14, 1999 and NRCS tables as of April 22 1999
1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
Rainfall not used to remove sections
Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
Means for raw data for 12 clusters and 4 variables
Test of 2 Canonical variates at 12 clusters

Variable	N	Sum
MEM1	452	105.0000000
MEM2	452	24.0000000
MEM3	452	129.0000000
MEM4	452	154.0000000
MEM5	452	79.0000000
MEM7	452	113.0000000
MEM8	452	83.0000000
MEM10	452	45.0000000
MEM11	452	21.0000000
MEM12	452	24.0000000
MEM13	452	17.0000000
MEM14	452	7.0000000

Analysis Variable : COUNT

INDEX=0

N	Sum
3	3.0000000

INDEX=1

N	Sum
72	72.0000000

INDEX=2

N	Sum
18	18.0000000

INDEX=3

N	Sum
82	82.0000000

INDEX=4

N	Sum
106	106.0000000

INDEX=5

N	Sum
57	57.0000000

INDEX=7

N	Sum
28	28.0000000

INDEX=8

N	Sum
14	14.0000000

INDEX=10

N	Sum
34	34.0000000

INDEX=11

N	Sum
7	7.0000000

INDEX=12

N	Sum
13	13.0000000

INDEX=13

N	Sum
11	11.0000000

INDEX=14

N	Sum
7	7.0000000

Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
Means for raw data for 12 clusters and 4 variables
Test of 2 Canonical variates at 12 clusters
Sections that were not classified in original cluster

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
1	12	M18N01W06	11	0.38	0.00	4.45	0.63	55.00	6.53976	0.7355	4.35931	7.4669	2.88292	6.3797	8.1503	11.0915	8.0674	10.3028
2	12	M04S09E20	50	0.00	0.00	4.60	0.67	37.92	6.55295	0.4087	6.08541	7.2966	3.20885	6.3213	8.1942	11.2135	8.1998	10.4573
3	14	M19N02W09	11	1.22	0.78	0.55	1.00	75.83	7.36355	10.1654	5.99427	15.3550	6.67751	13.0273	12.5696	12.7457	10.6680	11.3477
4	3	S04S10W04	30	0.00	0.00	4.72	0.00	43.00	-0.03587	-2.5318	0.77314	1.0854	8.72248	1.7614	4.1724	7.8891	6.1731	8.1162
5	3	M17S26E19	54	0.67	0.00	5.71	0.00	40.00	0.62480	-2.3258	-1.50350	1.2171	8.11373	1.5370	4.2829	8.0673	6.1131	8.1760
6	3	M21S26E32	54	0.00	0.00	4.70	0.00	45.00	-0.03572	-2.5211	0.76986	1.0952	8.71484	1.7509	4.1625	7.8799	6.1625	8.1061
7	10	M02N02W14	7	2.00	0.00	0.13	0.33	88.33	5.23840	3.5471	-4.63253	8.5637	0.93542	6.5499	7.1740	9.2292	6.2543	8.1795
8	10	M19N03W08	11	1.50	0.00	0.34	0.33	82.50	4.73816	2.8844	-2.77814	7.7344	1.60078	5.7377	6.5117	8.8137	5.7939	7.8498
9	10	M19N03W25	11	1.60	0.00	0.42	0.40	79.50	5.52557	3.2520	-2.57196	8.4917	0.73230	6.5806	7.3657	9.5437	6.5489	8.5208
10	10	M02S05E24	39	1.67	0.00	0.19	0.33	85.00	4.90884	3.1518	-3.42151	8.0516	1.33918	6.0414	6.7444	8.9435	5.9390	7.9439
11	11	M18N01W07	11	0.44	0.11	2.40	0.78	66.39	7.57087	3.2255	5.33545	9.8425	1.44623	8.2729	9.3507	11.5810	8.5934	10.5313
12	11	M19N01W19	11	0.25	0.00	1.30	0.75	63.13	7.61397	2.7972	5.27152	9.5863	1.64737	8.1110	9.3165	11.6718	8.6638	10.6581
13	1	M13S22E33	10	0.00	0.25	6.33	0.00	35.21	-1.22813	-1.8488	1.80188	2.3398	9.18718	1.8882	3.2102	6.7395	5.4159	7.1246
14	1	M14S22E33	10	0.00	0.14	6.64	0.14	35.36	0.66530	-2.0946	2.63018	1.4518	7.91838	1.3192	4.1088	7.9017	5.9021	7.9840
15	1	M14S24E30	10	0.29	0.07	6.28	0.14	40.36	1.28766	-2.0155	1.30141	1.7463	7.43905	1.5240	4.4201	8.2203	6.0354	8.2039

