



INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

INTRODUÇÃO AO GEOPROCESSAMENTO

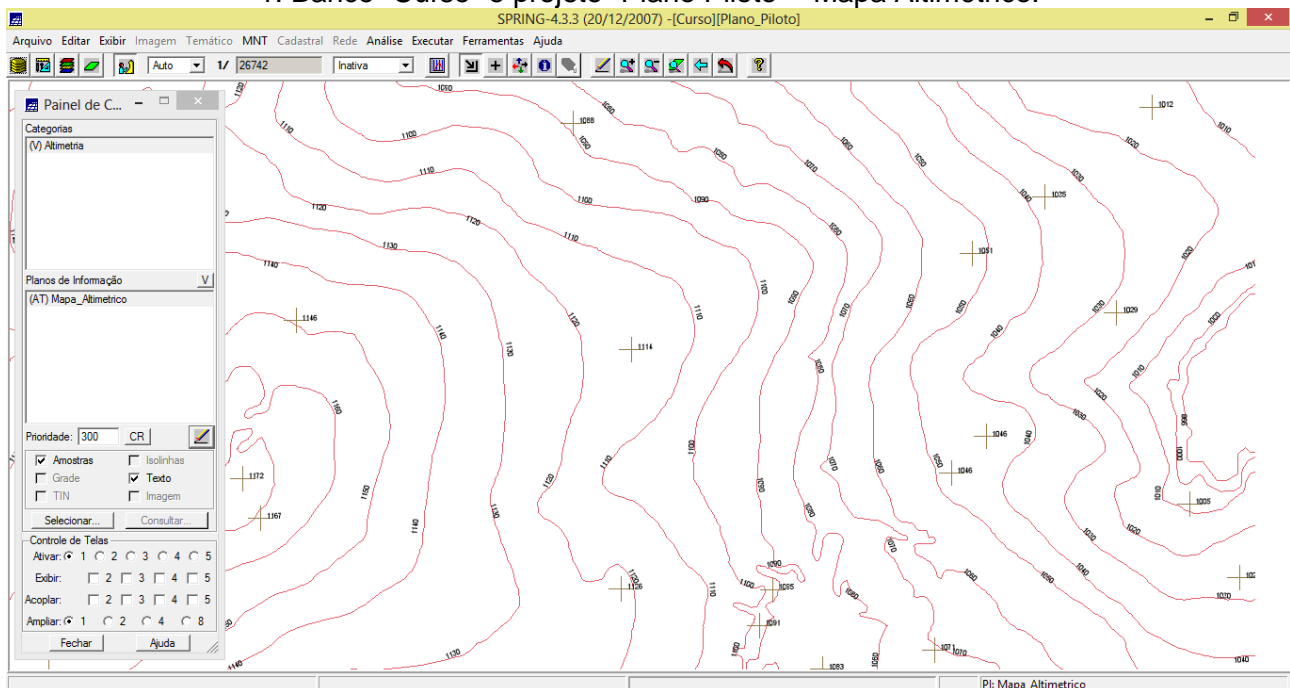
Laboratório 3: Modelo Numérico de Terreno (MNT)

