Assignment 8

Group Name- **MinTech Enthusiasts**

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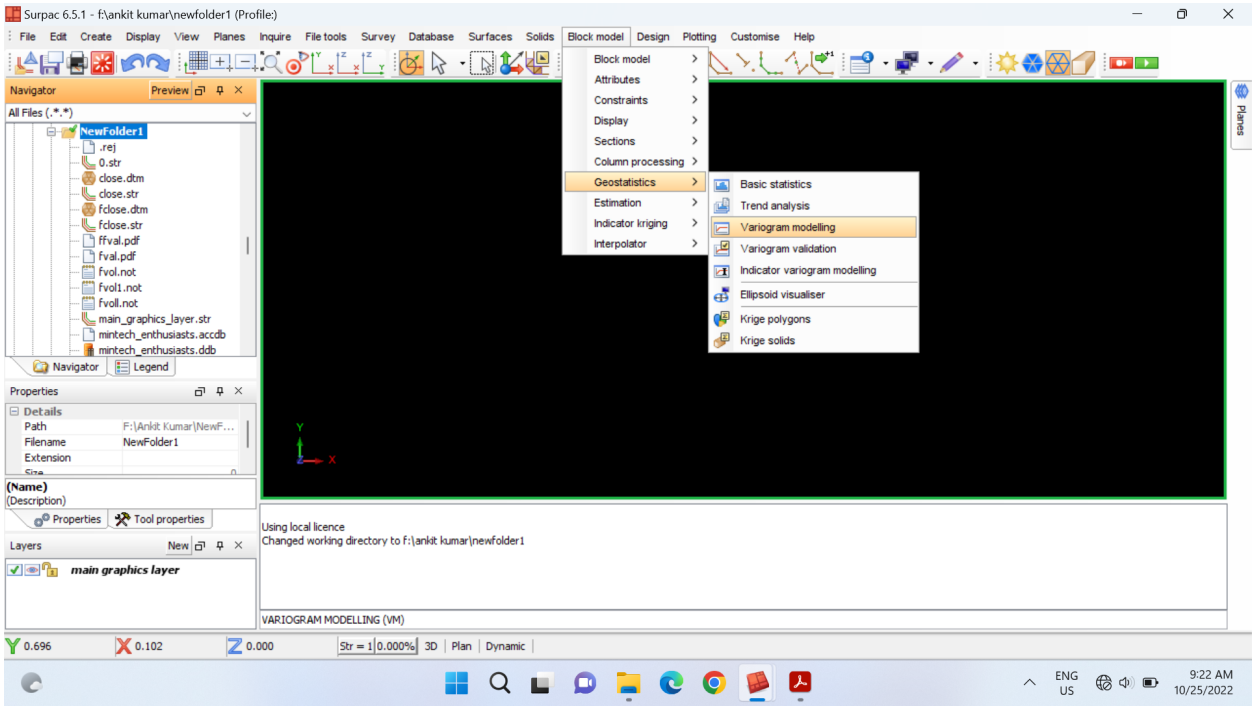
Variogram:
A variogram is a description of the spatial continuity of the data. Simply the variogram is the measure of variability with respect to distance between the two points.

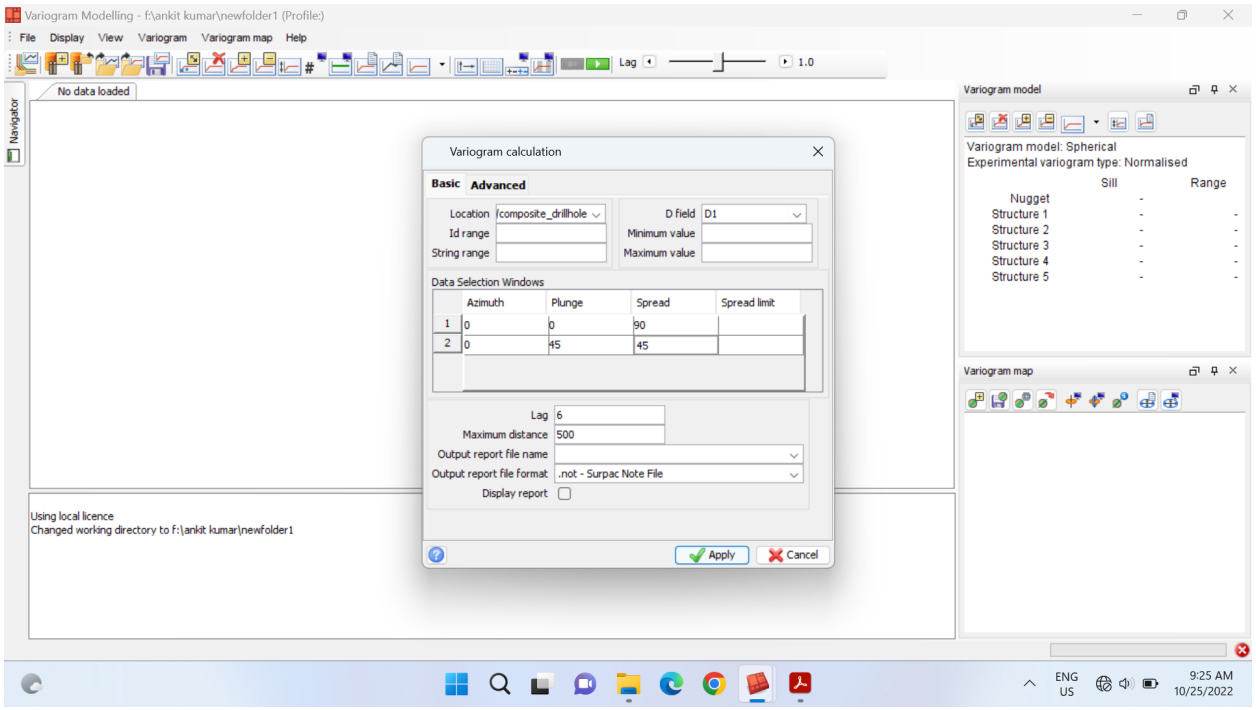
Isotropy:
The property of being isotropic is having the same value when measured in different directions.

Anisotropy:
The property of being anisotropic is having a different value when measured in different directions.

