



MINISTÉRIO DA CIÊNCIA E TECNOLOGIA
INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

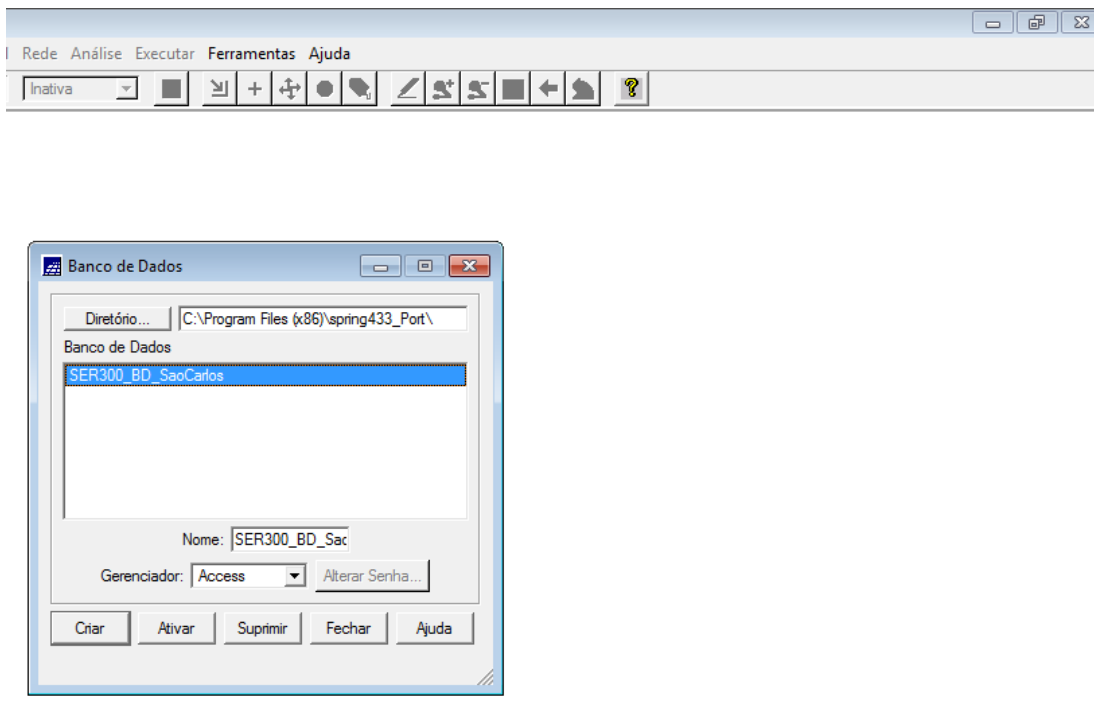
Disciplina: SER-300 - Introdução ao Geoprocessamento

**LABORATÓRIO 5 – LABORATÓRIO
MÓDULO: GEOESTATÍSTICA LINEAR**

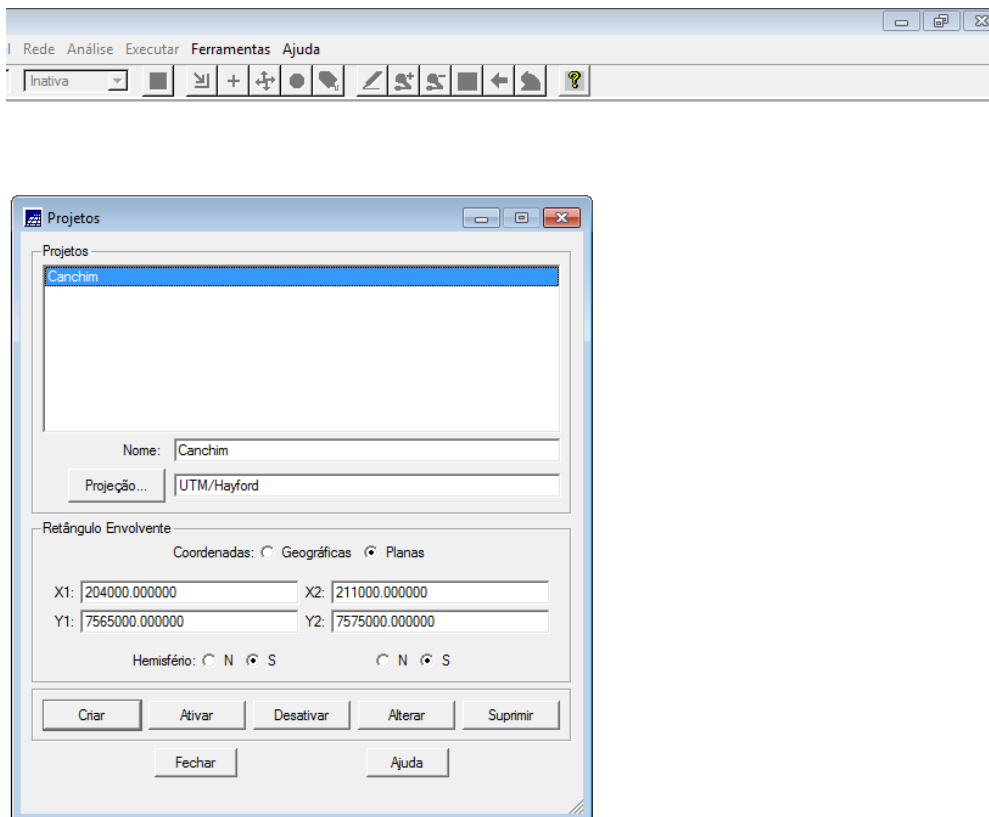
Nelson de Almeida Gouveia

INPE
São José dos Campos
2017

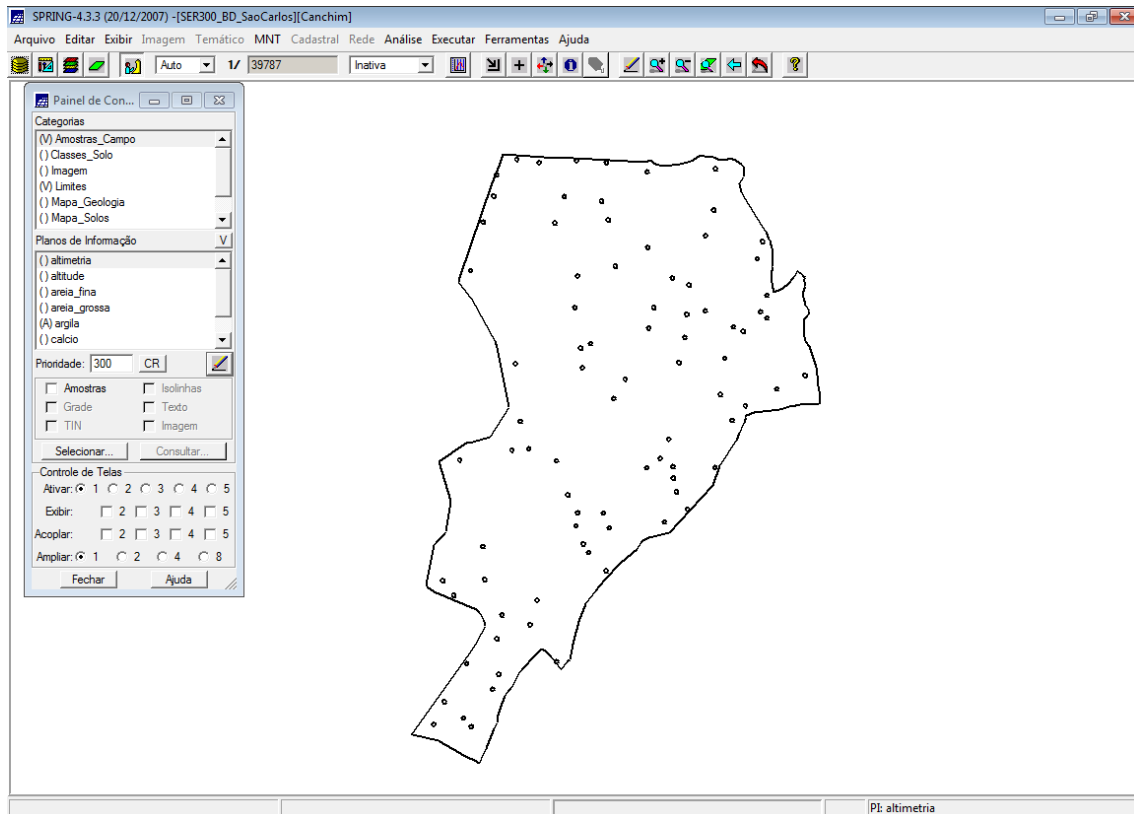
CARREGAR OS DADOS NO SISTEMA SPRING



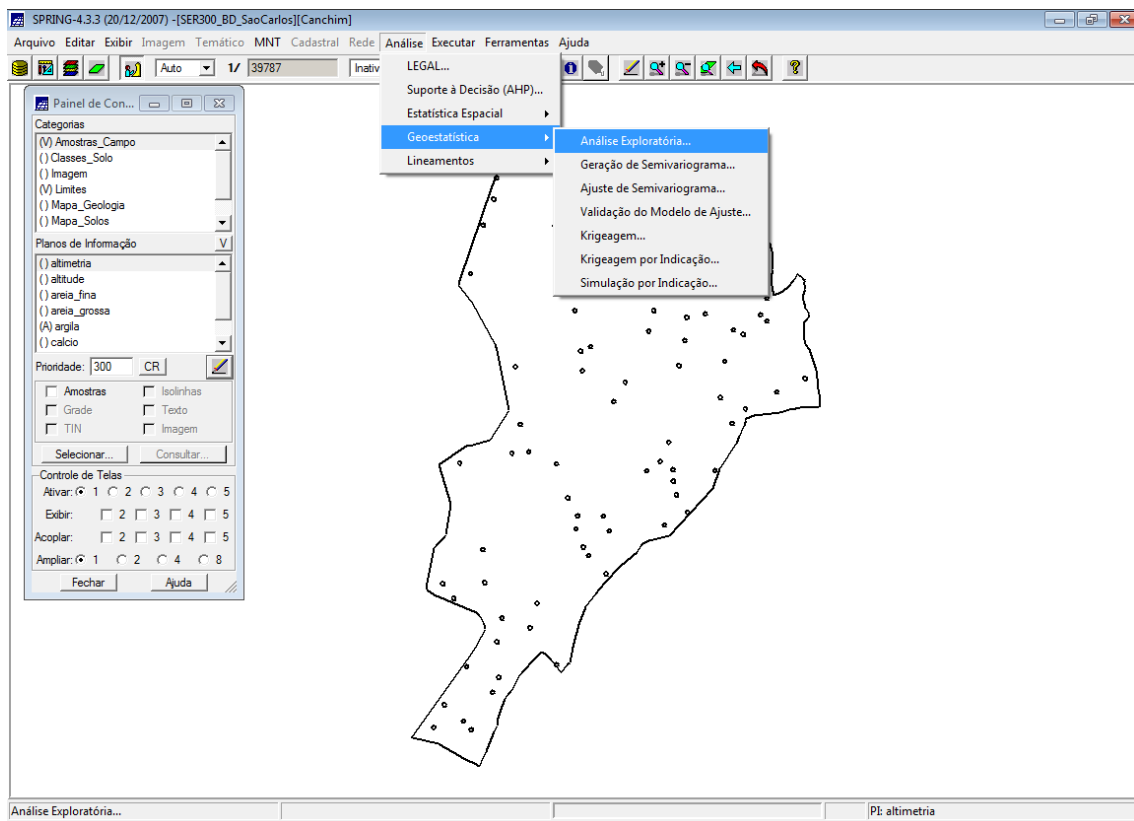
ATIVAR PROJETO CANCHIM

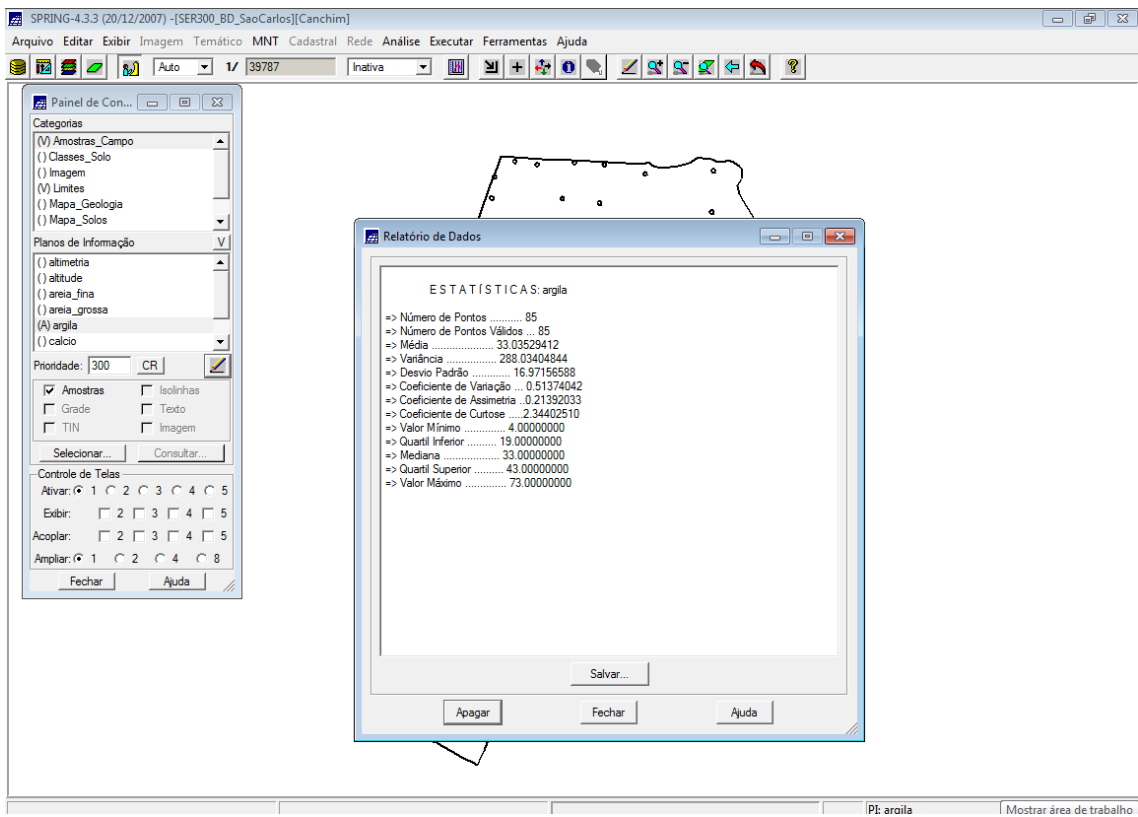
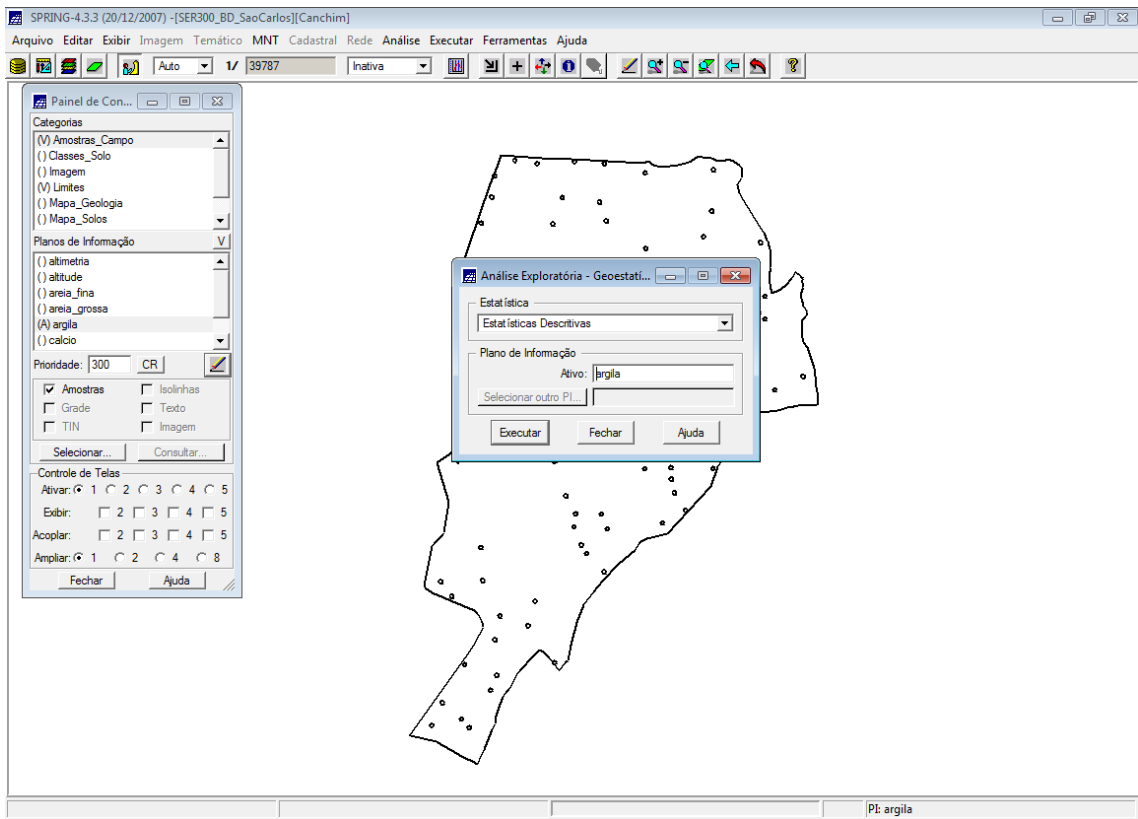