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
1	3.99232	4.3158	2.7576	5.5028	6.9914	0	0	0	0	0	0	0	0	0	0	0	0	2.75760	0	1
2	4.10903	4.5587	2.6383	5.7557	7.3126	0	0	0	0	0	0	0	0	0	0	0	0	2.63834	0	1
3	9.51679	6.5022	11.1708	5.7125	2.5318	0	0	0	0	0	0	0	0	0	0	0	0	2.53185	0	1
4	5.18288	11.4514	4.5852	12.5361	12.7264	1	0	1	0	0	0	0	0	0	0	0	0	1.08544	1	1
5	4.67990	10.7929	3.9027	11.8881	12.1717	1	0	1	0	0	0	0	0	0	0	0	0	1.21710	1	1
6	5.17371	11.4452	4.5803	12.5295	12.7177	1	0	1	0	0	0	0	0	0	0	0	0	1.09518	1	1
7	3.03730	4.1656	4.2211	4.9369	4.7326	0	1	0	0	0	0	0	0	0	0	0	0	0.93542	2	1
8	2.27028	4.7713	3.4596	5.6369	5.5576	0	1	0	0	0	0	0	1	0	0	0	0	1.60078	2	1
9	3.13899	3.9243	4.0319	4.7687	4.8607	0	1	0	0	0	0	0	0	0	0	0	0	0.73230	2	1
10	2.54815	4.5489	3.7564	5.3791	5.2404	0	1	0	0	0	0	0	0	0	0	0	0	1.33918	2	1
11	5.04781	1.9627	5.1139	2.9964	4.4197	0	1	0	0	0	0	0	0	1	0	0	0	1.44623	2	1
12	4.99182	2.1286	4.8412	3.2458	4.8479	0	1	0	0	0	0	0	0	1	0	0	0	1.64737	2	1
13	5.41235	12.1069	5.4743	13.1317	12.9680	1	0	1	0	0	0	0	0	0	0	0	0	1.88821	3	1
14	4.45539	10.6261	3.7640	11.7136	11.9595	1	0	1	0	0	0	0	0	0	0	0	0	1.31921	3	1
15	4.13192	10.0746	3.1718	11.1773	11.5431	1	0	1	0	0	0	0	0	0	0	0	0	1.52401	3	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
16	1	M15S21E12	10	0.00	0.20	6.16	0.00	37.50	-0.99084	-2.06690	1.62103	2.01804	9.13076	1.83617	3.46003	7.03629	5.62996	7.39178
17	1	M15S21E15	10	0.00	0.22	6.40	0.00	37.50	-1.08706	-2.07191	1.72154	2.08233	9.20953	1.91091	3.44967	7.00080	5.63536	7.37380
18	1	M15S22E05	10	0.00	0.20	6.16	0.00	37.50	-0.99084	-2.06690	1.62103	2.01804	9.13076	1.83617	3.46003	7.03629	5.62996	7.39178
19	1	M15S22E08	10	0.00	0.22	6.40	0.00	37.50	-1.08706	-2.07191	1.72154	2.08233	9.20953	1.91091	3.44967	7.00080	5.63536	7.37380
20	1	M15S22E09	10	0.00	0.22	6.40	0.00	36.39	-1.08706	-2.07191	1.72154	2.08233	9.20953	1.91091	3.44967	7.00080	5.63536	7.37380
21	1	M15S22E17	10	0.00	0.25	6.70	0.00	36.88	-1.23095	-2.04723	1.86249	2.20426	9.30839	2.00613	3.40719	6.92033	5.61435	7.31775
22	1	M16S21E34	10	0.00	0.25	6.55	0.08	35.83	-0.44319	-1.62335	2.47456	2.08103	8.42608	1.13429	3.17792	6.89911	5.21788	7.12378
23	1	M16S25E06	54	0.00	0.25	5.58	0.00	34.38	-1.22243	-1.44646	1.67903	2.63917	8.94996	1.69592	2.81153	6.37626	5.01372	6.73401
24	1	M17S25E24	54	0.00	0.33	6.10	0.00	33.33	-1.60399	-1.23046	2.00901	3.04917	9.15202	1.99889	2.57171	6.02268	4.82940	6.44302
25	1	M21S29E11	54	0.00	0.25	6.10	0.00	32.50	-1.22639	-1.72539	1.76421	2.42846	9.11320	1.82196	3.08784	6.62765	5.29258	7.00467
26	4	M13S22E26	10	0.11	0.33	4.93	0.11	41.67	-0.40380	-0.00967	2.29236	3.60562	7.49946	1.10253	1.79643	5.59663	3.62472	5.64209
27	4	M14S21E25	10	0.00	0.29	4.51	0.00	40.00	-1.40311	-0.62505	1.62617	3.41652	8.67175	1.76409	1.97492	5.56003	4.20591	5.89313
28	4	M14S22E22	10	0.00	0.33	5.10	0.00	36.39	-1.59639	-0.69406	1.84521	3.46616	8.87426	1.95095	2.03528	5.53621	4.29646	5.91817
29	4	M15S24E02	10	0.24	0.20	2.96	0.12	48.64	0.45276	0.42872	1.17824	3.95210	6.53768	1.24629	2.23547	5.87783	3.46131	5.68931
30	4	M21S29E15	54	0.00	0.17	2.92	0.00	45.00	-0.82461	-0.51457	0.99851	3.25060	8.11472	1.21290	2.00665	5.75560	4.08205	5.95123

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
16	5.39890	12.0079	5.30433	13.0485	12.9700	1	0	1	0	0	0	0	0	0	0	0	0	1.83617	3	1
17	5.46891	12.0936	5.39784	13.1319	13.0377	1	0	1	0	0	0	0	0	0	0	0	0	1.91091	3	1
18	5.39890	12.0079	5.30433	13.0485	12.9700	1	0	1	0	0	0	0	0	0	0	0	0	1.83617	3	1
19	5.46891	12.0936	5.39784	13.1319	13.0377	1	0	1	0	0	0	0	0	0	0	0	0	1.91091	3	1
20	5.46891	12.0936	5.39784	13.1319	13.0377	1	0	1	0	0	0	0	0	0	0	0	0	1.91091	3	1
21	5.55237	12.2062	5.52884	13.2397	13.1159	1	0	1	0	0	0	0	0	0	0	0	0	2.00613	3	1
22	4.70150	11.3119	4.65818	12.3477	12.2755	1	0	1	0	0	0	0	0	0	0	0	0	1.13429	3	1
23	5.14037	11.9132	5.38462	12.9195	12.6724	0	0	1	0	0	0	0	0	0	0	0	0	1.69592	3	1
24	5.30912	12.1598	5.72970	13.1457	12.7903	0	0	1	0	0	0	0	0	0	0	0	0	1.99889	3	1
25	5.32719	12.0464	5.44381	13.0657	12.8767	1	0	1	0	0	0	0	0	0	0	0	0	1.82196	3	1
26	3.63413	10.5685	4.51236	11.5182	11.0791	0	0	1	1	0	0	0	0	0	0	0	0	1.10253	3	1
27	4.80767	11.7278	5.48477	12.6869	12.2292	0	0	1	1	0	0	0	0	0	0	0	0	1.76409	3	1
28	5.00893	11.9327	5.67981	12.8906	12.4185	0	0	1	1	0	0	0	0	0	0	0	0	1.95095	3	1
29	2.67497	9.6101	3.74775	10.5561	10.1607	0	0	1	1	0	0	0	0	0	0	0	0	1.24629	3	1
30	4.26046	11.1531	4.90511	12.1213	11.7324	0	0	1	1	0	0	0	0	0	0	0	0	1.21290	3	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
31	4	M22S27E18	54	0.00	0.33	5.20	0.00	39.17	-1.59715	-0.74770	1.86159	3.42296	8.90097	1.94916	2.08892	5.58444	4.34971	5.97056
32	10	M19N03W18	11	1.00	0.00	0.61	0.00	75.00	0.99266	0.77290	-3.54008	4.33583	5.89877	1.71120	2.64250	6.08680	3.43788	5.75021
33	10	M19N04W12	11	1.00	0.00	0.76	0.00	78.75	0.99152	0.69244	-3.51551	4.25596	5.93867	1.63644	2.65986	6.13303	3.50284	5.81029
34	10	M08N01E11	57	1.00	0.00	0.78	0.00	76.25	0.99137	0.68171	-3.51224	4.24532	5.94406	1.62652	2.66235	6.13924	3.51155	5.81833
35	12	M13S23E34	10	0.00	0.18	5.41	0.29	36.72	1.96075	-0.54345	3.74483	3.36075	5.90471	1.63233	4.01815	7.65674	5.07182	7.37970
36	3	M15N03E12	58	0.11	0.22	1.20	0.11	57.78	0.14376	1.31058	1.34477	4.84080	6.44710	2.13406	1.73203	5.08383	2.53342	4.79518
37	5	M14S21E24	10	0.00	0.63	2.65	0.00	43.44	-2.99380	2.47610	2.36193	6.89573	9.23443	4.69125	1.80673	2.07478	2.25687	2.63375
38	5	M15S24E36	10	0.00	0.64	2.65	0.00	45.89	-3.04100	2.53796	2.39253	6.97283	9.27403	4.76830	1.88241	1.99810	2.26975	2.57621
39	7	M16S24E03	54	1.00	0.20	1.19	0.00	62.50	0.04424	1.69910	-2.83306	5.23474	6.41490	2.53115	1.67101	4.78088	2.14429	4.42990
40	7	M17S26E21	54	1.00	0.25	1.39	0.00	58.75	-0.19329	1.90115	-2.64729	5.45729	6.58736	2.76856	1.50292	4.47170	1.85430	4.12296
41	8	M16S25E29	54	0.50	0.75	3.93	0.00	52.50	-3.07129	3.08195	1.11881	7.46460	9.25811	5.18509	2.28700	1.51749	2.11094	2.03938
42	4	M13S21E01	10	0.40	0.50	1.85	0.13	52.67	-0.69694	3.09905	1.41163	6.71342	6.88741	4.05034	1.97079	3.48052	0.56301	2.89846
43	4	M13S22E04	10	0.40	0.36	1.16	0.09	61.50	-0.42419	2.43134	0.55187	6.01207	6.69862	3.33603	1.59463	4.00430	1.27702	3.56918
44	4	M15S24E01	10	0.25	0.42	1.83	0.13	49.29	-0.46877	2.44984	1.70955	6.03670	6.73936	3.36461	1.57535	3.95625	1.24036	3.52582
45	4	M15S24E12	10	0.18	0.55	2.18	0.09	51.59	-1.54817	2.81764	2.10117	6.63513	7.75979	4.09767	1.47698	2.83678	0.91590	2.60108