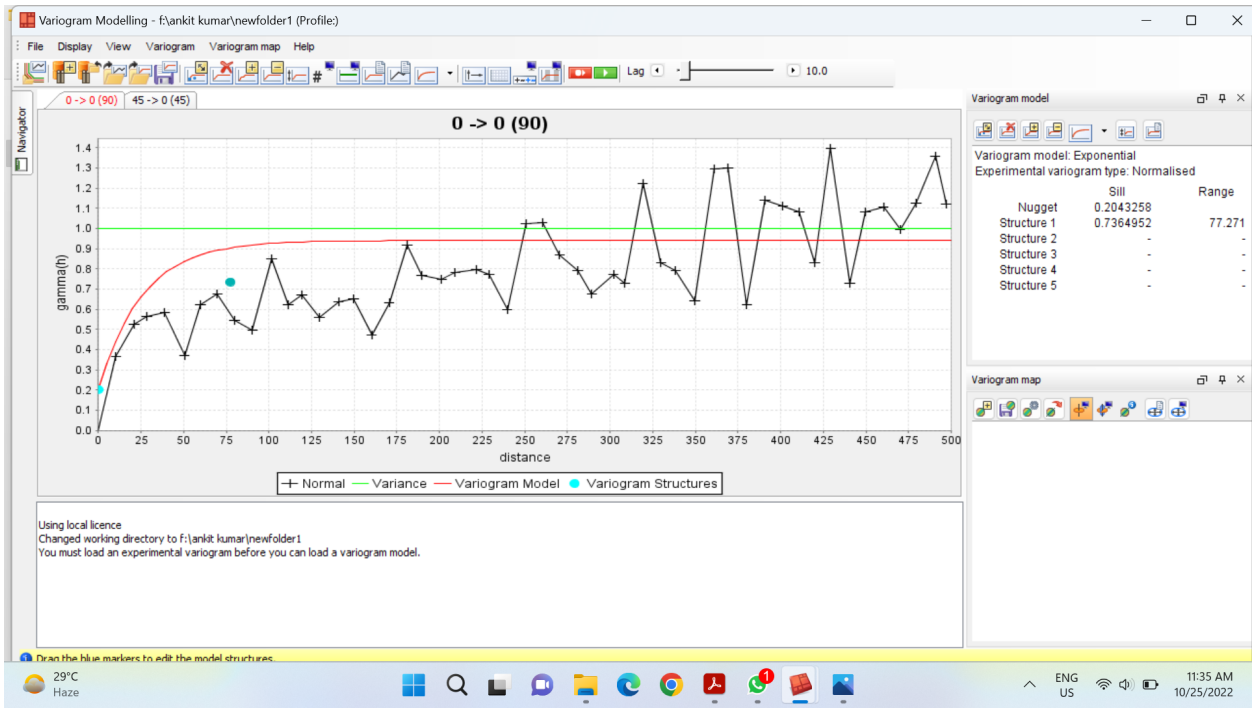
1. **To Make a Variogram Model:**
   Geostatistics → Variogram modelling



2. Choose the string composting file

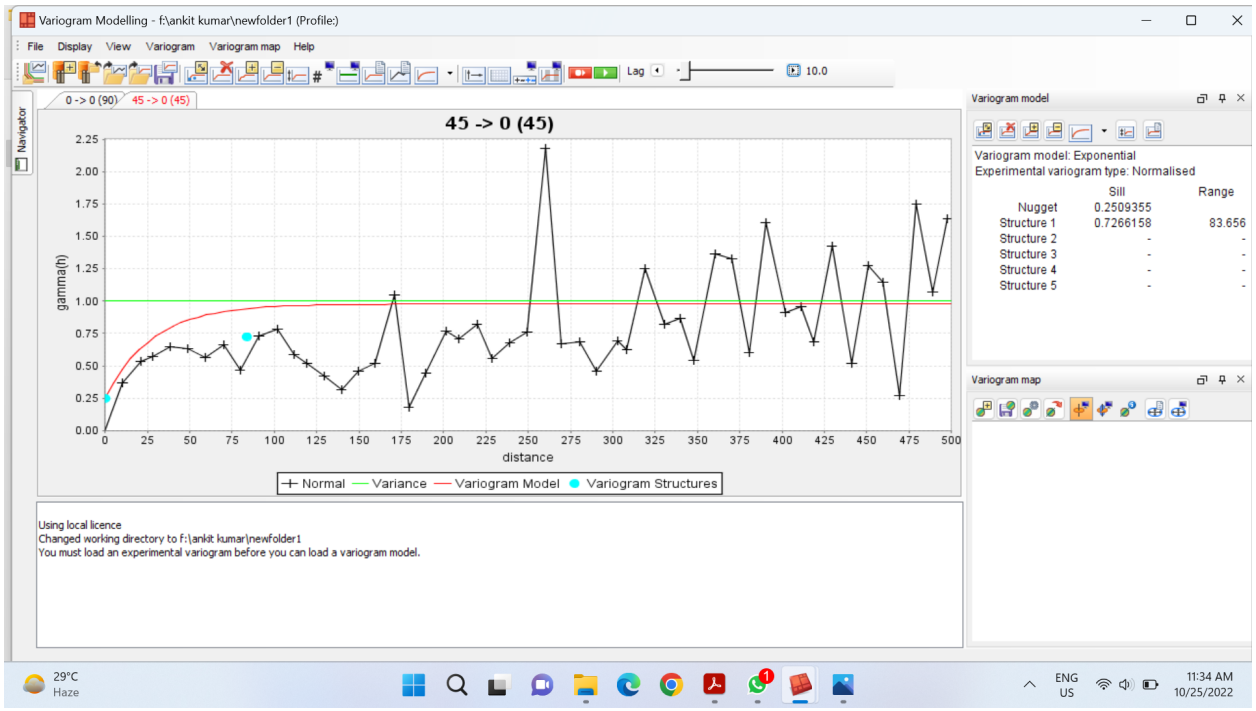


3. 0→0(90)



Model Type : Exponential
Model Nugget : 0.2043258
Sill : 0.7364952
Range : 77.271

4. 0→0(45)



Model Type : Exponential
Model Nugget : 0.2509355
Sill : 0.7266158
Range : 83.656

vari.not - Notepad

File Edit View

Oct 25, 2022

Surpac Minex Group

VARIOGRAM CALCULATION

Data Source: c:/users/ankit kumar/composite_drillhole.str
Id :
Strings : all
Output File: vari.not

D Field : 1
Valid Data Range : All values
Lag : 6
Max Distance : 500

VARIOGRAM DIRECTION
Azimuth : 0.000
Plunge : 0.000
Spread angle : 90
Spread limit : None

STATISTICS
Number of samples : 727
Mean : 59.690918
Variance : 59.984933
Standard Deviation : 7.744994

