



MINISTÉRIO DA CIÊNCIA, TECNOLOGIA, INOVAÇÕES E COMUNICAÇÕES  
**INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS**

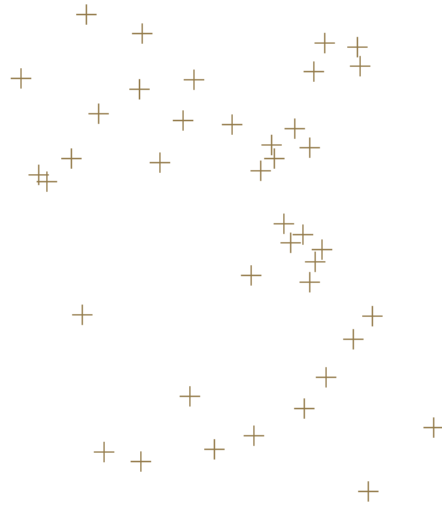
## Laboratório 4.1

Aluno : Guilherme Reis

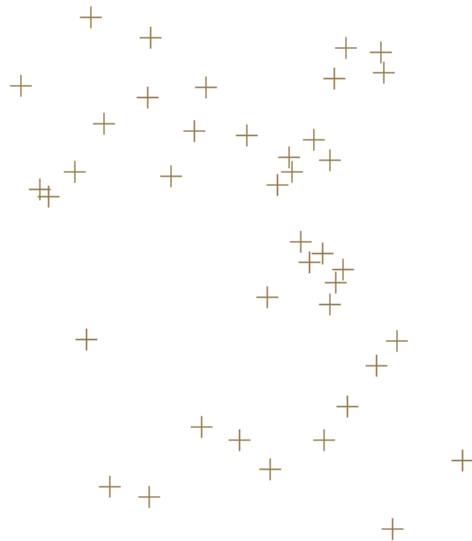
INPE

São José dos Campos 2021

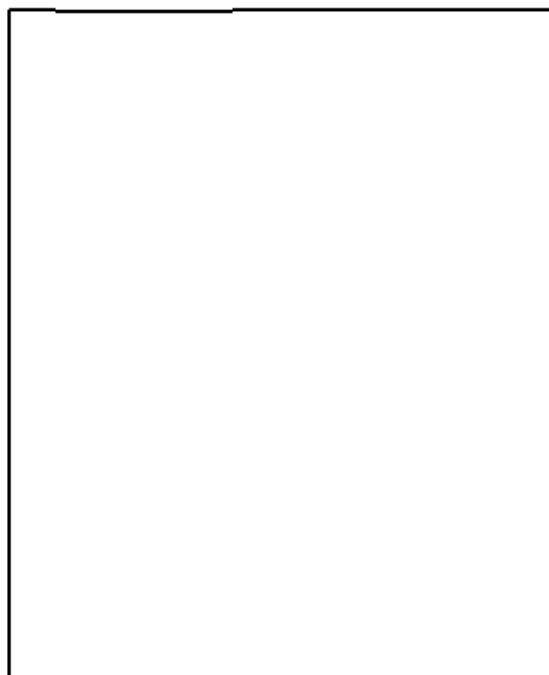
**Importar o arquivo Teores\_Cobalto.spr**



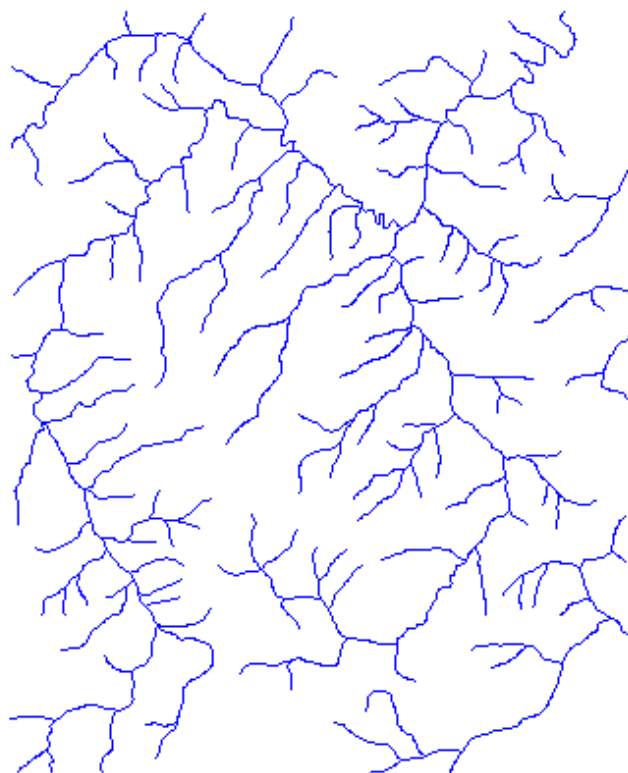
**Importar o arquivo Teores\_Cromo.spr**