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
31	5.03718	11.9545	5.68254	12.9153	12.4551	0	0	1	1	0	0	0	0	0	0	0	0	1.94916	3	1
32	2.03470	8.9820	3.34454	9.9201	9.5372	0	0	1	0	0	0	0	1	0	0	0	0	1.71120	3	1
33	2.07989	9.0121	3.31552	9.9562	9.5961	0	0	1	0	0	0	0	1	0	0	0	0	1.63644	3	1
34	2.08608	9.0162	3.31178	9.9611	9.6040	0	0	1	0	0	0	0	1	0	0	0	0	1.62652	3	1
35	2.52122	8.6925	2.11998	9.7500	9.9457	0	0	1	0	0	0	0	0	0	1	0	0	1.63233	3	1
36	2.62539	9.6164	4.33821	10.4875	9.7880	0	0	1	1	0	0	0	0	0	0	0	0	1.73203	4	1
37	5.73677	12.4663	7.67952	13.1866	11.7926	0	0	0	1	1	1	0	0	0	0	0	0	1.80673	4	1
38	5.79058	12.5059	7.74717	13.2210	11.8082	0	0	0	1	1	1	0	0	0	0	0	0	1.88241	4	1
39	2.67105	9.6123	4.60227	10.4489	9.6192	0	0	0	1	0	1	0	0	0	0	0	0	1.67101	4	1
40	2.90373	9.7982	4.90806	10.6121	9.6858	0	0	0	1	0	1	0	0	0	0	0	0	1.50292	4	1
41	5.90843	12.4849	8.00408	13.1578	11.6111	0	0	0	1	1	1	1	0	0	0	0	0	1.51749	5	1
42	3.62415	10.1167	5.98868	10.8134	9.4657	0	0	0	1	0	1	0	0	0	0	0	0	0.56301	7	1
43	3.18536	9.9274	5.38108	10.6899	9.5740	0	0	0	1	0	1	0	0	0	0	0	0	1.27702	7	1
44	3.23254	9.9686	5.42853	10.7286	9.6014	0	0	0	1	0	1	0	0	0	0	0	0	1.24036	7	1
45	4.36388	10.9912	6.53980	11.7022	10.3487	0	0	0	1	0	1	0	0	0	0	0	0	0.91590	7	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
46	4	M15S24E13	10	0.25	0.50	1.83	0.13	54.06	-0.8464	2.94476	1.95436	6.5881	7.04903	3.9443	1.7668	3.3999	0.6411	2.9050
47	4	M15S24E23	10	0.33	0.50	2.01	0.17	52.92	-0.3747	3.10793	2.01097	6.6769	6.56534	3.9879	2.1433	3.7814	0.7863	3.1337
48	4	M13N05E23	31	0.00	0.50	1.30	0.20	56.56	-0.4034	3.25452	3.33461	6.8258	6.58479	4.1373	2.2504	3.7097	0.6858	3.0197
49	4	M16S25E16	54	0.50	0.50	1.01	0.00	61.88	-1.8691	3.10159	-0.12451	7.0046	8.05679	4.5006	1.7827	2.4155	0.9700	2.2031
50	4	M17S26E25	54	0.40	0.60	1.61	0.00	57.50	-2.4454	3.28840	0.64378	7.3843	8.62342	4.9643	2.1276	1.8276	1.4556	1.8465
51	4	M18S27E31	54	0.80	0.40	1.37	0.00	58.00	-1.1006	2.61985	-1.46355	6.3251	7.33828	3.7275	1.3684	3.3221	0.9469	3.0037
52	4	M22S27E34	54	0.57	0.43	1.35	0.00	61.43	-1.4714	2.56316	-0.53783	6.3693	7.71336	3.8369	1.2275	3.0412	1.0987	2.8618
53	4	M16N04E29	58	0.33	0.33	1.11	0.17	62.50	0.4346	2.53897	1.34333	6.0621	5.83435	3.3534	2.3506	4.7381	1.7756	4.1207
54	8	M12S20E24	10	0.50	0.75	1.01	0.25	51.25	-0.5909	5.72141	2.63004	9.2981	7.08995	6.6023	4.4923	3.6508	2.1999	2.2864
55	8	M17S27E31	54	0.80	0.60	3.17	0.00	57.00	-2.0583	2.89165	-0.55669	6.8719	8.26090	4.4195	1.6202	2.3732	1.2399	2.3290
56	8	M21S27E10	54	0.80	0.60	0.83	0.00	63.00	-2.0405	4.14683	-0.93999	8.0508	8.23165	5.5066	2.8419	1.9256	1.1793	1.2154
57	7	M16S25E28	54	1.33	0.67	0.52	0.00	71.67	-1.8400	5.32923	-2.70576	9.1329	8.19816	6.5217	3.9960	2.3502	1.9490	0.9786
58	7	M16S25E34	54	1.17	0.67	0.57	0.00	67.92	-2.0000	5.12639	-2.11517	8.9780	8.31482	6.3881	3.8075	2.1213	1.8473	0.7923
59	7	M19S27E30	54	1.00	0.60	0.65	0.00	66.50	-1.8397	4.46340	-1.69747	8.2963	8.05923	5.7134	3.1323	2.1247	1.2204	1.1466
60	3	M13S23E24	10	0.33	0.17	3.96	0.25	45.83	1.9548	0.36379	1.95719	4.1840	5.31321	1.9895	3.6751	7.1110	4.3658	6.7069

