



Homework

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College: Engineering

Department: Petroleum

Stage: 4th

17/10/2021

The mean horizontal permeability for all cells:

Settings for 'Permeability'

Style Info Statistics Histogram Colors fx Operations More Variogram Quality attributes Structural analysis

For zone: Zone 1

Axis	Min	Max	Delta
X	1268.84	10373.37	9104.53
Y	3372.02	13815.63	10443.61
Z	-2858.83	-1682.15	1176.68
Permeability	10.0000	4905.0000	4895.0000

Description

Unit: mD

Is upscaled (U): No

Total number of defined cells in filtered area: 94391

Total number of upscaled cells: 0

Have the upscaled cell values been edited? No

Number of edited upscaled cells: 0

Grid cells (nl x nj x nk): 80 x 83 x 28

Total number of grid cells: 185920

Property resolution: Per cell with volume (c...)

Name	Type	Min	Max	Delta	N	Mean	Std	Var	Sum
Property	Cont.	10.0000	4905.0000	4895.0000	94391.0000	1275.3541	1608.0237	2585740.3449	120381953.2...
Upscaled									
Well logs									

Copy to output sheet ☒ List 1 ☒ List 2 ☒ List 3 ☐ Reset

Apply OK Cancel

The mean: 1275.3541

The mean horizontal permeability for cells in zone 1:

Settings for 'Permeability'

Style Info Statistics Histogram Colors fx Operations More Variogram Quality attributes Structural analysis

For zone: Zone 1

Axis	Min	Max	Delta
X	1268.84	10373.37	9104.53
Y	3372.02	13815.63	10443.61
Z	-2858.83	-1682.15	1176.68
Permeability	10.0000	4905.0000	4895.0000

Description

Unit: mD

Is upscaled (U): No

Total number of defined cells in entire property, in...: 36364

Total number of upscaled cells: 0

Have the upscaled cell values been edited? No

Number of edited upscaled cells: 0

Grid cells (nl x nj x nk): 80 x 83 x 28

Total number of grid cells: 185920

Property resolution: Per cell with volume (c...)

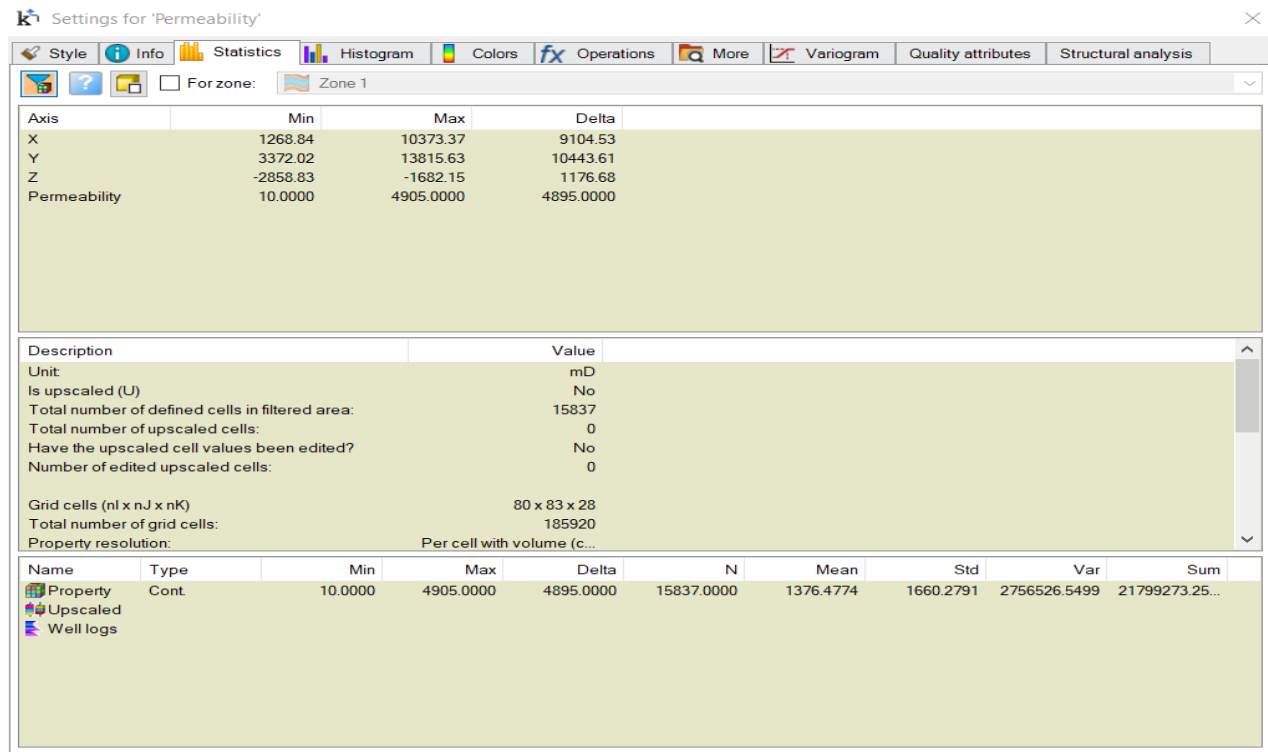
Name	Type	Min	Max	Delta	N	Mean	Std	Var	Sum
Property	Cont.	10.0000	4905.0000	4895.0000	36364.0000	983.0811	1775.1743	3151243.9112	35748760.96...
Upscaled									
Well logs									