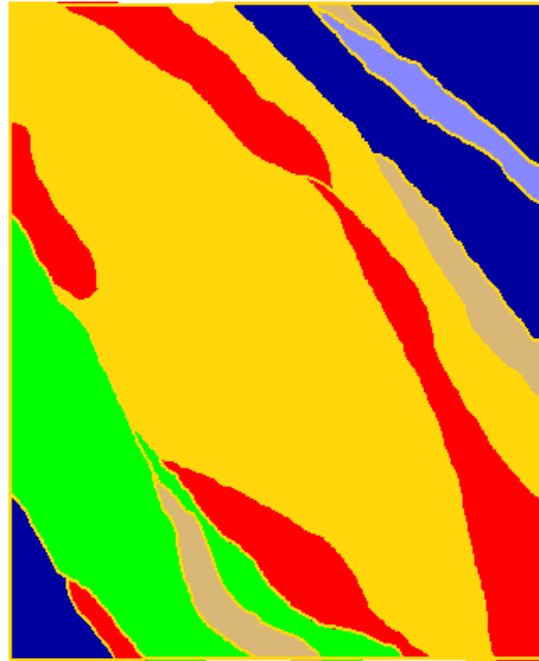
**Importar o arquivo Recorte.spr**



**Importar o arquivo Rede\_Drenagem.spr**



## Importar o arquivo Mapa\_Geologico\_L2D.spr



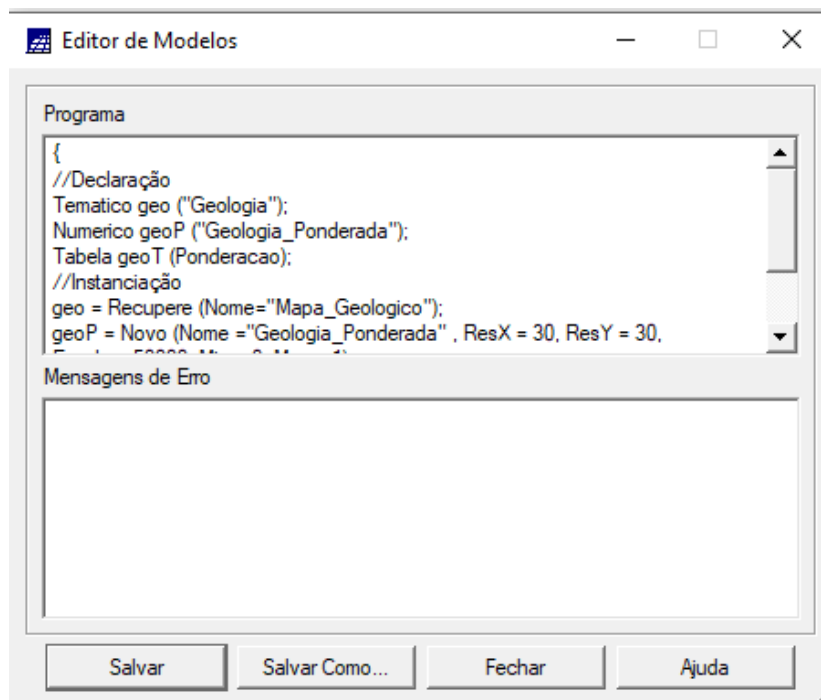
## GERAÇÃO DE GRADE REGULAR PARA O PI TEORES\_CROMO

3.7e-00	5.9e-00	5.6e-00	4.5e-00	5.9e-00	7.2e-00	7.9e-00	5.9e-00	5.6e-00	4.5e-00	+
4.9e-00	4.4e-00	4.0e-00	4.2e-00	5.6e-00	5.6e-00	1.207	5.8e-00	5.1e-00	4.5e-00	+
5.0e-00	5.1e-00	7.3e-00	5.0e-00	5.6e-00	5.9e-00	5.5e-00	5.9e-00	5.3e-00	4.3e-00	+
4.1e-00	5.6e-00	4.8e-00	1.4e-00	4.4e-00	5.1e-00	5.0e-00	4.8e-00	5.0e-00	2.4e-00	+
3.6e-00	5.6e-00	5.6e-00	2.8e-00	5.4e-00	5.2e-00	4.4e-00	4.7e-00	4.9e-00	+	+