Jaidson Nandi Becker

Exercício 1: Definindo o Plano Piloto

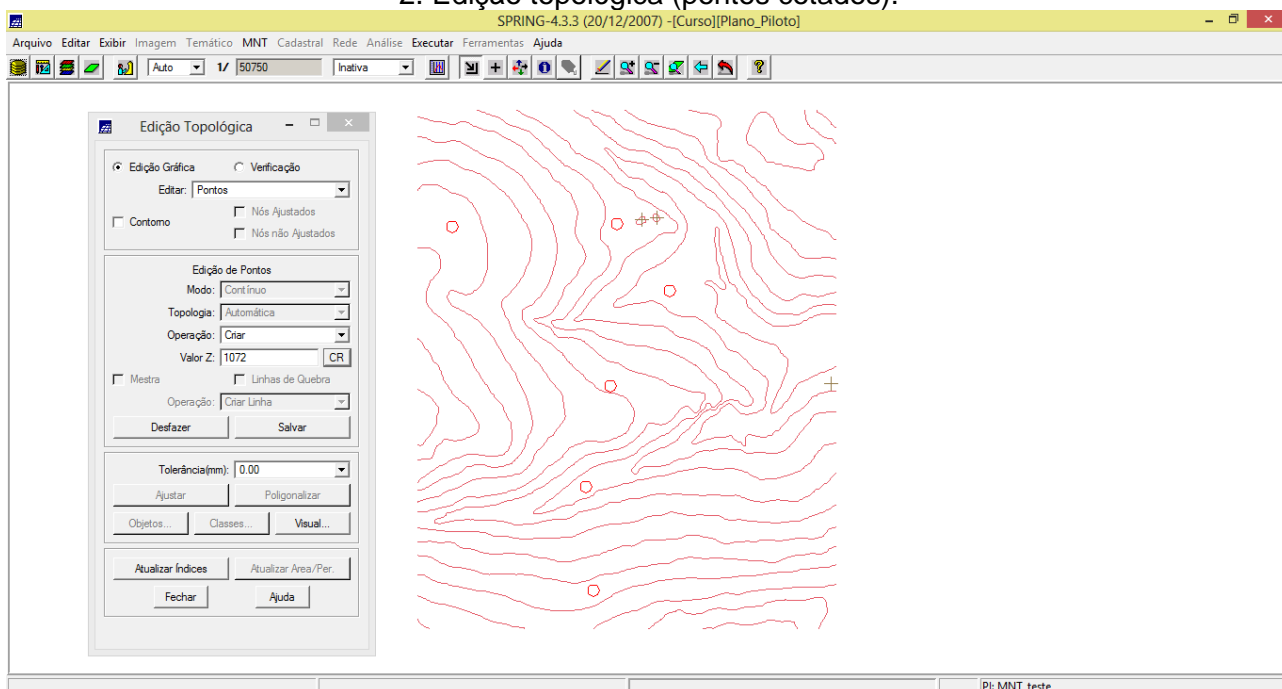
Exercício 2: Importando amostras MNT

1. Banco "Curso" e projeto "Plano Piloto" - Mapa Altimétrico.



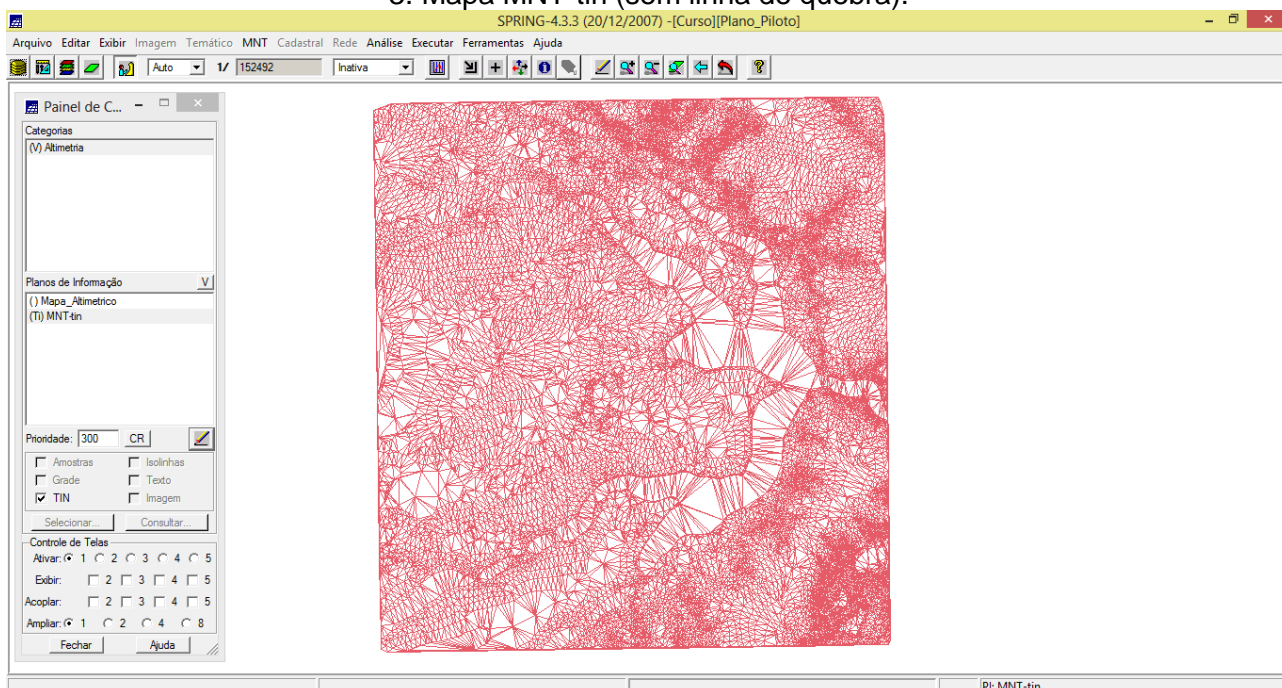
Exercício 3: Gerar toponímia para as amostras

