

Assignment 5

Group Name- MinTech
Enthusiasts

Group Members:-

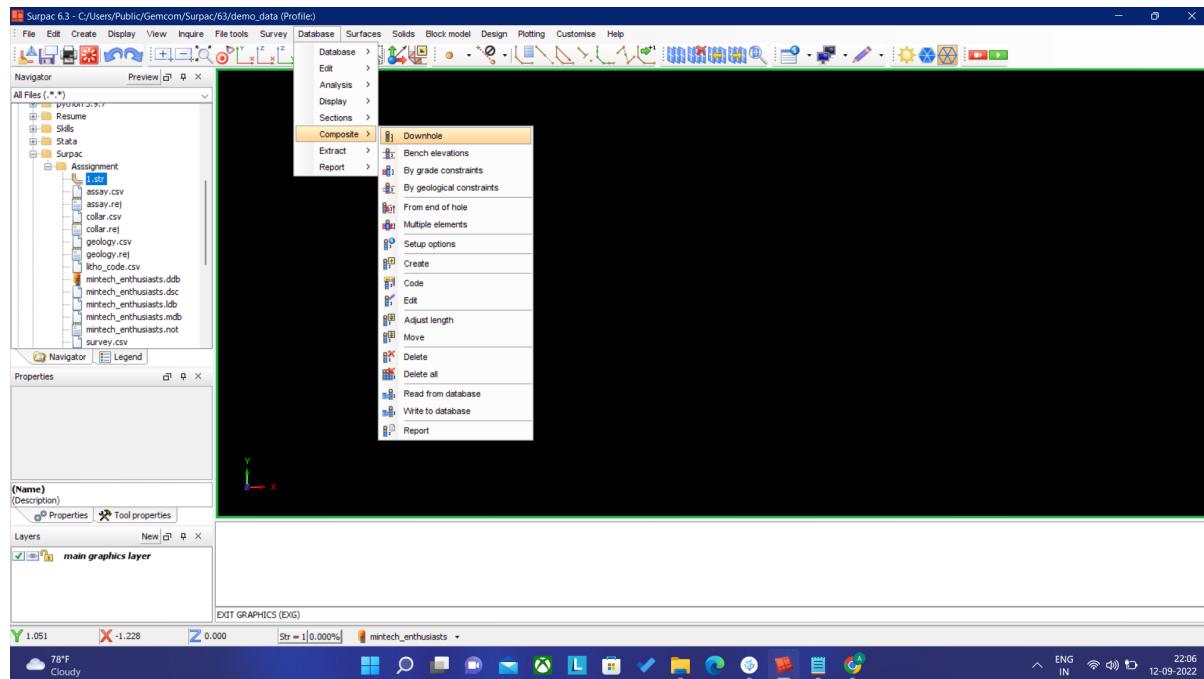
Abhishek Sawargave 20JE0035

Ankit Kumar Mondal 20JE0146

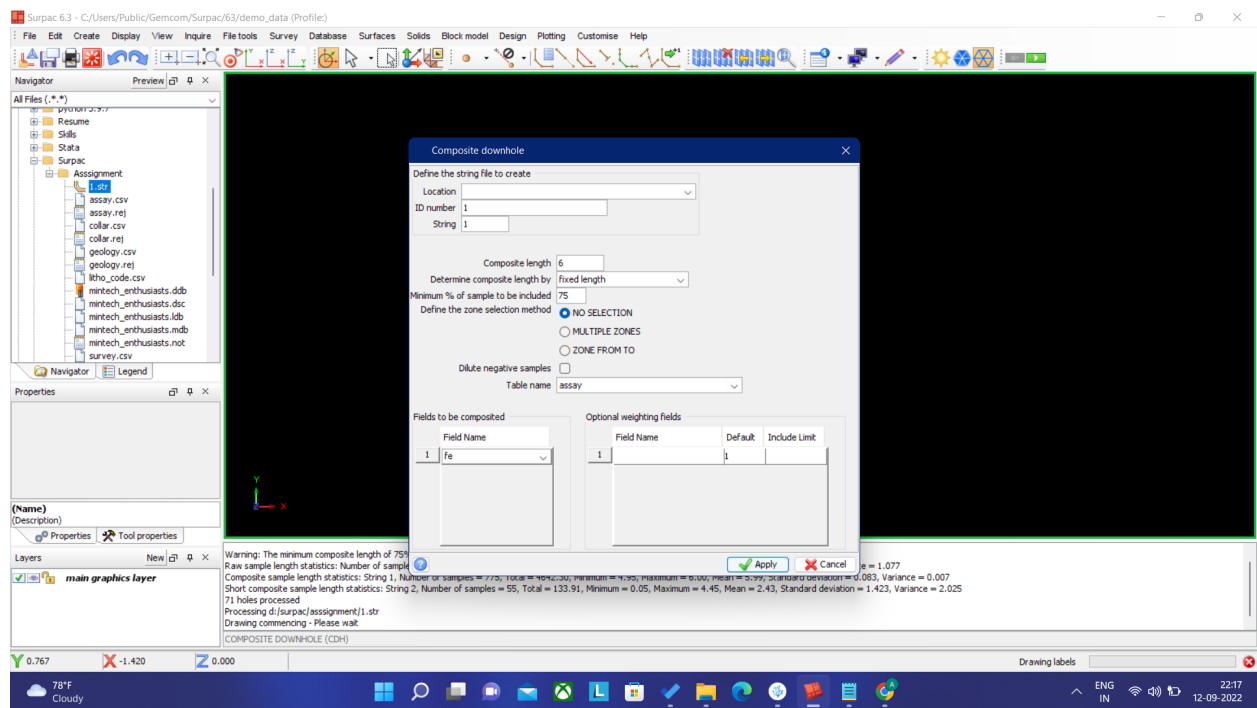
Ankit Kumar 20JE0145

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1. The database has been created using assay, survey, geology files → Database → Composite → Downhole



2. After clicking on composite, moving forward to the dialog box → Fill corresponding values → Composite length → Field name (Fe) → Apply