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
46	3.71722	10.2801	6.01864	10.9891	9.6710	0	0	0	1	0	1	0	0	0	0	0	0	0.64106	7	1
47	3.32629	9.7949	5.74047	10.4949	9.1799	0	0	0	1	0	1	0	0	0	0	0	0	0.78631	7	1
48	3.41007	9.8116	5.85600	10.4969	9.1335	0	0	0	1	0	1	0	0	0	0	0	0	0.68580	7	1
49	4.74361	11.2846	6.96105	11.9674	10.5078	0	0	0	1	1	1	1	0	0	0	0	0	0.96995	7	1
50	5.34878	11.8468	7.55188	12.5084	10.9546	0	0	0	1	1	1	1	0	0	0	0	0	1.45561	7	1
51	3.88509	10.5700	6.05418	11.3044	10.0524	0	0	0	1	0	1	0	0	0	0	0	0	0.94694	7	1
52	4.23972	10.9451	6.34675	11.6788	10.4028	0	0	0	1	0	1	0	0	0	0	0	0	1.09873	7	1
53	2.37365	9.0624	4.75411	9.8316	8.8032	0	0	0	1	0	1	0	1	0	0	0	0	1.77555	7	1
54	5.07726	10.1221	7.78966	10.5476	8.4192	0	0	0	0	0	1	1	0	0	0	0	0	2.19985	7	1
55	4.87803	11.4914	7.01930	12.1898	10.7697	0	0	0	1	1	1	1	0	0	0	0	0	1.23989	7	1
56	5.27083	11.4227	7.69237	12.0119	10.2609	0	0	0	0	1	1	1	0	0	0	0	0	1.17929	7	1
57	5.71958	11.3013	8.31706	11.7792	9.7254	0	0	0	0	1	1	1	0	0	0	0	0	0.97861	8	1
58	5.72975	11.4381	8.29244	11.9363	9.9303	0	0	0	0	1	1	1	0	0	0	0	0	0.79231	8	1
59	5.24018	11.2309	7.73333	11.7913	9.9668	0	0	0	0	1	1	1	0	0	0	0	0	1.14657	8	1
60	1.67950	8.2617	2.29911	9.2631	9.2168	0	0	1	0	0	0	0	1	0	1	0	0	1.67950	10	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
61	3	M20N03W03	11	0.33	0.00	1.56	0.17	61.25	1.9888	0.25601	0.40721	4.0971	5.35278	1.9561	3.7378	7.1995	4.4682	6.8073
62	3	M20N03W09	11	0.54	0.00	1.67	0.23	59.04	2.7874	0.68559	0.13831	4.8356	4.46362	2.8607	4.4242	7.6596	4.7691	7.1157
63	3	M20N03W36	11	0.00	0.00	1.30	0.20	61.50	1.9567	0.16122	1.80456	3.9972	5.43731	1.8784	3.7359	7.2270	4.5175	6.8528
64	3	M13N04E24	51	0.00	0.25	1.98	0.25	49.38	1.2631	1.55775	3.07887	5.1526	5.31537	2.5406	2.8593	5.9042	3.0356	5.3857
65	3	M17N02E35	51	0.89	0.00	0.62	0.20	74.21	2.8494	1.50506	-1.54642	5.5903	3.92567	3.4085	4.4404	7.3646	4.3790	6.6905
66	4	M14S23E35	10	0.50	0.38	1.35	0.25	52.81	1.1529	3.24999	1.55349	6.8141	5.03151	4.1418	3.3401	5.2212	2.1913	4.3580
67	4	M14S24E27	10	0.57	0.21	1.61	0.14	61.61	0.9416	1.66362	-0.05433	5.2143	5.57615	2.5465	2.5500	5.5708	2.7275	5.0756
68	4	M14S24E35	10	0.50	0.25	1.76	0.17	57.08	0.9768	1.88240	0.58619	5.4355	5.47073	2.7675	2.6213	5.5017	2.6068	4.9568
69	4	M14S24E36	10	0.40	0.34	1.70	0.20	54.18	0.7477	2.49014	1.45451	6.0229	5.53624	3.3273	2.6030	5.0473	2.0643	4.3990
70	12	M13S23E26	10	0.13	0.19	4.22	0.38	45.17	2.9372	0.68609	3.82353	4.9115	4.35076	2.9895	4.5724	7.7916	4.8891	7.2335
71	12	M15N03E13	58	0.00	0.17	4.15	0.33	43.75	2.4108	0.24225	3.82616	4.2657	5.03896	2.3147	4.1471	7.5593	4.7718	7.1194
72	13	M18N02W25	6	1.25	0.00	0.67	0.75	81.88	8.6161	4.23526	1.52832	11.2957	2.52598	9.6851	10.6065	12.5753	9.6554	11.4408
73	13	M19N03W09	11	2.00	0.00	0.06	0.67	90.00	8.5821	5.04413	-1.93825	11.8423	2.81171	10.1026	10.8232	12.5624	9.7116	11.3741
74	13	M02S05E13	39	1.20	0.00	0.99	0.80	79.00	9.0554	4.22324	2.16064	11.6109	2.95048	10.0566	11.0267	13.0147	10.0929	11.8798
75	1	M14S22E23	10	0.00	0.00	6.55	0.29	35.83	2.8017	-2.26854	3.38074	2.7040	6.76335	2.8502	5.6833	9.4350	6.9700	9.2528