2. Edição topológica (pontos cotados).

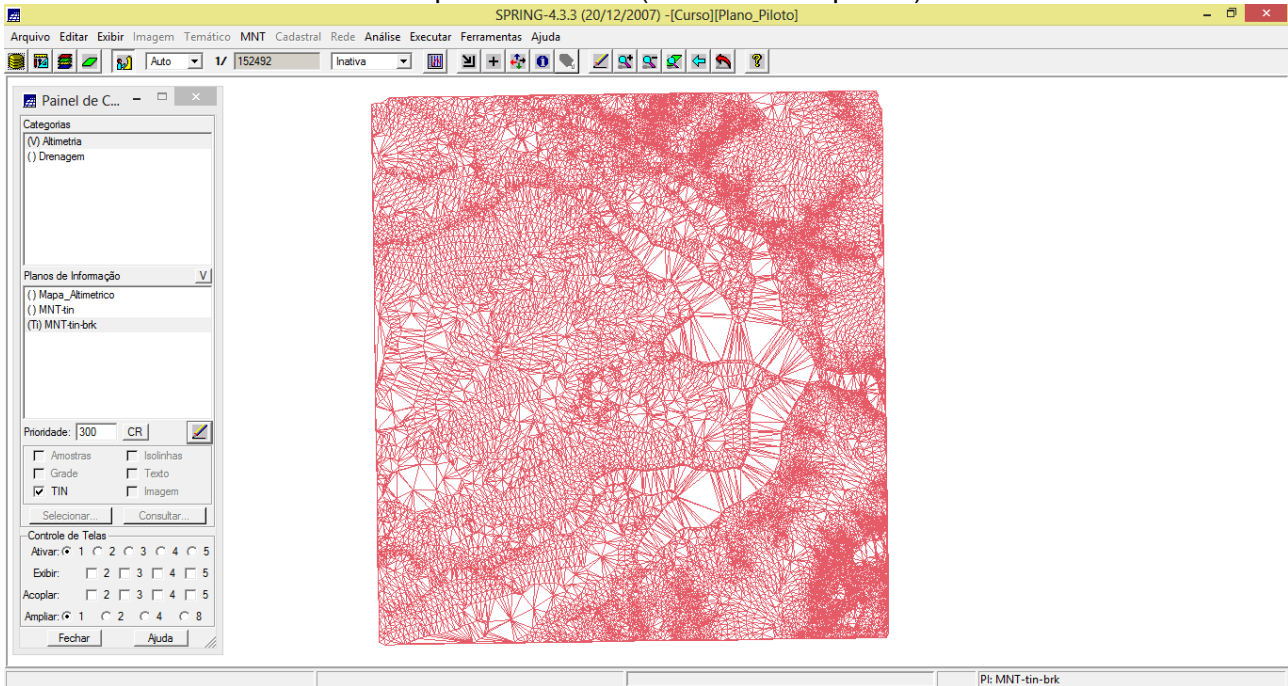


Exercício 4: Gerar grade triangular com e sem linha de quebra

3. Mapa MNT-tin (sem linha de quebra).

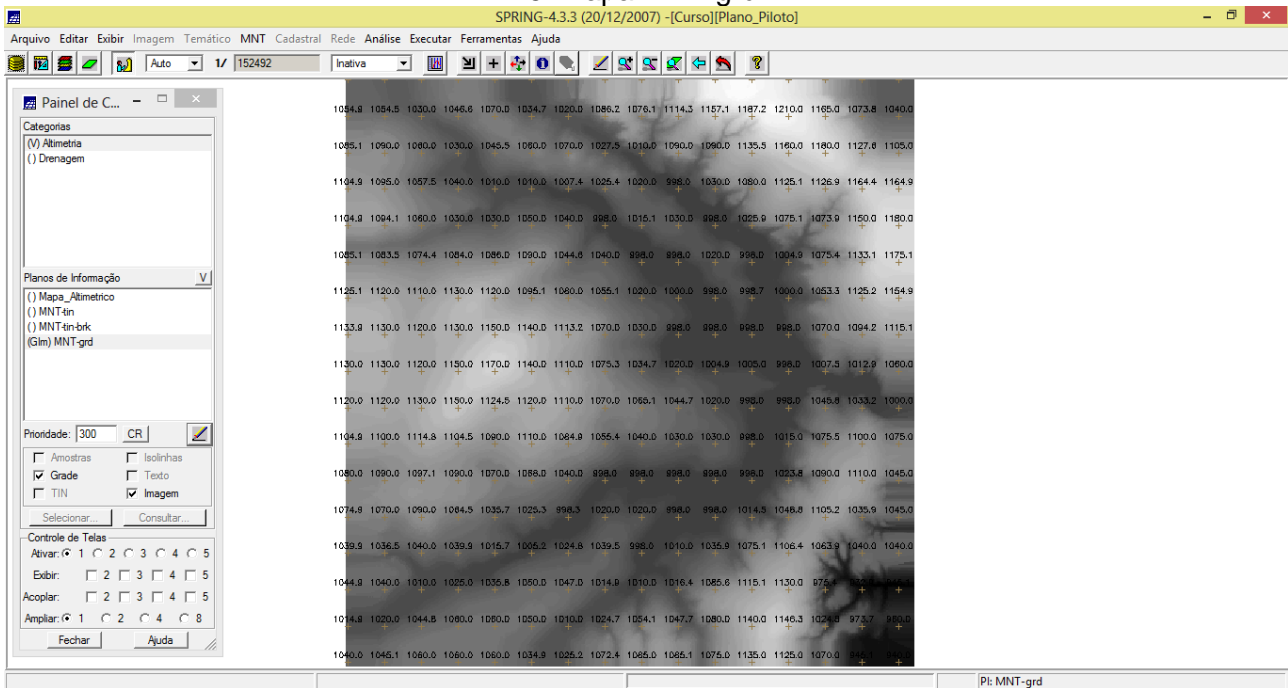


4. Mapa MNT-tin-brk (com linha de quebra).



Exercício 5: Gerar grades retangulares de amostras e de outras grades

5. Mapa MNT-grd.



6. Mapa MNT-grd.

SPRING-4.3.3 (20/12/2007) -[Curso][Plano_Piloto]

Arquivo Editar Exibir Imagem Temático MNT Cadastral Rede Análise Executar Ferramentas Ajuda

Auto 1/ 152492 Inativa

Painel de C... -

Categorias

- (V) Altimetria
- () Drenagem

Planos de Informação V

- () Mapa_Altimetrico
- () MNT-tin
- () MNT-tin-brk
- () MNT-grd
- (Gim) MNT-grd-10

Prioridade: 300 CR

Amostras Isolinhas

Grade Texto

TIN Imagem

Selecionar Consultar

Controle de Telas

Ativar: 1 2 3 4 5

Exibir: 2 3 4 5

Acoplar: 2 3 4 5

Ampliar: 1 2 4 8

Fechar Ajuda

1054.6 1033.1 1045.9 1070.0 1035.0 1020.0 1045.1 1098.3 1094.3 1145.2 1163.9 1210.0 1190.0 1100.0 1041.9

1080.0 1060.0 1030.0 1037.7 1060.0 1060.0 1037.0 1003.8 1072.0 1044.2 1128.1 1152.1 1172.9 1158.9 1105.1