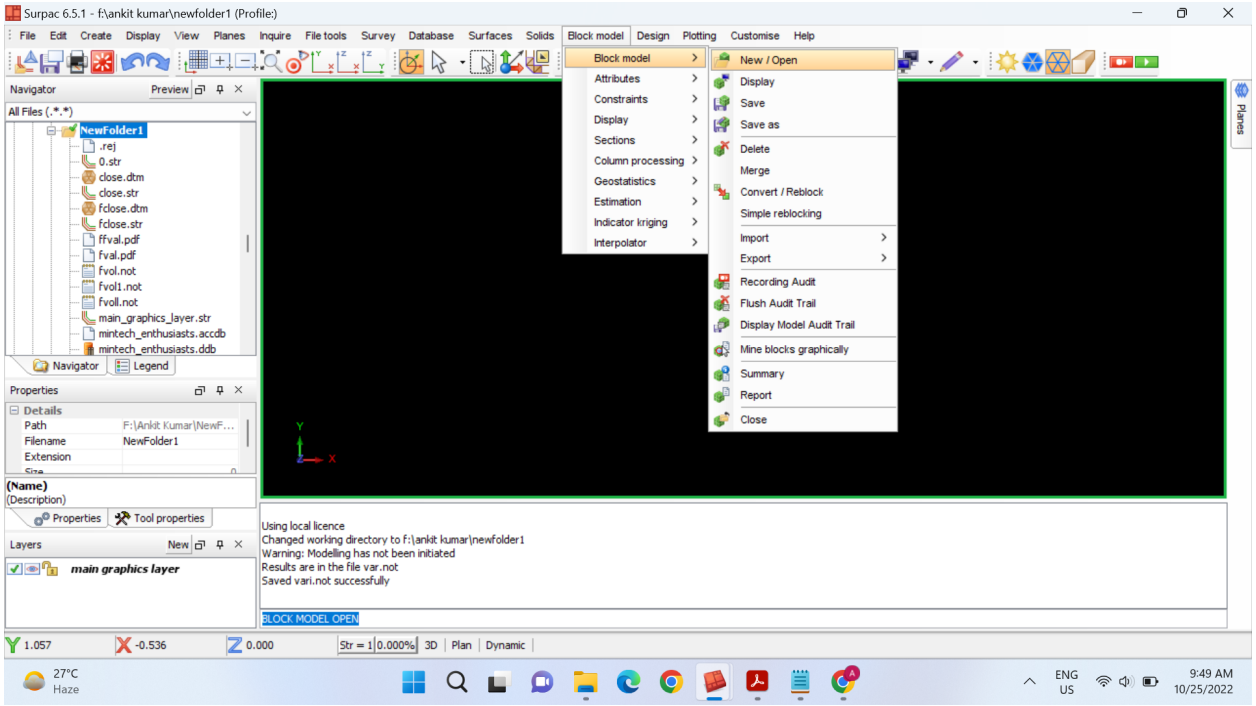
Lag	Pairs	Drift	Gamma(h)	Wtd Gamma(h)	Log Gamma(h)	Gen Rel Gamma(h)	P/w Rel Gamma(h)	Average Distance)
0.00	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6.00	656	-0.525	17.179	17.179	0.008	0.005	0.008	7.000
12.00	623	-0.296	26.779	26.900	0.012	0.008	0.011	13.907
18.00	16	2.544	11.371	11.314	0.003	0.003	0.003	20.137
24.00	533	0.058	31.670	31.536	0.014	0.009	0.013	21.153