ATIVAR PAINEL DE CONTROLE E SELECIONAR PLANOS DE INFORMAÇÃO (PI'S)

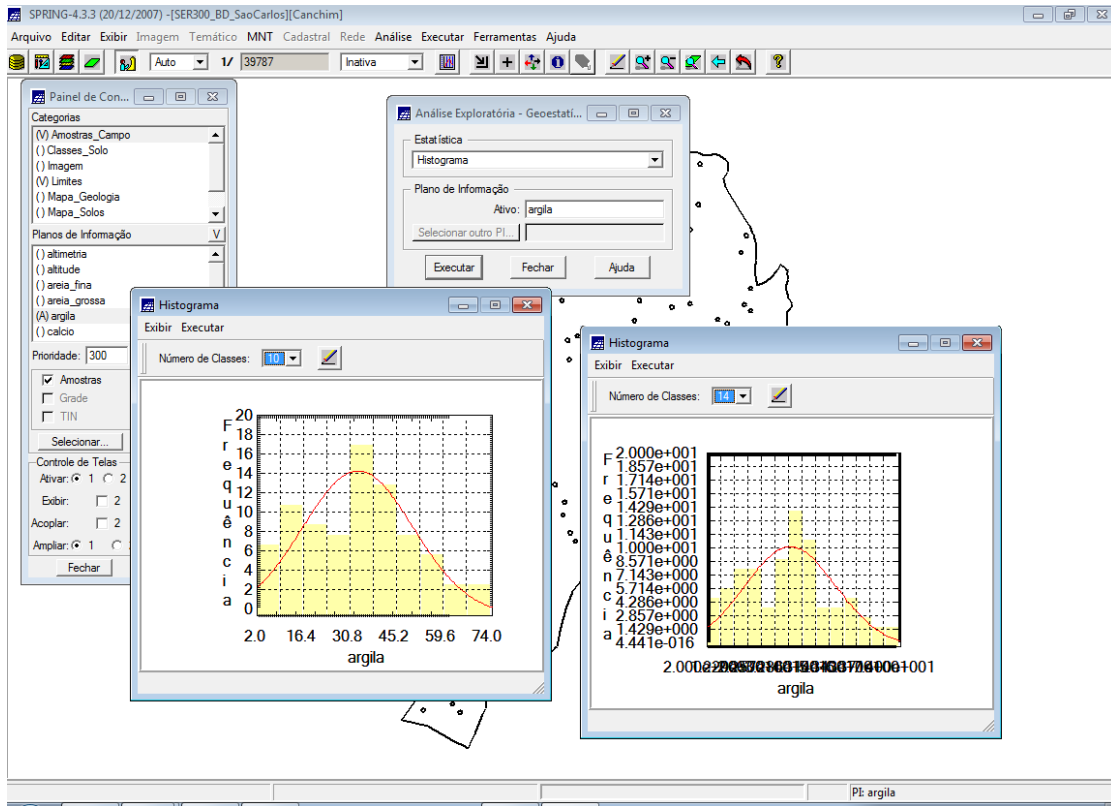


INICIALIZANDO A ANÁLISE EXPLORATÓRIA NO SISTEMA SPRING

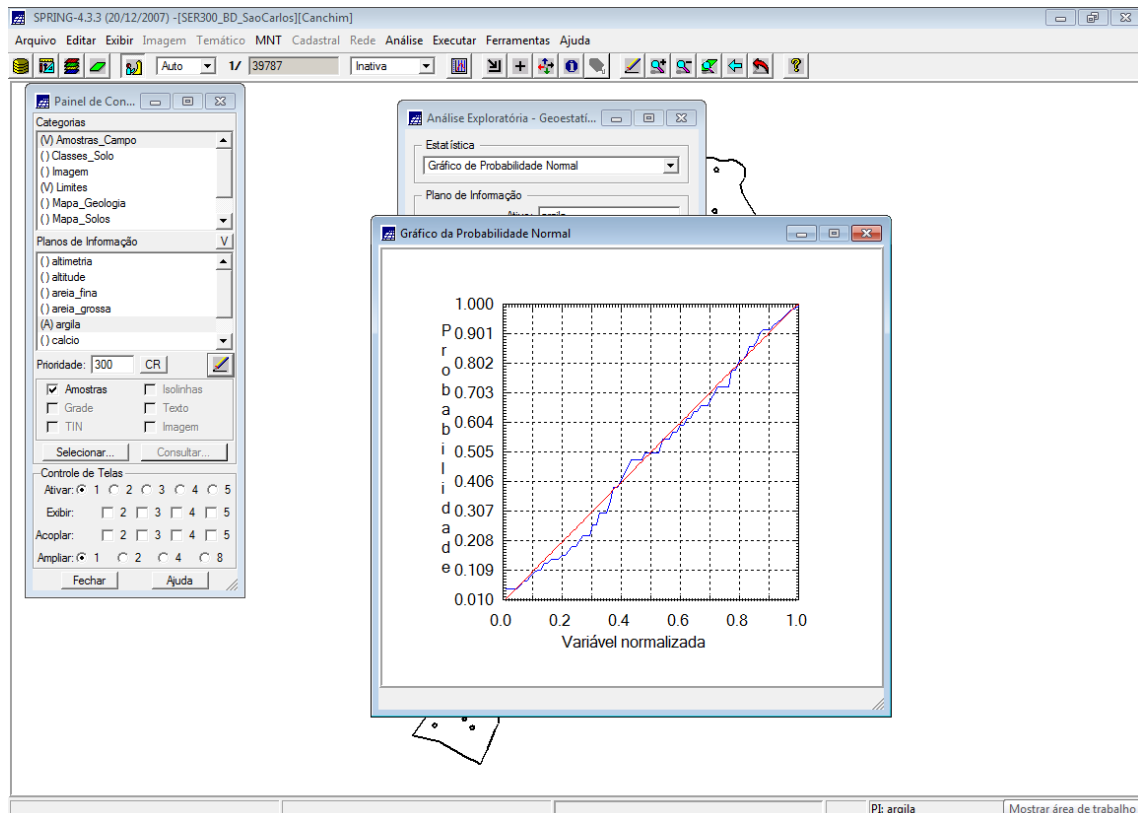




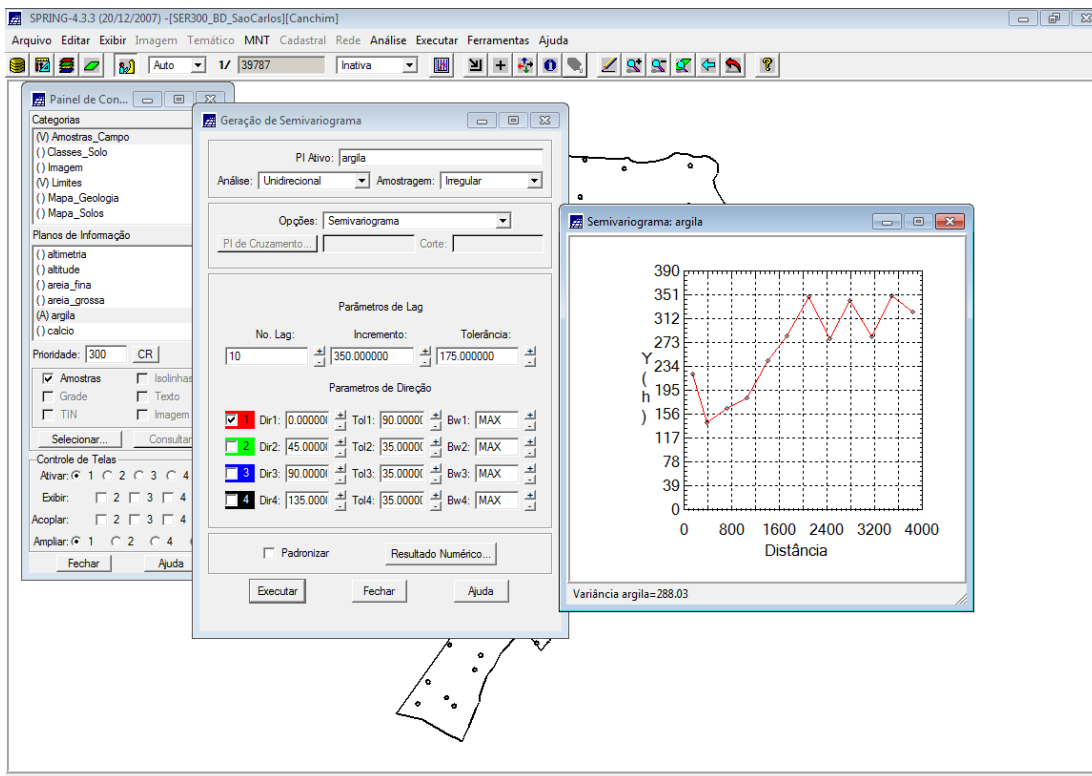
EXECUTANDO HISTOGRAMA



EXECUTANDO O GRÁFICO DA PROBABILIDADE NORMAL

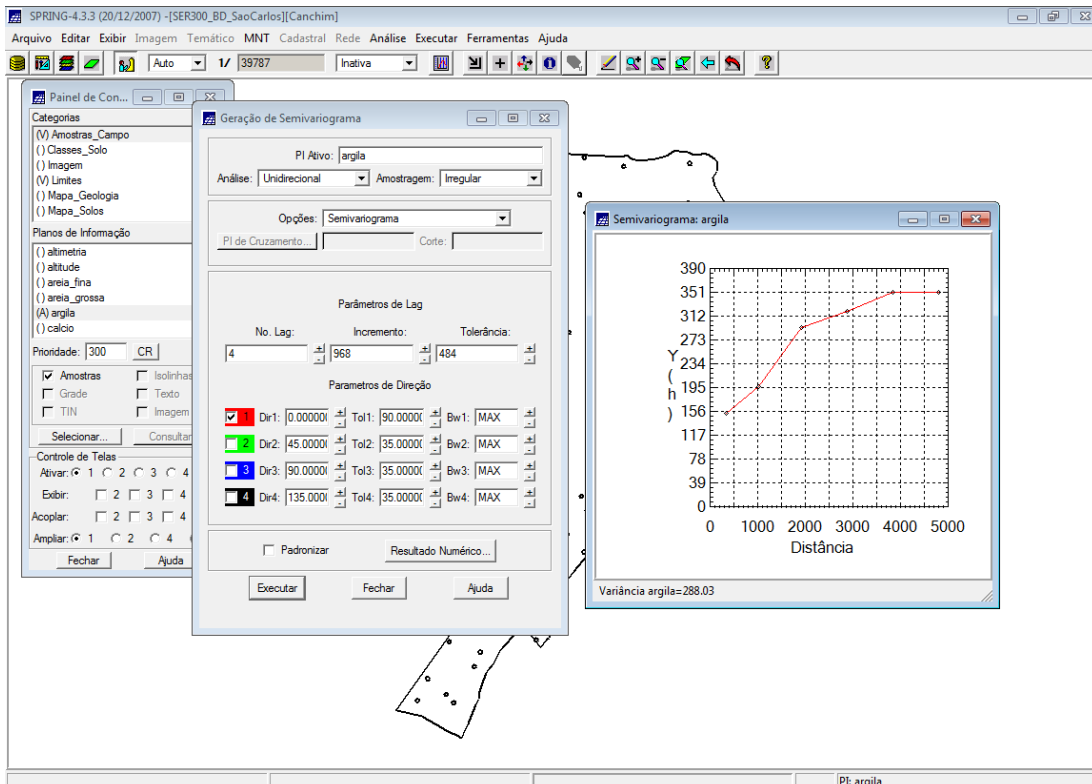


ANÁLISE DA VARIABILIDADE ESPACIAL POR SEMIVARIOGRAMA

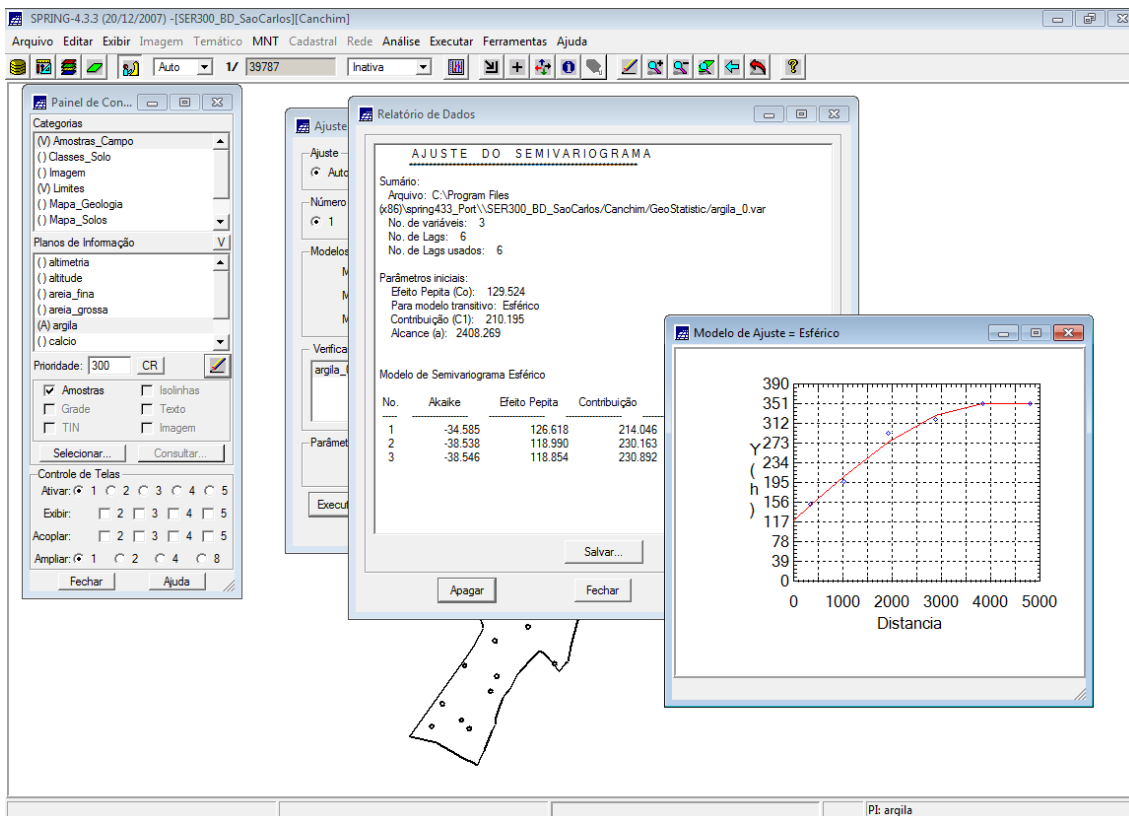


Modificando os parâmetros de Lag foram modificados para:

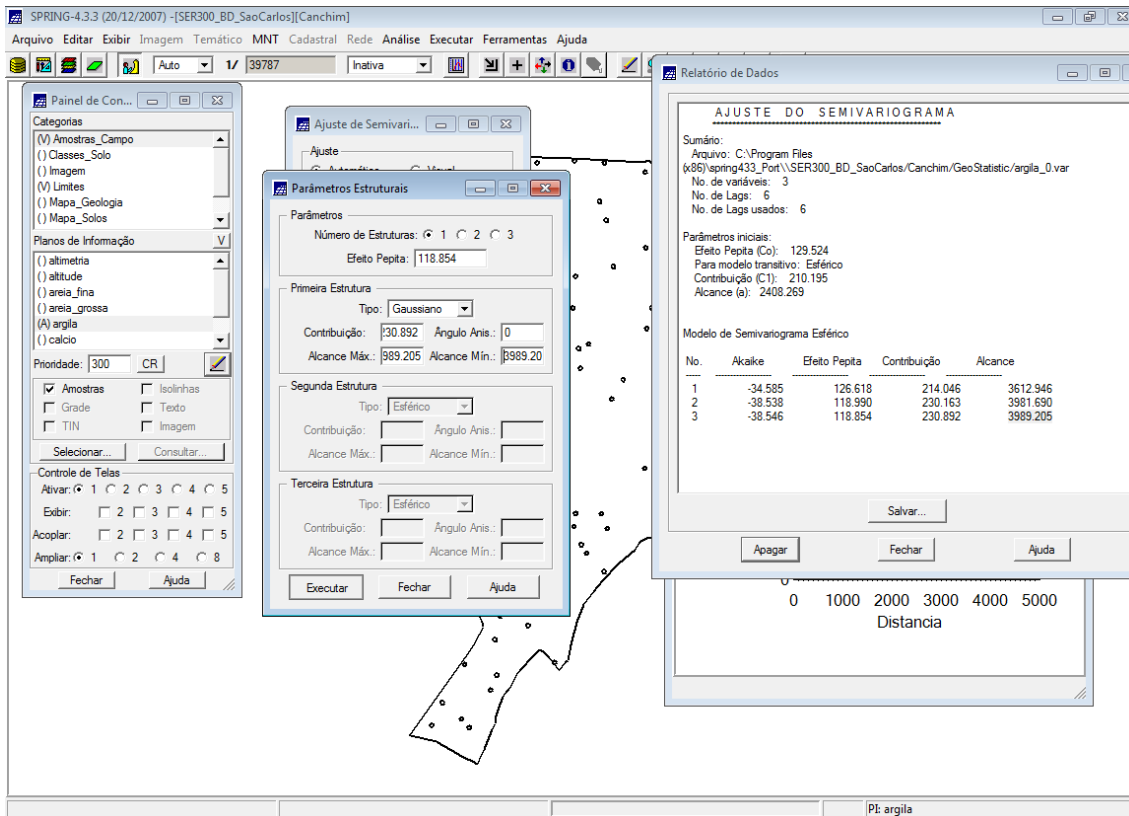
- No. Lag = 4
- Incremento = 968
- Tolerância = 484