1099.2 1063.9 1040.0 1012.4 1010.0 1001.5 1009.3 1030.0 998.3 1010.5 1054.3 1115.2 1126.7 1120.2 1156.0

1082.3 1059.5 1030.4 1034.9 1050.0 1041.8 998.6 1005.7 1030.0 1005.8 998.9 1033.8 1089.5 1121.5 1180.0

1085.0 1078.1 1085.5 1090.6 1094.5 1056.9 1040.0 1007.6 998.0 1010.0 1012.4 998.0 1046.7 1106.1 1171.2

1130.0 1110.0 1130.0 1128.0 1100.0 1084.9 1064.9 1029.3 1010.0 998.0 1010.0 998.0 1030.5 1104.8 1146.4

1133.2 1120.0 1130.0 1150.0 1144.0 1117.1 1082.9 1037.4 998.0 998.0 998.0 998.0 1027.7 1076.3 1104.7

1130.0 1120.0 1144.9 1161.0 1140.0 1120.0 1084.3 1080.0 1020.2 1010.0 1010.0 998.0 998.0 998.0 1046.9

1118.3 1124.8 1150.0 1120.0 1120.0 1114.2 1080.0 1067.3 1050.0 1030.0 1010.0 998.0 1031.8 1036.9 1000.0

1100.0 1110.0 1100.0 1083.8 1100.0 1081.9 1082.0 1027.7 1026.8 1029.3 1011.0 998.0 1070.2 1098.1 1085.6

1080.0 1097.4 1090.0 1078.0 1063.7 1040.0 998.0 998.0 998.0 998.0 998.0 1012.4 1068.4 1113.3 1044.8

1070.0 1080.0 1088.0 1039.2 1021.2 998.0 1015.0 1022.2 998.0 998.0 1037.1 1036.5 1087.7 1085.0 1033.1

1040.0 1024.6 1024.6 1004.4 1016.1 1030.0 1040.3 1008.3 1010.0 1032.4 1034.3 1104.1 1095.3 871.0 1032.9