Ln 1, Col 1 100% Windows (CRLF) UTF-8

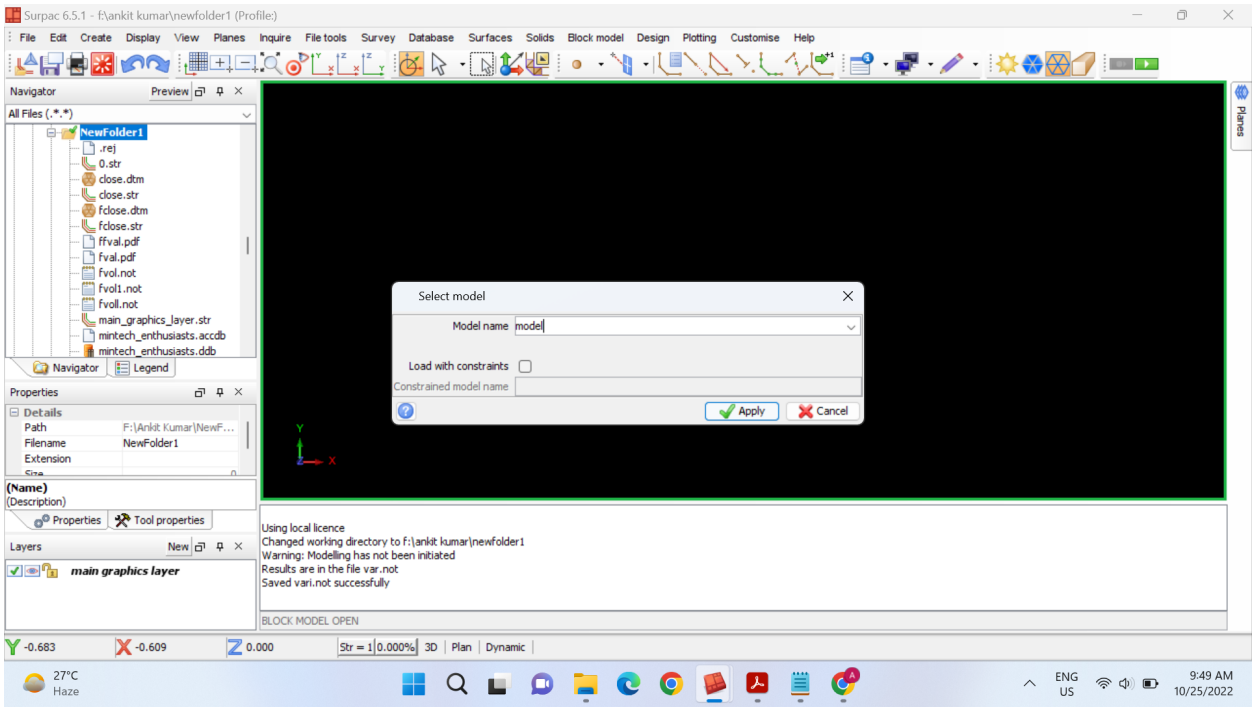
ENG US 9:33 AM 10/25/2022

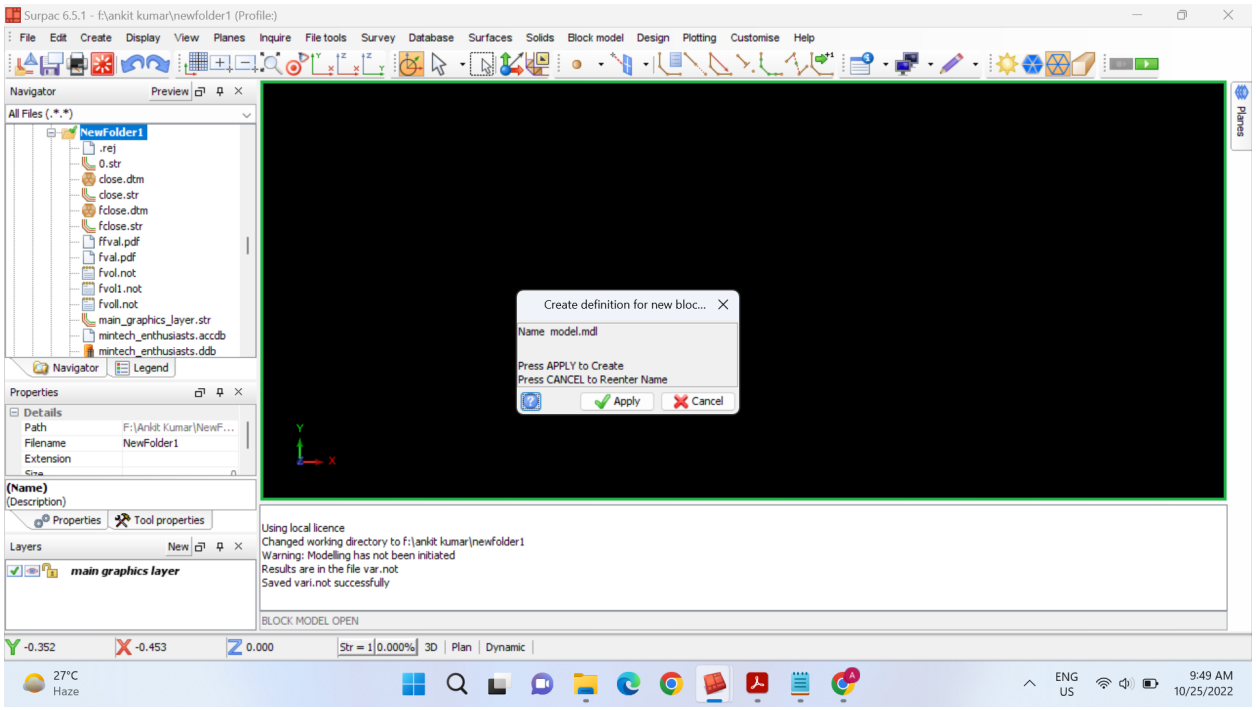
1. Block Modelling

Block model → New / Open

