

IP Inversion Challenge

Review by John Paine and Bob Smith

ASEG-PESA-AIG 2016

Workshop W3

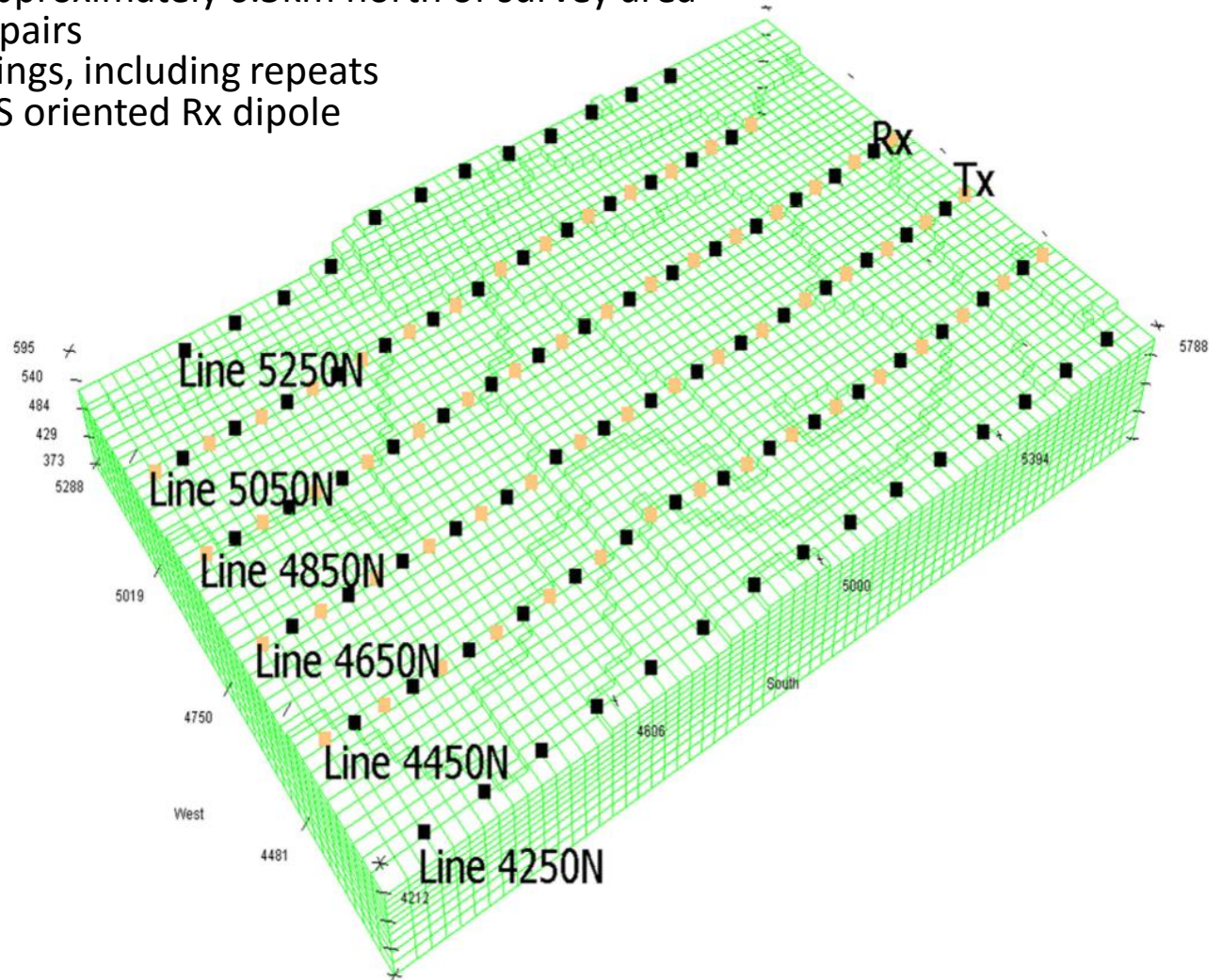
IP Processing and QC

Survey Layout



Data Summary

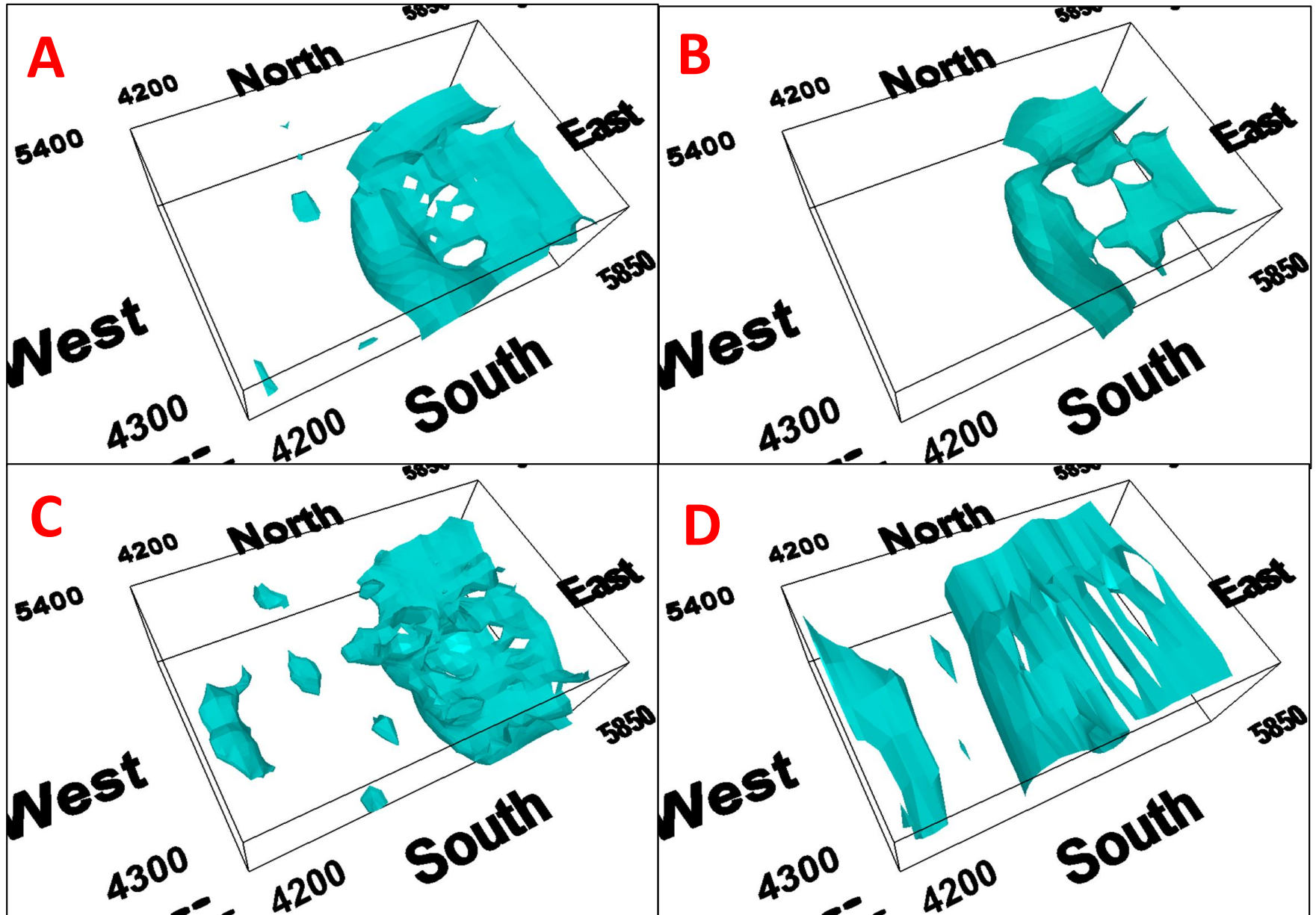
- 147 electrode locations
- Fixed Tx electrode approximately 6.5km north of survey area
- 4,896 distinct Tx/Rx pairs
- Total of 10,510 readings, including repeats
- 666 readings with NS oriented Rx dipole



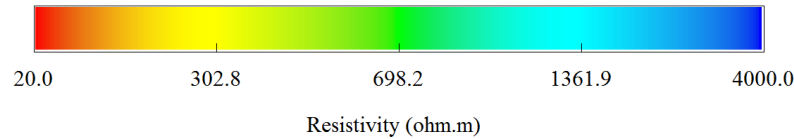
Summary of inversion methods

Inversion	CODE	CELL SIZE (m)					Infinite electrode	# pts used		# its.		Error	
		X	Y	Z#	Zmin	Zmax		RES	IP	RES	IP	RES	IP
A	Loke	50	50	12	25	134	not used	3626	3401	5	5	3.9 rms	0.8% abs.
B	Loke	50	50	11	23	91	not used	3662	3662	5	3	12.2 rms	1.5% abs.
C	UBC	50	50	33	20	20	not used	4728	4435	2	36	Vp 2387 misfit	3.6% misfit
D	Loke	50	200	12	51	283	used	4326	4326	7	4	17 rms	2.0% rms