1032.8 1010.0 1030.0 1044.9 1050.0 1050.3 1015.0 1016.1 1026.2 1081.1 1114.2 1142.0 1080.4 1016.0 1016.0

1025.6 1050.0 1080.0 1060.0 1050.0 1020.0 1048.8 1078.0 1083.5 1036.5 1116.8 1158.4 1067.9 985.0 854.4

1045.1 1060.0 1060.0 1060.0 1044.9 1050.0 1065.0 1090.0 1095.0 1043.0 1115.0 1150.0 1053.0 971.0 971.0

Pl: MNT-grd-10

7. Mapa MNT-grd-tin.

SPRING-4.3.3 (20/12/2007) -[Curso][Plano_Piloto]

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1054.4 1030.6 1047.7 1070.0 1033.5 1018.2 1051.6 1091.8 1099.8 1149.8 1176.7 1211.6 1185.7 1097.7

1087.7 1062.1 1027.9 1040.3 1060.6 1061.7 1036.4 1008.4 1076.6 1061.1 1129.9 1152.8 1174.2 1153.4

1096.2 1063.1 1041.1 1013.3 1011.5 1004.6 1017.4 1029.3 998.0 1015.1 1073.8 1120.5 1128.4 1129.0

1090.1 1060.1 1026.9 1034.6 1052.3 1041.6 998.0 1007.5 1030.0 1000.0 998.0 1034.8 1073.4 1128.3

1085.8 1078.2 1088.7 1081.2 1084.1 1054.0 1040.7 1084.7 998.0 1012.5 1007.3 998.0 1069.2 1115.8

1126.8 1110.4 1133.7 1124.8 1098.9 1083.9 1062.7 1028.1 1010.4 998.0 1010.0 998.0 1042.5 1109.4

1133.7 1120.0 1130.0 1131.1 1144.1 1118.0 1079.5 1034.2 998.0 998.0 998.0 998.0 1037.0 1078.3

1129.5 1120.0 1145.5 1164.0 1141.2 1119.4 1080.0 1049.7 1020.5 1012.1 1009.7 998.0 998.0 998.0

1117.5 1124.6 1190.0 1120.4 1119.7 1112.9 1080.3 1065.8 1047.9 1030.2 1003.7 998.0 1038.7 1044.3 1027.5

1098.5 1109.8 1098.7 1084.2 1101.1 1081.5 1060.2 1029.5 1026.9 1030.0 1010.1 998.1 1078.3 1097.7 1078.7

1089.4 1097.4 1091.3 1074.8 1083.4 1038.4 998.0 998.0 998.0 998.0 998.0 1021.2 1078.3 1110.8 1034.2

1070.0 1079.3 1056.7 1037.0 1022.5 998.0 1017.5 1023.6 998.0 998.0 1036.9 1022.9 1100.0 1075.7 1021.3

1036.9 1024.8 1024.4 1001.7 1016.2 1029.6 1041.3 989.5 1010.0 1035.9 1037.9 1106.5 1090.5 985.8 1033.2

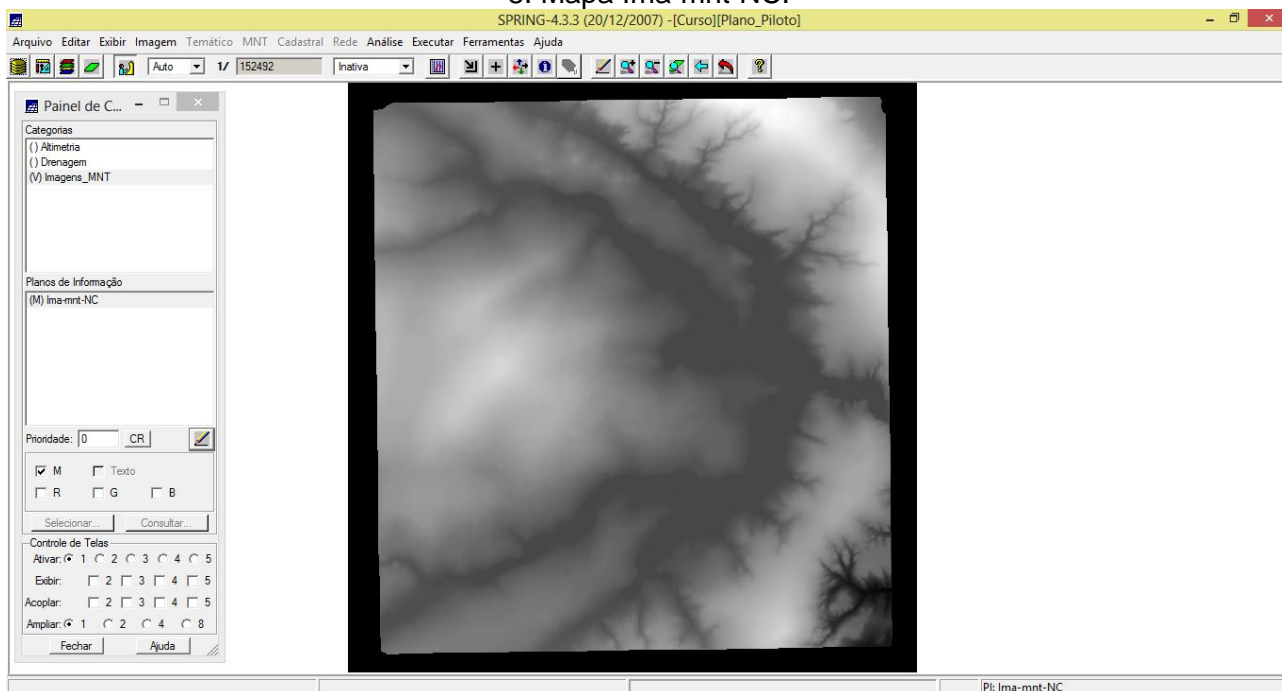
1031.0 1007.3 1031.1 1045.8 1053.9 1050.7 1012.1 1015.0 1023.2 1088.6 1116.5 1141.8 1046.5 976.0 976.0