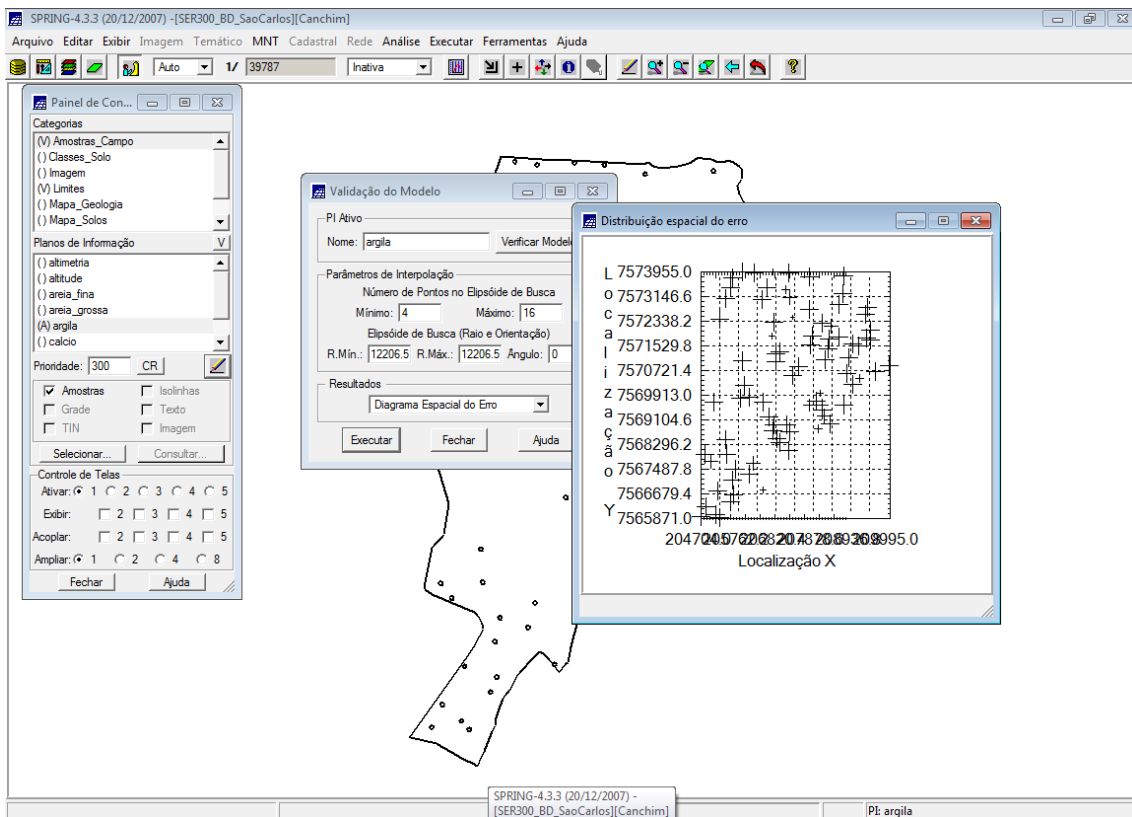
MODELAGEM DO SEMIVARIOGRAMA EXPERIMENTAL



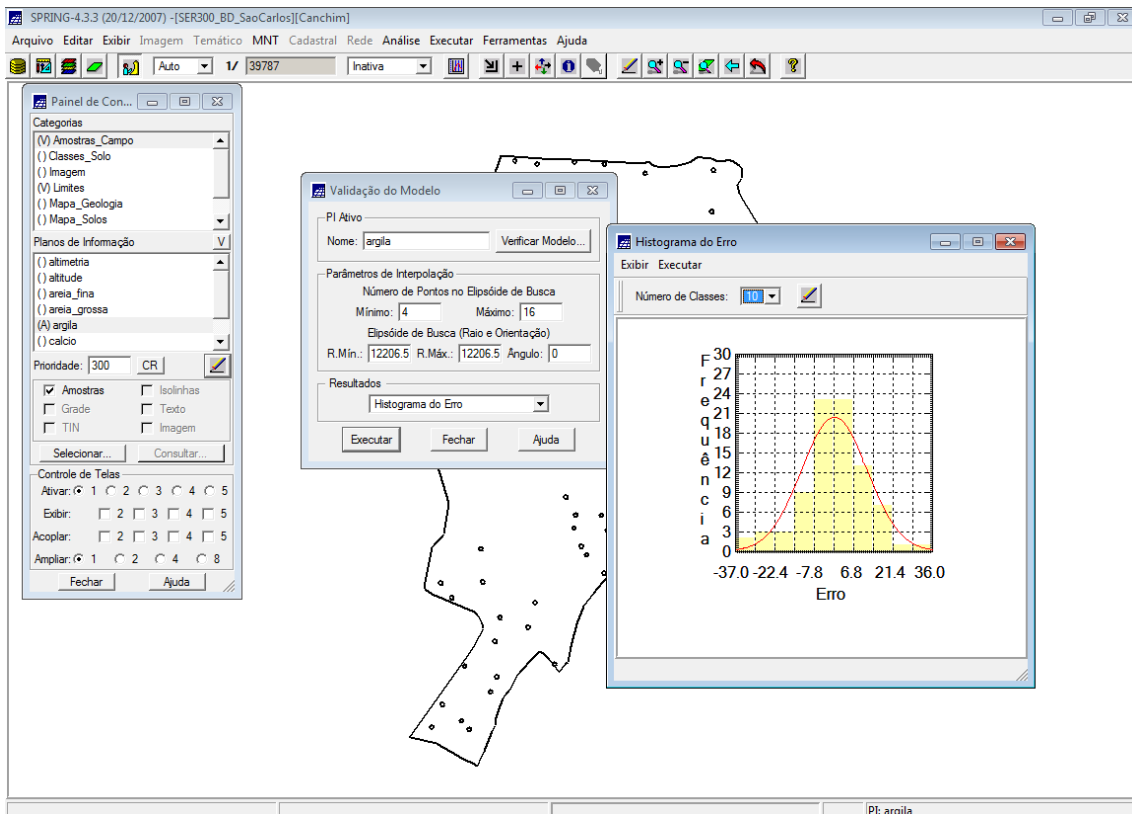
DEFININDO OS PARÂMETROS DO MODELO ISOTRÓPICO



VALIDAÇÃO DO MODELO DE AJUSTE



HISTOGRAMA DO ERRO



ESTATÍSTICAS DO ERRO

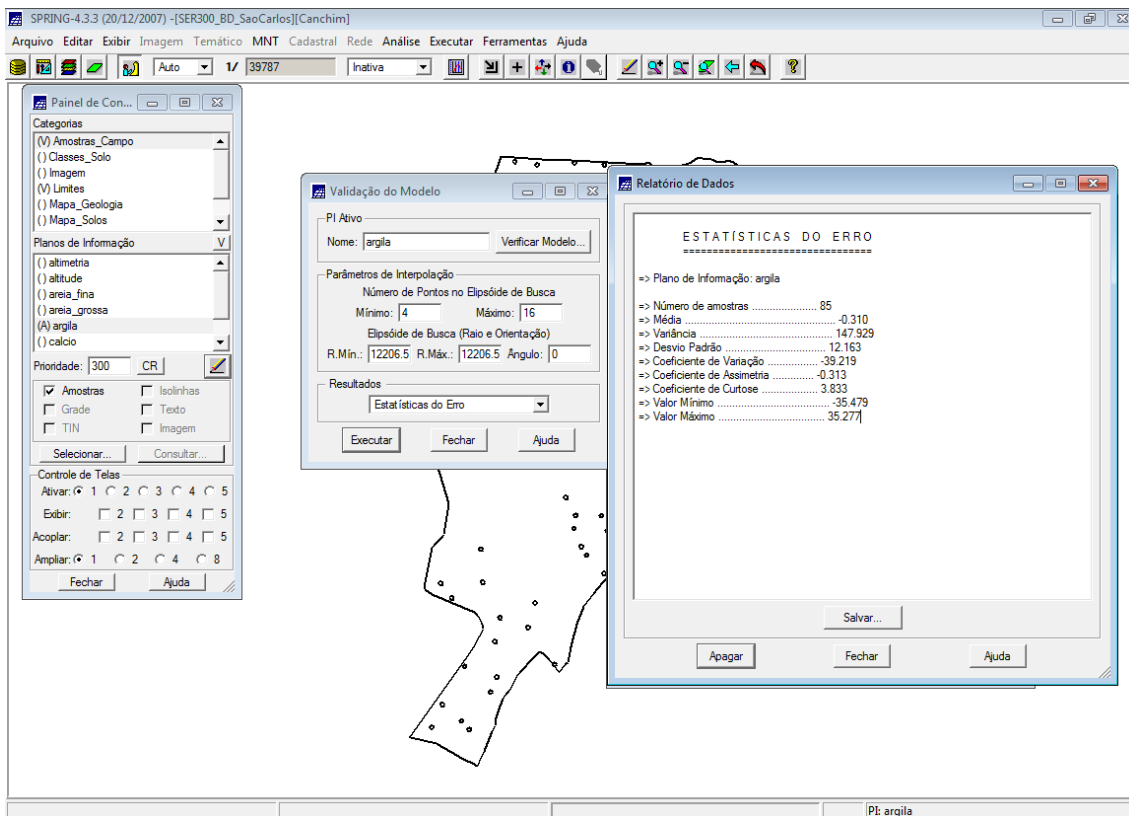
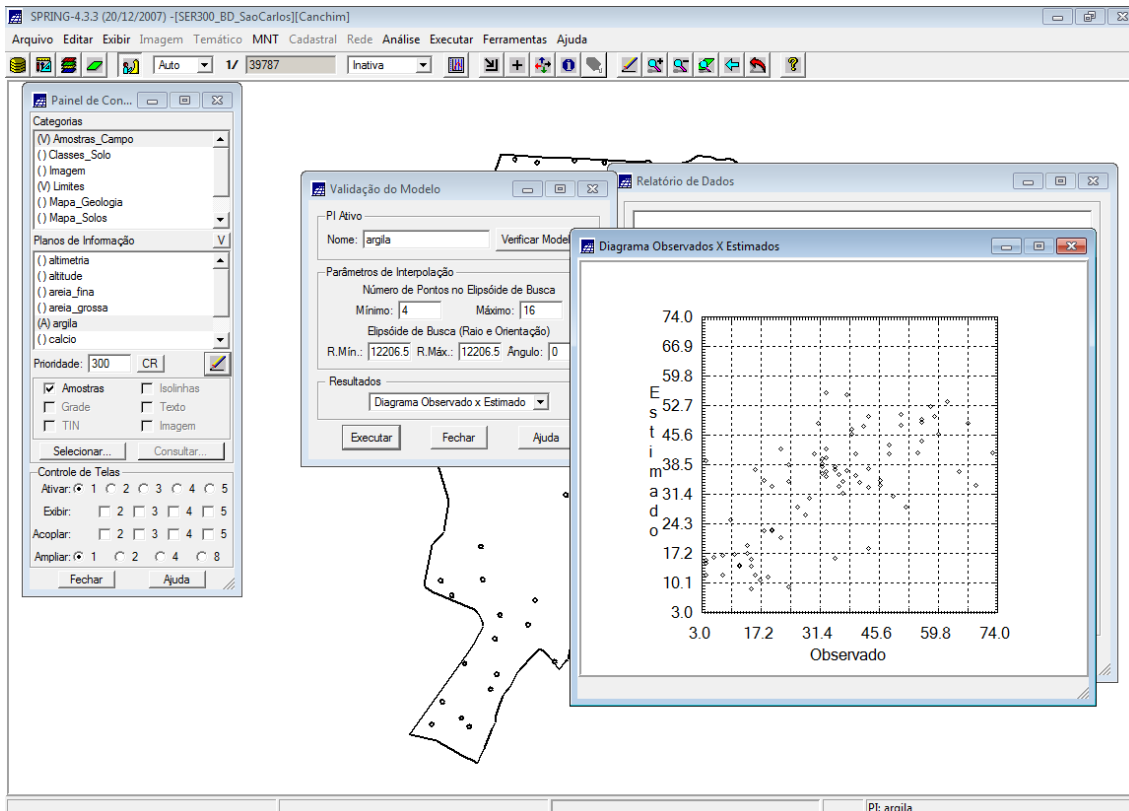
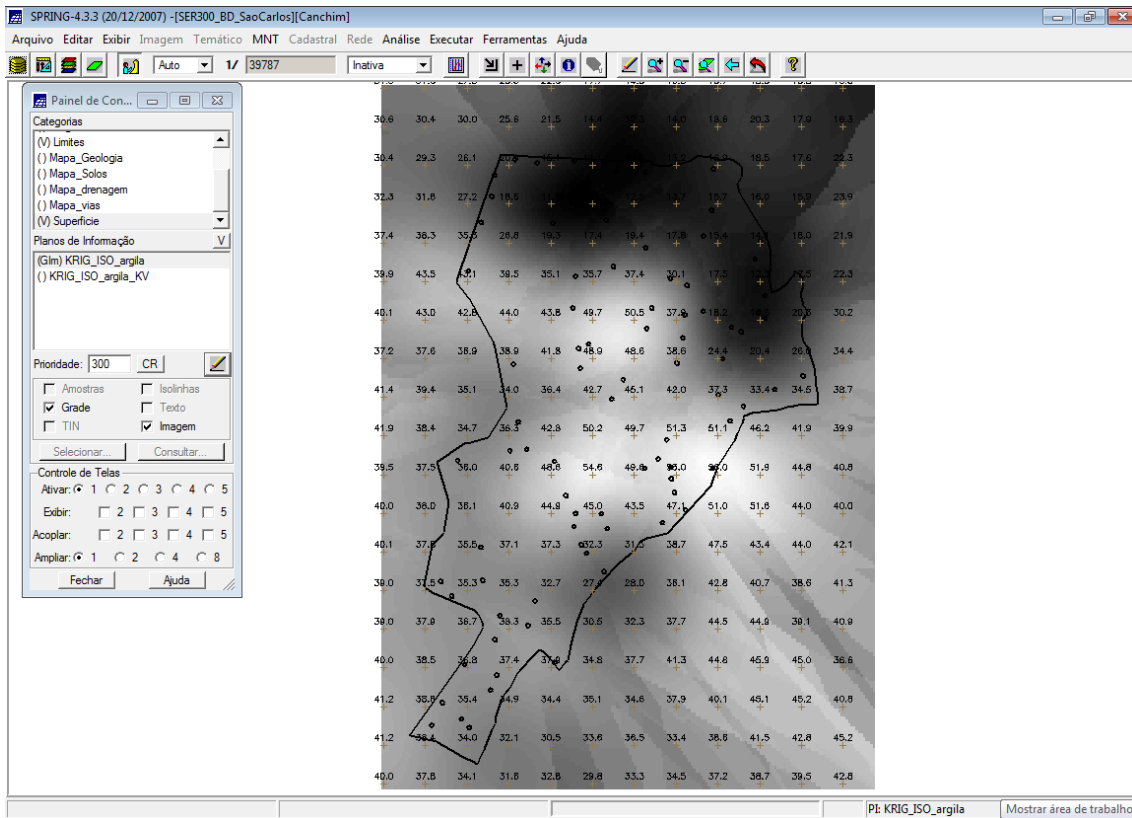
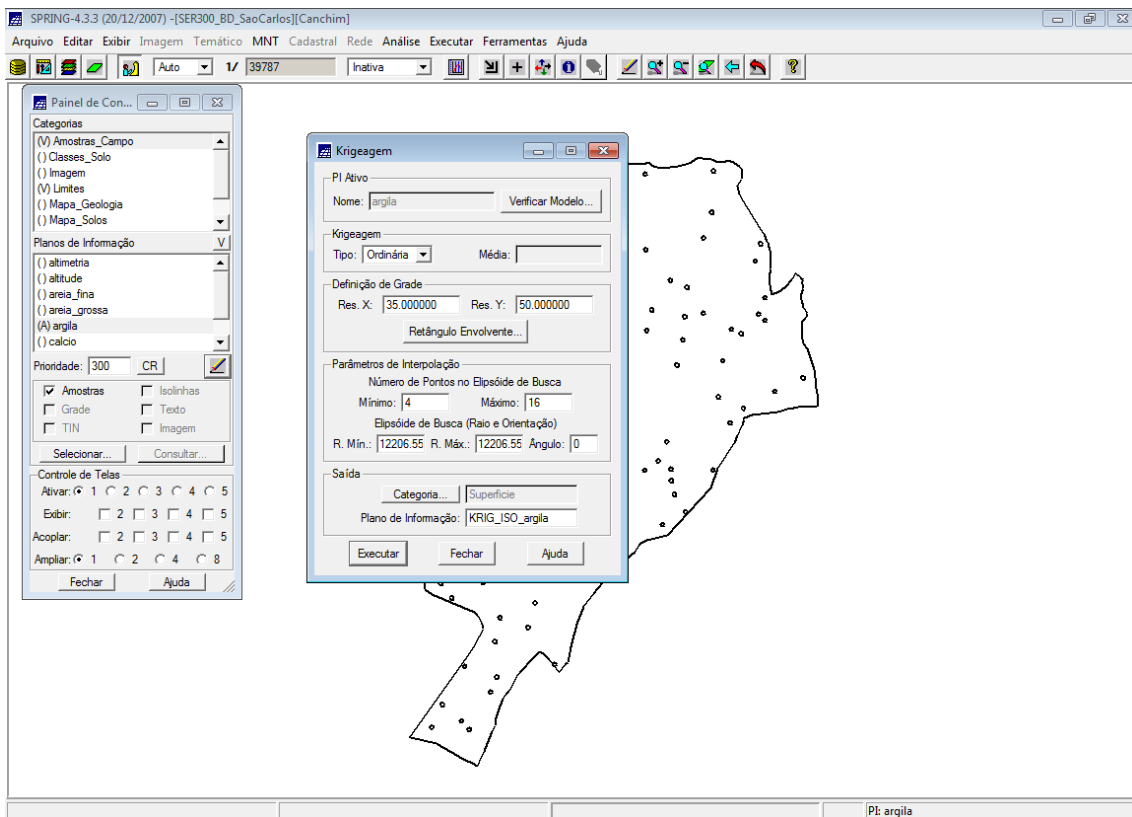
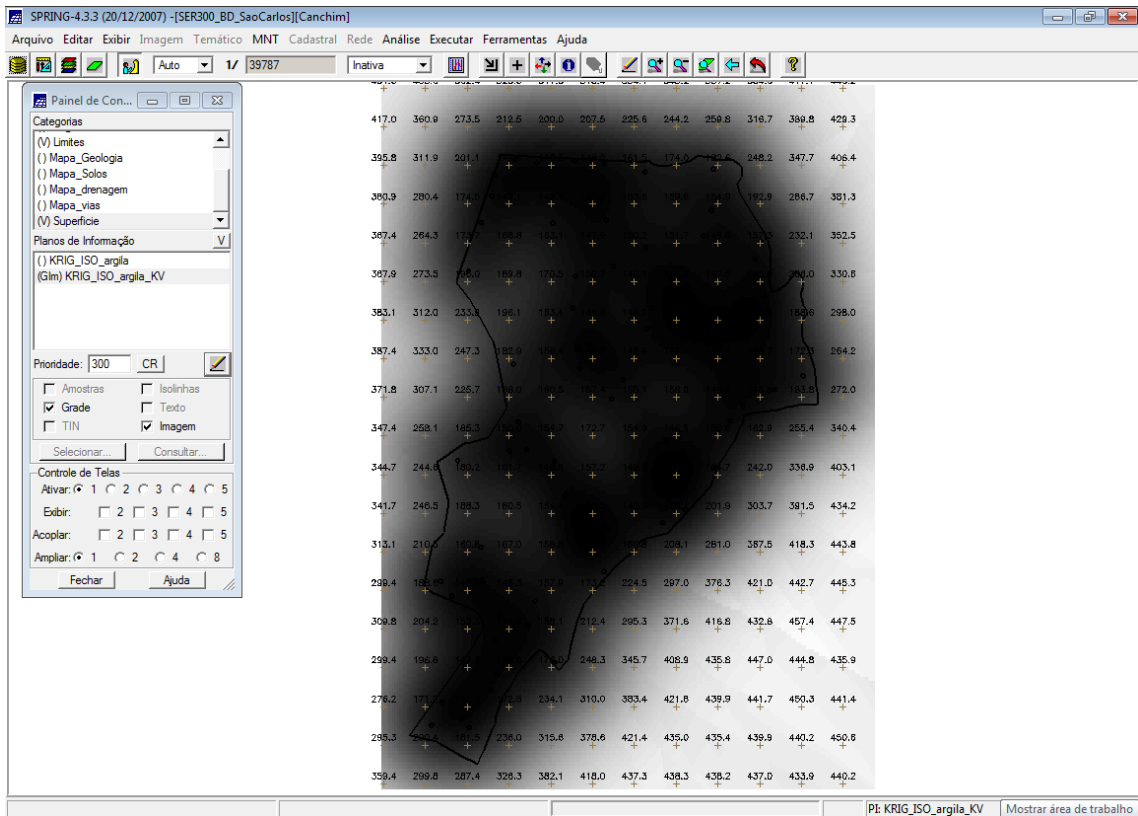