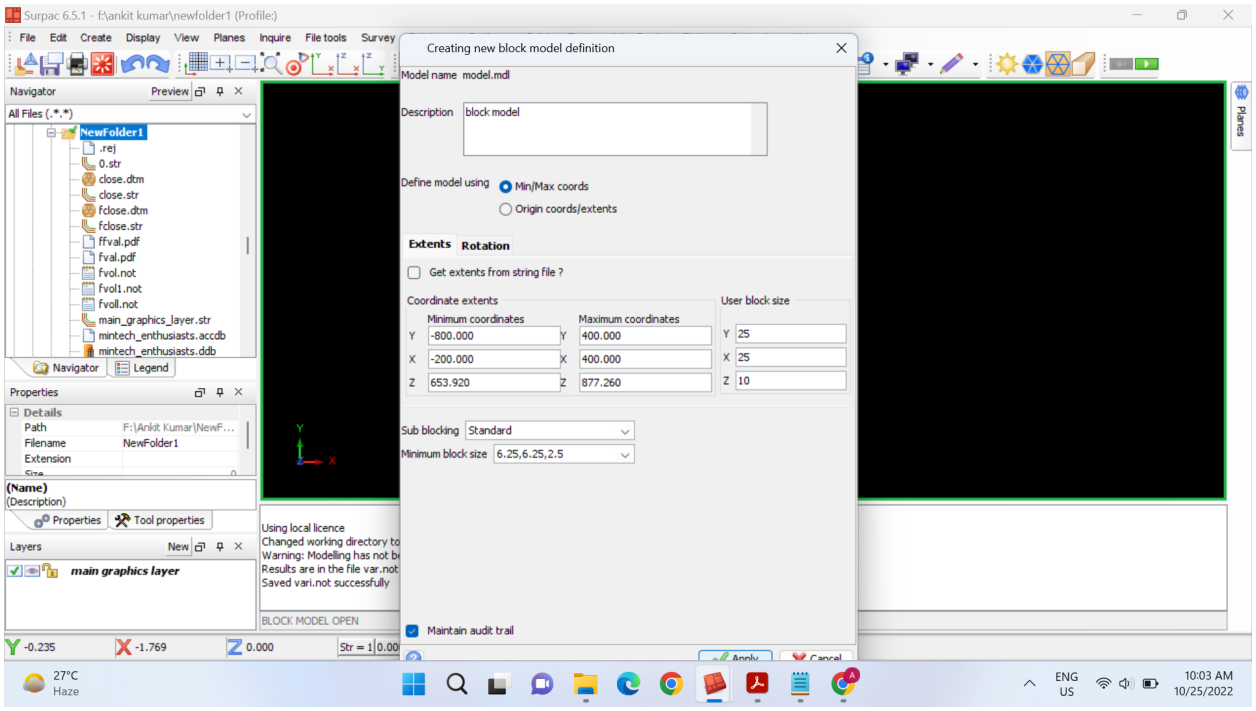


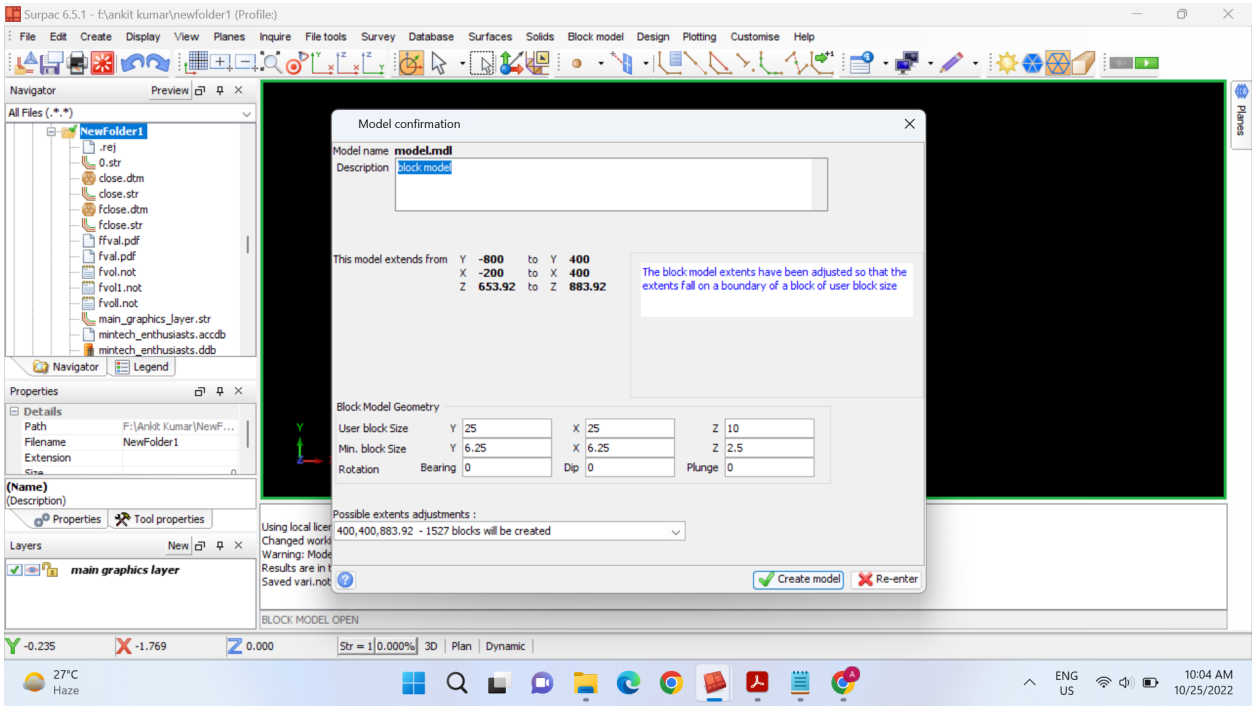
2. Give model name



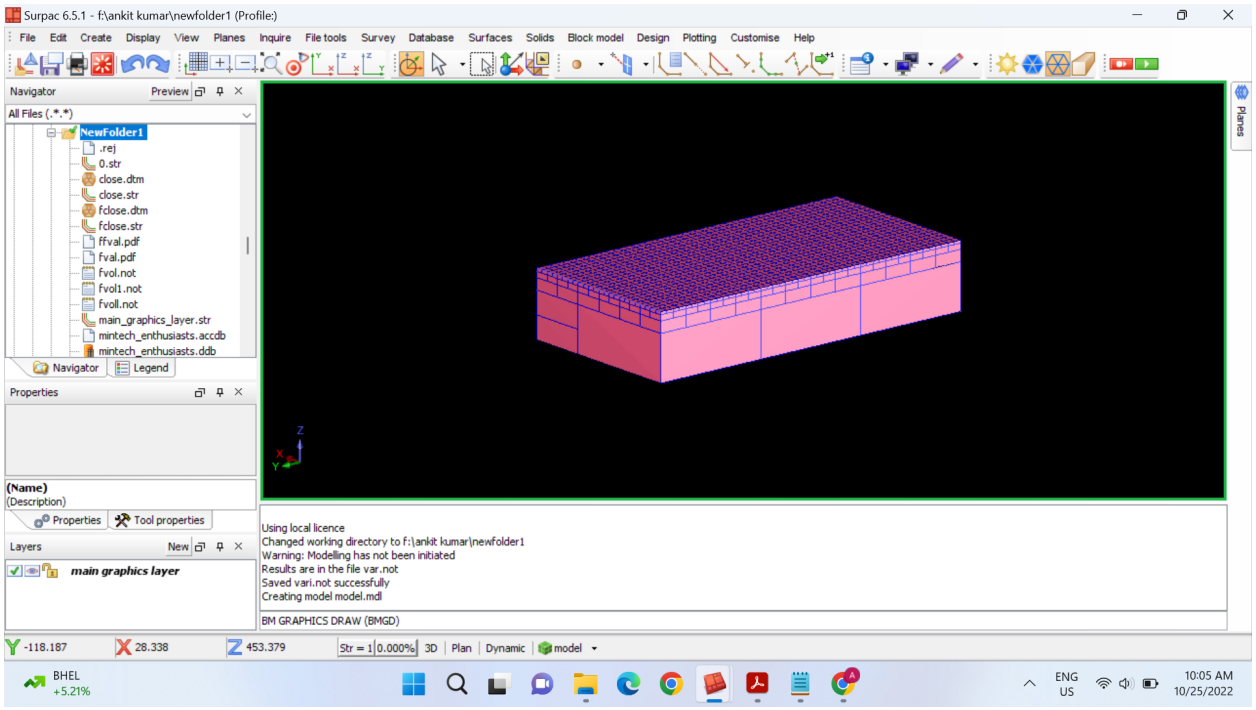


3. Upload the string file