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
61	1.76221	8.27908	2.22826	9.2891	9.2815	0	0	1	0	0	0	0	1	0	1	0	0	1.76221	10	1
62	1.18074	7.37266	1.76257	8.3836	8.4646	0	0	0	0	0	0	0	1	0	1	0	0	1.18074	10	1
63	1.86188	8.35076	2.22802	9.3659	9.3765	0	0	1	0	0	0	0	1	0	1	0	0	1.86188	10	1
64	1.47911	8.47275	3.49600	9.3554	8.7911	0	0	0	0	0	0	0	1	0	0	0	0	1.47911	10	1
65	0.38481	6.98621	2.36315	7.9307	7.7667	0	0	0	0	0	0	0	1	0	1	0	0	0.38481	10	1
66	2.08486	8.26076	4.76697	8.9688	7.8073	0	0	0	0	0	1	0	1	0	0	0	0	2.08486	10	1
67	1.77991	8.75262	3.81923	9.6163	8.9547	0	0	0	0	0	0	0	1	0	0	0	0	1.77991	10	1
68	1.73349	8.66300	3.92001	9.5079	8.7835	0	0	0	0	0	0	0	1	0	0	0	0	1.73349	10	1
69	2.06002	8.76160	4.48564	9.5424	8.5793	0	0	0	0	0	1	0	1	0	0	0	0	2.06002	10	1
70	1.19939	7.23876	1.65615	8.2560	8.3799	0	0	0	0	0	0	0	1	0	1	0	0	1.19939	10	1
71	1.64895	7.91105	1.83217	8.9381	9.0437	0	0	1	0	0	0	0	1	0	1	0	0	1.64895	10	1
72	6.36420	0.80512	6.56572	1.5592	3.5564	0	0	0	0	0	0	0	0	1	0	1	0	0.80512	11	1
73	6.67781	1.32739	7.15092	1.3543	2.7782	0	0	0	0	0	0	0	0	1	0	1	0	1.32739	11	1
74	6.76967	0.40399	6.86827	1.2183	3.7163	0	0	0	0	0	0	0	0	1	0	1	0	0.40399	11	1
75	4.13335	9.07649	2.17265	10.2314	11.0162	0	0	0	0	0	0	0	0	0	1	0	0	2.17265	12	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
76	3	M14S02E34	27	0.63	0.00	3.97	0.25	57.34	3.0563	-0.36327	0.34661	4.1240	5.03770	2.7426	4.9472	8.4308	5.6567	8.0045
77	3	M18S07E28	27	0.67	0.00	3.93	0.22	52.08	2.8015	-0.42659	-0.04428	3.9148	5.24753	2.4810	4.7321	8.2562	5.5217	7.8647
78	11	M18N02W19	6	1.00	0.00	0.67	1.00	91.25	10.8249	5.03341	4.42785	13.4819	4.86963	11.9954	12.9504	14.8015	11.9318	13.6170
79	11	M18N02W35	6	1.00	0.00	0.94	1.00	85.36	10.8229	4.88858	4.47207	13.3888	4.82685	11.9237	12.9079	14.7931	11.9127	13.6164
80	11	M19N02W36	11	1.00	0.00	0.31	1.00	90.00	10.8276	5.22652	4.36888	13.6074	4.93271	12.0931	13.0094	14.8149	11.9598	13.6201
81	11	M09S12E36	24	0.67	0.00	1.60	1.00	64.17	10.4887	4.17153	5.78138	12.6832	4.35448	11.2971	12.4040	14.4484	11.5207	13.3132
82	11	M12N01E24	57	0.63	0.00	1.40	1.00	74.72	10.4504	4.23480	5.89422	12.6913	4.32536	11.2909	12.3812	14.4096	11.4859	13.2706

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
76	2.25380	7.67473	1.03496	8.7635	9.2103	0	0	0	0	0	0	0	1	0	1	0	0	1.03496	12	1
77	2.29221	7.92110	1.28184	9.0034	9.3932	0	0	0	0	0	0	0	1	0	1	0	0	1.28184	12	1
78	8.71177	1.78492	8.73154	0.8893	4.1455	0	0	0	0	0	0	0	0	1	0	1	0	0.88927	13	1
79	8.65820	1.70207	8.63868	0.9040	4.2366	0	0	0	0	0	0	0	0	1	0	1	0	0.90404	13	1
80	8.78640	1.90693	8.85752	0.9060	4.0288	0	0	0	0	0	0	0	0	1	0	1	0	0.90596	13	1
81	8.11364	1.12348	7.93737	1.0505	4.5142	0	0	0	0	0	0	0	0	1	0	1	0	1.05052	13	1
82	8.09517	1.09835	7.94407	0.9765	4.4410	0	0	0	0	0	0	0	0	1	0	1	0	0.97652	13	1

3d. Application of the profiling algorithm to data from 12 of 19 clusters with spherical tolerance intervals.

Cluster analysis of data from the Well Inventory as of:
January 14, 1999 and NRCS tables as of April 22 1999
1996 SOIL DATA CENSORED BY SLOPEH <= 15% AND WEIGHTED BY DEPTH
Rainfall not used to remove sections
Muids weighted by composition percentage
Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD
Means for raw data for 12 clusters and 4 variables
Test of 3 Canonical variates at 12 clusters

Variable	N	Sum
MEM1	452	102.0000000
MEM2	452	12.0000000
MEM3	452	116.0000000
MEM4	452	150.0000000
MEM5	452	68.0000000
MEM7	452	38.0000000
MEM8	452	30.0000000
MEM10	452	27.0000000
MEM11	452	13.0000000
MEM12	452	16.0000000
MEM13	452	11.0000000
MEM14	452	7.0000000