3. A string file is appeared containing string1 as White color & string 2 as Blue color.

Composite length = 6

Minimum % of the sample to be included = 75%

—>Here according to the first borehole data the

1.Length of Borehole is 82.95

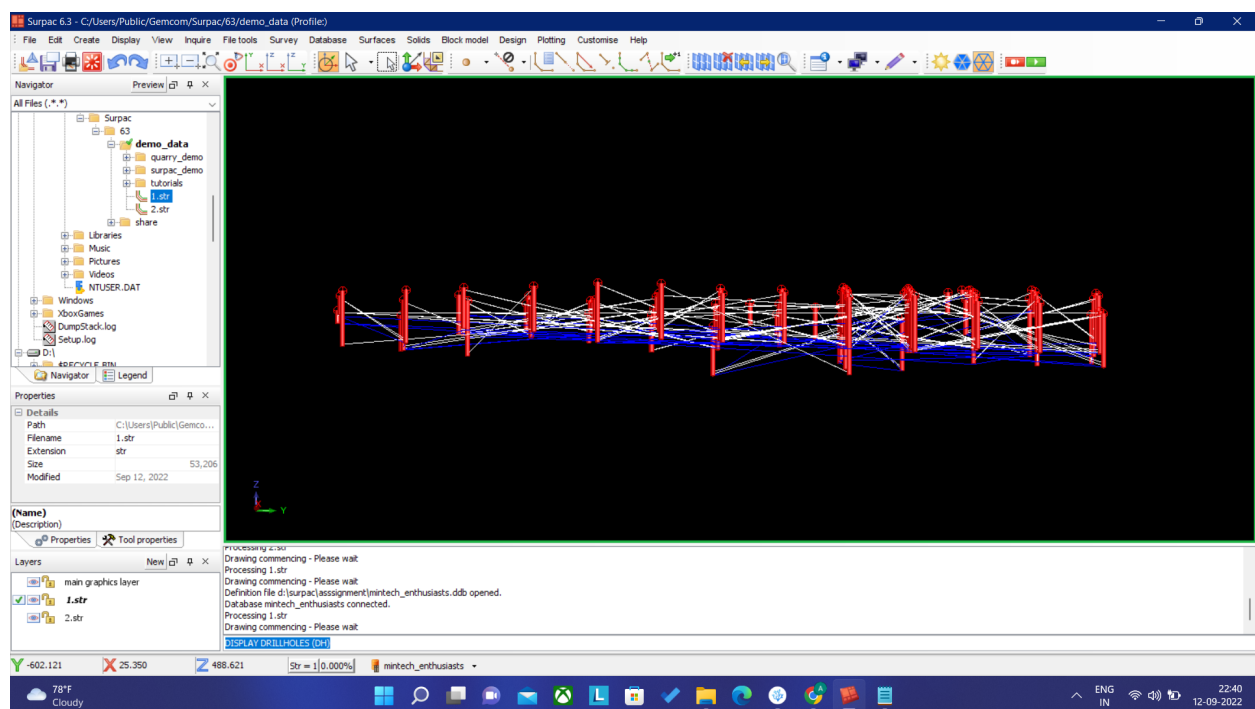
We have taken the compositing length as 6 so the algorithm will divide the borehole length into parts of 6m. Finally the remaining length will be $(82.95-78)=4.95$.