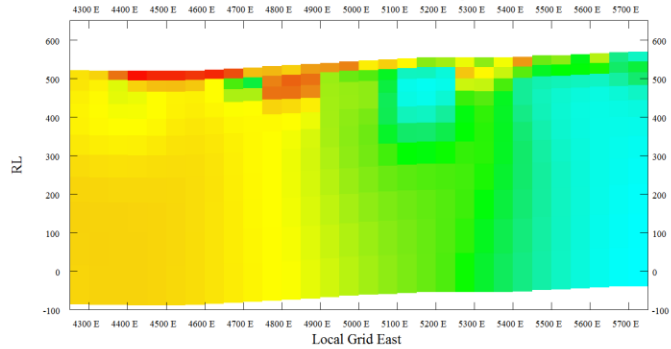
Inversions A – D Resistivity 500 ohm.m



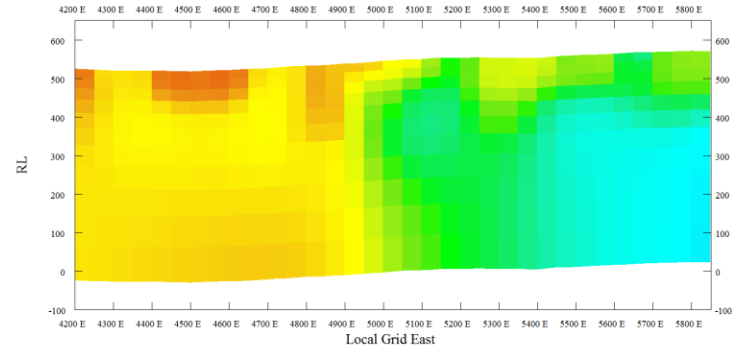
Models A-D Resistivity 4850N



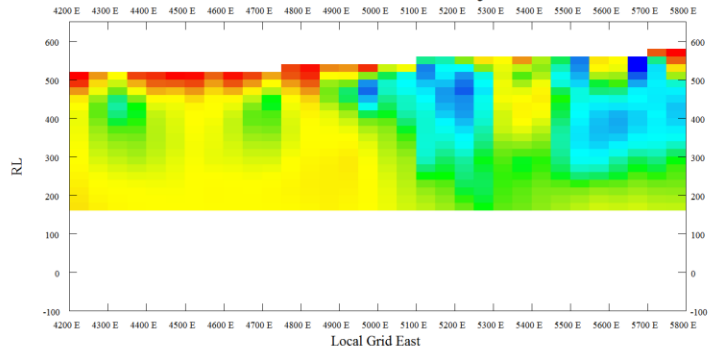
Inversion A Resistivity 4850N



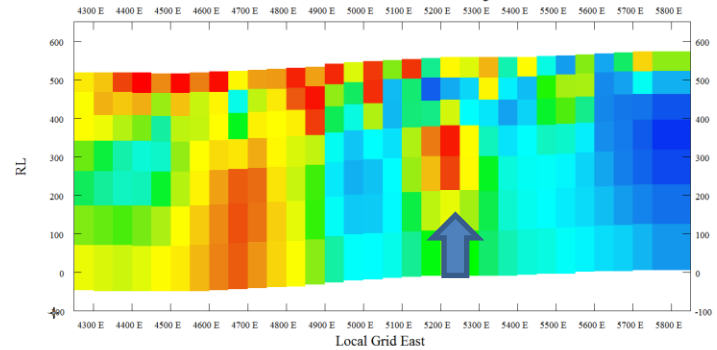
Inversion B Resistivity 4850N



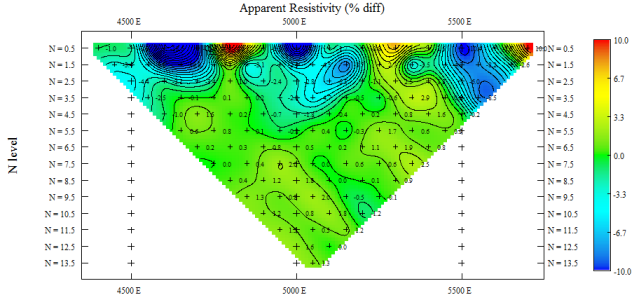
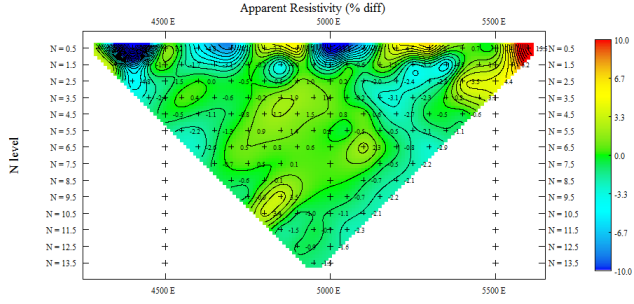
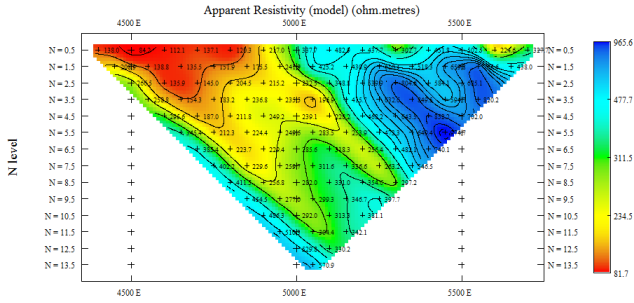
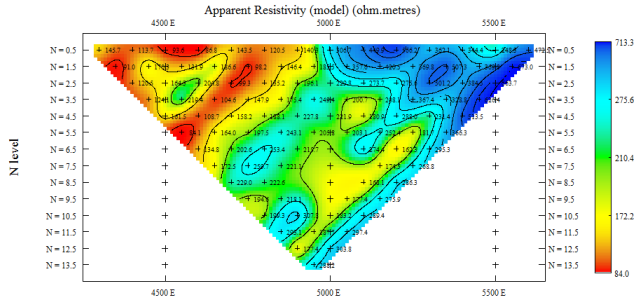
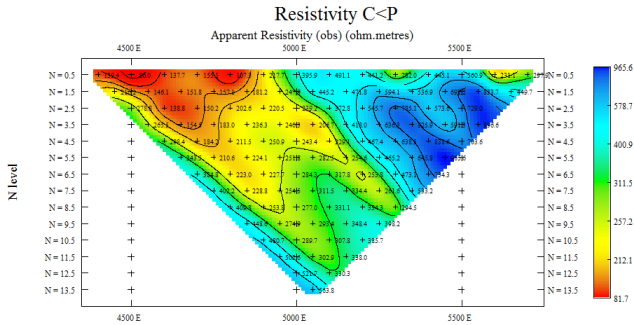
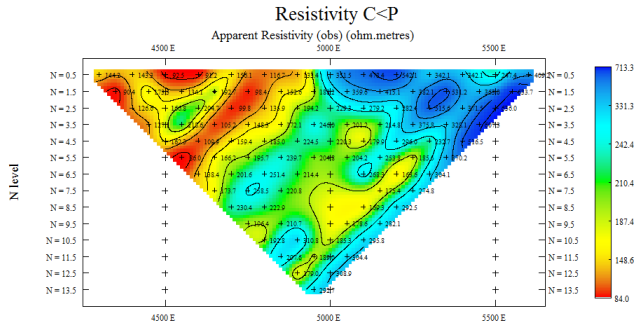
Inversion C Resistivity 4850N



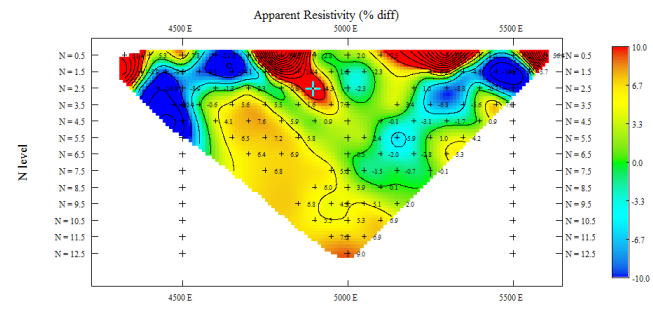
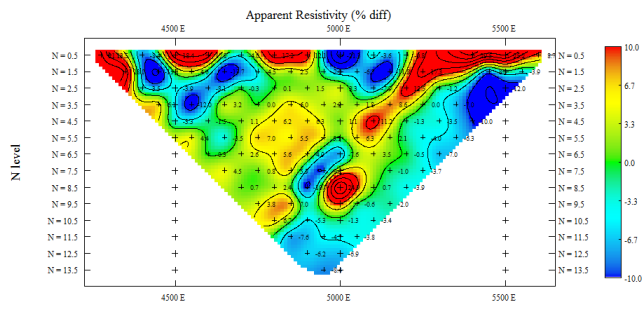
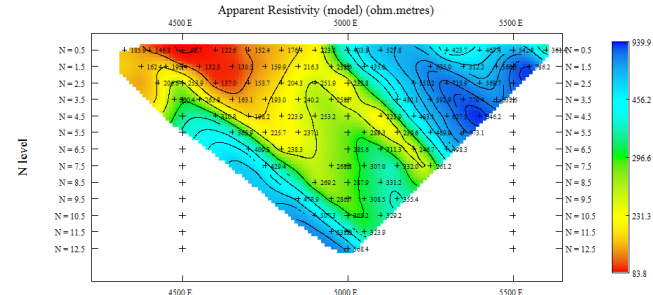
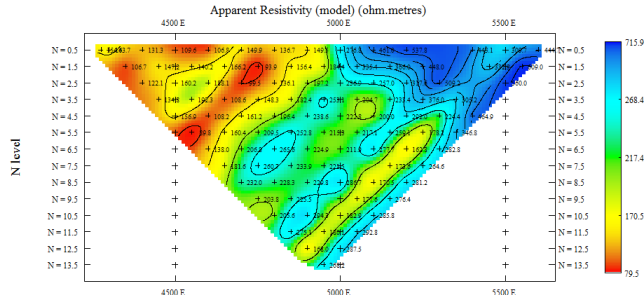
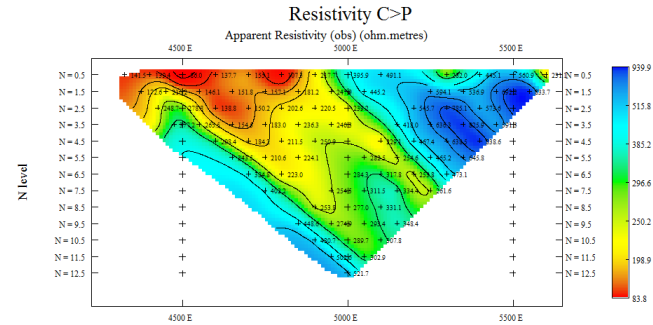
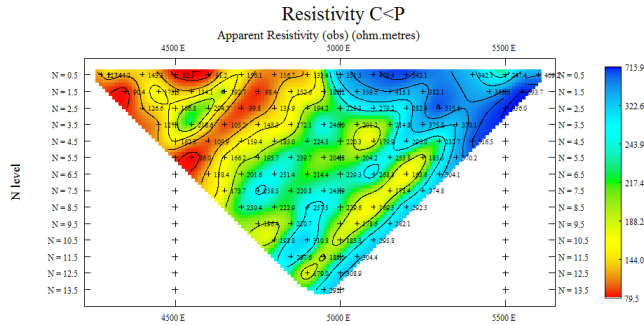
Inversion D Resistivity 4850N