1026.9 1052.4 1080.0 1059.4 1050.7 1015.9 1048.0 1080.7 1077.1 1047.4 1122.6 1151.6 1059.5 979.6 948.0

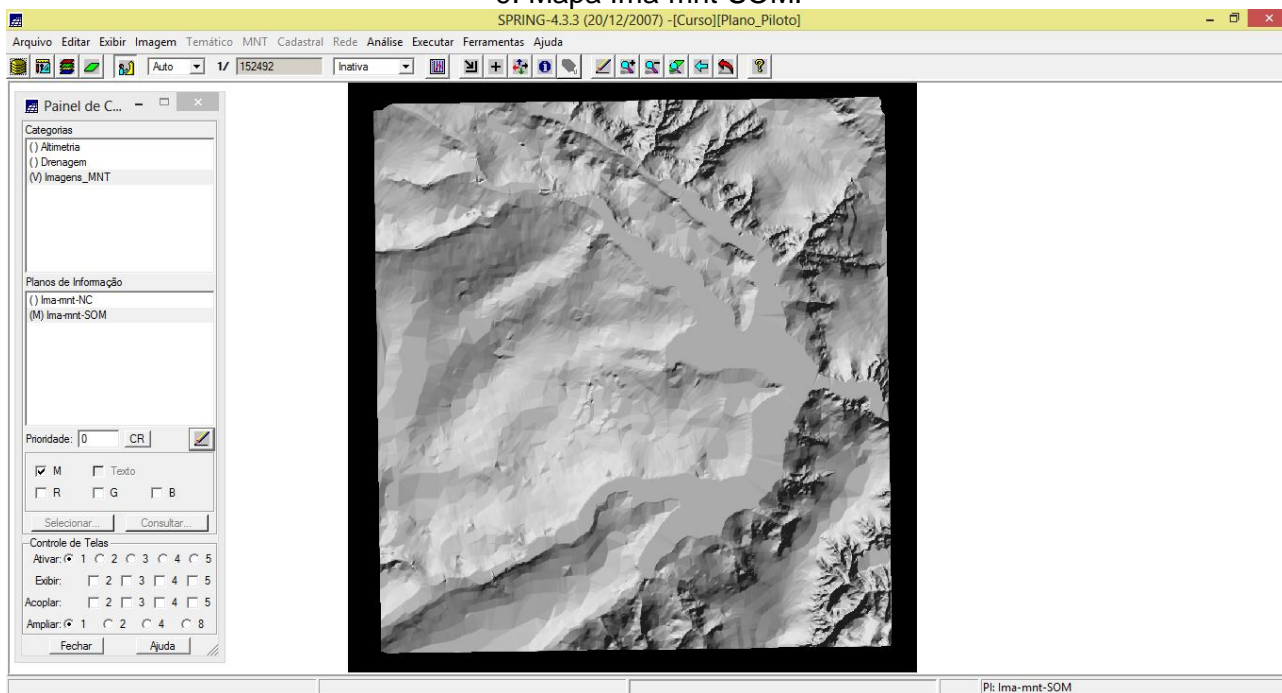
Pl: MNT-grd-tin

Exercício 6: Geração de Imagem para Modelo Numérico