2. Also, we have provided the 75% as minimum sample to included means, $6*0.75=4.5\text{m}$, so for each borehole we have to check whether the The remaining length is greater or lesser than 4.5.

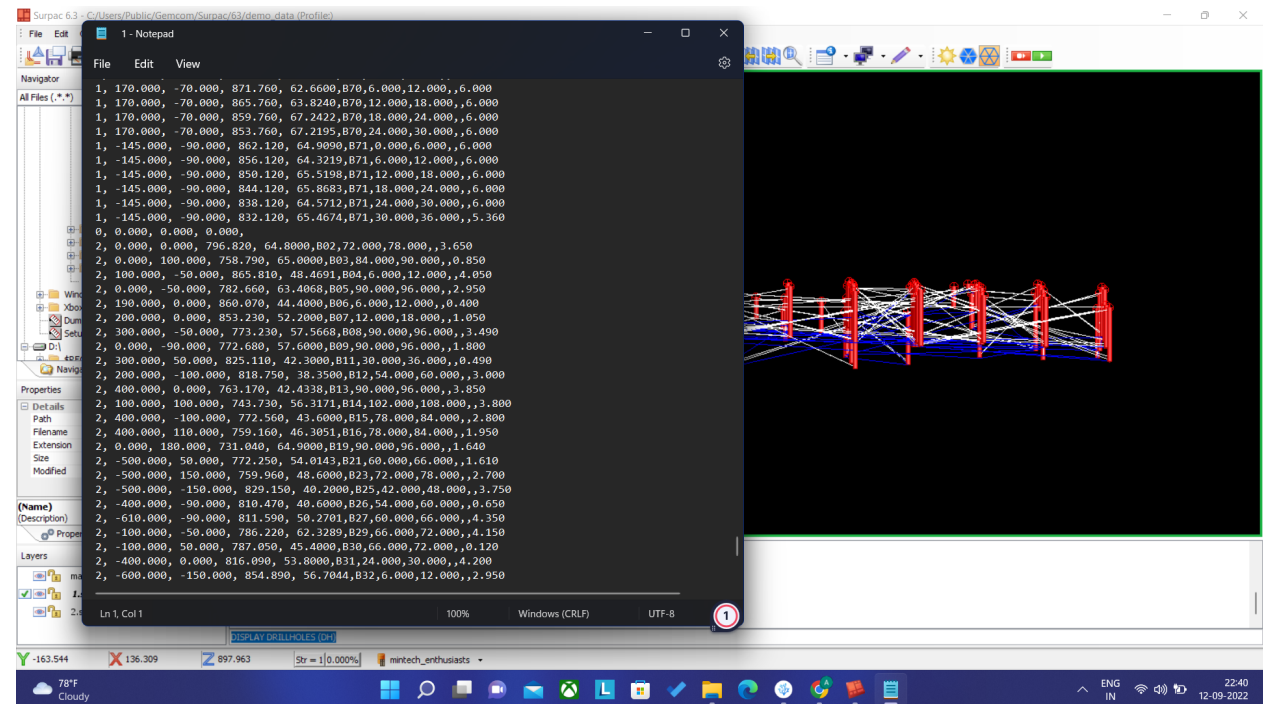
3.So, if the remaining length is greater than 4.5 we must include this length into grade and if it is lesser than 4.5 consider it in waste.