2.6e-00	2.5e-00	2.0e-00	2.3e-00	2.4e-00	5.0e-00	5.9e-00	5.5e-00	5.2e-00	4.9e-00	+
1.6e-00	1.4e-00	2.9e-00	2.3e-00	4.4e-00	5.0e-00	7.3e-00	5.8e-00	7.7e-00	5.7e-00	+
4.5e-00	2.4e-00	2.8e-00	5.0e-00	4.2e-00	5.9e-00	1.069	1.051	3.9e-00	5.0e-00	5.2e-00
9.0e-00	2.6e-00	2.6e-00	4.1e-00	5.5e-00	1.228	1.303	1.224	3.3e-00	1.067	3.2e-00
1.1e-00	1.1e-00	2.1e-00	4.0e-00	1.102	1.201	1.595	1.375	1.323	1.237	3.2e-00
7.0e-00	2.2e-00	5.8e-00	5.4e-00	5.1e-00	1.258	1.700	1.780	1.579	1.413	+

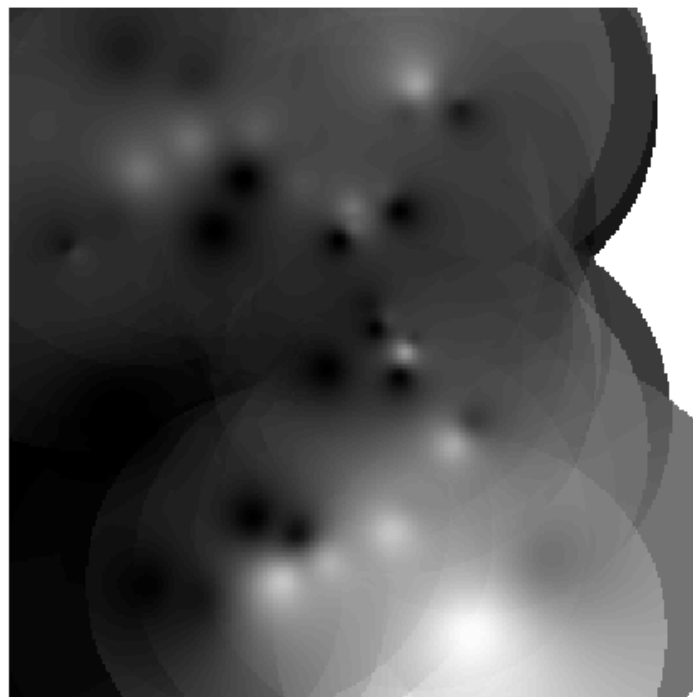
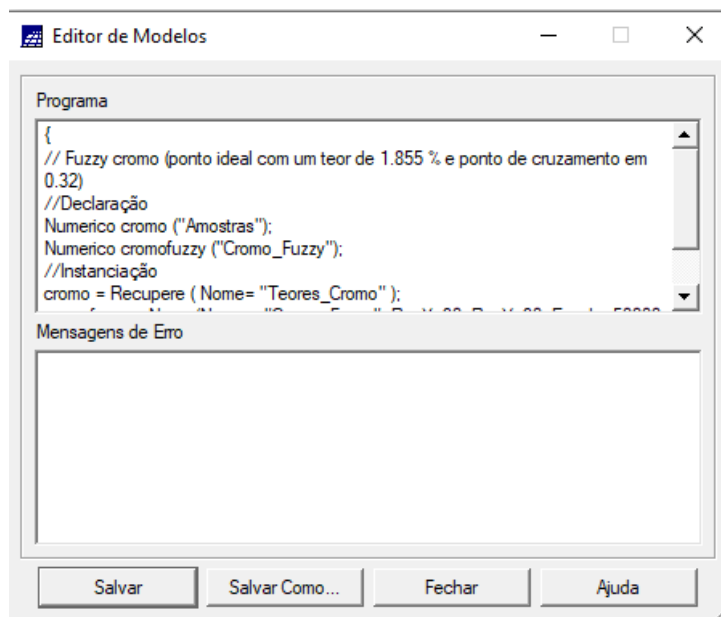
## GERAÇÃO DE GRADE REGULAR PARA O PI: TEORES\_COBALTO