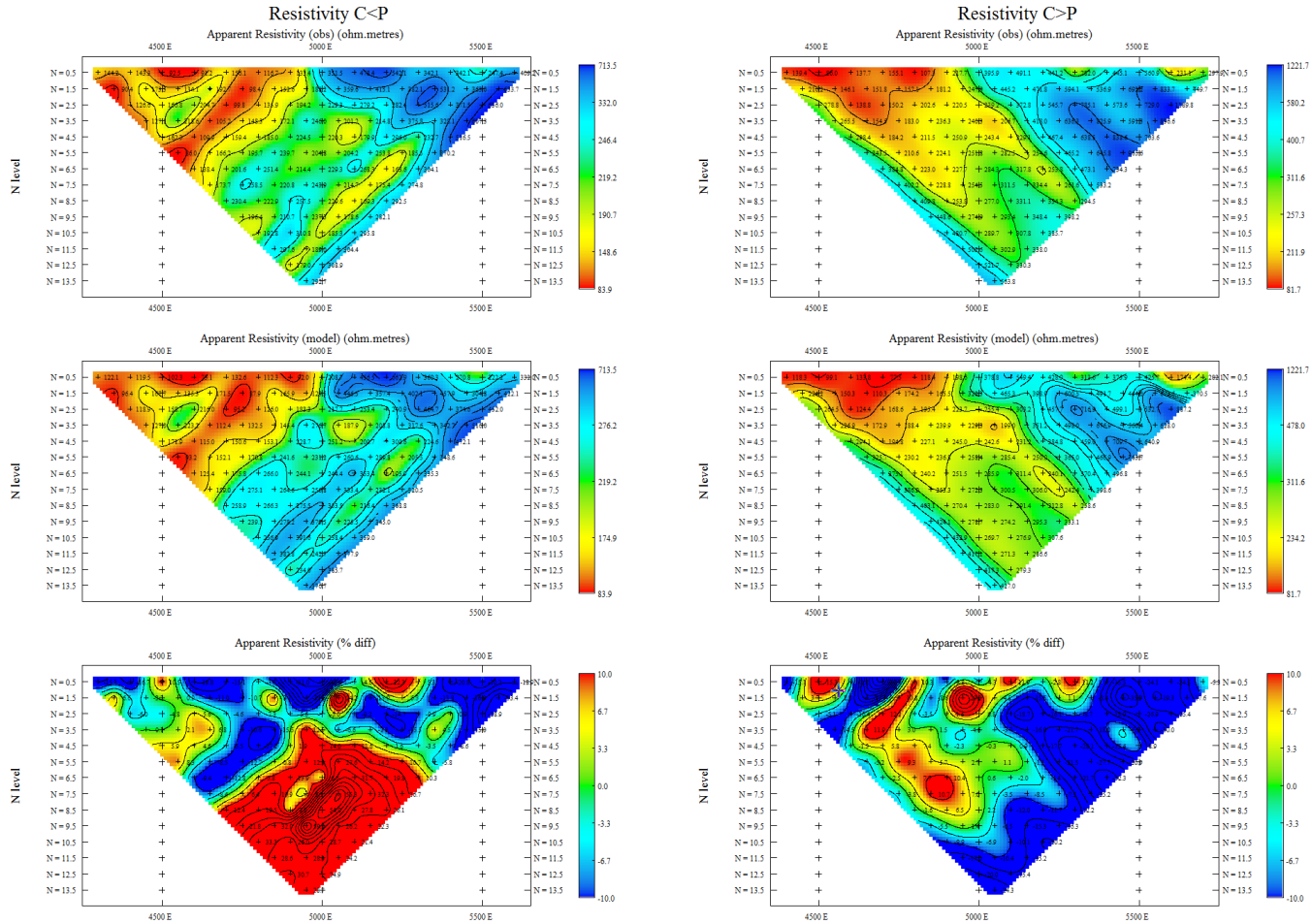
Inversion A Resistivity: Rx/Tx:4850N



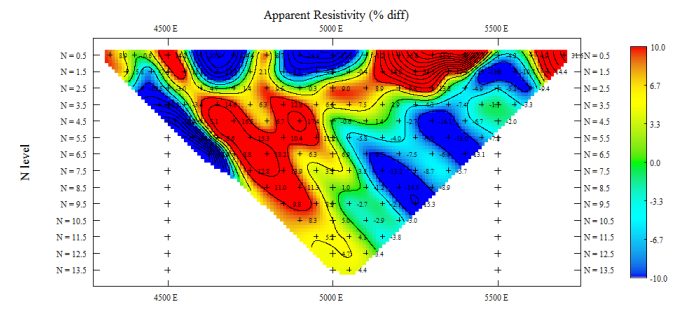
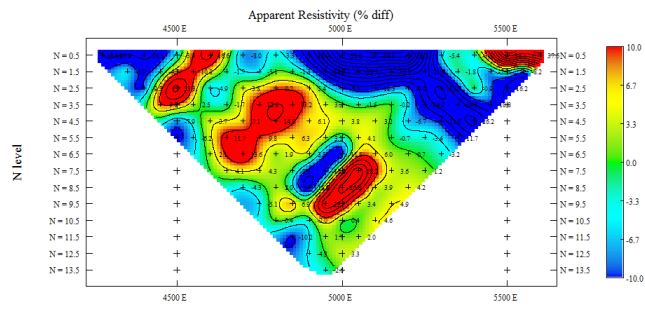
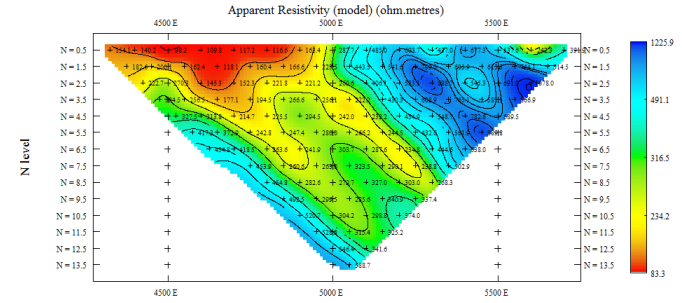
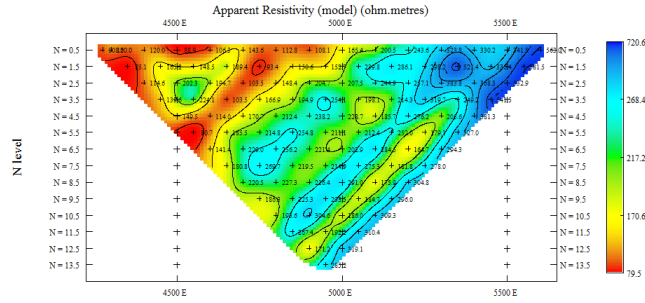
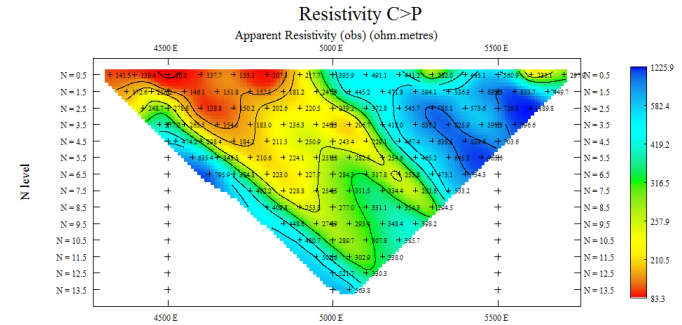
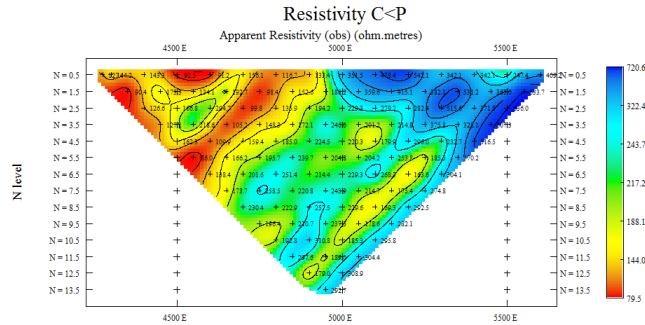
Inversion B Resistivity: Rx/Tx:4850N