DIAGRAMA DE VALORES OBSERVADOS VERSUS ESTIMADOS

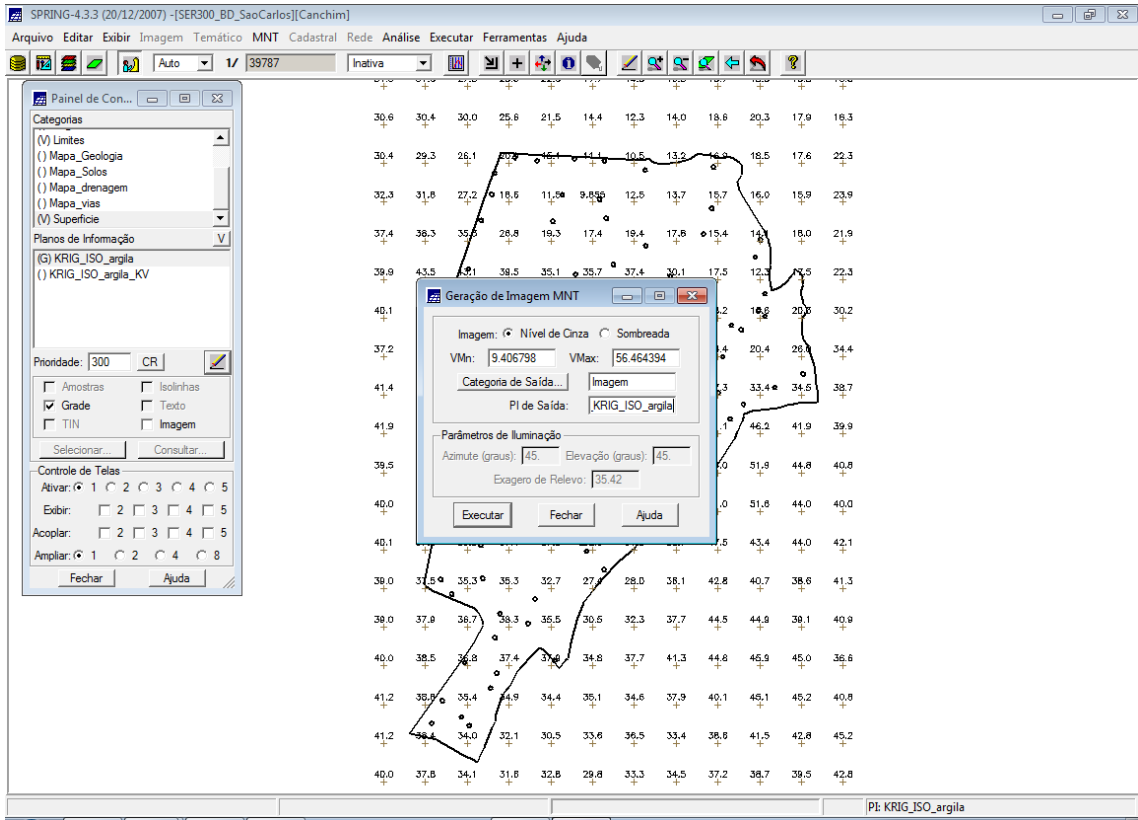


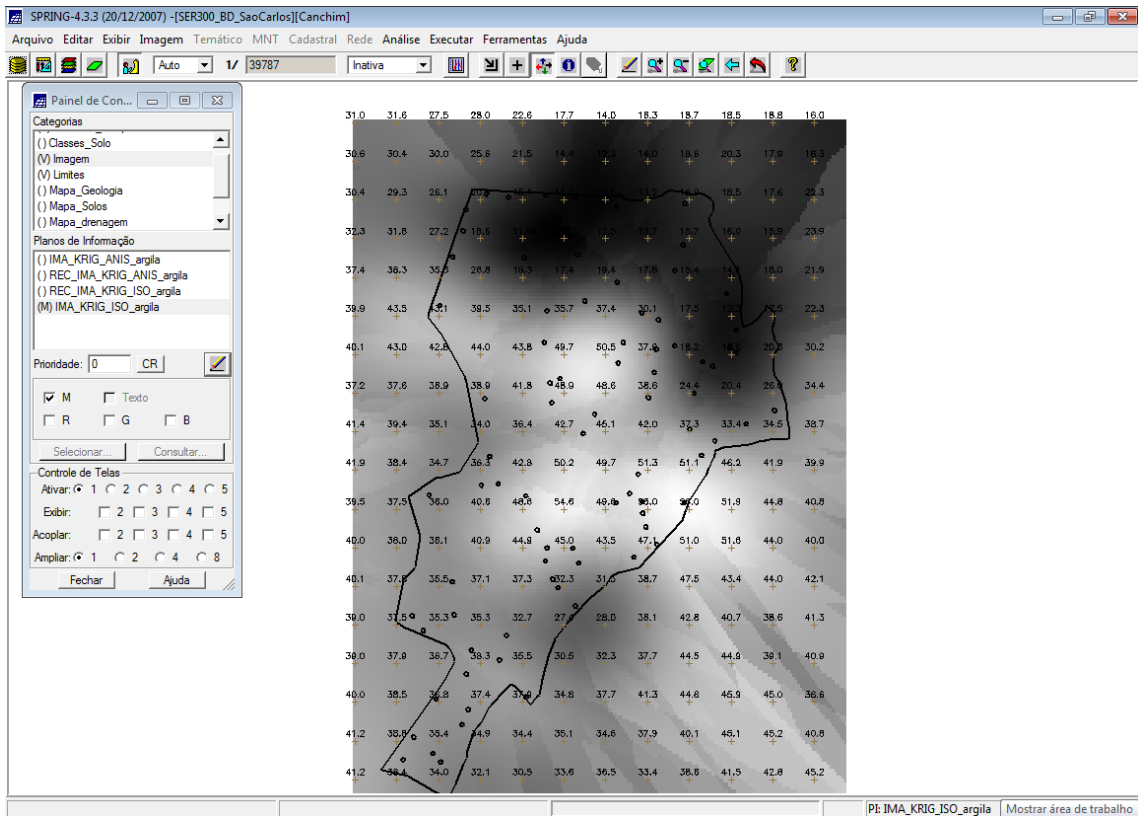
INTERPOLAÇÃO POR KRIGEAGEM ORDINÁRIA





VISUALIZAÇÃO DA SUPERFÍCIE DE ARGILA





EXECUTAR RECORTE DA IMAGEM GERADA UTILIZANDO LEGAL

The screenshot shows the 'Editor de Modelos' window in the SPRING-4.3.3 software. The code editor contains the following program:

```

Programa
{
  // Recorte de imagem
  {
    //Declarações
    Imagem ima, ima1 ("Imagem");
    // "Imagem" refere-se ao nome da categoria (tipo:Imagem), a qual possui a imagem a ser recortada

    Tematico limite ("Limites");
    // "Limites" refere-se ao nome da categoria (tipo:Temática), a qual possui o PI de recorte.

    ima = Recupere (Nome = "IMA_KRIG_ISO_argila");
    // "IMA_KRIG_ISO_argila" refere-se ao nome do PI ou da imagem a ser recortada.

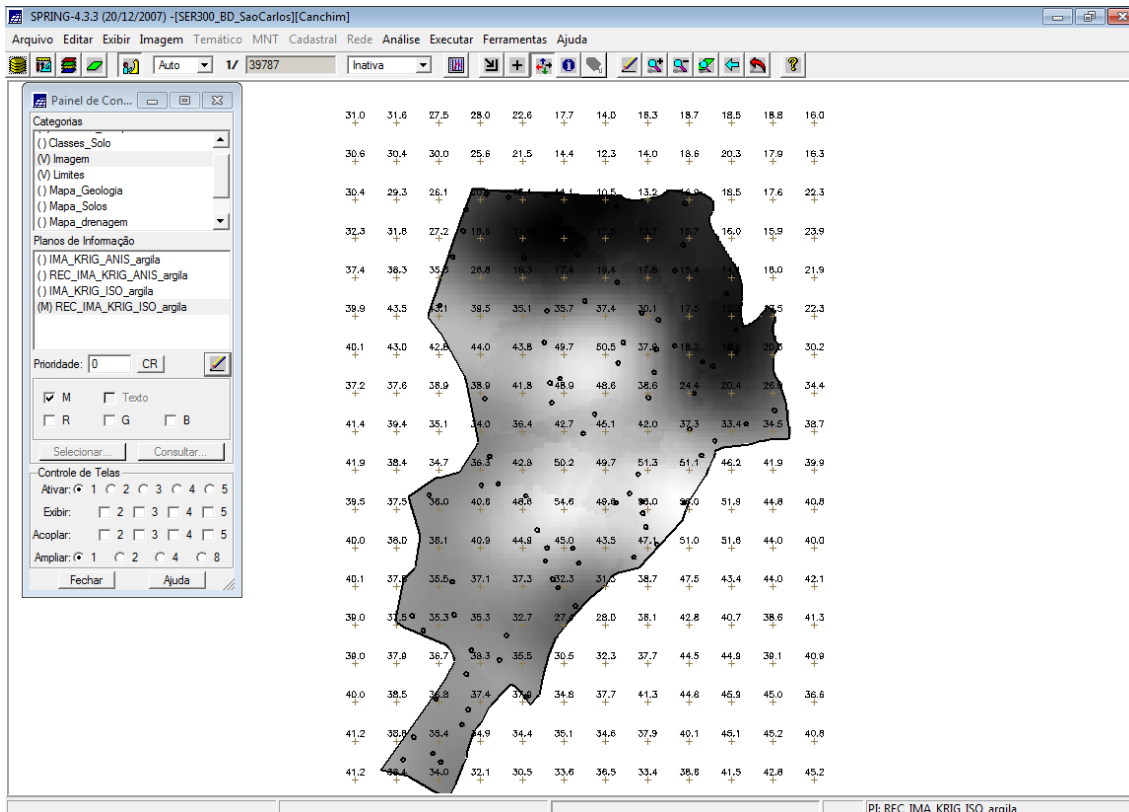
    ima1 = Novo (Nome = "REC_IMA_KRIG_ISO_argila", ResX=30, ResY=30);
    // "REC_IMA_KRIG_ISO_argila" refere-se ao nome do PI a ser gerado (é o resultado do recorte)

    limite = Recupere (Nome = "recorte");
    // "recorte" refere-se ao nome do PI de recorte (neste exemplo pertence à categoria Limites e deve
    // possuir uma representação do tipo Matriz. Nota: após classificá-lo fazer conversão Vetor-> Matriz)

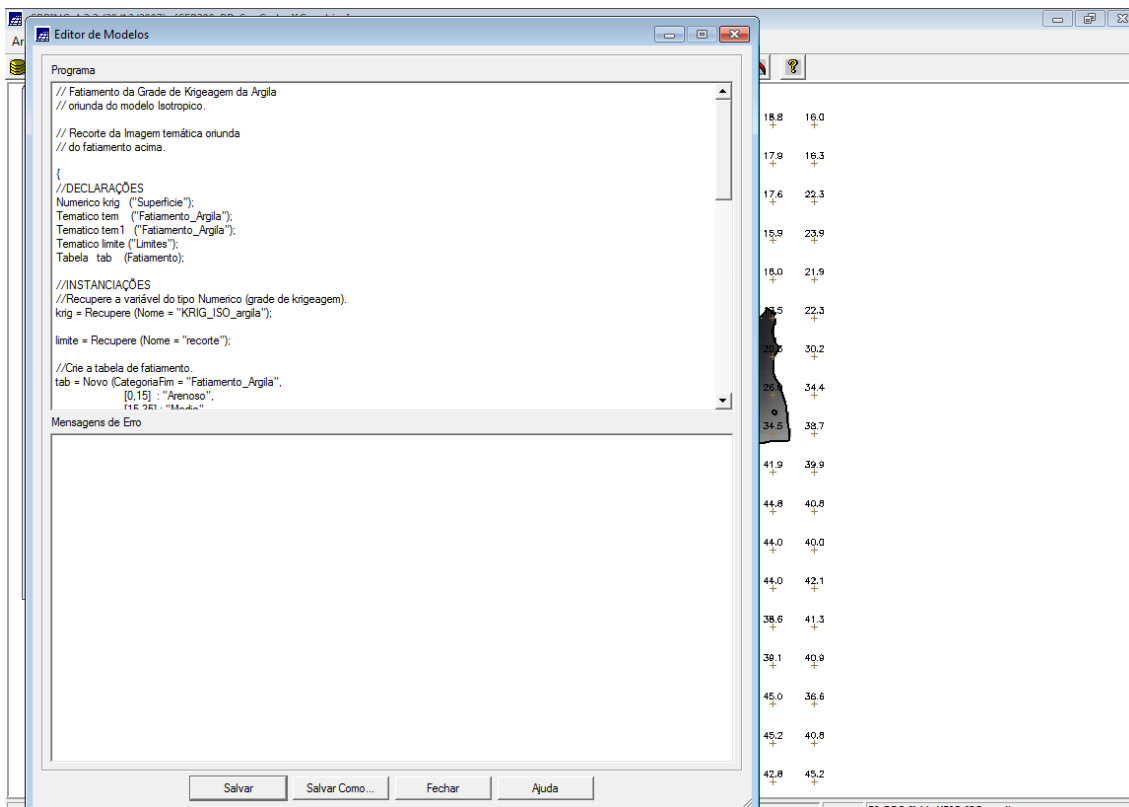
    ima1 = limite Class=="cl1" ? ima : 255;
    // "cl1" refere-se ao nome da classe, a qual foi escolhida para classificar o PI de nome recorte.
  }
}

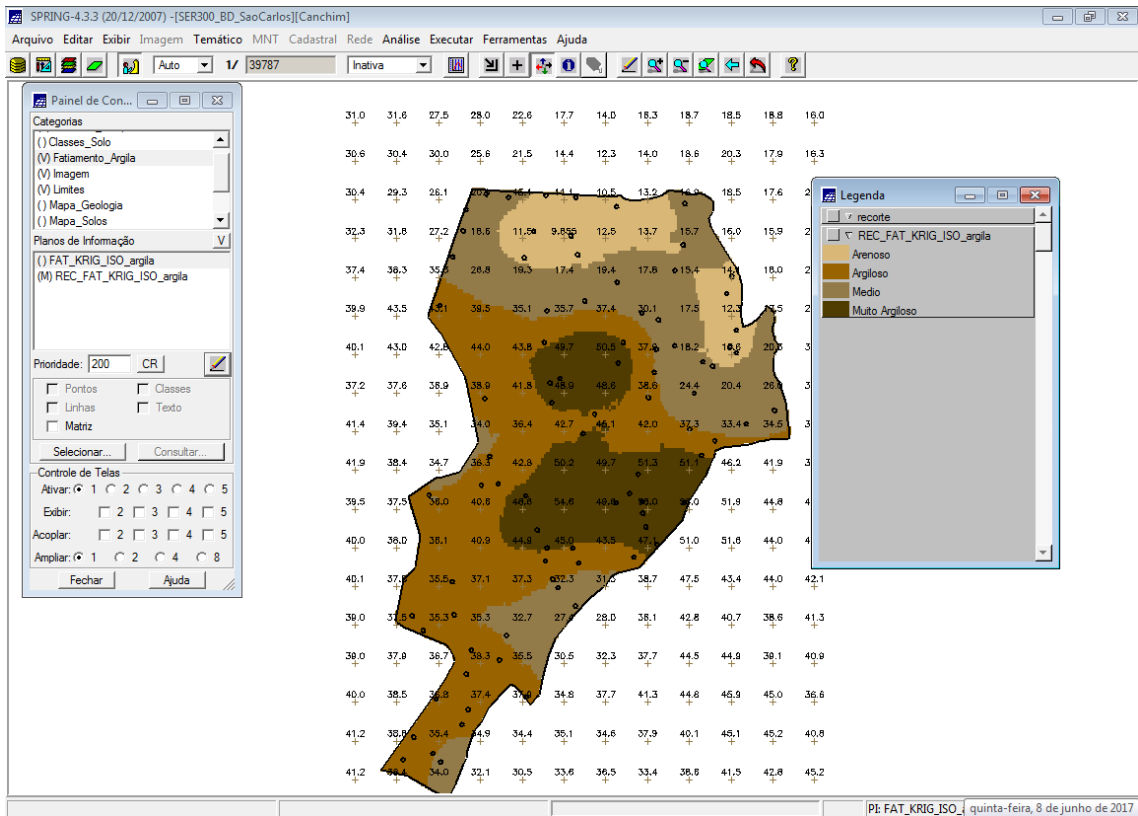
```

The interface also shows the control panel on the left and the 'Mensagens de Erro' section at the bottom of the editor window.



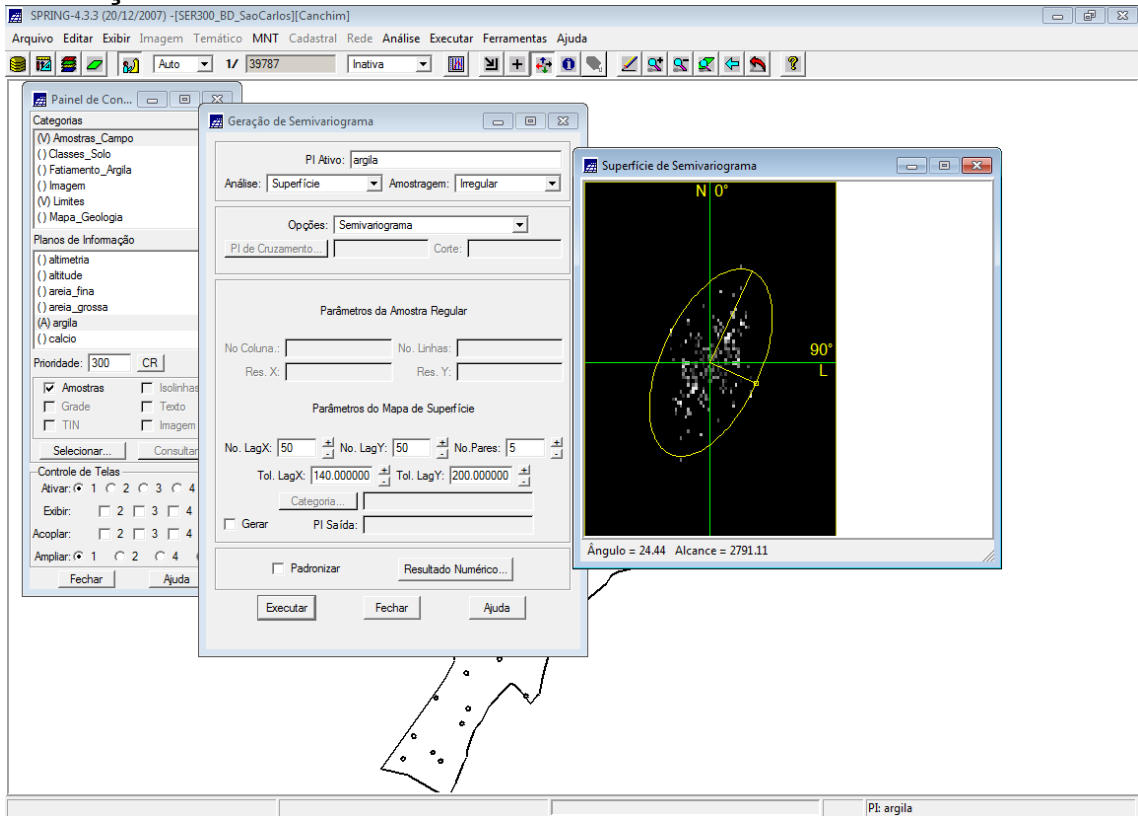
EXECUTAR FATIAMENTO E RECORTE DA GRADE DO TEOR DE ARGILA, SEGUNDO CLASSIFICAÇÃO ESPECIFICADA NA PÁGINA 4.