82,5	86,5	89,0	70,6	80,9	87,6	89,2	86,0	83,6	82,9	82,6
53,8	80,9	89,5	70,4	82,4	90,1	110,0	82,8	81,4	81,8	82,0
49,7	54,6	86,2	82,0	81,1	83,3	80,7	74,7	79,4	80,9	80,8
88,2	70,2	86,9	89,9	76,8	91,7	82,4	75,0	78,2	78,1	78,8
71,3	73,2	70,3	89,8	79,7	77,1	83,7	82,9	82,0	82,8	84,3
87,8	87,2	89,7	76,3	90,5	91,0	95,3	89,7	90,1	94,9	95,7
86,7	84,3	84,7	78,1	90,1	95,8	96,9	80,8	94,2	96,4	102,9
87,0	86,8	70,9	79,7	88,2	100,9	104,0	105,4	105,2	106,3	105,0
87,2	86,2	82,5	72,4	95,4	110,3	110,8	114,9	106,2	109,3	109,3
89,4	86,7	81,0	83,1	97,3	107,1	132,3	151,2	119,5	113,8	112,1
72,4	70,5	89,8	79,4	92,8	107,4	128,0	137,3	125,8	118,7	115,8

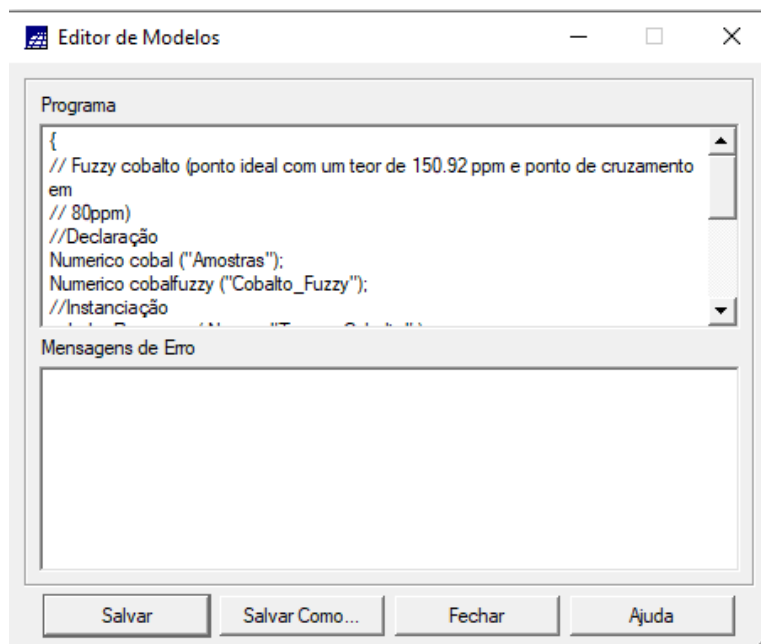
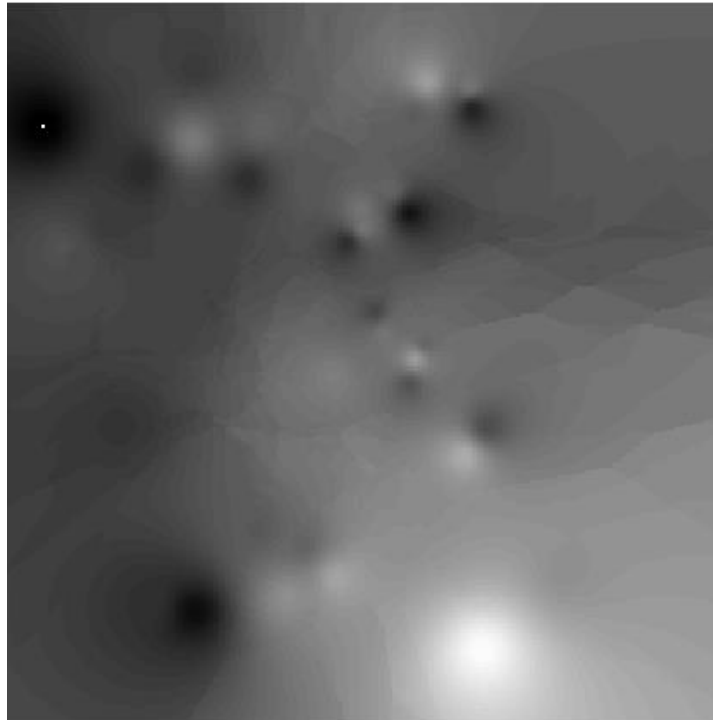
## GERAR MAPA PONDERADO DA GEOLOGIA