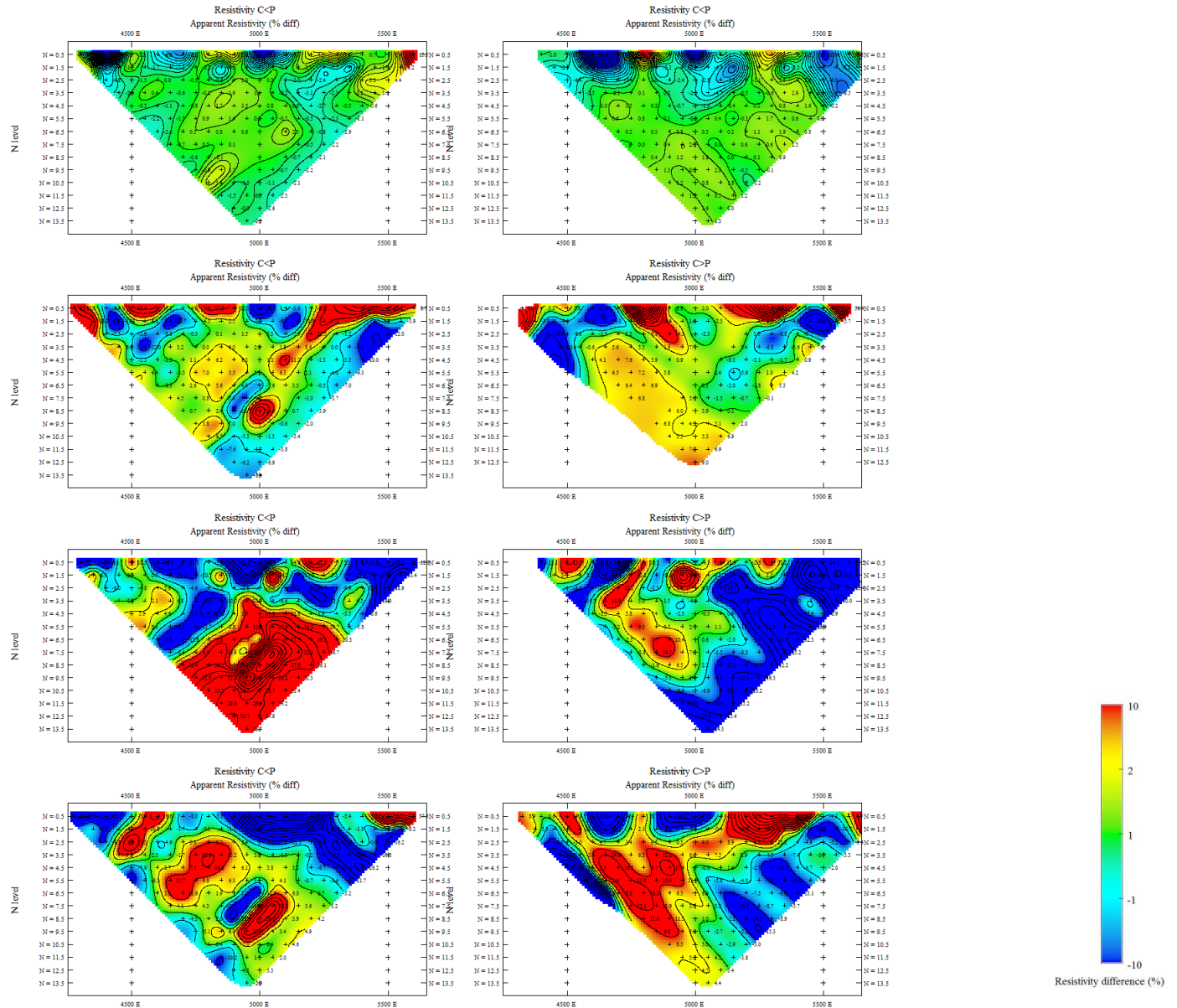
Inversion C Resistivity: Rx/Tx:4850N



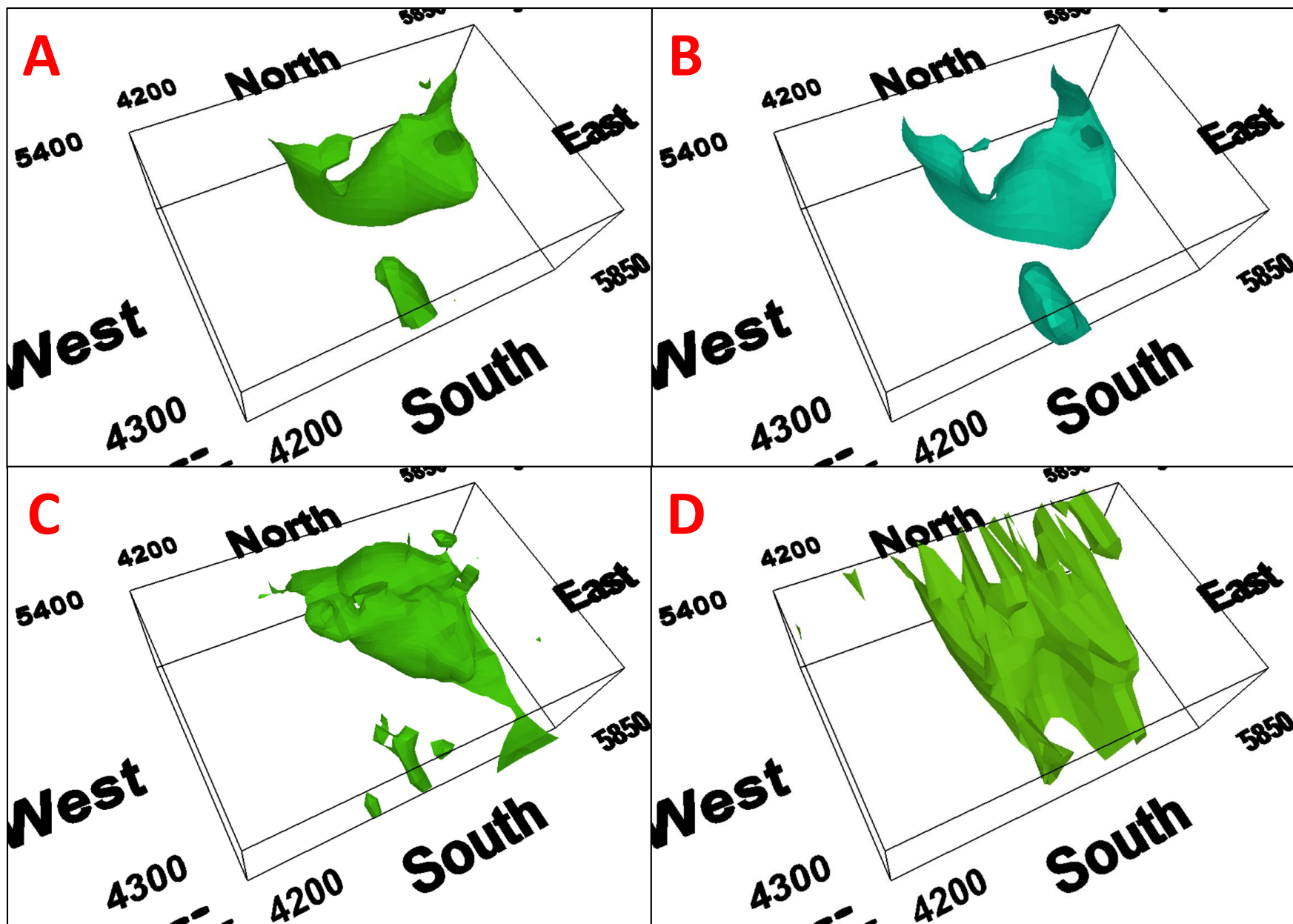
Inversion D Resistivity: Rx/Tx:4850N



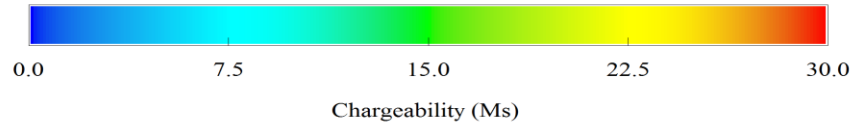
A-D Resistivity Error %: Rx/Tx:4850N



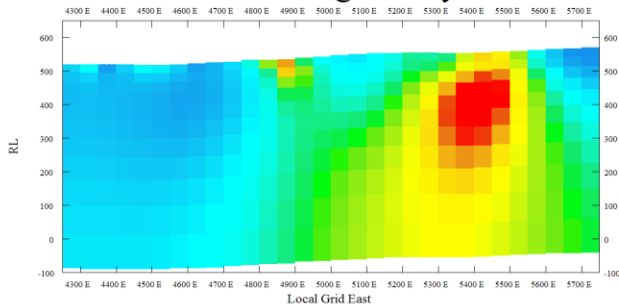
Inversions A – D Chargeability 20 Ms



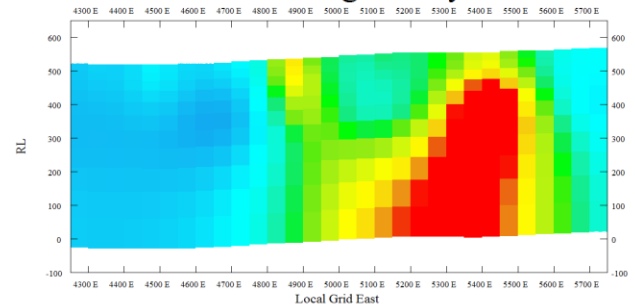
Models A-D Chargeability 4850N



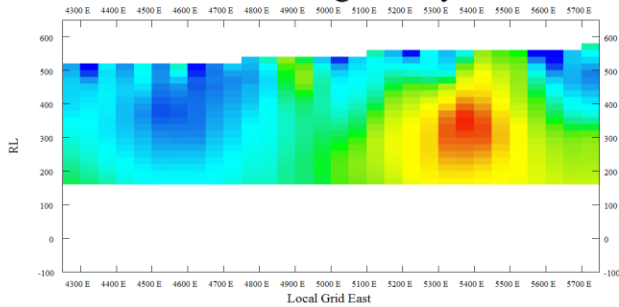
Inversion A Chargeability 4850N



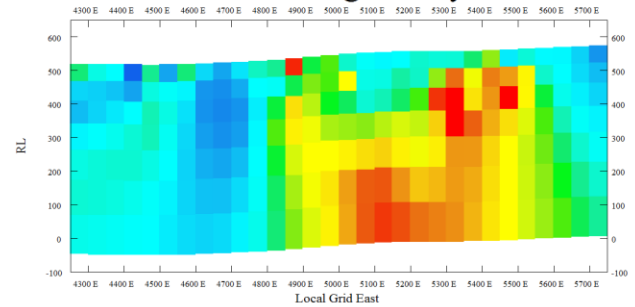
Inversion B Chargeability 4850N



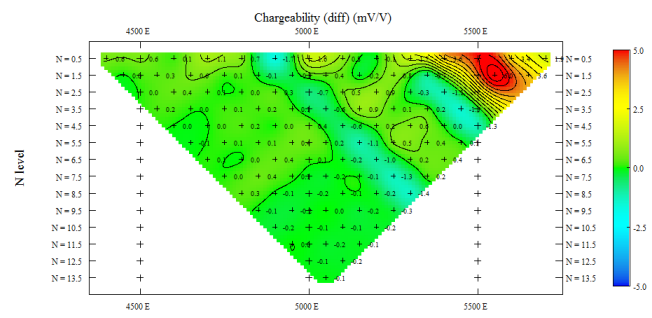
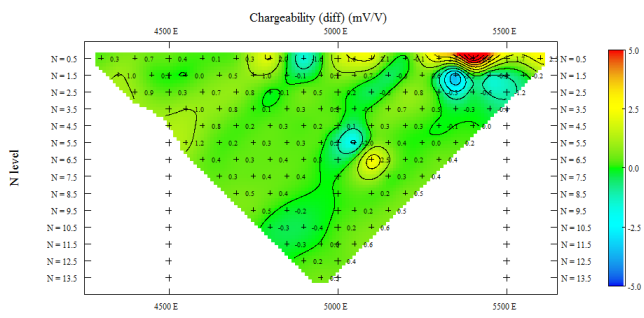
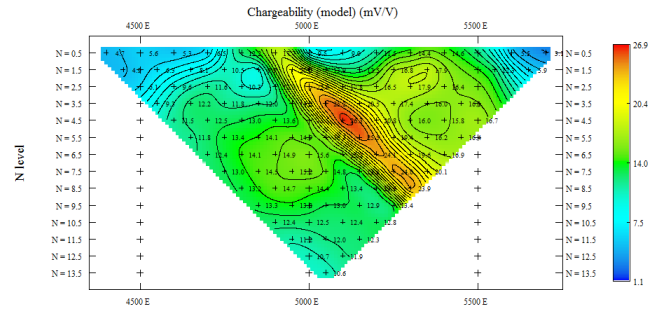
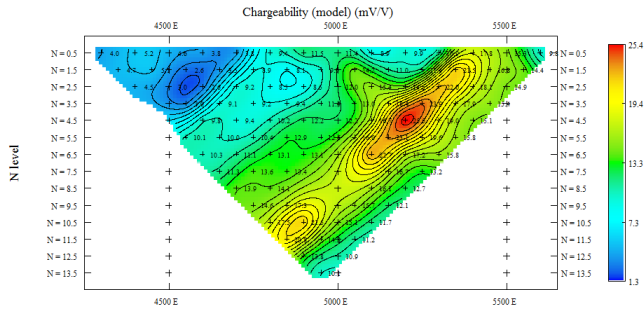