8. Mapa Ima-mnt-NC.

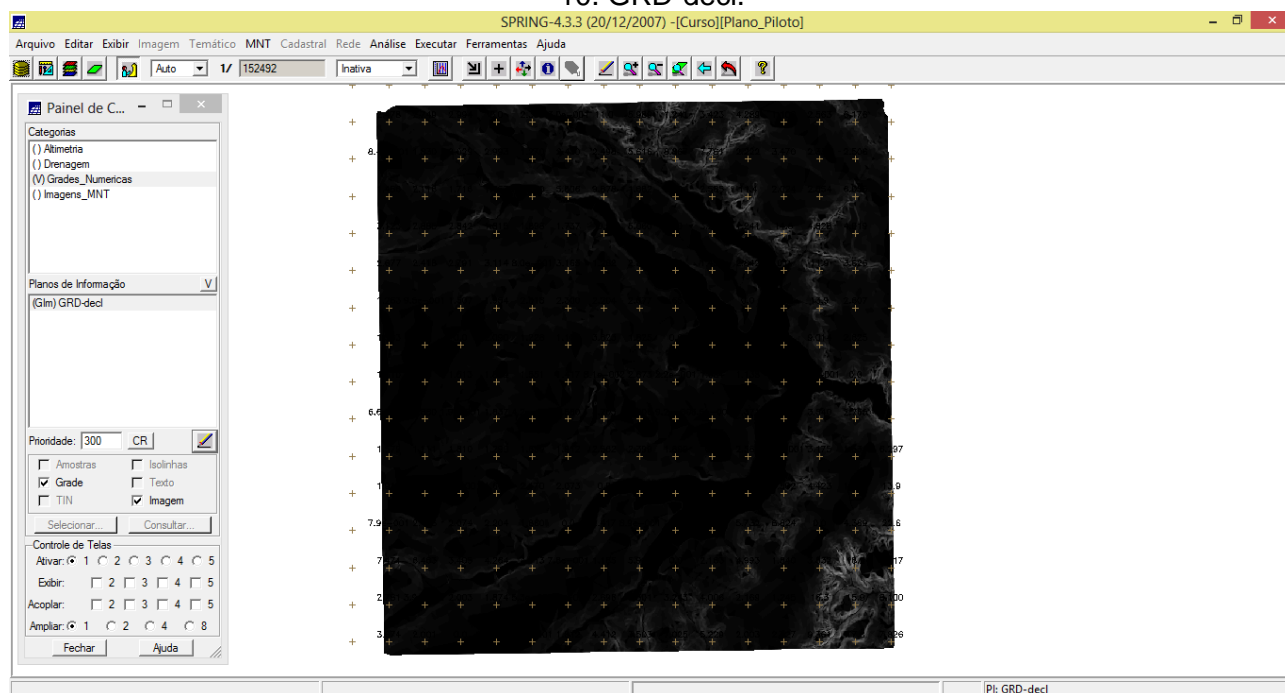


9. Mapa Ima-mnt-SOM.



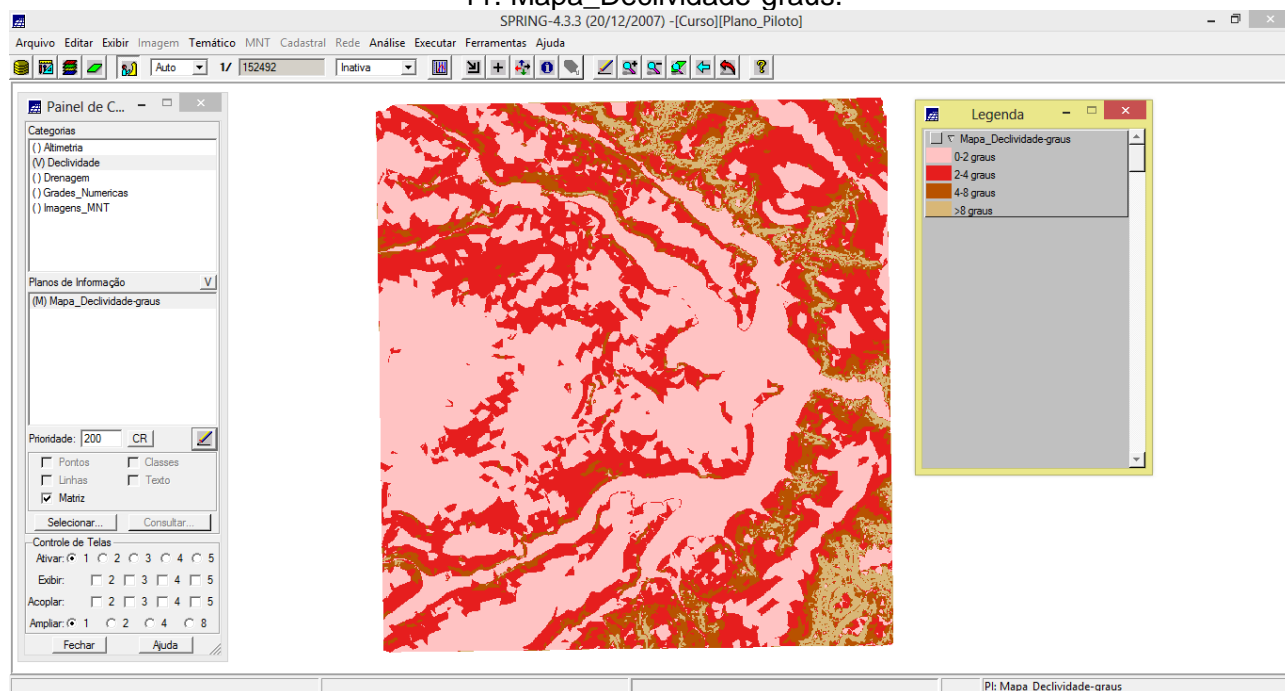
Exercício 7: Geração de Grade Declividade