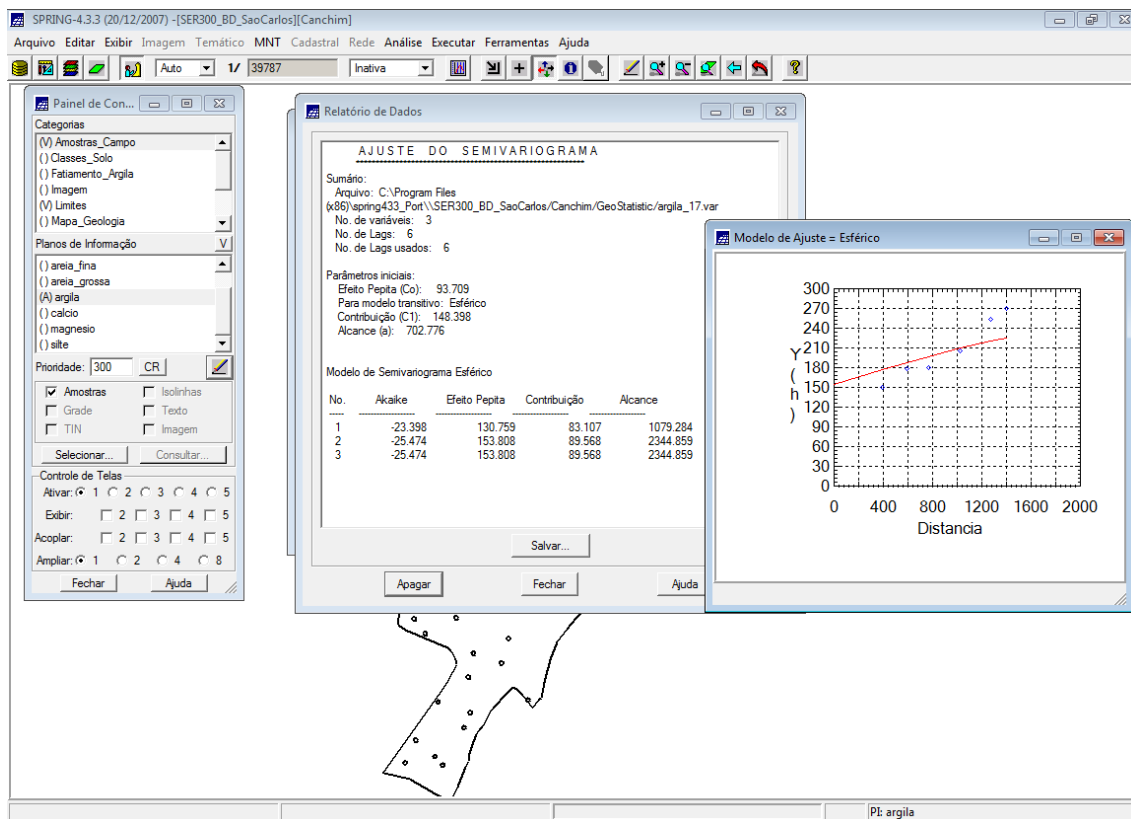
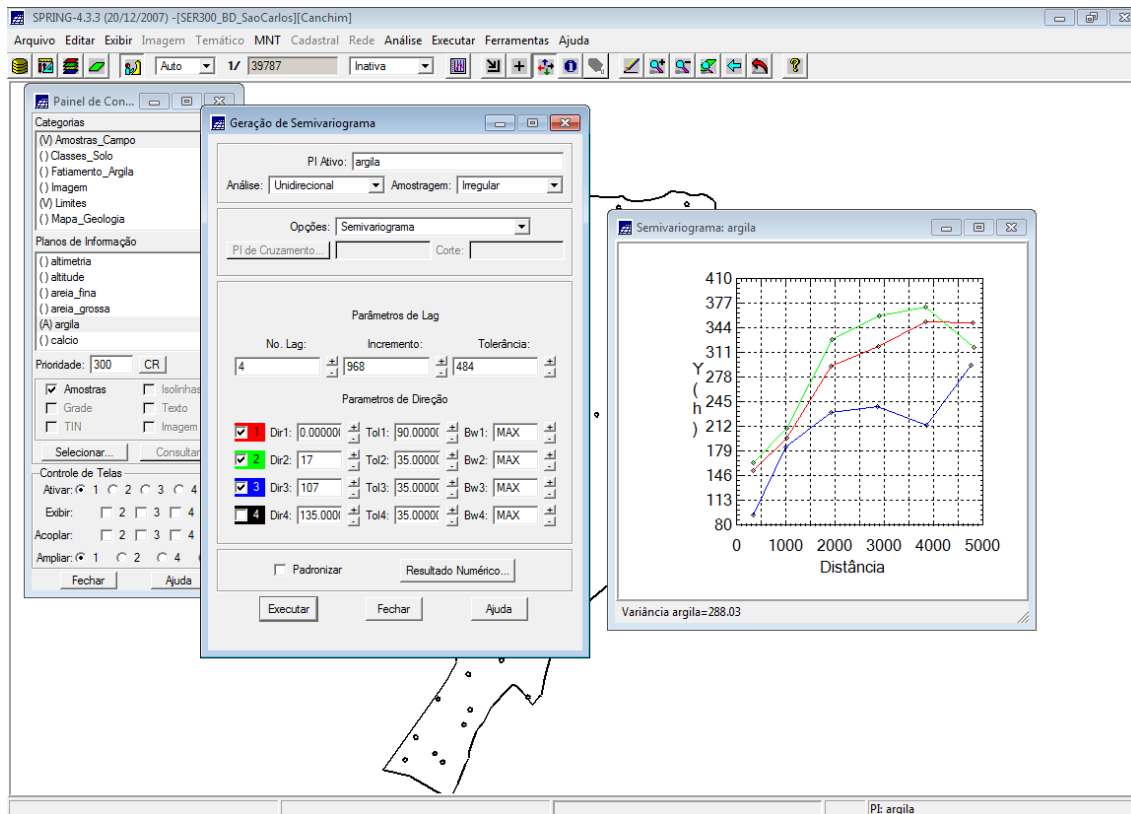