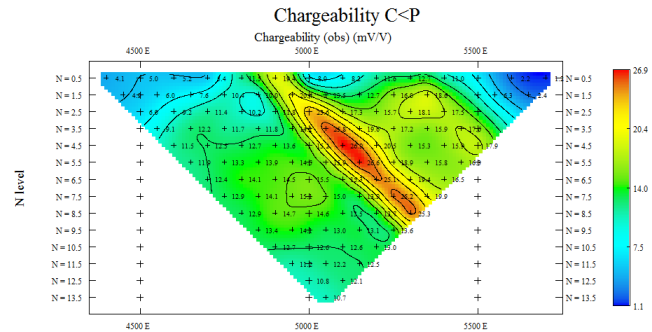
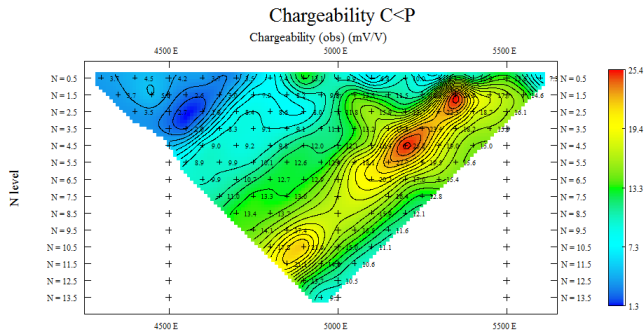
Inversion C Chargeability 4850N



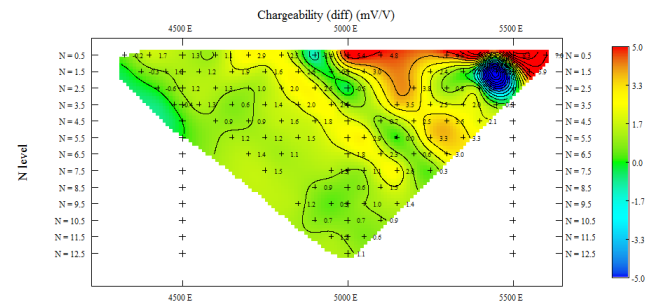
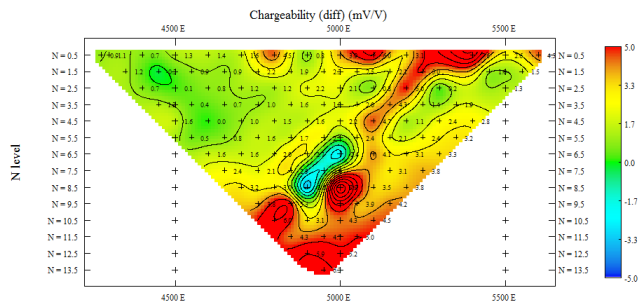
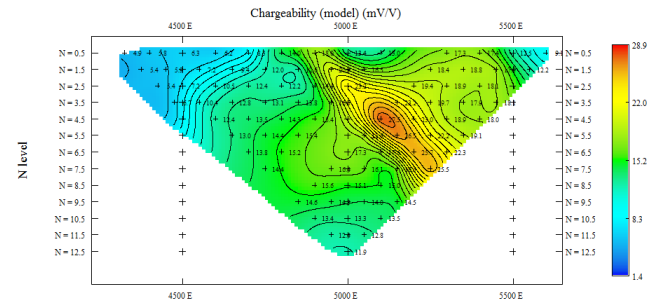
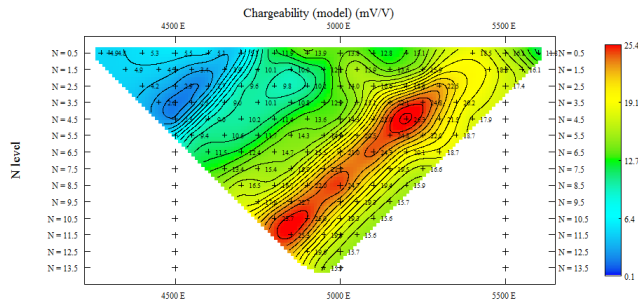
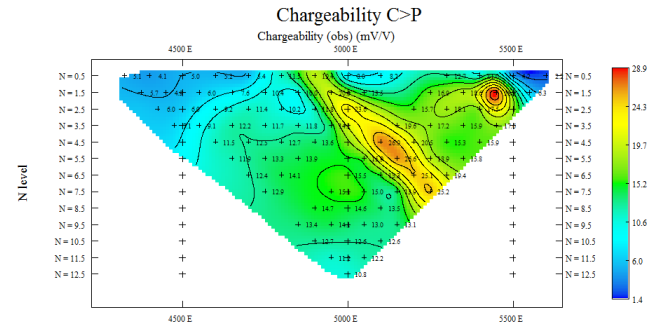
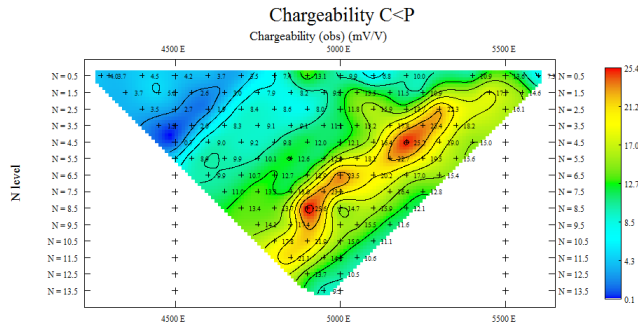
Inversion D Chargeability 4850N



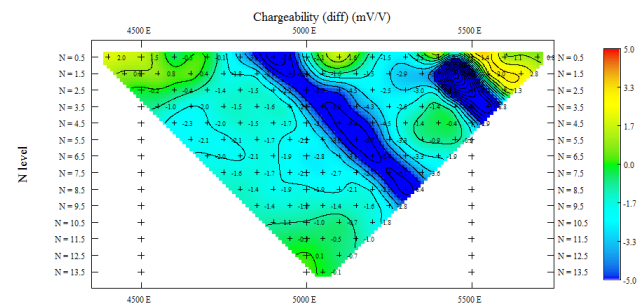
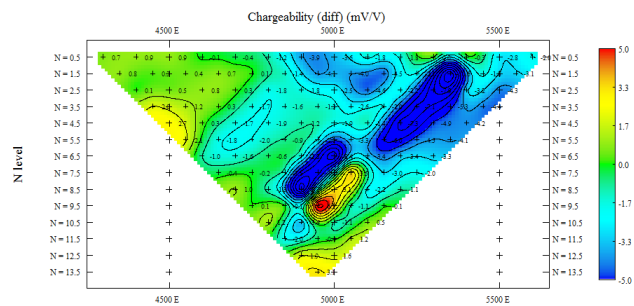
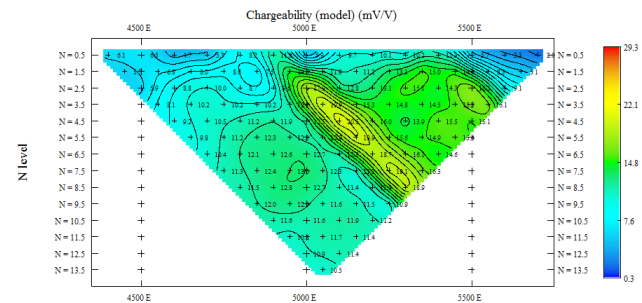
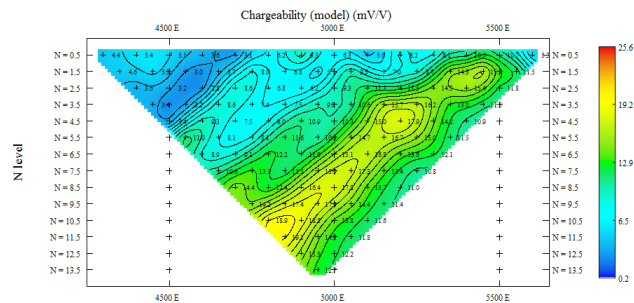
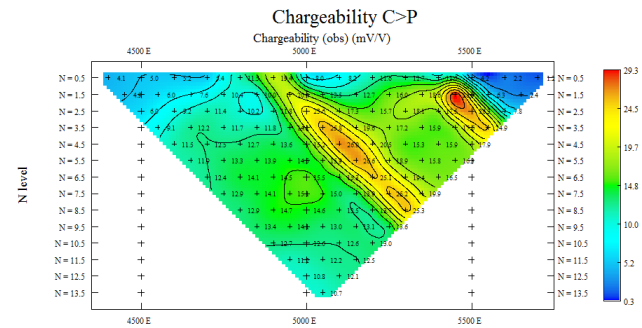
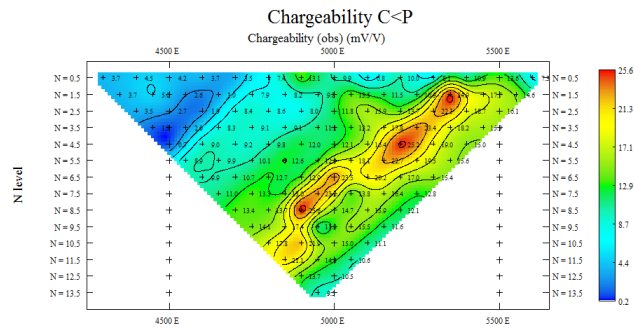
Inversion A Chargeability: Rx/Tx:4850N