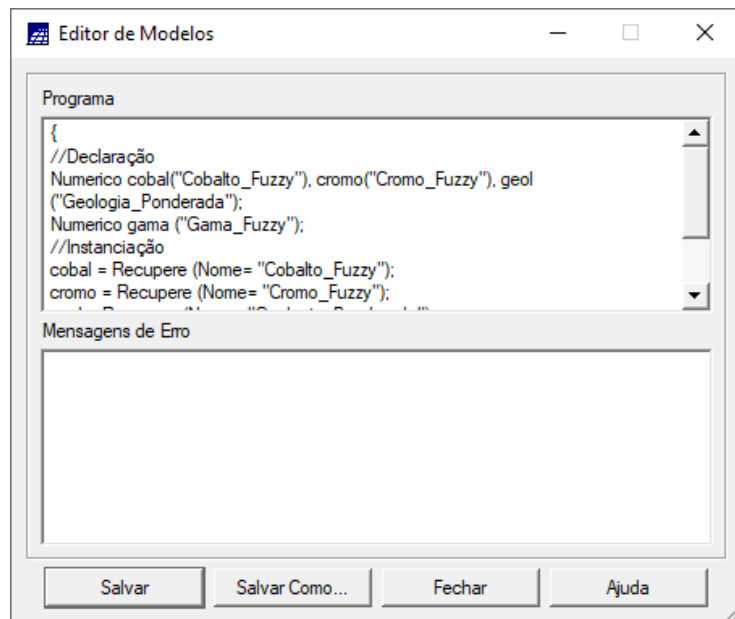
## MAPEAR A GRADE DO PI TEORES\_CROMO UTILIZANDO FUZZY LOGIC.