4.The considered grade generated in the string file indicated with the white line and the waste with the blue line.

5.In the following generated profile we can see many blue lines as it is waste.



The screenshot displays a Windows desktop environment. In the foreground, a Notepad++ window titled '1 - Notepad' is open, showing a text file with a header '12-Sep-22_Downhole composite of assays,' followed by a large table of numerical data. The data appears to be organized in columns, with some values in scientific notation (e.g., 1.000, 50.000, 847.660, 60.7560, 801.000, 6.000, 6.000). The Notepad++ window has a dark theme and a sidebar on the left showing file explorer and properties. To the right of the Notepad++ window, a 3D visualization of a wellbore is visible, showing a complex network of red and blue lines representing the wellbore structure. The Windows taskbar at the bottom shows the Start button, search bar, and several pinned applications including File Explorer, Edge, and various utility tools. The system tray on the right indicates the date and time as 12-09-2022, 22:40.

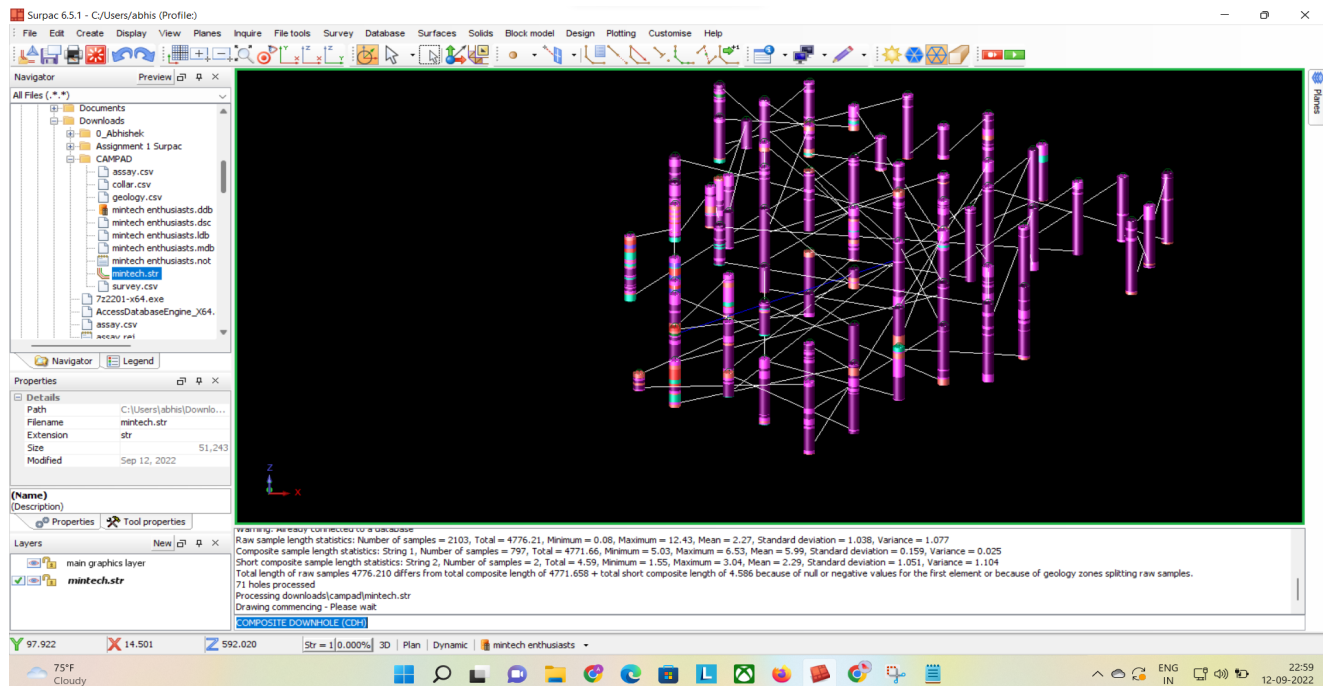


4. A string file appears containing string1 as White color & string 2 as Blue color.

Composite length = Best fit

Minimum % of the sample to be included = 75%

1. In the surpac software we can use the best fit composite length instead of fixed length.
2. With the use of best fit composite length we can minimize the waste. There are algorithms running behind which can reduce the waste significantly.
3. So, following is the data of best fit compositing length.