Copy to output sheet ☒ List 1 ☒ List 2 ☒ List 3 ☐ Reset

Apply OK Cancel

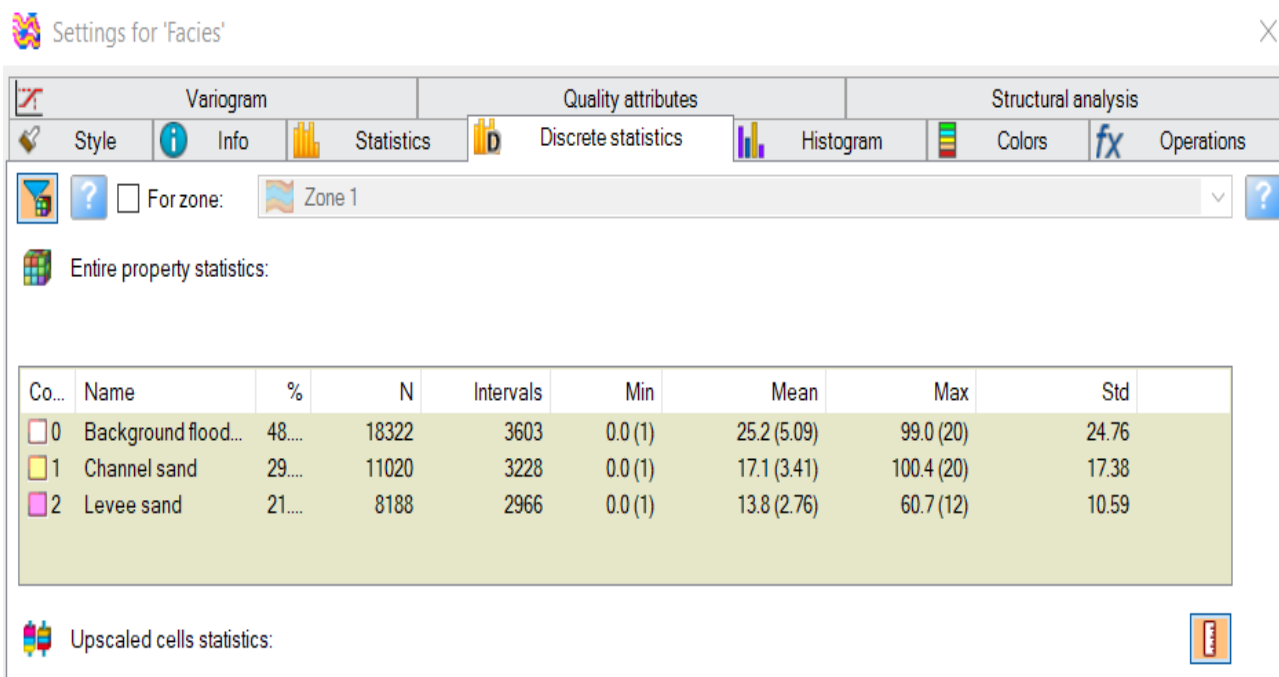
The mean: 983.0811

The mean horizontal permeability for cells in segment 3:



The mean: 1376.4774

The mean horizontal permeability for cells in channel sand cells in segment 4 & 2:



The mean: 17.1(3.41)

Number of cells in model: 94391.0000

Settings for 'Permeability'

Style

Info

Statistics

Histogram

Colors

fxOperations

More

Variogram

Quality attributes

Structural analysis

☐ For zone:

Zone 1

Axis	Min	Max	Delta
X	1268.84	10373.37	9104.53
Y	3372.02	13815.63	10443.61
Z	-2858.83	-1682.15	1176.68
Permeability	10.0000	4905.0000	4895.0000

Description	Value
Unit:	mD
Is upscaled (U)	No
Total number of defined cells in filtered area:	94391
Total number of upscaled cells:	0
Have the upscaled cell values been edited?	No
Number of edited upscaled cells:	0
Grid cells (nl x nJ x nK)	80 x 83 x 28
Total number of grid cells:	185920
Property resolution:	Per cell with volume (c...

Name	Type	Min	Max	Delta	N	Mean	Std	Var	Sum
<div>Property</div>	Cont.	10.0000	4905.0000	4895.0000	94391.0000	1275.3541	1608.0237	2585740.3449	120381953.2...
<div>Upscaled</div>									
<div>Well logs</div>									

Number of horizons: 4

Settings for 'Horizons'			
Style	Info	Statistics	Operations
Axis	Min	Max	Delta
X	1268.84	10373.37	9104.53
Y	3382.40	13815.63	10433.22
Z	-2858.83	-1682.15	1176.68
Lat	-	-	-
Long	-	-	-
Description		Value	
Number of horizons:		4	
Nodes (nl x nJ)		81 x 84	
Cells (nl x nJ)		80 x 83	
Total number of 2D nodes:		6804	
Total number of 2D cells:		6640	

Cells dimensions:

Settings for 'Edges' ×

Style Info **Statistics**

Axis	Min	Max	Delta
X	1268.84	10373.37	9104.53
Y	3372.02	13815.63	10443.61
Z	-2858.83	-1682.15	1176.68
Lat	-	-	-
Long	-	-	-

Description Value

Number of channel sand cells in model: **25131**

Settings for 'Facies' ×

Variogram Quality attributes Structural analysis

Style Info **Statistics** Discrete statistics Histogram Colors **fx** Operations

☐ For zone: Zone 1 ?

Entire property statistics:

Co...	Name	%	N	Intervals	Min	Mean	Max	Std
<input type="checkbox"/> 0	Background floodplain	50....	47473	9421	0.0 (1)	24.9 (5.04)	103.9 (21)	24.45
<input type="checkbox"/> 1	Channel sand	26....	25131	7828	0.0 (1)	16.1 (3.21)	100.9 (21)	16.5
<input type="checkbox"/> 2	Levee sand	23....	21787	8244	0.0 (1)	13.1 (2.64)	140.4 (28)	10.06

Upscaled cells statistics: ?