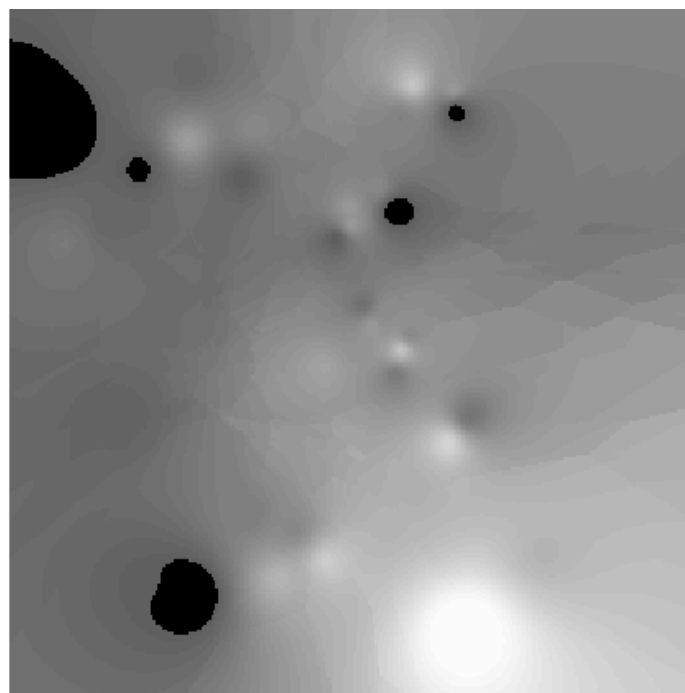
## MAPEAR A GRADE DO PI TEORES\_COBALTO UTILIZANDO FUZZY LOGIC



**CRUZAR OS PI'S CROMO\_FUZZY, COBALTO\_FUZZY E GEOLOGIA\_PONDERADA UTILIZANDO A FUNÇÃO FUZZY GAMA.**

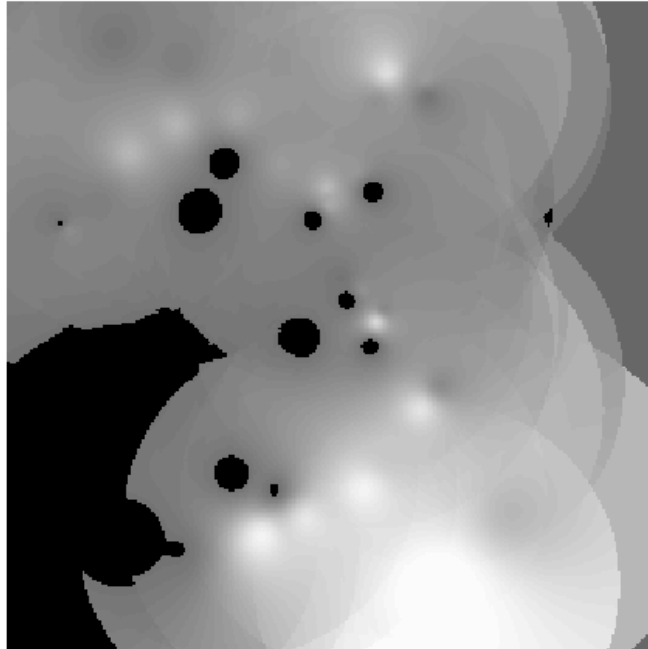


**COBALTO\_FUZZY**





**CROMO\_FUZZY**



**GEOLOGIA\_PONDERADA**



## CRIAR O PI CROMO\_AHP UTILIZANDO AHP (PROCESSO ANALÍTICO HIERÁRQUICO).

Suporte à decisão (AHP)