4. In the above diagram We can see only one blue line. This blue line is in between the boreholes B03 and B32 , so the waste consideration is minimized.
5. If we consider the generated notepad file
 - i.The first column gives the name of string
 - ii.The second to fourth column gives coordinates composited boreholes.
 - iii.Fifth column will give grade of the composited length.
 - iv.Sixth column gives the name of borehole.

The next columns will give the composited parts with the remaining length at the end of partitioning.

mintechstr - Notepad

FileEditView

Downloads/campad/mintech.str,12-Sep-22,Downhole composite of assays,
0, 0.000, 0.000, 0.000, 0.000, 0.000
1, 100.000, 50.000, 853.697, 60.7529,B01,0.000,5.925,,5.925
1, 100.000, 50.000, 847.772, 59.3916,B01,5.925,11.850,,5.925
1, 100.000, 50.000, 841.847, 63.9277,B01,11.850,17.775,,5.925
1, 100.000, 50.000, 835.923, 64.4502,B01,17.775,23.700,,5.925
1, 100.000, 50.000, 829.997, 65.7470,B01,23.700,29.625,,5.925
1, 100.000, 50.000, 824.072, 64.3273,B01,29.625,35.550,,5.925
1, 100.000, 50.000, 818.147, 64.0878,B01,35.550,41.475,,5.925
1, 100.000, 50.000, 812.222, 64.7855,B01,41.475,47.400,,5.925
1, 100.000, 50.000, 806.298, 64.1818,B01,47.400,53.325,,5.925
1, 100.000, 50.000, 800.372, 63.1627,B01,53.325,59.250,,5.925
1, 100.000, 50.000, 794.447, 63.2729,B01,59.250,65.175,,5.925
1, 100.000, 50.000, 788.523, 63.4542,B01,65.175,71.100,,5.925
1, 100.000, 50.000, 782.597, 63.0792,B01,71.100,77.025,,5.925
1, 100.000, 50.000, 776.673, 57.2354,B01,77.025,82.950,,5.925
1, 0.000, 0.000, 868.910, 55.7240,B02,0.000,5.819,,5.819
1, 0.000, 0.000, 863.091, 61.4119,B02,5.819,11.638,,5.819
1, 0.000, 0.000, 857.272, 63.7576,B02,11.638,17.458,,5.819
1, 0.000, 0.000, 851.453, 64.0372,B02,17.458,23.277,,5.819
1, 0.000, 0.000, 845.633, 57.7753,B02,23.277,29.096,,5.819
1, 0.000, 0.000, 839.814, 65.2139,B02,29.096,34.915,,5.819
1, 0.000, 0.000, 833.995, 60.5412,B02,34.915,40.735,,5.819
1, 0.000, 0.000, 828.176, 64.1719,B02,40.735,46.554,,5.819
1, 0.000, 0.000, 822.357, 64.6649,B02,46.554,52.373,,5.819
1, 0.000, 0.000, 816.537, 64.7076,B02,52.373,58.192,,5.819
1, 0.000, 0.000, 810.718, 64.8364,B02,58.192,64.012,,5.819
1, 0.000, 0.000, 804.899, 64.1597,B02,64.012,69.831,,5.819
1, 0.000, 0.000, 799.080, 64.7687,B02,69.831,75.650,,5.819
1, 0.000, 100.000, 842.815, 44.1714,B03,0.000,5.950,,5.950
1, 0.000, 100.000, 836.865, 59.3672,B03,5.950,11.900,,5.950
1, 0.000, 100.000, 830.915, 58.0000,B03,11.900,17.850,,5.950
1, 0.000, 100.000, 824.965, 58.5000,B03,17.850,23.800,,5.950
1, 0.000, 100.000, 819.015, 62.6790,B03,23.800,29.750,,5.950
1, 0.000, 100.000, 813.065, 64.2328,B03,29.750,35.700,,5.950
1, 0.000, 100.000, 807.115, 64.8471,B03,35.700,41.650,,5.950
1, 0.000, 100.000, 801.165, 63.7176,B03,41.650,47.600,,5.950
1, 0.000, 100.000, 795.215, 63.5034,B03,47.600,53.550,,5.950
1, 0.000, 100.000, 789.265, 63.8202,B03,53.550,59.500,,5.950
1 0.000 100.000 793.316 64.8704 B03 59.500 65.450 65.450
Ln 1, Col 1