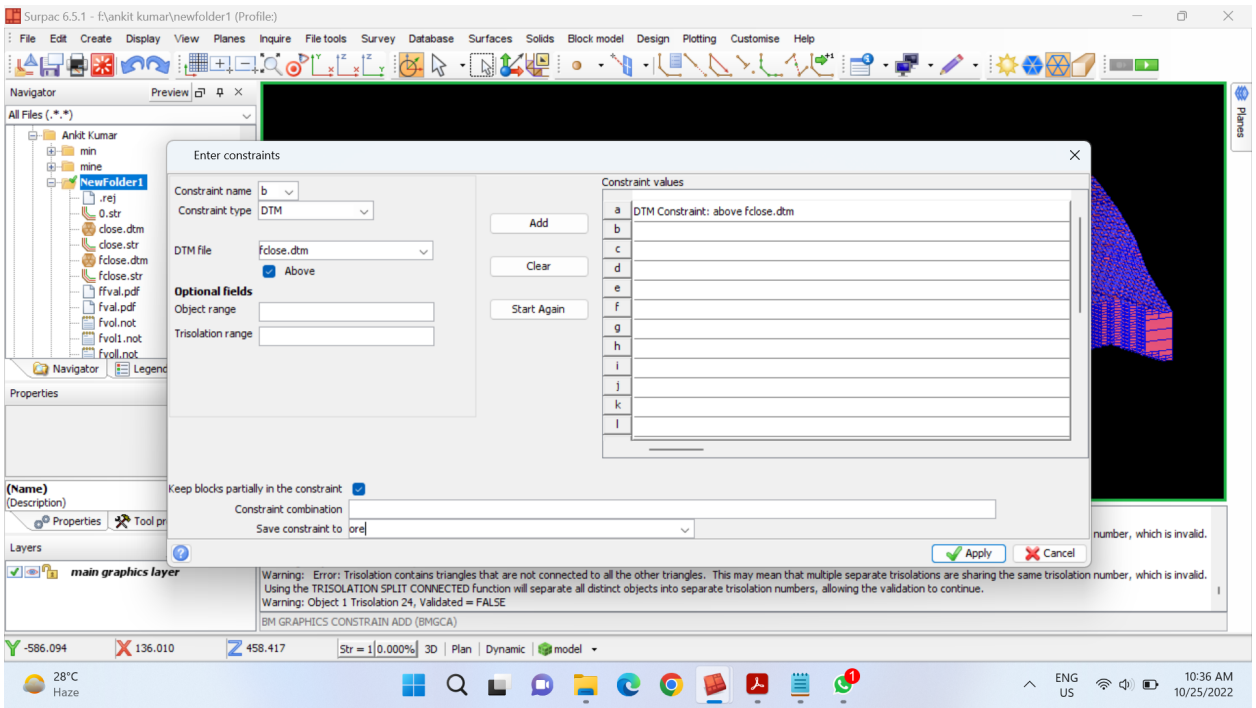




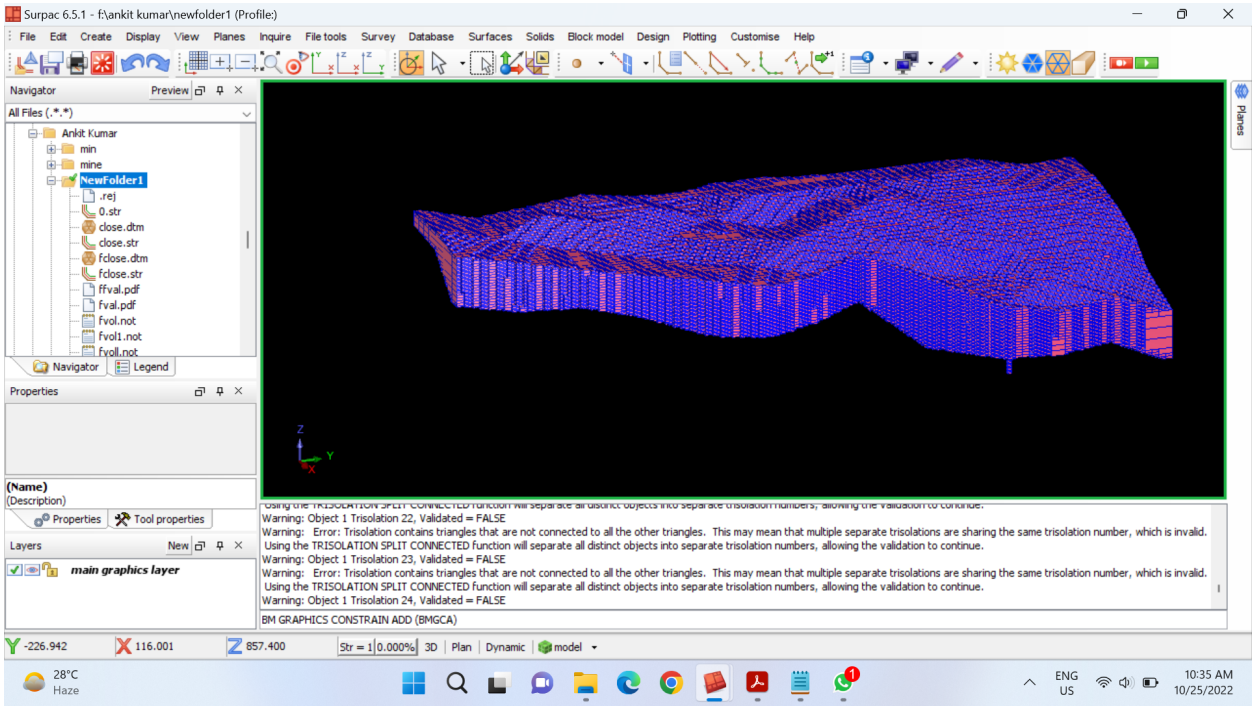
4.The block model is created



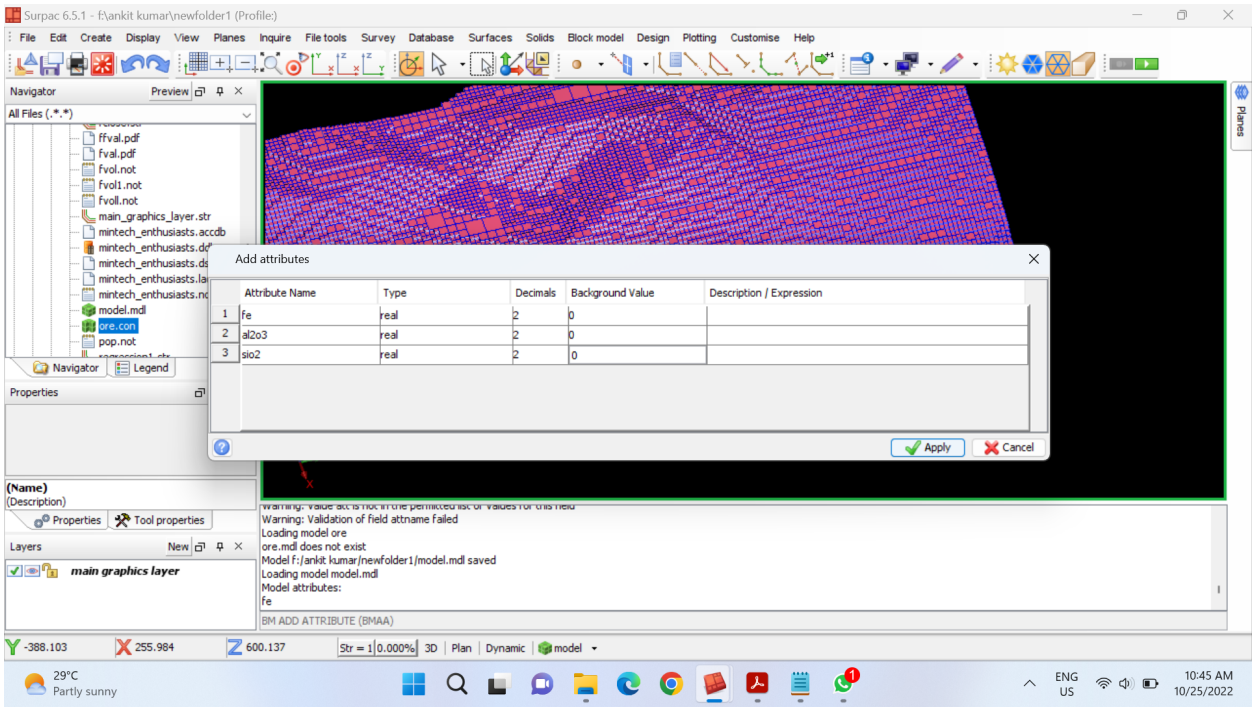
5. Constraints added—>By Uploading the DTM file