Analysis Variable : COUNT

INDEX=0

N	Sum
15	15.0000000

INDEX=1

N	Sum
80	80.0000000

INDEX=2

N	Sum
12	12.0000000

INDEX=3

N	Sum
67	67.0000000

INDEX=4

N	Sum
110	110.0000000

INDEX=5

N	Sum
58	58.0000000

INDEX=7

N	Sum
29	29.0000000

INDEX=8

N	Sum
13	13.0000000

INDEX=10

N	Sum
27	27.0000000

INDEX=11

N	Sum
11	11.0000000

INDEX=12

N	Sum
15	15.0000000

INDEX=13

N	Sum
8	8.0000000

INDEX=14

N	Sum
7	7.0000000

Candisc on 12 of 19 clsuters clusters: shrink1 wattab perm1 pan- AVERAGE METHOD

Means for raw data for 12 clusters and 4 variables

Test of 3 Canonical variates at 12 clusters

Sections that were not classified in original cluster

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
1	3	M19N03W07	11	0.75	0.00	0.78	0.00	74.38	0.74205	0.4067	-2.60224	6.0527	6.93333	3.0777	4.6769	8.1341	3.6195	6.4500
2	3	M20N03W09	11	0.54	0.00	1.67	0.23	59.04	2.78737	0.6856	0.13831	5.1776	4.46650	2.8612	4.5855	8.0975	5.3946	7.1162
3	3	S02S05W20	33	0.00	0.29	4.32	0.21	36.61	0.66321	0.3783	3.26625	4.1132	7.03605	3.3082	3.1130	6.0906	6.6990	6.6750
4	3	M13N04E24	51	0.00	0.25	1.98	0.25	49.38	1.26310	1.5578	3.07887	5.2666	5.99854	3.8425	3.3446	5.9126	6.2488	6.1759
5	3	M21S29E30	54	1.00	0.00	2.86	0.00	58.57	0.97556	-0.4340	-3.17153	6.0413	7.43531	3.4460	5.4874	9.0622	4.5347	7.4337
6	3	M08N01E14	57	0.88	0.00	2.25	0.00	70.63	0.86052	-0.2388	-2.83465	5.8532	7.26178	3.1265	5.0942	8.6776	4.2636	7.0868
7	4	M14S23E35	10	0.50	0.38	1.35	0.25	52.81	1.15293	3.2500	1.55349	6.8280	5.18561	4.3586	3.3467	5.3599	4.5054	4.6080
8	4	M13N05E23	31	0.00	0.50	1.30	0.20	56.56	-0.40339	3.2545	3.33461	6.9572	7.25095	5.1930	3.0046	3.7532	5.7587	4.4572
9	8	M12S20E24	10	0.50	0.75	1.01	0.25	51.25	-0.59093	5.7214	2.63004	9.3202	7.46341	7.0367	4.6728	3.6533	5.4746	3.4427
10	10	M02N02W14	7	2.00	0.00	0.13	0.33	88.33	5.23840	3.5471	-4.63253	10.8250	5.01917	8.1374	9.3371	11.8280	6.6465	9.4281
11	10	M19N03W25	11	1.60	0.00	0.42	0.40	79.50	5.52557	3.2520	-2.57196	9.6390	2.96260	7.1391	8.3419	10.9346	6.5516	8.9169
12	10	M19S27E29	54	2.00	0.00	0.13	0.00	71.67	1.99361	2.1305	-7.25871	10.9546	8.75916	8.1816	9.3517	11.8605	5.9060	9.2325
13	12	M04S09E20	50	0.00	0.00	4.60	0.67	37.92	6.55295	0.4087	6.08541	8.3678	6.61685	8.6396	9.4672	11.6948	11.7878	12.0709
14	13	M19N03W09	11	2.00	0.00	0.06	0.67	90.00	8.58205	5.0441	-1.93825	12.4765	3.59300	10.3256	11.3099	13.4139	9.7217	11.5476
15	14	M19N02W09	11	1.22	0.78	0.55	1.00	75.83	7.36355	10.1654	5.99427	15.8688	8.77660	14.2594	13.4023	13.1485	13.5642	12.8074

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
1	2.7984	11.8833	7.6518	11.0966	12.1149	0	0	0	0	0	0	0	0	0	0	0	0	2.79837	0	1
2	4.2616	8.6864	4.4472	8.4949	9.4205	0	0	0	0	0	0	0	0	0	0	0	0	2.86124	0	1
3	7.6528	9.5472	3.6583	10.5376	10.1003	0	0	0	0	0	0	0	0	0	0	0	0	3.11301	0	1
4	7.1892	8.6324	3.6779	9.4862	8.8718	0	0	0	0	0	0	0	0	0	0	0	0	3.34457	0	1
5	2.9841	12.3543	8.0188	11.5082	12.8316	0	0	0	0	0	0	0	0	0	0	0	0	2.98413	0	1
6	3.0168	12.1523	7.7608	11.3739	12.5766	0	0	0	0	0	0	0	0	0	0	0	0	3.01676	0	1
7	5.8912	8.8510	5.4627	8.9690	8.2674	0	0	0	0	0	0	0	0	0	0	0	0	3.34666	0	1
8	8.0492	9.9105	5.9227	10.6545	9.1816	0	0	0	0	0	0	0	0	0	0	0	0	3.00457	0	1
9	8.3163	10.3380	7.9505	10.6070	8.5781	0	0	0	0	0	0	0	0	0	0	0	0	3.44274	0	1
10	3.1116	10.2488	9.8086	7.8798	10.0849	0	0	0	0	0	0	0	0	0	0	0	0	3.11162	0	1
11	3.4308	8.2910	7.8997	6.2765	8.3952	0	0	0	0	0	0	0	0	0	0	0	0	2.96260	0	1
12	3.3896	14.2047	11.9636	12.1888	13.9602	0	0	0	0	0	0	0	0	0	0	0	0	3.38957	0	1
13	10.8501	4.7555	3.2304	7.3534	7.5338	0	0	0	0	0	0	0	0	0	0	0	0	3.23044	0	1
14	6.9761	6.8005	9.4380	3.7036	6.8043	0	0	0	0	0	0	0	0	0	0	0	0	3.59300	0	1
15	13.7691	6.6236	11.3106	7.2630	3.0615	0	0	0	0	0	0	0	0	0	0	0	0	3.06154	0	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
16	3	S04S10W04	30	0.00	0.00	4.72	0.00	43.00	-0.03587	-2.53181	0.77314	1.62988	8.73537	1.85352	4.21129	8.13669	6.93318	8.14778
17	3	M21S26E32	54	0.00	0.00	4.70	0.00	45.00	-0.03572	-2.52108	0.76986	1.63882	8.72757	1.84253	4.20193	8.12855	6.92228	8.13749
18	1	S04S09W03	30	0.20	0.00	5.36	0.10	39.00	1.14199	-2.22581	0.94578	1.82003	7.72052	1.78405	4.50942	8.49010	7.01771	8.36452
19	1	M16S25E06	54	0.00	0.25	5.58	0.00	34.38	-1.22243	-1.44646	1.67903	2.65731	9.05578	2.25286	2.83144	6.46808	6.45277	6.92679
20	1	M21S29E11	54	0.00	0.25	6.10	0.00	32.50	-1.22639	-1.72539	1.76421	2.43884	9.23029	2.40389	3.11632	6.70278	6.72395	7.20991
21	4	M14S24E27	10	0.57	0.21	1.61	0.14	61.61	0.94158	1.66362	-0.05433	5.60033	5.58731	2.55875	2.90818	6.24355	3.58644	5.07684
22	4	M15S24E02	10	0.24	0.20	2.96	0.12	48.64	0.45276	0.42872	1.17824	4.03440	6.59658	1.58680	2.24159	6.08824	4.96627	5.79890
23	4	M21S29E15	54	0.00	0.17	2.92	0.00	45.00	-0.82461	-0.51457	0.99851	3.39816	8.14484	1.45433	2.03614	6.02058	5.30080	6.02537
24	1	M17S25E24	54	0.00	0.33	6.10	0.00	33.33	-1.60399	-1.23046	2.00901	3.04924	9.31046	2.69859	2.65635	6.06994	6.52792	6.73245
25	3	M15N03E12	58	0.11	0.22	1.20	0.11	57.78	0.14376	1.31058	1.34477	4.88348	6.53141	2.42358	1.73203	5.27848	4.50724	4.96529
26	5	M14S21E24	10	0.00	0.63	2.65	0.00	43.44	-2.99380	2.47610	2.36193	6.90581	9.46211	5.16710	2.07385	2.11357	5.25441	3.50044
27	5	M16S24E35	54	0.27	0.67	2.84	0.00	45.59	-2.91478	2.91867	1.53266	7.26184	9.19567	5.13610	2.06989	2.13363	4.39933	2.63863
28	8	M12S21E25	10	0.36	0.83	1.41	0.17	53.86	-1.89781	5.50435	2.81332	9.35325	8.66607	7.19866	4.42575	2.38136	5.61688	2.92624
29	8	M16S25E29	54	0.50	0.75	3.93	0.00	52.50	-3.07129	3.08195	1.11881	7.51515	9.29437	5.26656	2.29804	2.23891	4.08894	2.29961
30	4	M16S24E04	54	0.67	0.33	1.81	0.00	65.00	-0.90320	1.80776	-1.13249	6.31479	7.43701	3.19504	2.61125	5.55005	2.15815	3.97905