Categorias

Gama\_Fuzzy\_Litologia    Exibir

Geologia

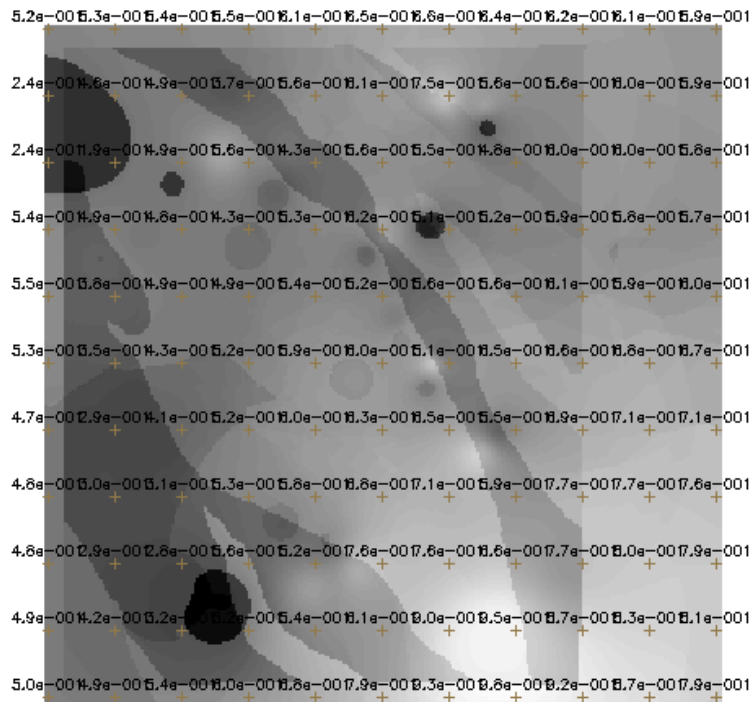
Geologia\_Ponderada

Recorte

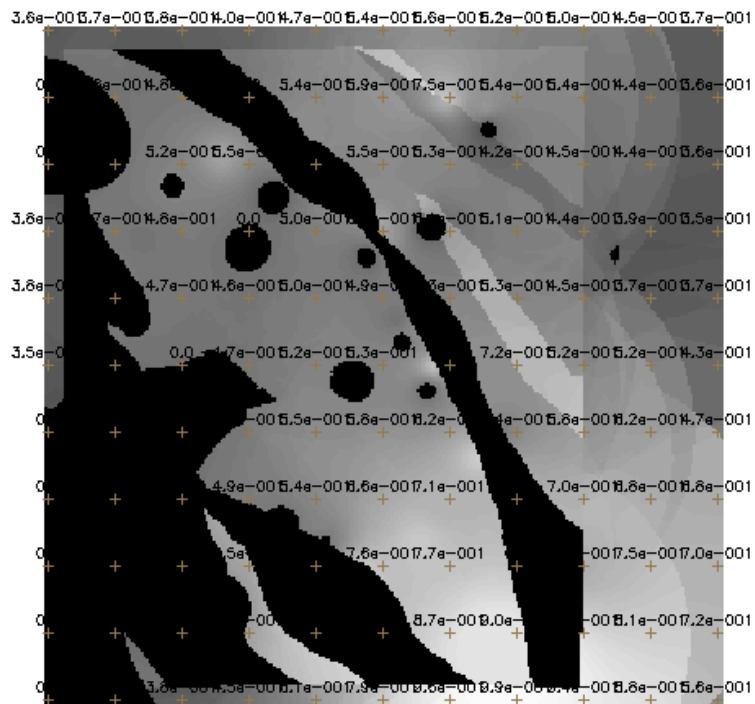
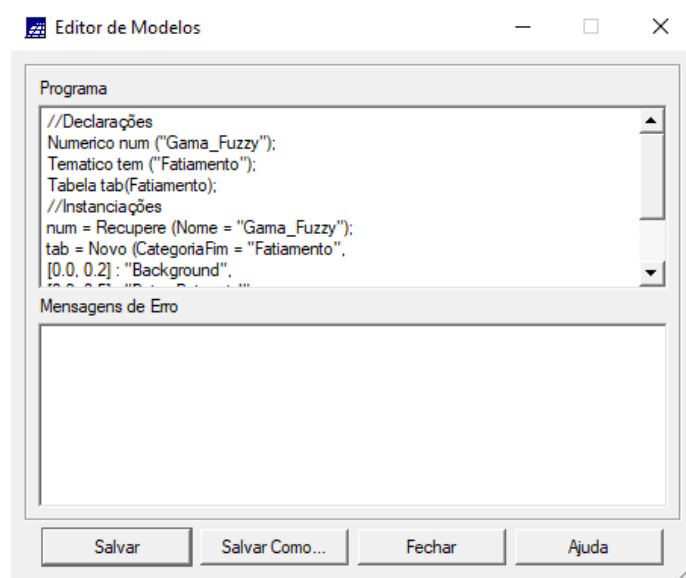
Critério	Peso	Critério	
Cromo_Fuzzy	5	Melhor	Cobalto_Fuzzy <=>
logia_Ponderada	2	Um Pouco Melhor	Cromo_Fuzzy <=>
logia_Ponderada	7	Muito Melhor	Cobalto_Fuzzy <=>
		Igual	<=>
		Igual	<=>
		Igual	<=>
		Igual	<=>
		Igual	<=>
		Igual	<=>
		Igual	<=>

Razão de Consistência 0.846



## REALIZAR O FATIAMENTO NO GEO-CAMPO GAMA\_FUZZY



## REALIZAR O FATIAMENTO NO GEO-CAMPO CROMO\_AHP