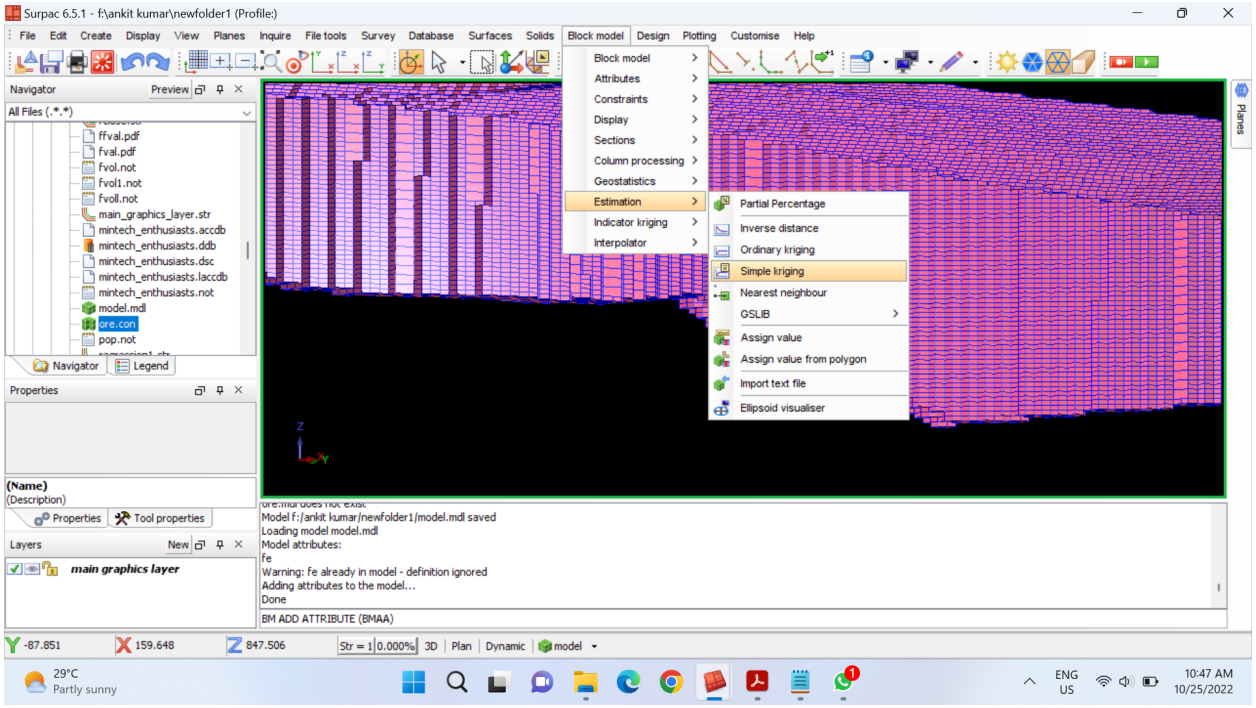
6. Block Model with DTM Constraints



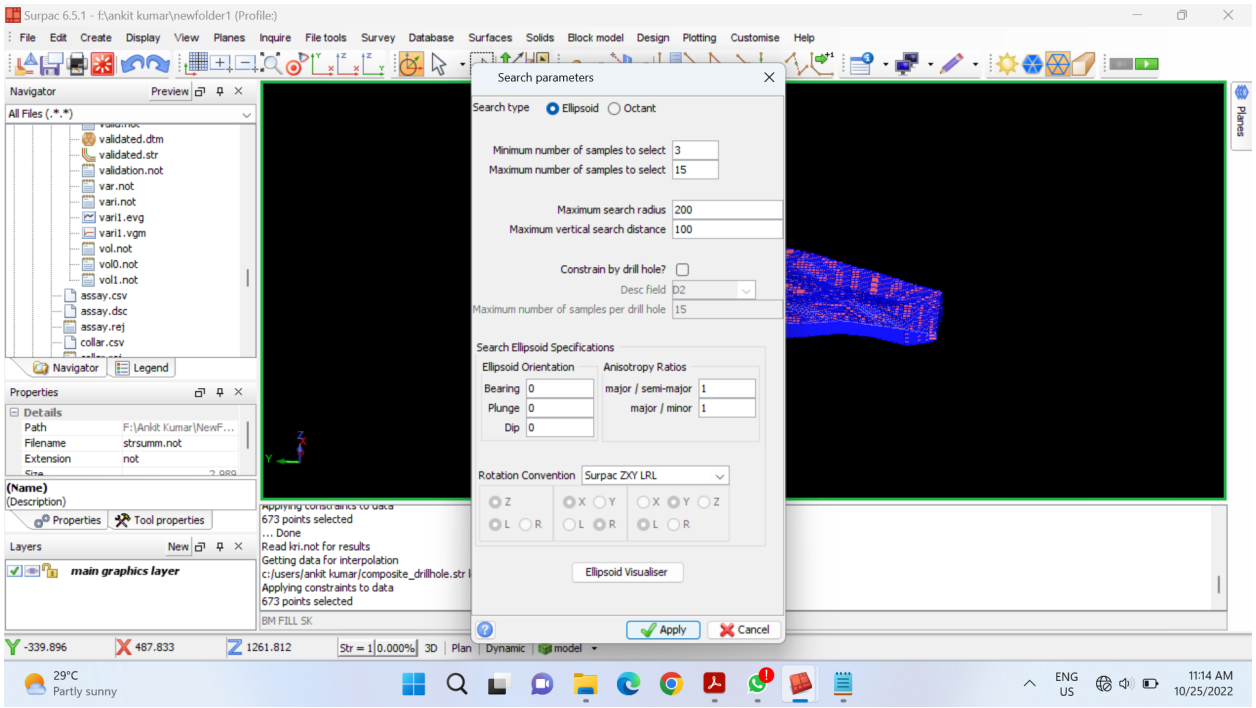
7. Addition of Attributes—->(Block Model→Attributes)



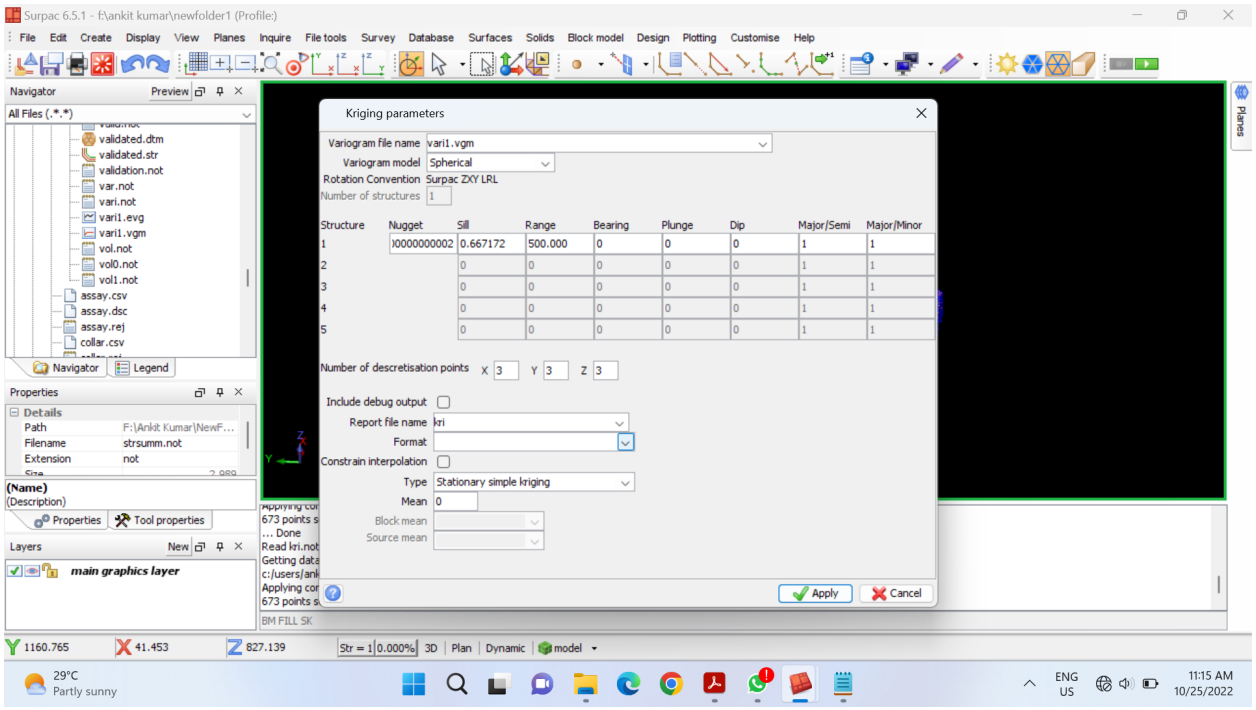
8. Kriging (Block Model→Estimation→Kriging)