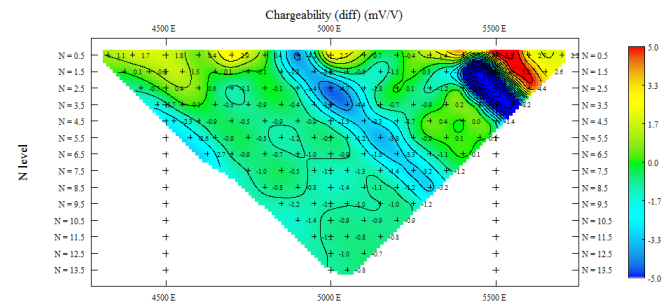
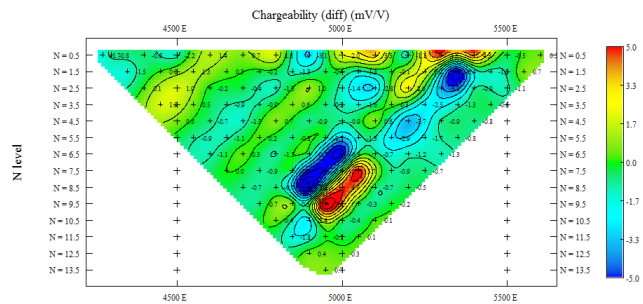
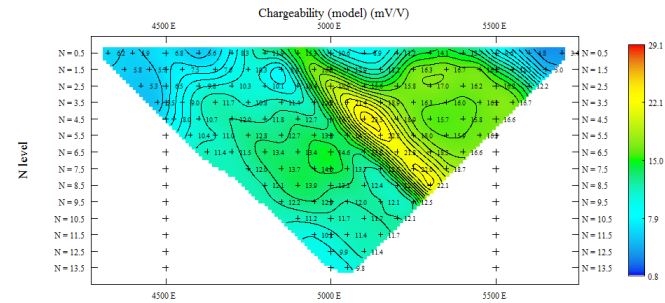
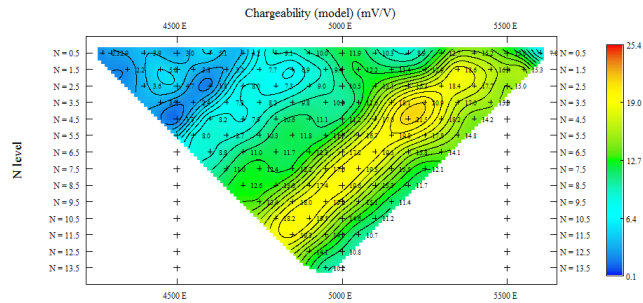
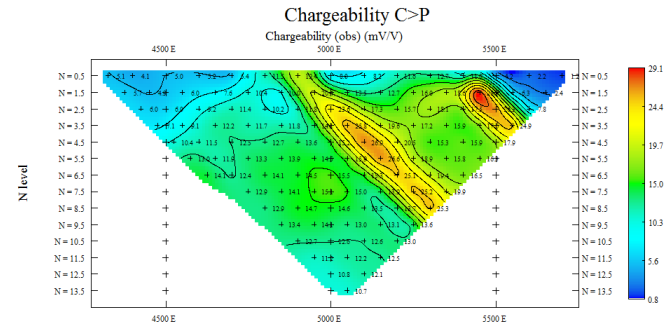
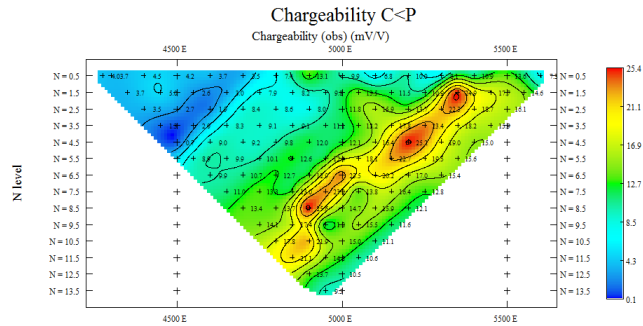
Inversion B Chargeability: Rx/Tx:4850N