100% Windows (CRLF) UTF-8

75°F Cloudy

ENG IN 23:00 12-09-2022

mintechstr - Notepad

FileEditView

1, 0.0000, -150.000, 797.980, 61.3139,B07,55.800,62.000,,6.200
1, 0.000, -150.000, 791.780, 57.0047,B07,62.000,68.200,,6.200
1, 0.000, -150.000, 785.580, 33.3123,B07,68.200,74.400,,6.200
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1, 0.000, -100.000, 852.952, 53.8583,B08,6.039,12.078,,6.039
1, 0.000, -100.000, 846.913, 58.2339,B08,12.078,18.117,,6.039
1, 0.000, -100.000, 840.874, 57.5865,B08,18.117,24.156,,6.039
1, 0.000, -100.000, 834.834, 59.3085,B08,24.156,30.195,,6.039
1, 0.000, -100.000, 828.795, 60.8888,B08,30.195,36.234,,6.039
1, 0.000, -100.000, 822.756, 61.6819,B08,36.234,42.273,,6.039
1, 0.000, -100.000, 816.717, 58.4917,B08,42.273,48.312,,6.039
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1, -40.000, -110.000, 849.854, 58.5261,B09,11.444,17.167,,5.722
1, -40.000, -110.000, 844.132, 53.5713,B09,17.167,22.889,,5.722
1, -40.000, -110.000, 838.410, 49.6159,B09,22.889,28.611,,5.722
1, -40.000, -110.000, 832.688, 48.3570,B09,28.611,34.333,,5.722
1, -40.000, -110.000, 826.966, 61.4355,B09,34.333,40.056,,5.722
1, -40.000, -110.000, 821.243, 63.4117,B09,40.056,45.778,,5.722
1, -40.000, -110.000, 815.521, 56.1949,B09,45.778,51.500,,5.722
1, 170.000, -70.000, 877.890, 62.4634,B70,0.000,5.740,,5.740
1, 170.000, -70.000, 872.150, 62.6899,B70,5.740,11.480,,5.740
1, 170.000, -70.000, 866.410, 63.4129,B70,11.480,17.220,,5.740
1, 170.000, -70.000, 860.670, 67.0674,B70,17.220,22.960,,5.740
1, 170.000, -70.000, 854.930, 67.5653,B70,22.960,28.700,,5.740
1, 170.000, -70.000, 849.190, 63.9702,B70,28.700,34.440,,5.740
1, -145.000, -90.000, 862.173, 64.9309,B71,0.000,5.893,,5.893
1, -145.000, -90.000, 856.280, 64.2622,B71,5.893,11.787,,5.893
1, -145.000, -90.000, 850.387, 65.5818,B71,11.787,17.680,,5.893
1, -145.000, -90.000, 844.493, 65.8047,B71,17.680,23.573,,5.893
1, -145.000, -90.000, 838.600, 64.5654,B71,23.573,29.467,,5.893
1, -145.000, -90.000, 832.707, 65.4737,B71,29.467,35.360,,5.893
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2, 0.000, 100.000, 759.515, 65.0000,B03,83.300,89.250,,1.550
2, -600.000, -150.000, 854.761, 57.3932,B32,6.086,12.171,,3.036
0, 0.000, 0.000, 0.000,
0, 0.000, 0.000, 0.000, END
Ln 1, Col 1

100% Windows (CRLF) UTF-8

75°F Cloudy

ENG IN 23:01 12-09-2022