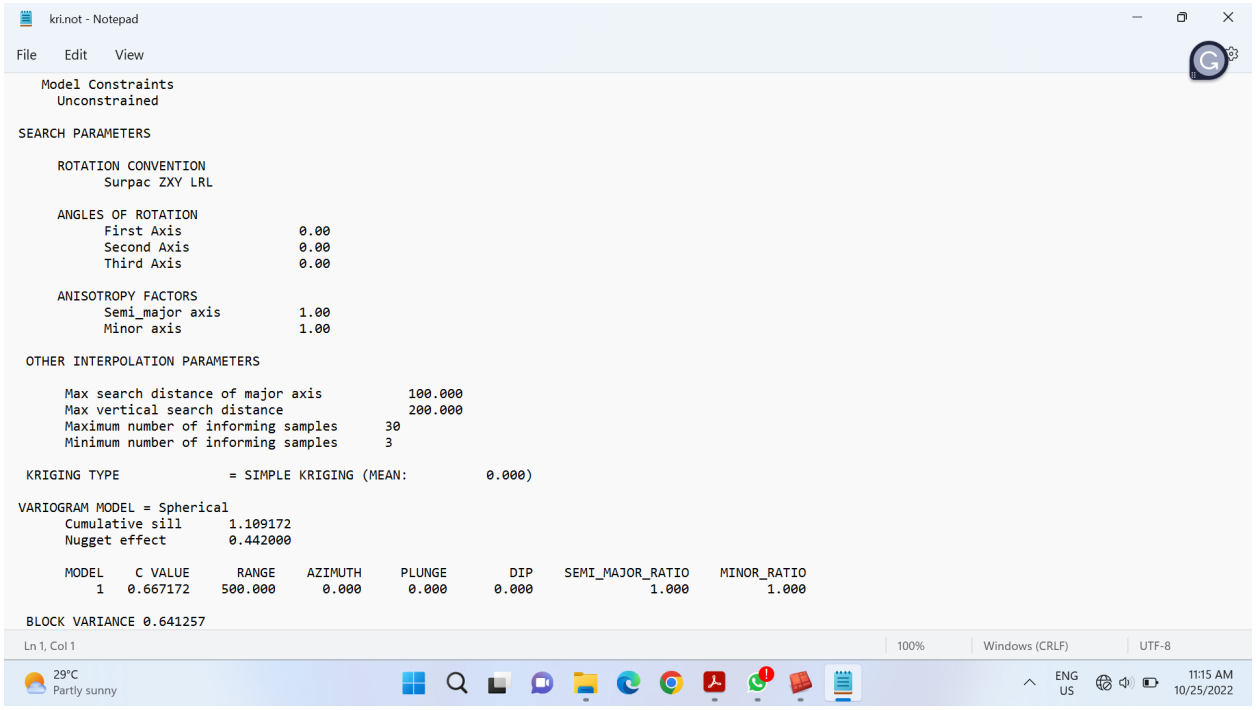


9.Kriging parameters are added

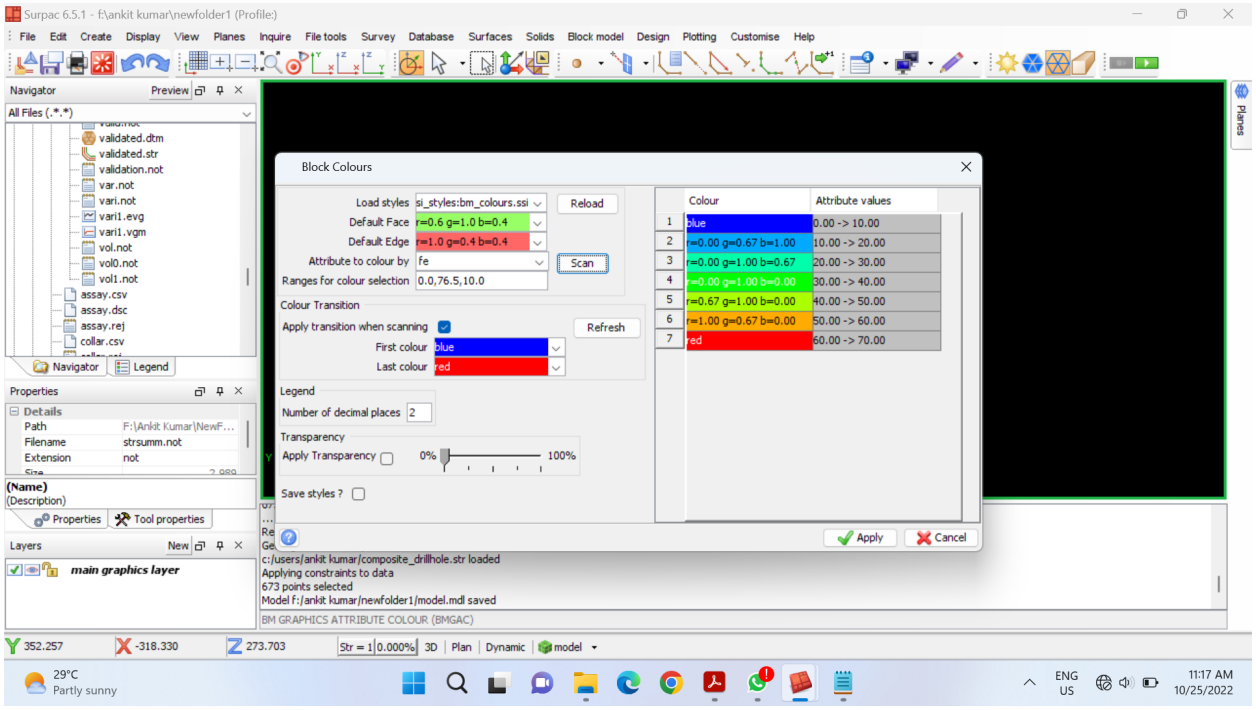


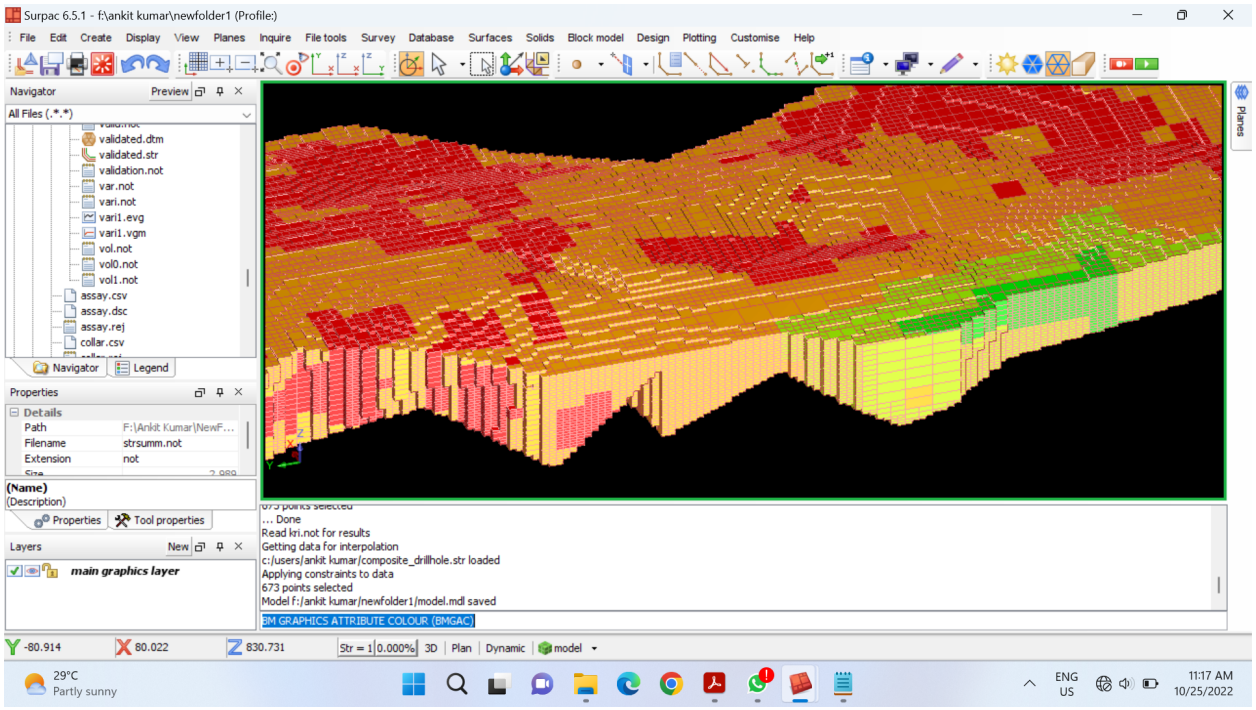
10. Uploading variogram file





11.Colour distribution according to the attributes





12.To see the attributes and value of each block by clicking on it