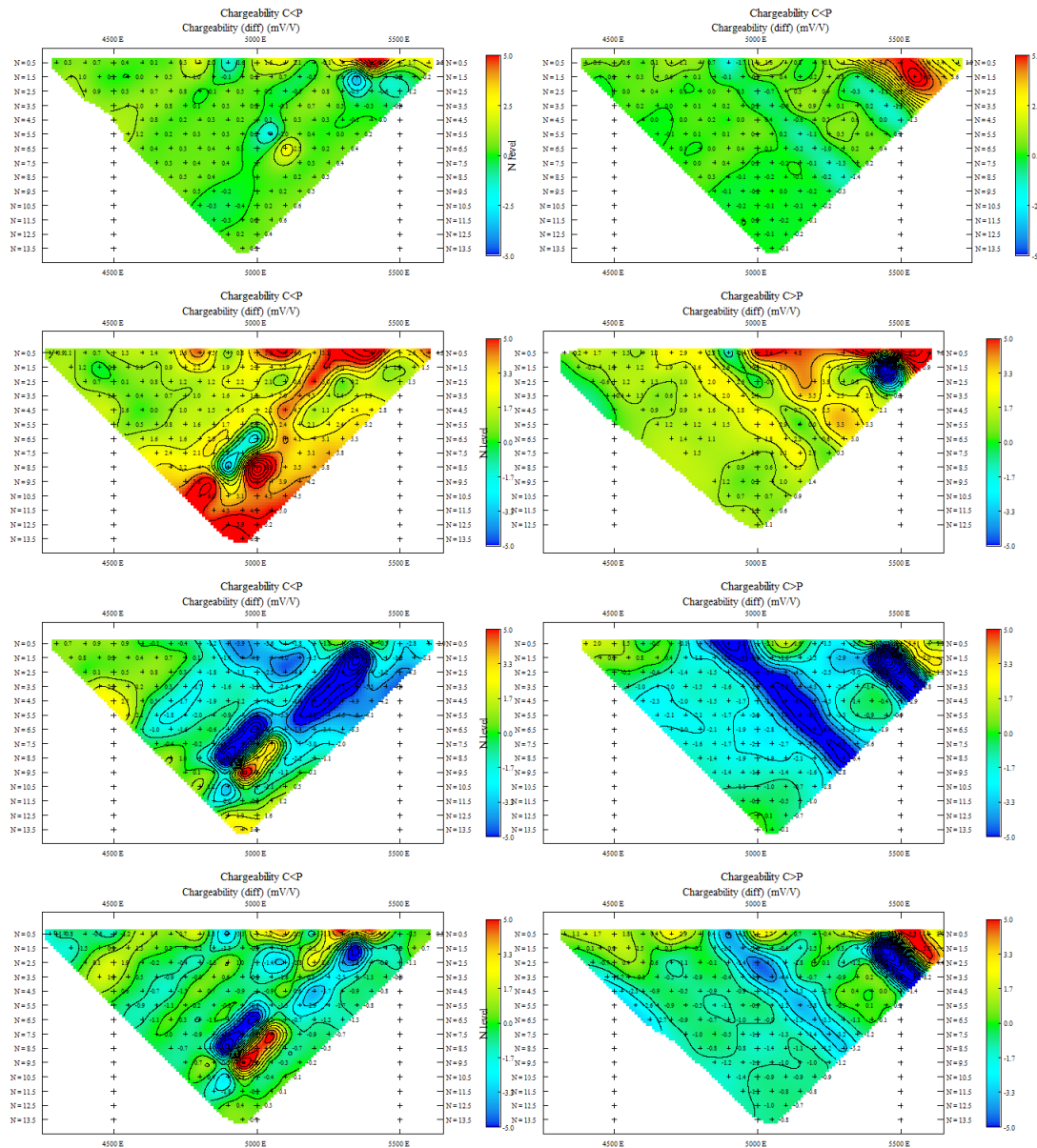
Inversion C Chargeability: Rx/Tx:4850N



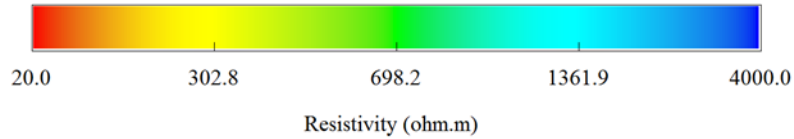
Inversion D Chargeability: Rx/Tx:4850N



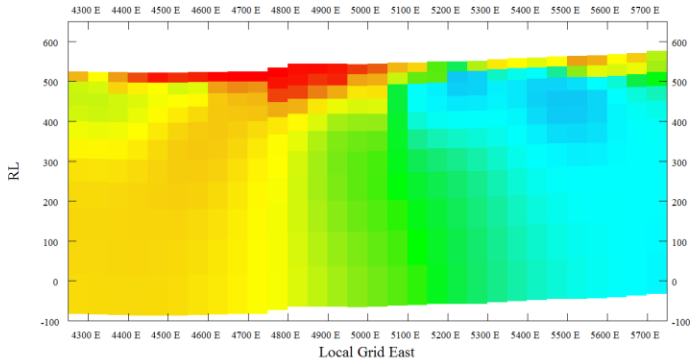
A-D IP Error: Rx/Tx:4850N



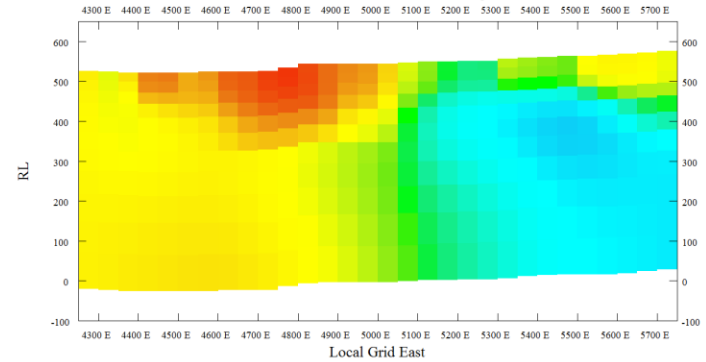
Models A-D Resistivity 4650N



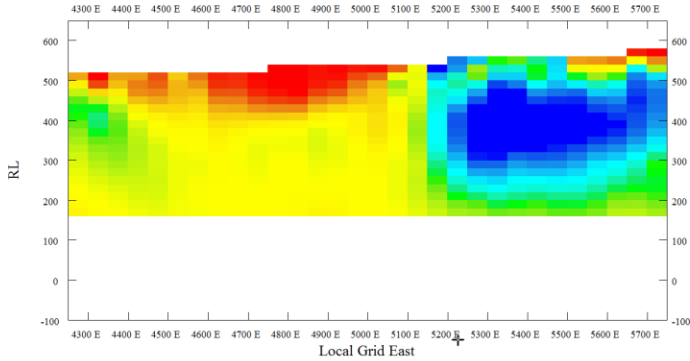
Inversion A Resistivity 4650N



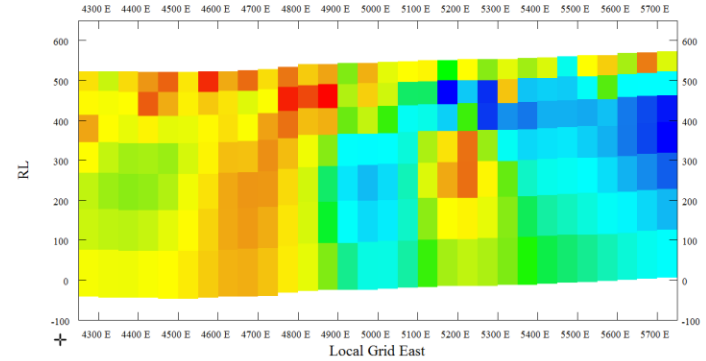
Inversion B Resistivity 4650N



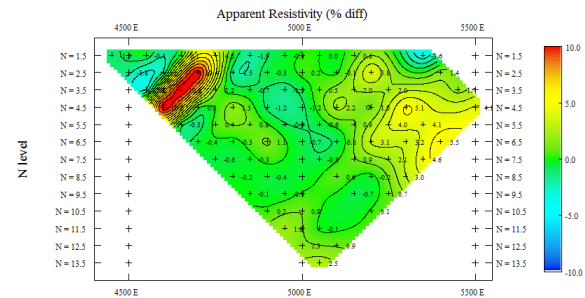
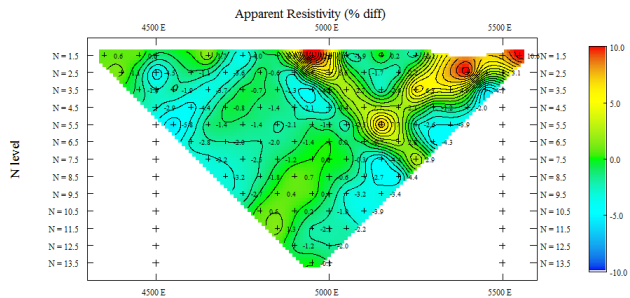
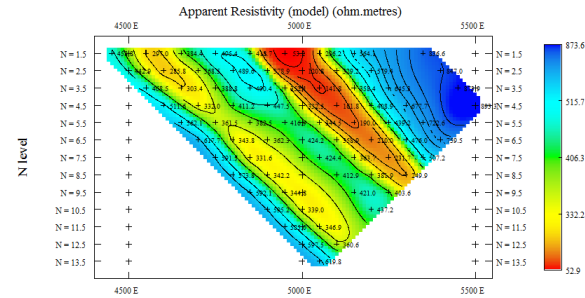
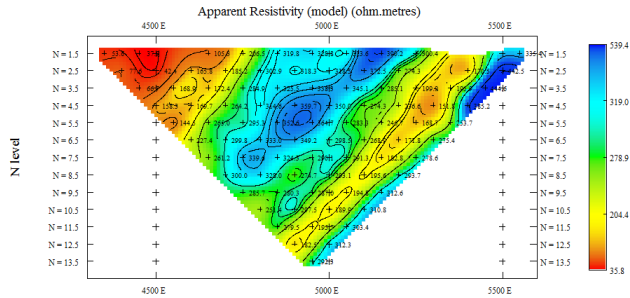
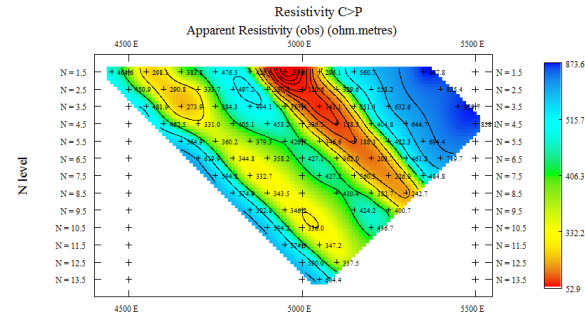
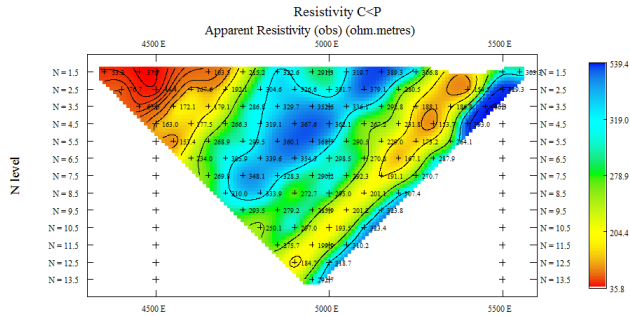
Inversion C Resistivity 4650N