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT

16	7.01653	12.1162	5.73704	12.5577	13.1989	1	0	1	0	0	0	0	0	0	0	0	0	1.62988	1	1
17	7.00755	12.1114	5.73513	12.5513	13.1914	1	0	1	0	0	0	0	0	0	0	0	0	1.63882	1	1
18	6.57393	10.9898	4.72236	11.4373	12.2590	1	0	1	0	0	0	0	0	0	0	0	0	1.78405	3	1
19	7.62775	12.2980	5.95460	12.9206	12.9352	1	0	1	0	0	0	0	0	0	0	0	0	2.25286	3	1
20	7.81700	12.4064	5.97264	13.0682	13.1188	1	0	1	0	0	0	0	0	0	0	0	0	2.40389	3	1
21	4.28894	9.9756	5.73302	9.7425	9.9455	0	0	1	0	0	0	0	0	0	0	0	0	2.55875	3	1
22	5.78974	10.2460	4.82761	10.5613	10.6215	0	0	1	1	0	0	0	0	0	0	0	0	1.58680	3	1
23	6.53480	11.7613	5.86911	12.1321	12.1808	0	0	1	1	0	0	0	0	0	0	0	0	1.45433	3	1
24	7.98587	12.4609	6.14196	13.1552	12.9891	0	0	1	1	0	0	0	0	0	0	0	0	2.65635	4	1
25	5.91576	10.1953	5.20524	10.4888	10.2166	0	0	1	1	0	0	0	0	0	0	0	0	1.73203	4	1
26	8.53423	12.6895	7.90141	13.2142	11.9465	0	0	0	1	1	0	0	0	0	0	0	0	2.07385	4	1
27	7.92994	12.7497	8.24214	13.0290	11.8544	0	0	0	1	1	0	1	0	0	0	0	0	2.06989	4	1
28	8.96202	11.5413	8.59769	11.9138	9.8503	0	0	0	0	1	0	0	0	0	0	0	0	2.38136	5	1
29	7.78899	12.9971	8.58433	13.1636	12.0319	0	0	0	1	1	0	1	0	0	0	0	0	2.23891	5	1
30	4.58637	12.0369	7.67346	11.6224	11.6488	0	0	0	1	0	1	0	0	0	0	0	0	2.15815	7	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
31	4	M17S26E04	54	0.71	0.29	1.61	0.00	58.21	-0.67298	1.71158	-1.43325	6.34654	7.30811	3.17466	2.94728	5.93204	2.10892	4.26660
32	4	M17S26E20	54	0.67	0.33	1.81	0.00	53.33	-0.90320	1.80776	-1.13249	6.31479	7.43701	3.19504	2.61125	5.55005	2.15815	3.97905
33	4	M17S27E29	54	0.73	0.27	1.61	0.00	57.95	-0.55863	1.60985	-1.56726	6.31864	7.26166	3.13188	3.09936	6.13484	2.16552	4.45184
34	4	M18S26E09	54	0.60	0.40	1.43	0.00	56.50	-1.30053	2.36765	-0.72573	6.70700	7.64220	3.70080	2.32791	4.79957	2.06319	3.21136
35	4	M18S27E14	54	0.67	0.33	1.81	0.00	60.00	-0.90320	1.80776	-1.13249	6.31479	7.43701	3.19504	2.61125	5.55005	2.15815	3.97905
36	4	M18S27E29	54	0.75	0.38	1.54	0.00	60.31	-1.05737	2.34993	-1.31491	6.89569	7.51173	3.77794	2.89272	5.37751	1.61688	3.53030
37	4	M18S27E31	54	0.80	0.40	1.37	0.00	58.00	-1.10061	2.61985	-1.46355	7.20602	7.54691	4.08024	3.12310	5.37743	1.31995	3.36625
38	4	M21S29E10	54	0.67	0.33	1.81	0.00	60.00	-0.90320	1.80776	-1.13249	6.31479	7.43701	3.19504	2.61125	5.55005	2.15815	3.97905
39	4	M22S27E34	54	0.57	0.43	1.35	0.00	61.43	-1.47144	2.56316	-0.53783	6.85225	7.75859	3.90649	2.24662	4.48971	2.14761	2.92279
40	8	M17S27E31	54	0.80	0.60	3.17	0.00	57.00	-2.05831	2.89165	-0.55669	7.32830	8.30507	4.48312	2.49739	4.08236	2.20751	2.40829
41	4	M16S25E16	54	0.50	0.50	1.01	0.00	61.88	-1.86908	3.10159	-0.12451	7.31647	8.06790	4.51200	2.30952	3.76615	2.45805	2.21050
42	4	M17S26E25	54	0.40	0.60	1.61	0.00	57.50	-2.44538	3.28840	0.64378	7.50587	8.63033	4.98441	2.23980	2.79997	3.35869	1.93774
43	3	M17N02E35	51	0.89	0.00	0.62	0.20	74.21	2.84943	1.50506	-1.54642	6.61441	4.33767	3.82807	5.29821	8.53381	4.45824	6.87980
44	1	M14S22E23	10	0.00	0.00	6.55	0.29	35.83	2.80170	-2.26854	3.38074	3.04119	7.43248	4.27389	6.03729	9.45510	9.04449	9.83195

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
31	4.22325	12.0105	7.71455	11.5090	11.6749	0	0	0	0	0	1	0	0	0	0	0	0	2.10892	7	1
32	4.58637	12.0369	7.67346	11.6224	11.6488	0	0	0	1	0	1	0	0	0	0	0	0	2.15815	7	1
33	4.05688	12.0045	7.71567	11.4692	11.7127	0	0	0	0	0	1	0	0	0	0	0	0	2.16552	7	1
34	5.17472	12.1033	7.85630	11.7700	11.4960	0	0	0	1	0	1	0	0	0	0	0	0	2.06319	7	1
35	4.58637	12.0369	7.67346	11.6224	11.6488	0	0	0	1	0	1	0	0	0	0	0	0	2.15815	7	1
36	4.62697	12.1733	8.07704	11.6706	11.5892	0	0	0	0	0	1	0	0	0	0	0	0	1.61688	7	1
37	4.61613	12.2517	8.30485	11.6887	11.5741	0	0	0	0	0	1	0	0	0	0	0	0	1.31995	7	1
38	4.58637	12.0369	7.67346	11.6224	11.6488	0	0	0	1	0	1	0	0	0	0	0	0	2.15815	7	1
39	5.44633	12.1474	7.93288	11.8568	11.4614	0	0	0	1	0	1	0	0	0	0	0	0	2.14761	7	1
40	5.94591	12.6498	8.49116	12.3636	11.8031	0	0	0	1	0	1	1	0	0	0	0	0	2.20751	7	1
41	6.09803	12.2851	8.20623	12.0784	11.3908	0	0	0	1	0	1	1	0	0	0	0	0	2.21050	8	1
42	7.05493	12.5322	8.35640	12.5383	11.5401	0	0	0	1	0	0	1	0	0	0	0	0	1.93774	8	1
43	2.44060	9.3925	6.23307	8.4989	9.7050	0	0	0	0	0	0	0	1	0	0	0	0	2.44060	10	1
44	8.42138	9.1764	2.32958	10.4012	11.0523	0	0	0	0	0	0	0	0	0	1	0	0	2.32958	12	1