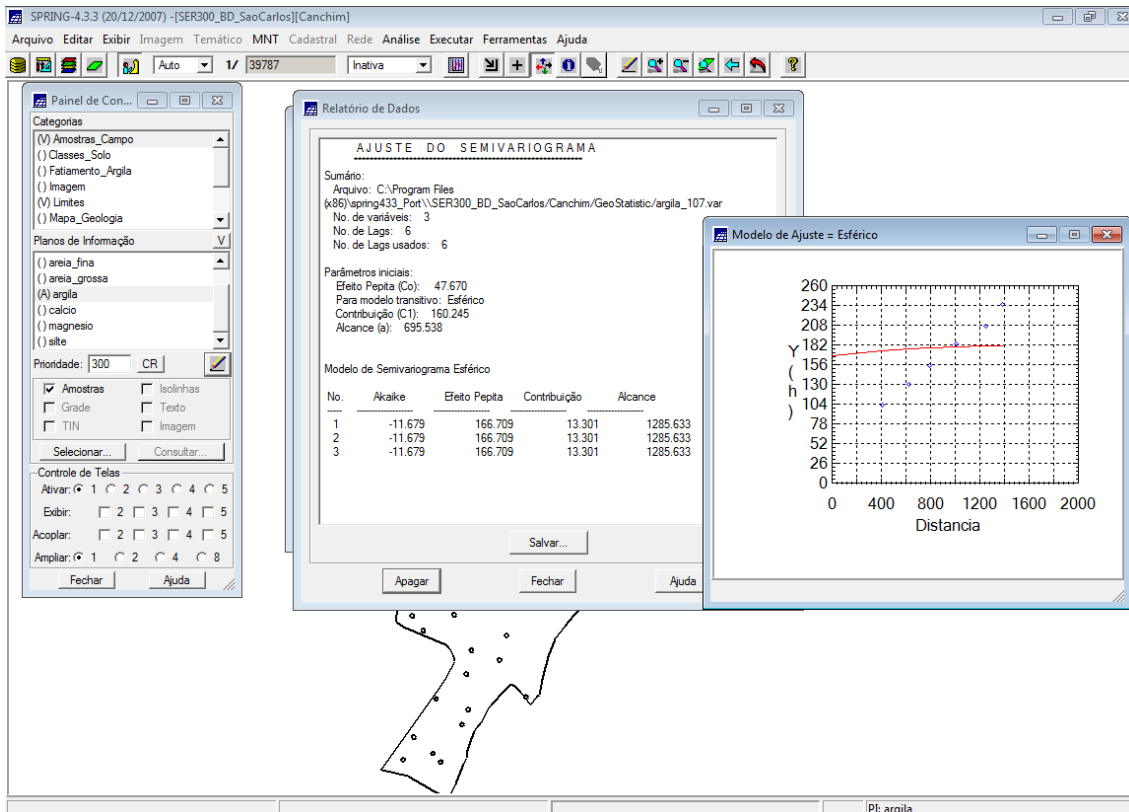
CASO ANISOTRÓPICO

DETECÇÃO DA ANISOTROPIA

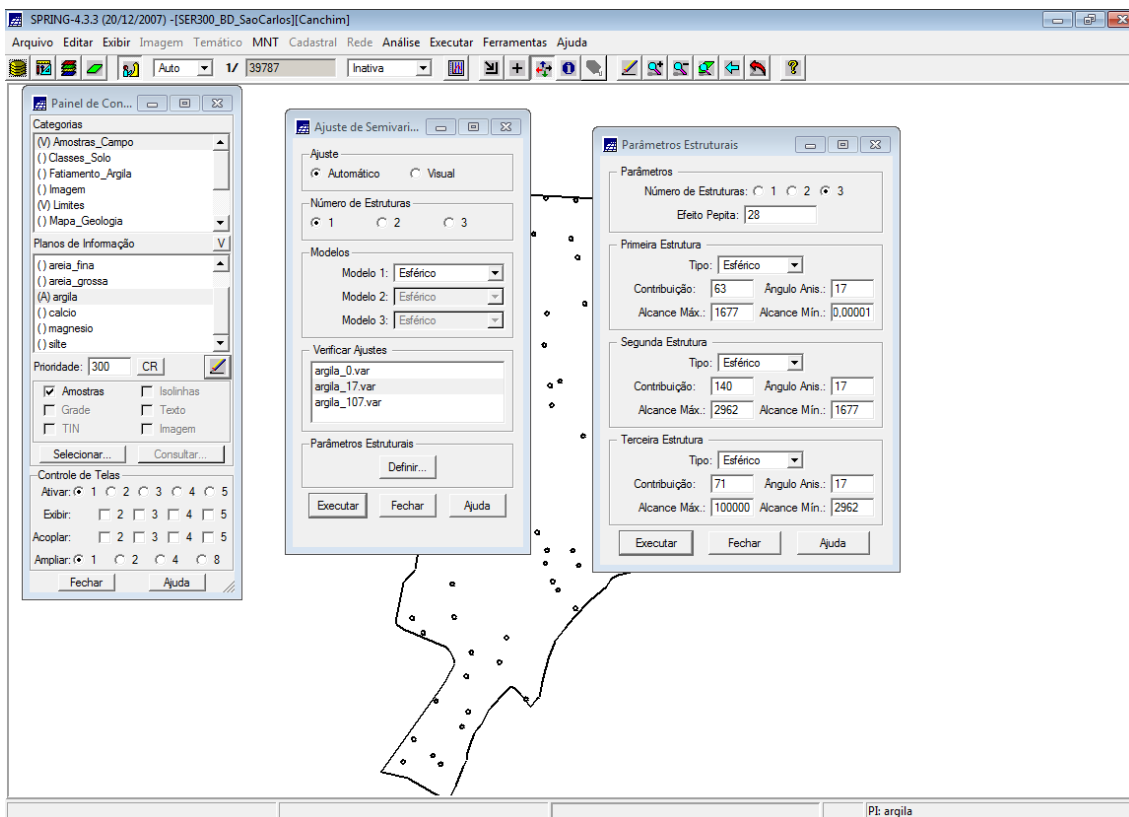


GERAÇÃO DOS SEMIVARIOGRAMAS DIRECIONAIS

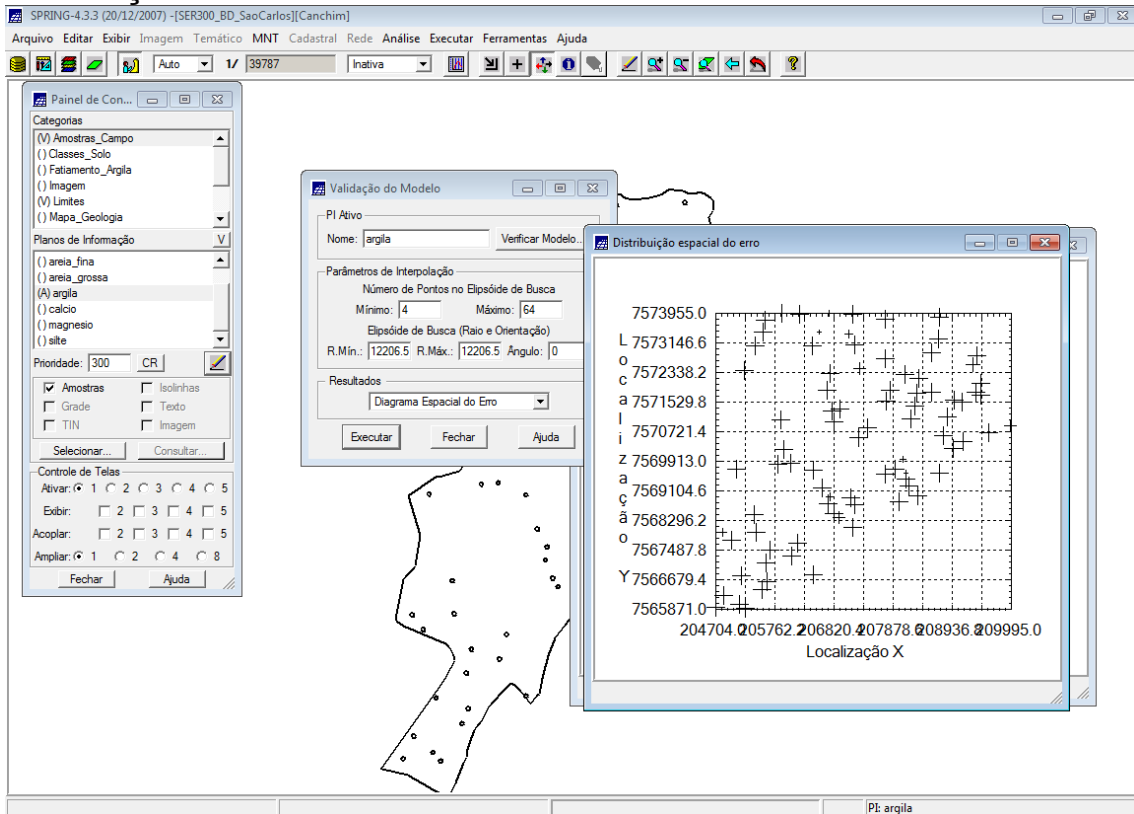




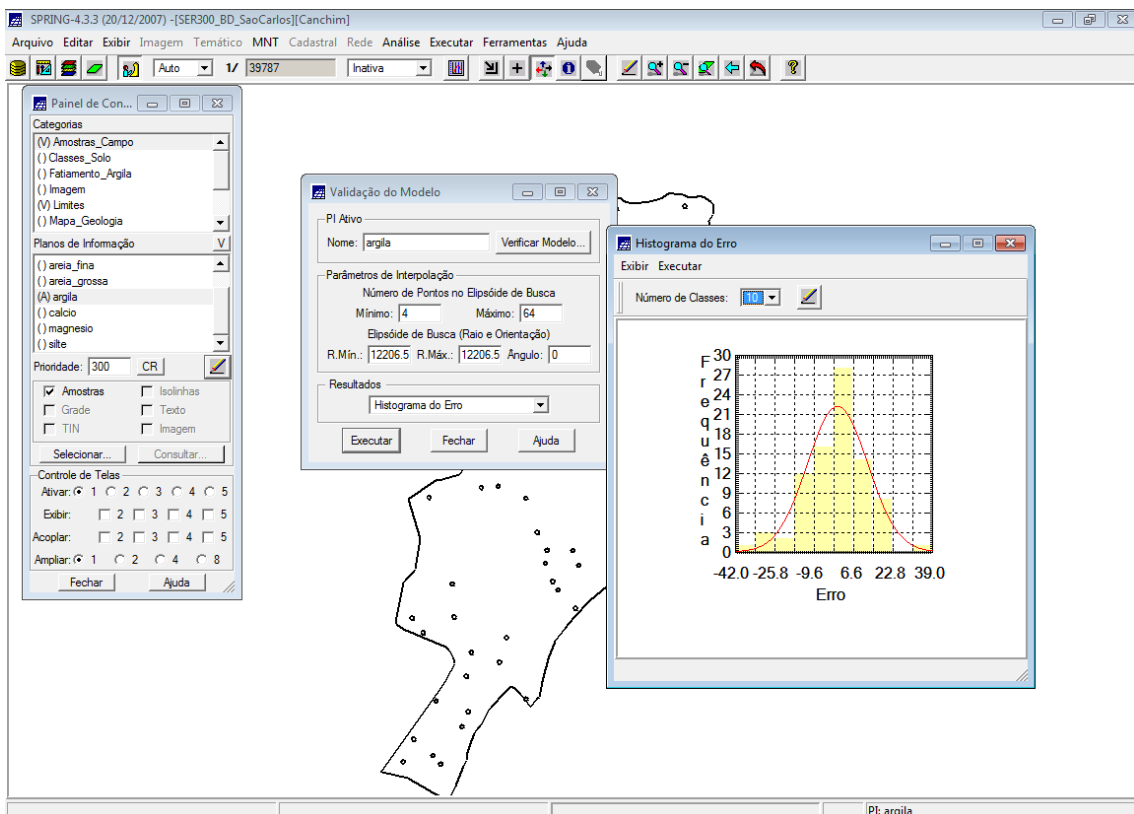
MODELAGEM DA ANISOTROPIA



VALIDAÇÃO DO MODELO DE AJUSTE



HISTOGRAMA DO ERRO



ESTATÍSTICAS DO ERRO

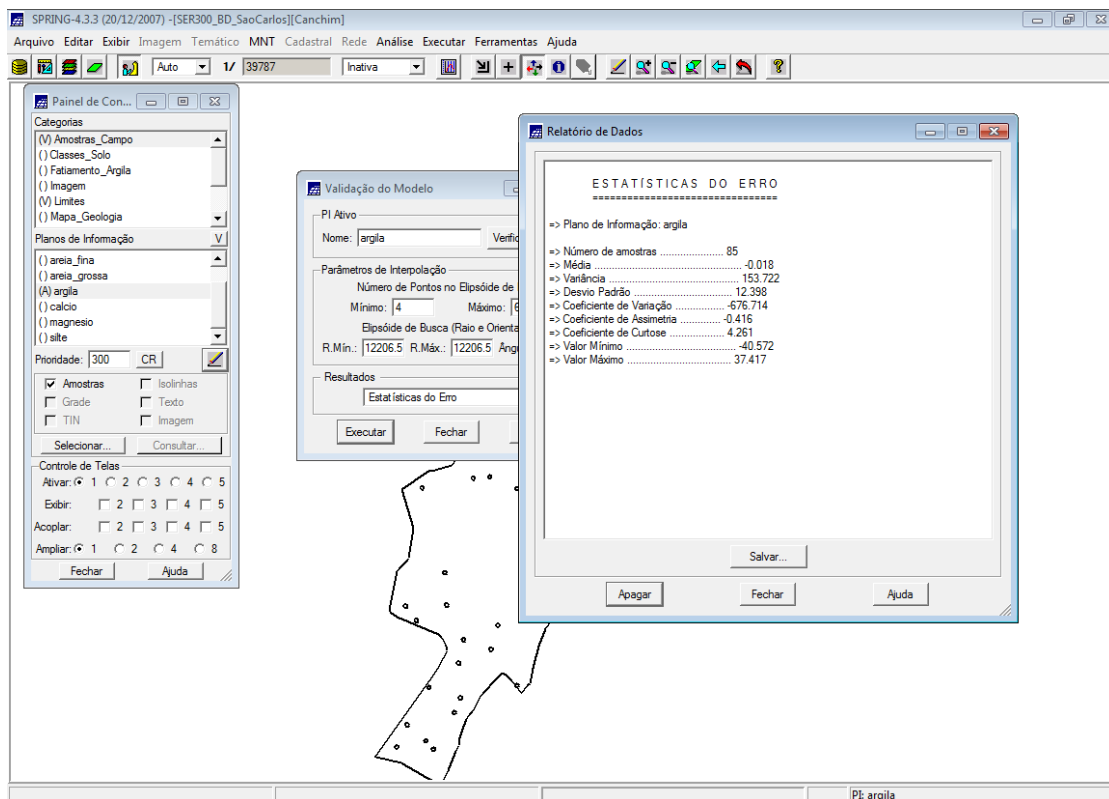
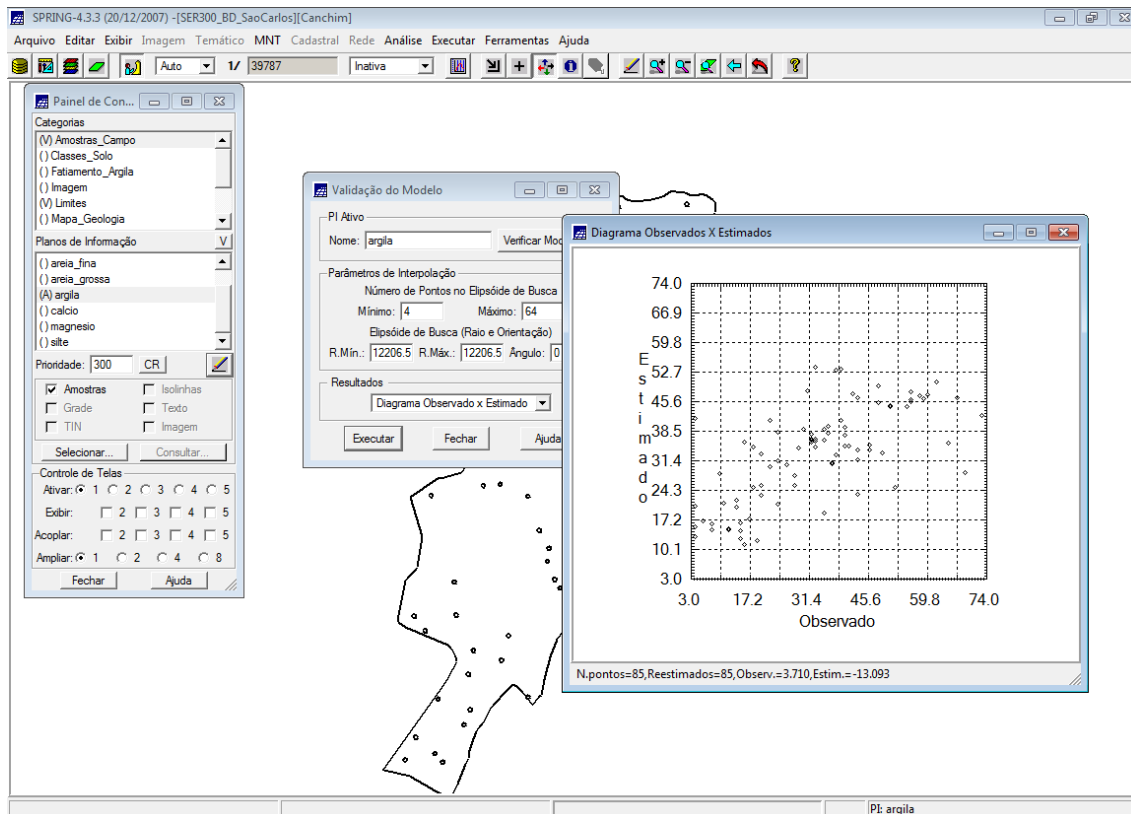
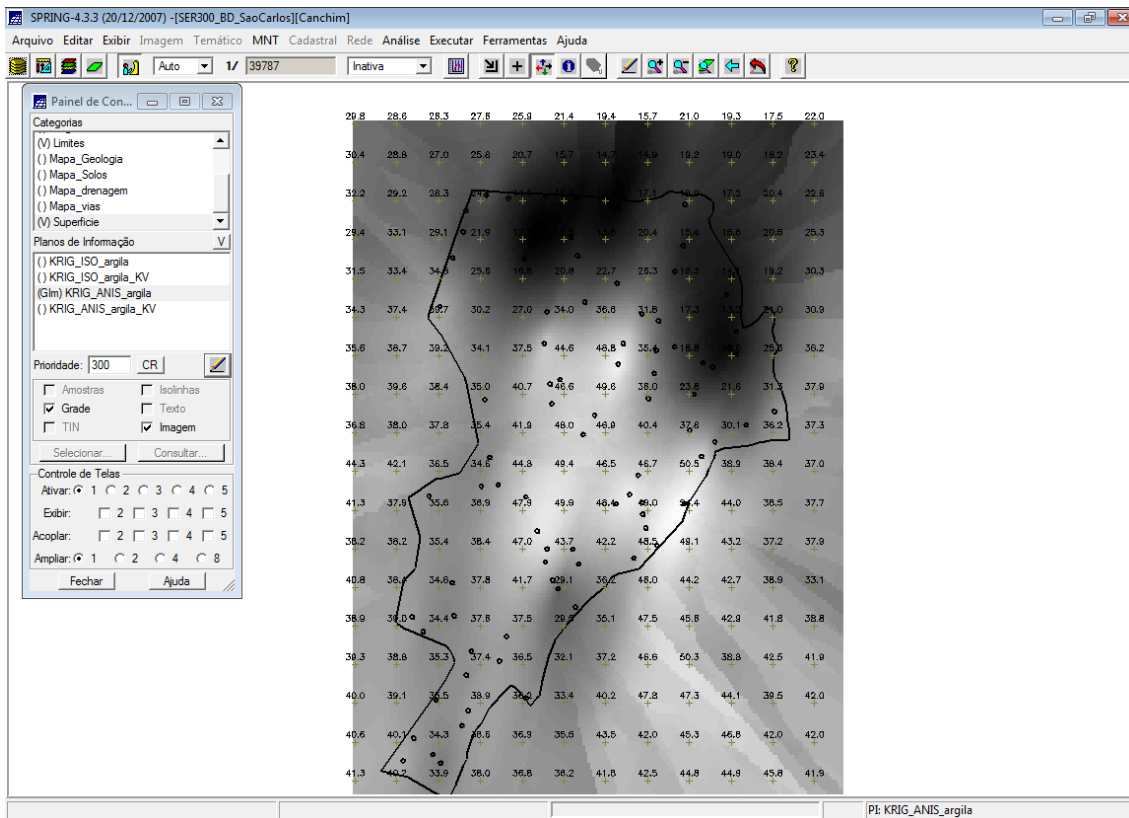
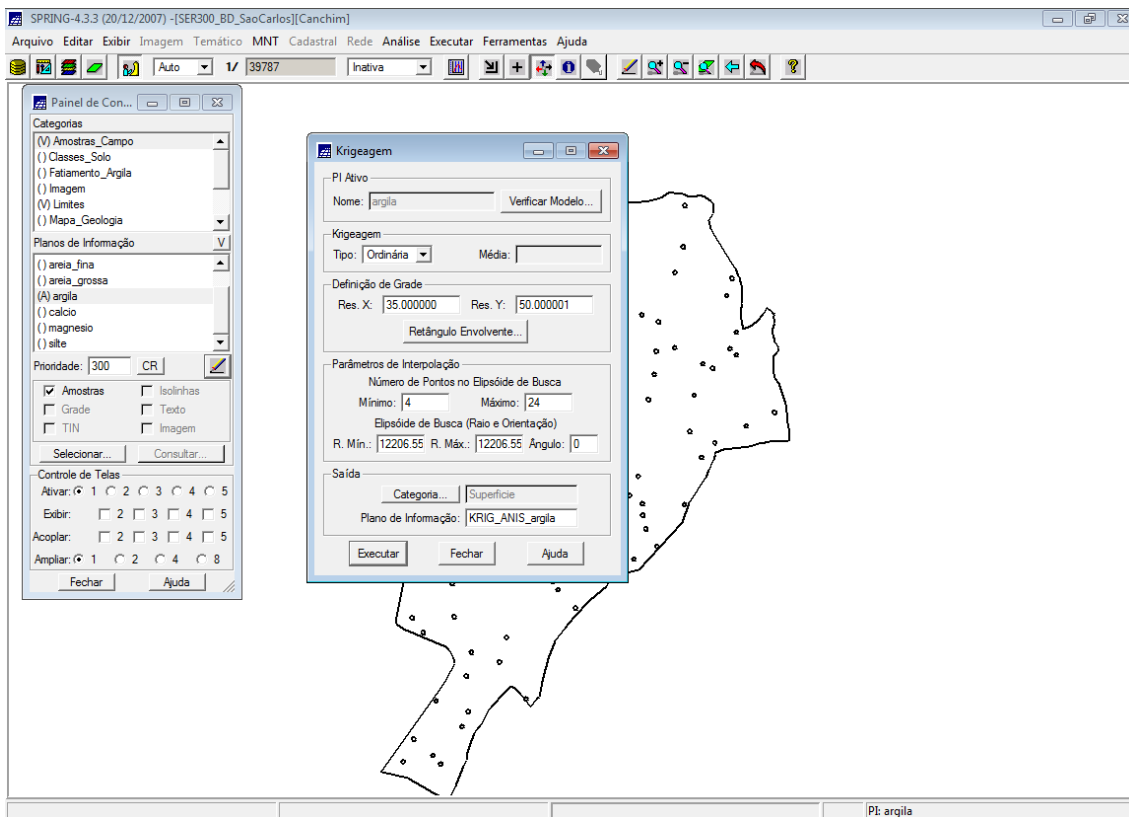


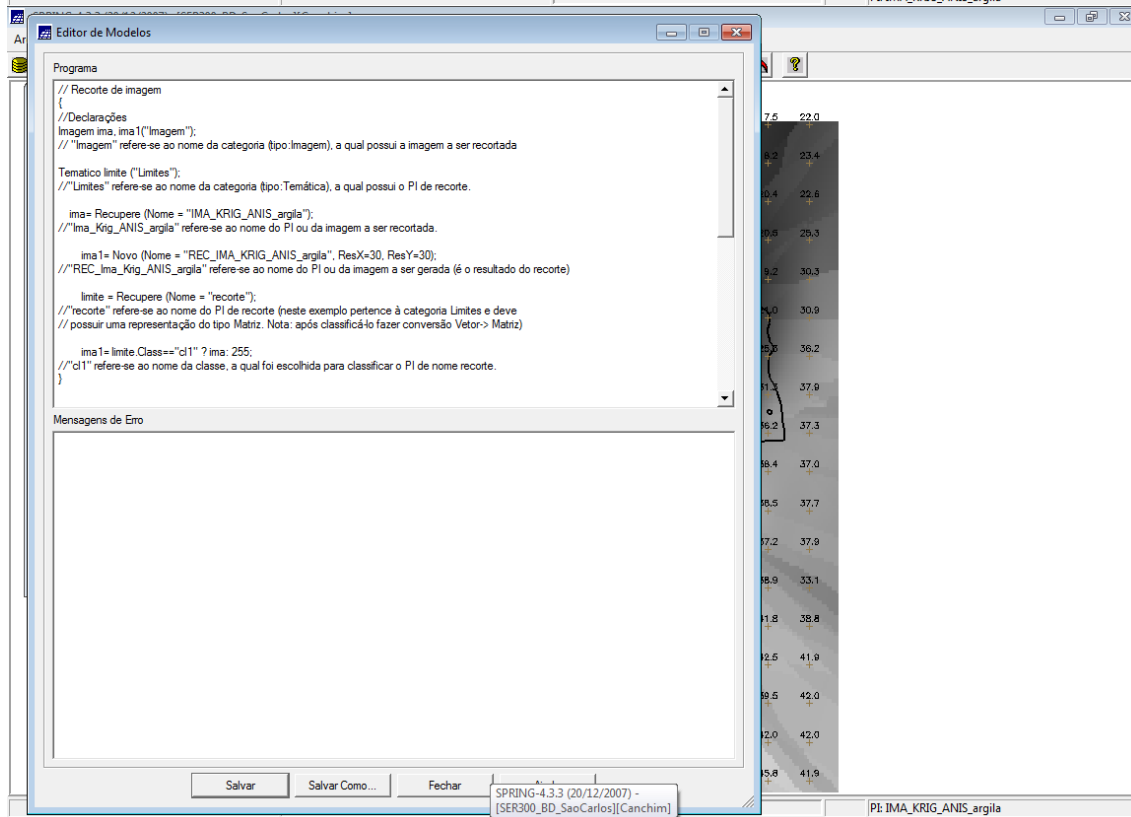
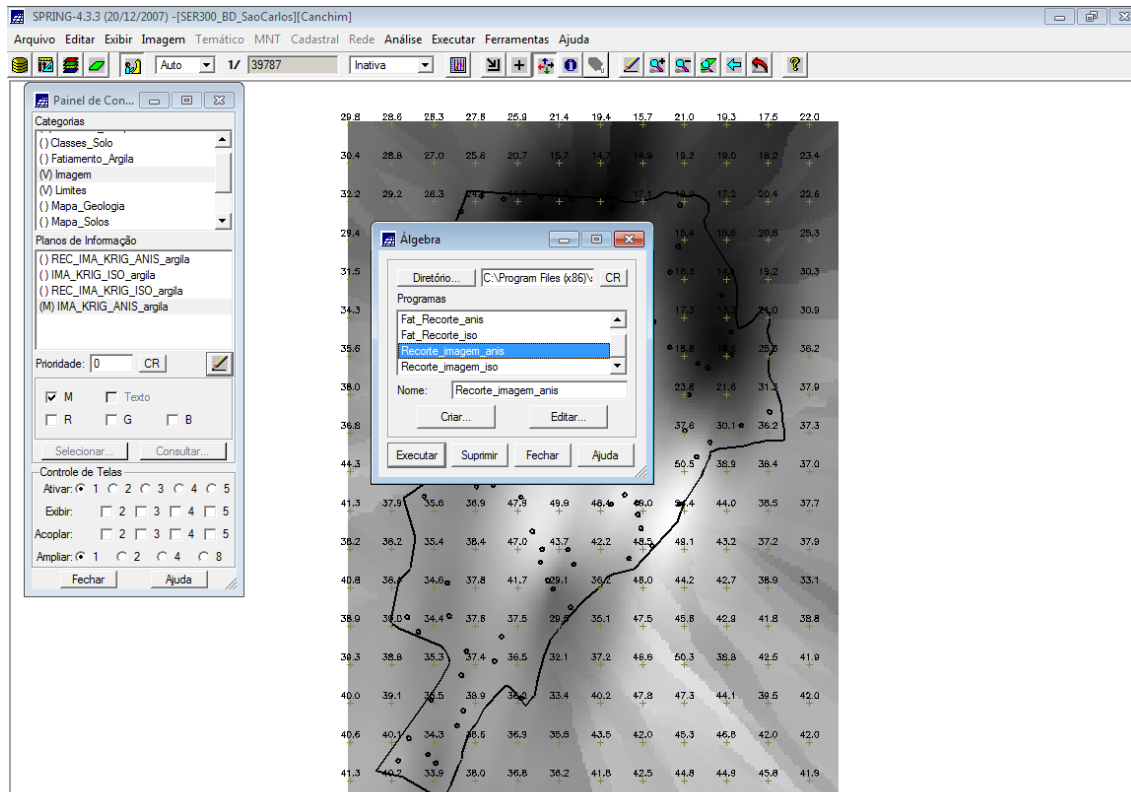
DIAGRAMA DE VALORES OBSERVADOS VERSUS ESTIMADOS