10. GRD-decl.



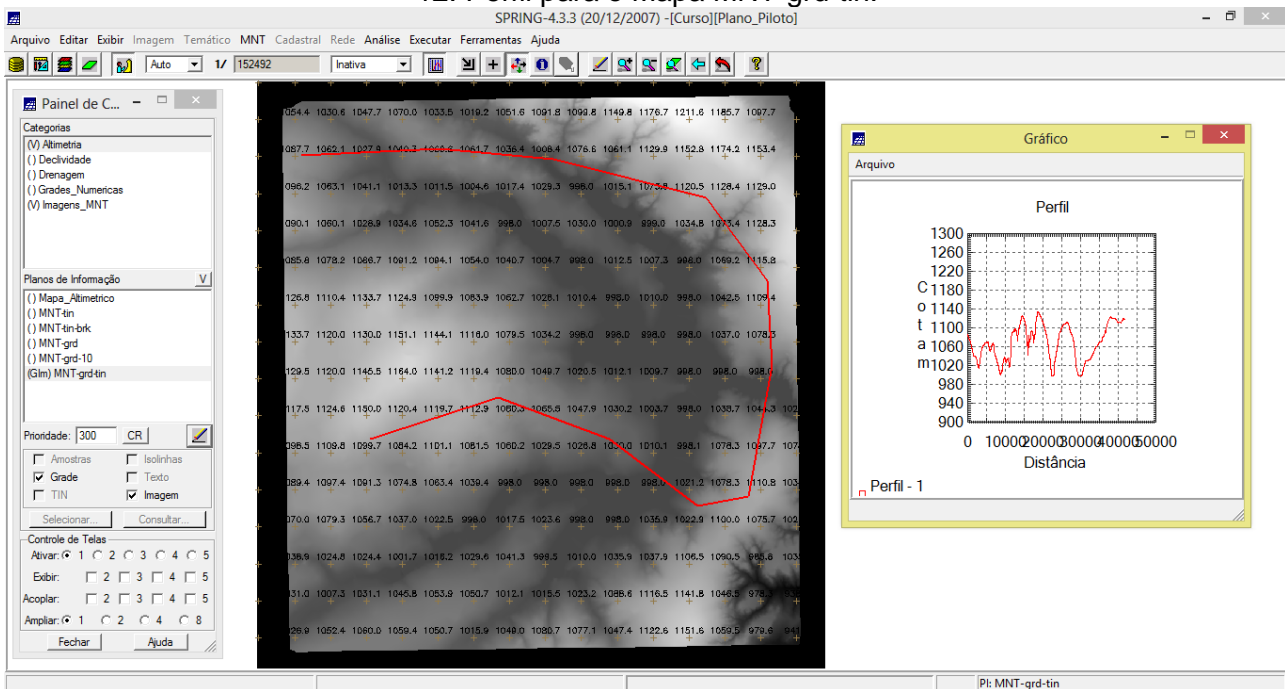
Exercício 8: Fatiamento de Grade Numérica - Mapa de Declividade

11. Mapa_Declividade-graus.



Exercício 9: Geração de Perfil a partir de grades

12. Perfil para o Mapa MNT-grd-tin.



Exercício 10: Visualização de Imagem em 3D

13. Imagem 3D para o mapa MNT-grd-tin (textura Ima_mnt_SOM).