OBS	CLUSTER	MTRS	CO	SHRINK1	PAN	PERM1	WATTAB	NO2001	CV1	CV2	CV3	DIST1	DIST2	DIST3	DIST4	DIST5	DIST7	DIST8
1	3	M19N03W07	11	0.75	0.00	0.78	0.00	74.38	0.74205	0.4067	-2.60224	6.0527	6.93333	3.0777	4.6769	8.1341	3.6195	6.4500
2	3	M20N03W09	11	0.54	0.00	1.67	0.23	59.04	2.78737	0.6856	0.13831	5.1776	4.46650	2.8612	4.5855	8.0975	5.3946	7.1162
3	3	S02S05W20	33	0.00	0.29	4.32	0.21	36.61	0.66321	0.3783	3.26625	4.1132	7.03605	3.3082	3.1130	6.0906	6.6990	6.6750
4	3	M13N04E24	51	0.00	0.25	1.98	0.25	49.38	1.26310	1.5578	3.07887	5.2666	5.99854	3.8425	3.3446	5.9126	6.2488	6.1759
5	3	M21S29E30	54	1.00	0.00	2.86	0.00	58.57	0.97556	-0.4340	-3.17153	6.0413	7.43531	3.4460	5.4874	9.0622	4.5347	7.4337
6	3	M08N01E14	57	0.88	0.00	2.25	0.00	70.63	0.86052	-0.2388	-2.83465	5.8532	7.26178	3.1265	5.0942	8.6776	4.2636	7.0868
7	4	M14S23E35	10	0.50	0.38	1.35	0.25	52.81	1.15293	3.2500	1.55349	6.8280	5.18561	4.3586	3.3467	5.3599	4.5054	4.6080
8	4	M13N05E23	31	0.00	0.50	1.30	0.20	56.56	-0.40339	3.2545	3.33461	6.9572	7.25095	5.1930	3.0046	3.7532	5.7587	4.4572
9	8	M12S20E24	10	0.50	0.75	1.01	0.25	51.25	-0.59093	5.7214	2.63004	9.3202	7.46341	7.0367	4.6728	3.6533	5.4746	3.4427
10	10	M02N02W14	7	2.00	0.00	0.13	0.33	88.33	5.23840	3.5471	-4.63253	10.8250	5.01917	8.1374	9.3371	11.8280	6.6465	9.4281
11	10	M19N03W25	11	1.60	0.00	0.42	0.40	79.50	5.52557	3.2520	-2.57196	9.6390	2.96260	7.1391	8.3419	10.9346	6.5516	8.9169
12	10	M19S27E29	54	2.00	0.00	0.13	0.00	71.67	1.99361	2.1305	-7.25871	10.9546	8.75916	8.1816	9.3517	11.8605	5.9060	9.2325
13	12	M04S09E20	50	0.00	0.00	4.60	0.67	37.92	6.55295	0.4087	6.08541	8.3678	6.61685	8.6396	9.4672	11.6948	11.7878	12.0709
14	13	M19N03W09	11	2.00	0.00	0.06	0.67	90.00	8.58205	5.0441	-1.93825	12.4765	3.59300	10.3256	11.3099	13.4139	9.7217	11.5476
15	14	M19N02W09	11	1.22	0.78	0.55	1.00	75.83	7.36355	10.1654	5.99427	15.8688	8.77660	14.2594	13.4023	13.1485	13.5642	12.8074

OBS	DIST10	DIST11	DIST12	DIST13	DIST14	MEM1	MEM2	MEM3	MEM4	MEM5	MEM7	MEM8	MEM10	MEM11	MEM12	MEM13	MEM14	CLASSX	INDEX	COUNT
1	2.7984	11.8833	7.6518	11.0966	12.1149	0	0	0	0	0	0	0	0	0	0	0	0	2.79837	0	1
2	4.2616	8.6864	4.4472	8.4949	9.4205	0	0	0	0	0	0	0	0	0	0	0	0	2.86124	0	1
3	7.6528	9.5472	3.6583	10.5376	10.1003	0	0	0	0	0	0	0	0	0	0	0	0	3.11301	0	1
4	7.1892	8.6324	3.6779	9.4862	8.8718	0	0	0	0	0	0	0	0	0	0	0	0	3.34457	0	1
5	2.9841	12.3543	8.0188	11.5082	12.8316	0	0	0	0	0	0	0	0	0	0	0	0	2.98413	0	1
6	3.0168	12.1523	7.7608	11.3739	12.5766	0	0	0	0	0	0	0	0	0	0	0	0	3.01676	0	1
7	5.8912	8.8510	5.4627	8.9690	8.2674	0	0	0	0	0	0	0	0	0	0	0	0	3.34666	0	1
8	8.0492	9.9105	5.9227	10.6545	9.1816	0	0	0	0	0	0	0	0	0	0	0	0	3.00457	0	1
9	8.3163	10.3380	7.9505	10.6070	8.5781	0	0	0	0	0	0	0	0	0	0	0	0	3.44274	0	1
10	3.1116	10.2488	9.8086	7.8798	10.0849	0	0	0	0	0	0	0	0	0	0	0	0	3.11162	0	1
11	3.4308	8.2910	7.8997	6.2765	8.3952	0	0	0	0	0	0	0	0	0	0	0	0	2.96260	0	1
12	3.3896	14.2047	11.9636	12.1888	13.9602	0	0	0	0	0	0	0	0	0	0	0	0	3.38957	0	1
13	10.8501	4.7555	3.2304	7.3534	7.5338	0	0	0	0	0	0	0	0	0	0	0	0	3.23044	0	1
14	6.9761	6.8005	9.4380	3.7036	6.8043	0	0	0	0	0	0	0	0	0	0	0	0	3.59300	0	1
15	13.7691	6.6236	11.3106	7.2630	3.0615	0	0	0	0	0	0	0	0	0	0	0	0	3.06154	0	1