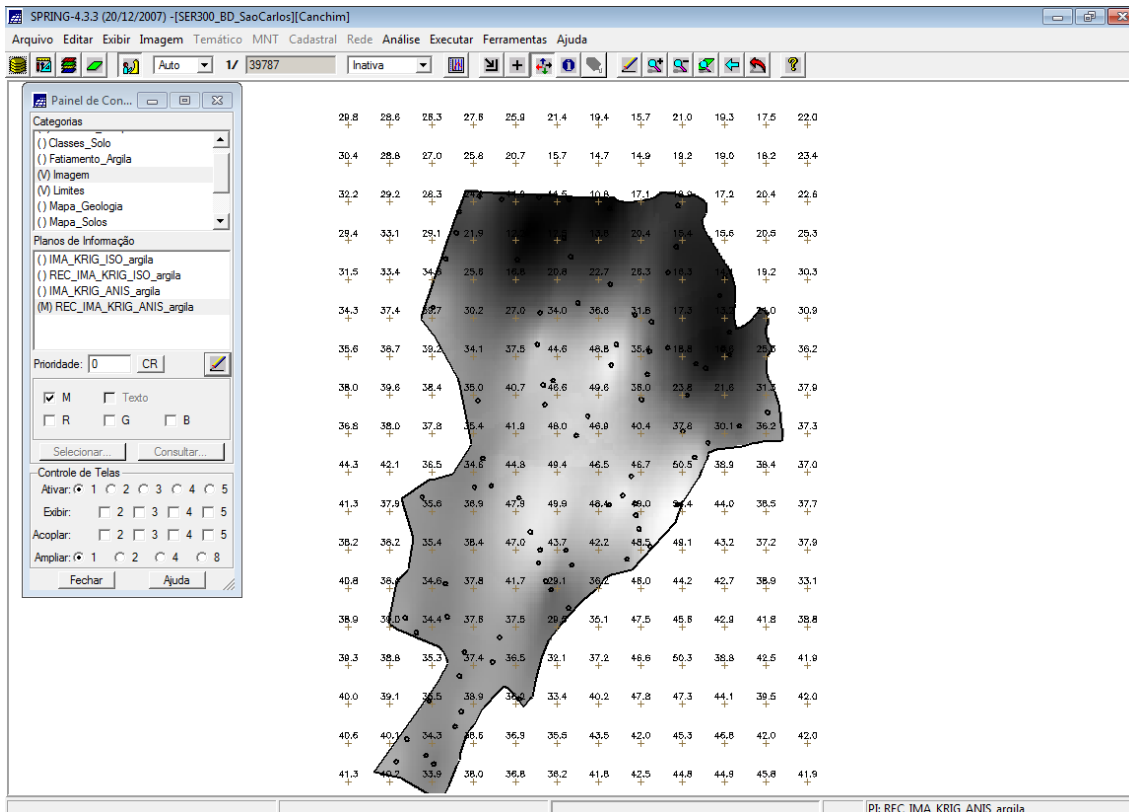


INTERPOLAÇÃO POR KRIGEAGEM ORDINÁRIA

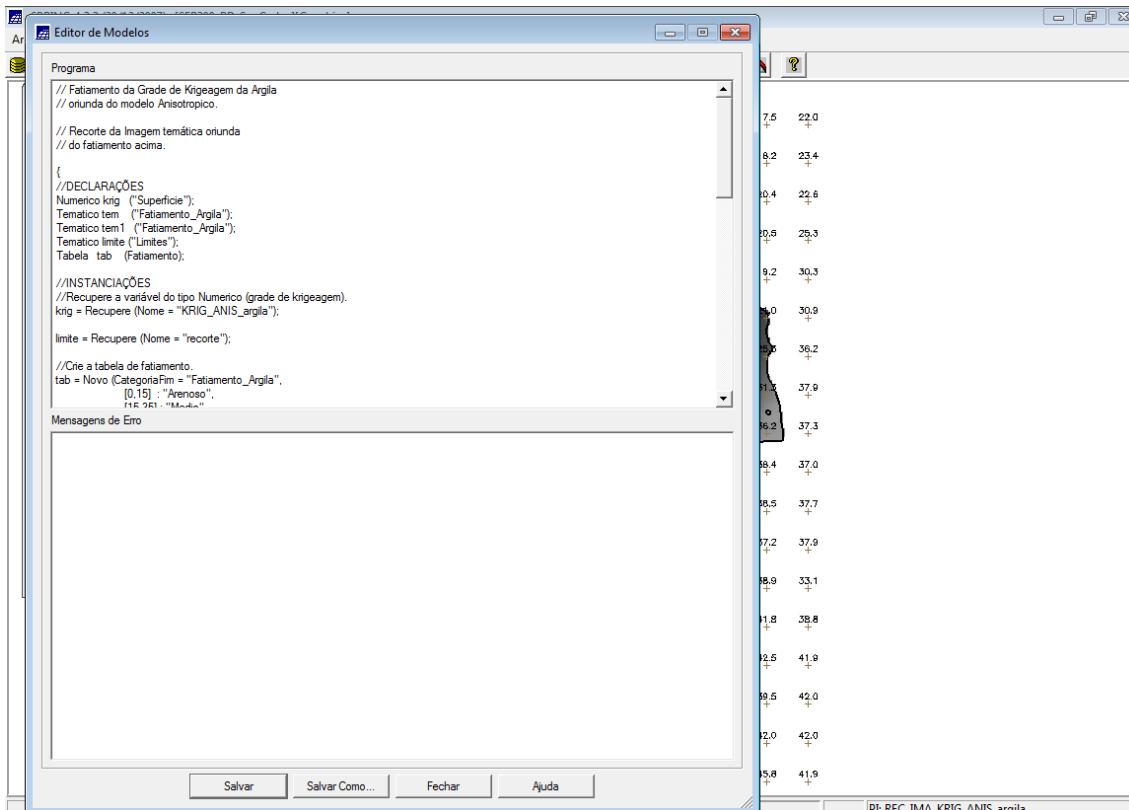


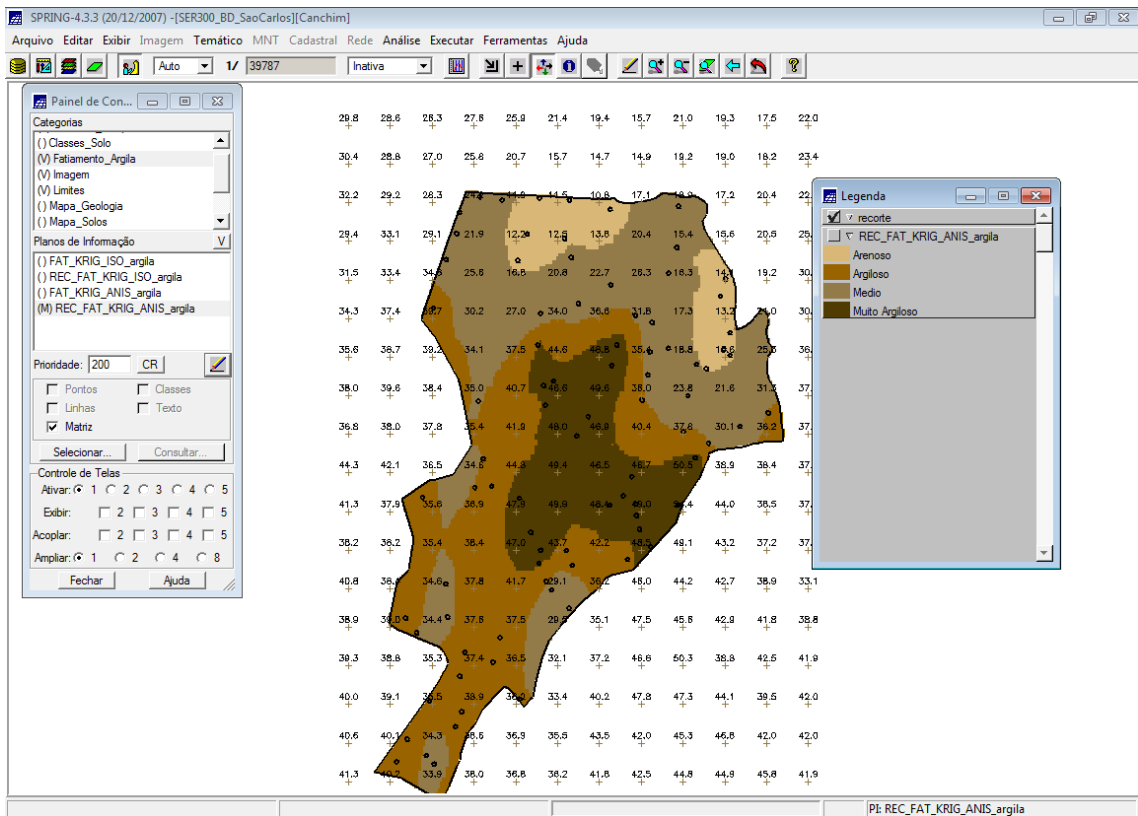
EXECUTAR RECORTE NA IMAGEM ORIUNDA DO MODELO ANISOTRÓPICO.



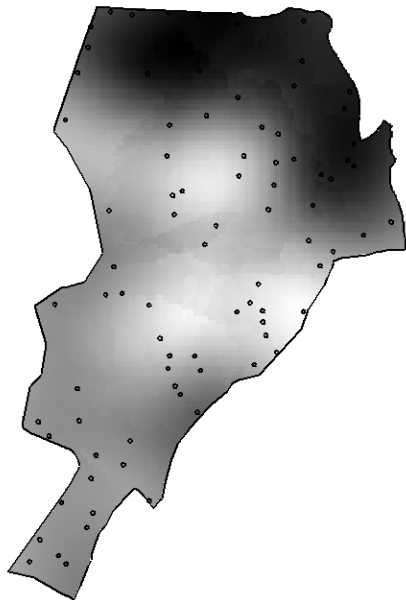


EXECUTAR FATIAMENTO E RECORTE NA GRADE DE KRIGEAGEM ORIUNDA DO MODELO ANISOTRÓPICO.

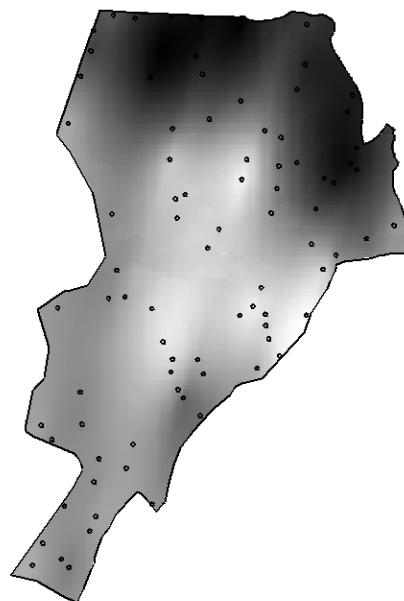




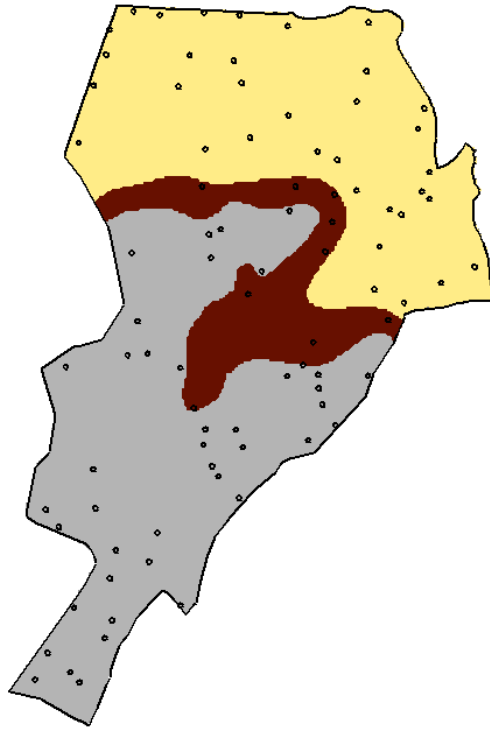
ANÁLISE DOS RESULTADOS



ISOTRÓPICO



ASOTRÓPICO



MAPA GEOLÓGICO

SPRING-4.3.3 (20/12/2007) - [SER300_BD_SaoCarlos][Canchim]

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

Auto 1/ 39787 Inativa

Painel de Con...

Categorias

- (V) Classes_Solo
- () Fatiamento_Argila
- (V) Imagem
- (V) Limites
- () Mapa_Geologia
- () Mapa_Solos

Planos de Informação

- (C) solos

Prioridade: [200] CR

Pontos Classes

Linhas Texto

Matriz

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

Algebra

Diretório... [C:\Program Files (x86)\v] CR

Programas

- atualiza_Targila
- Fat_Recorte_anis
- Fat_Recorte_iso
- Recorte_imagem_anis

Nome: atualiza_Targila

Criar... Editar...

Executar Suprimir Fechar Ajuda

Pl: solos