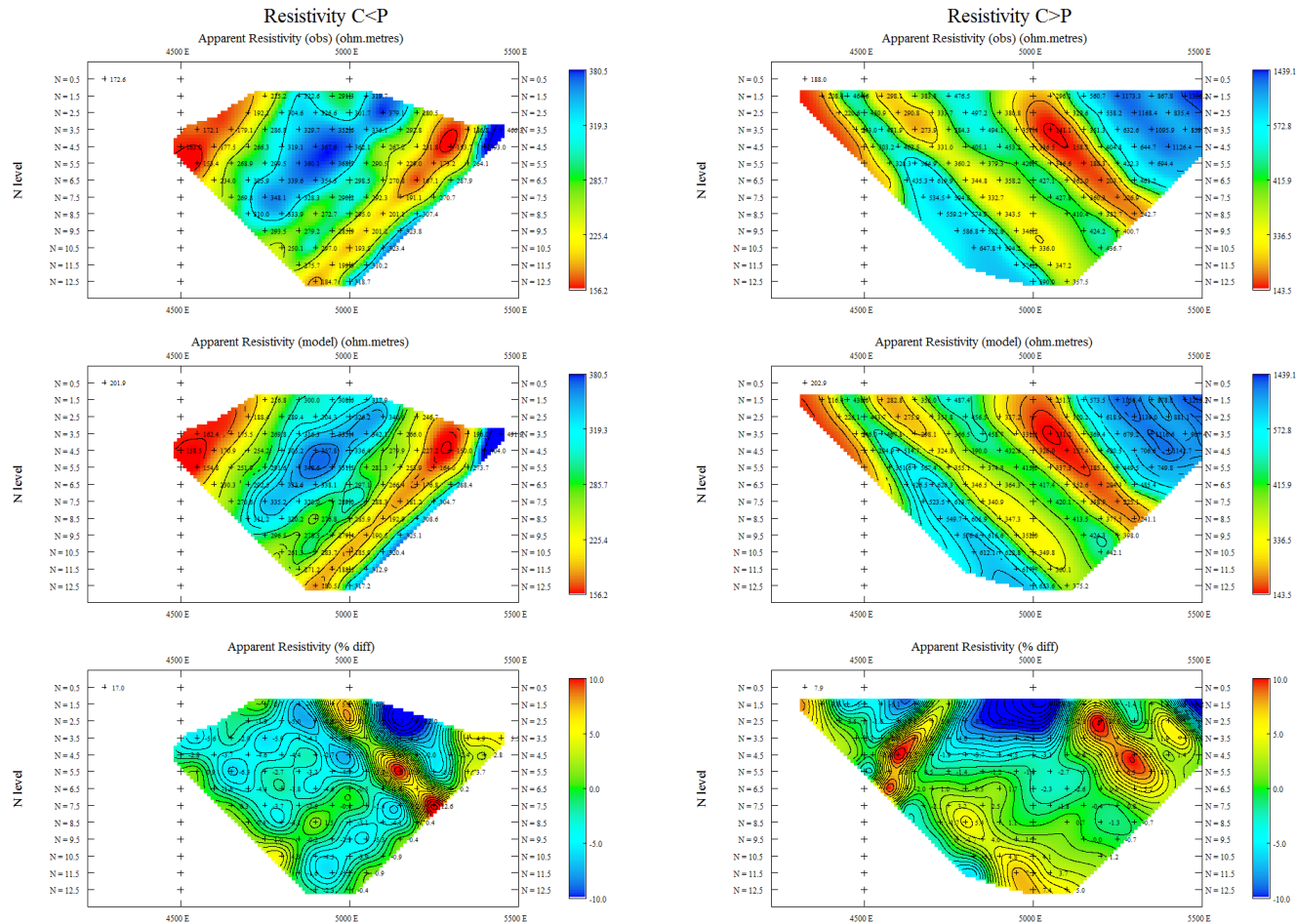
Inversion D Resistivity 4650N



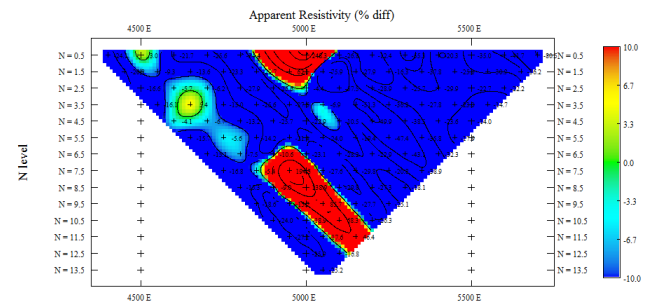
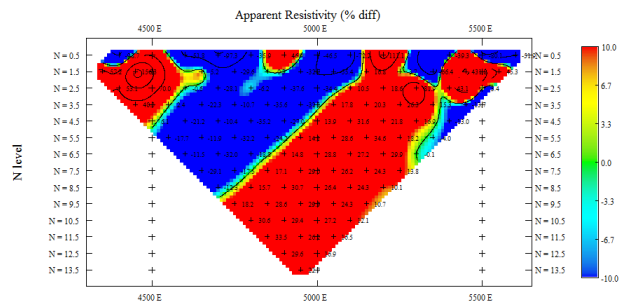
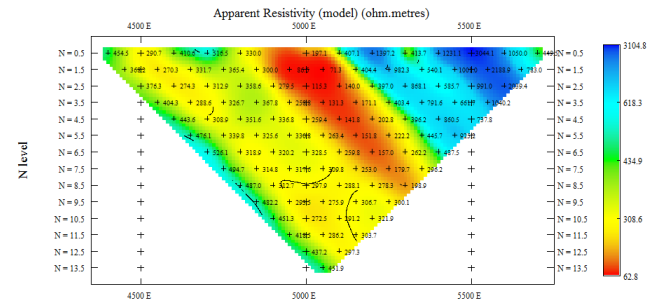
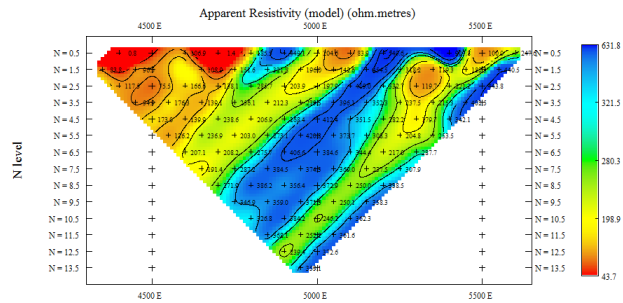
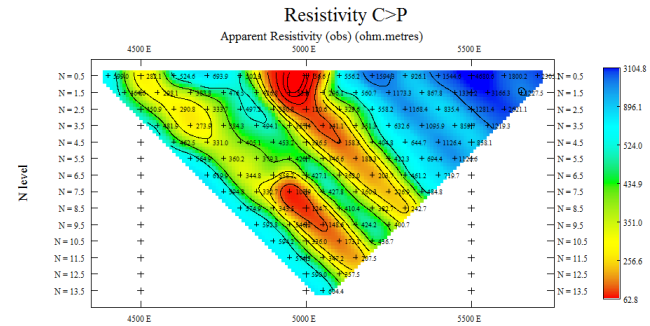
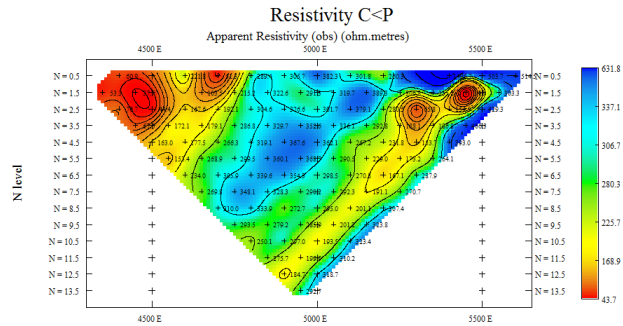
Inversion A Resistivity: Rx/Tx:4850N 4450N



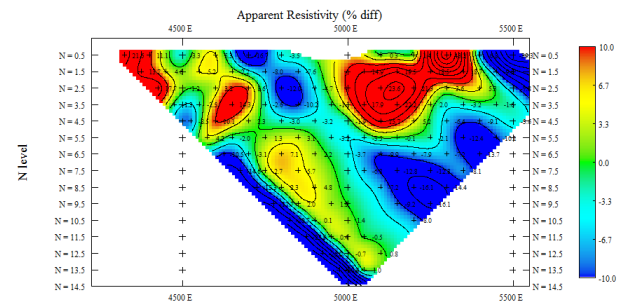
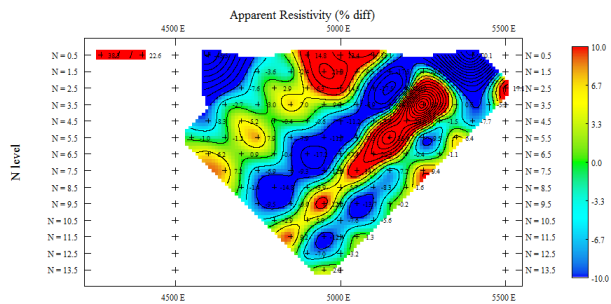
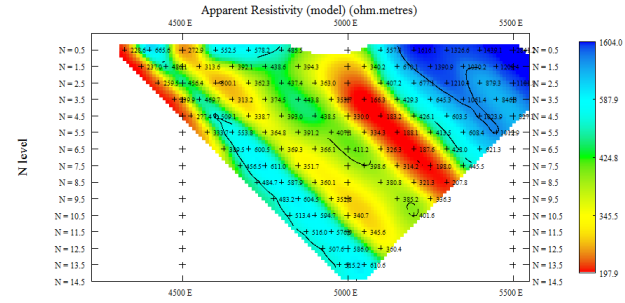
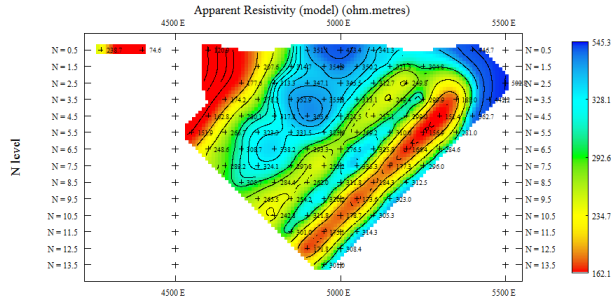
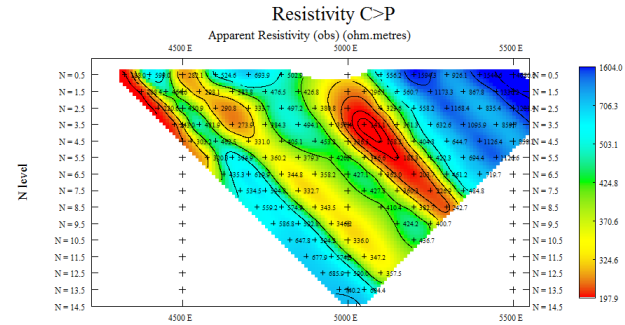
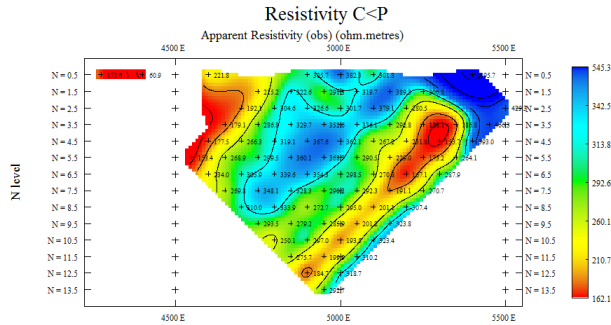
Inversion B Resistivity: Rx/Tx:4850N 4450N



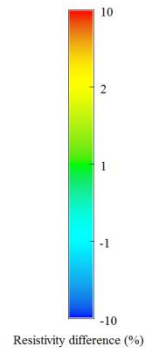
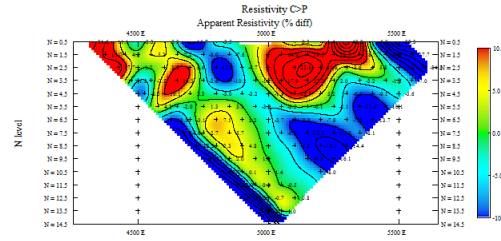
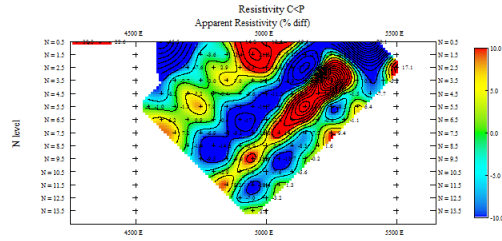
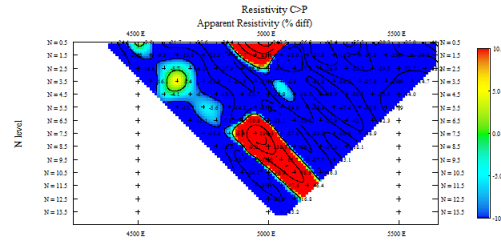
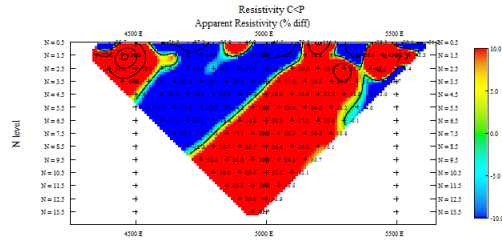
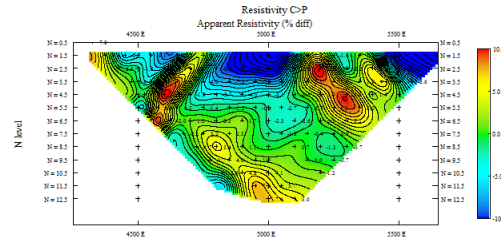
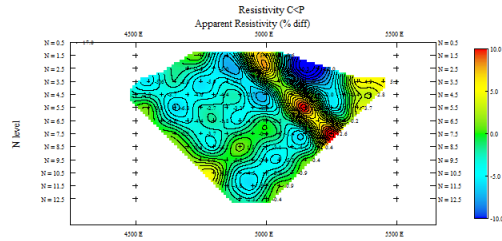
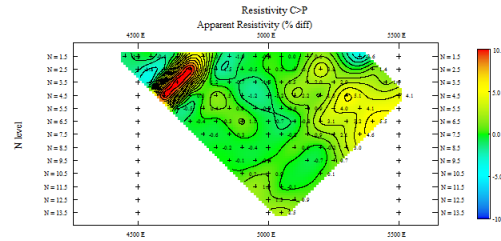
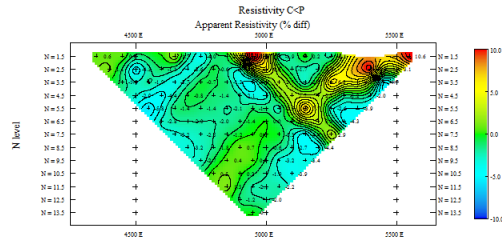
Inversion C Resistivity: Rx/Tx:4850N 4450N



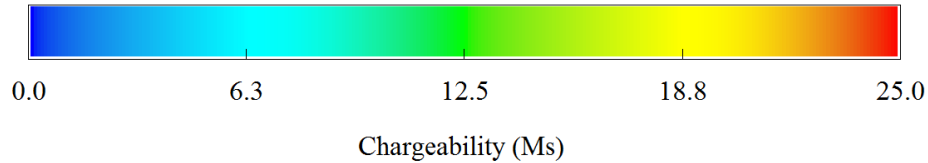
Inversion D Resistivity: Rx/Tx:4850N 4450N



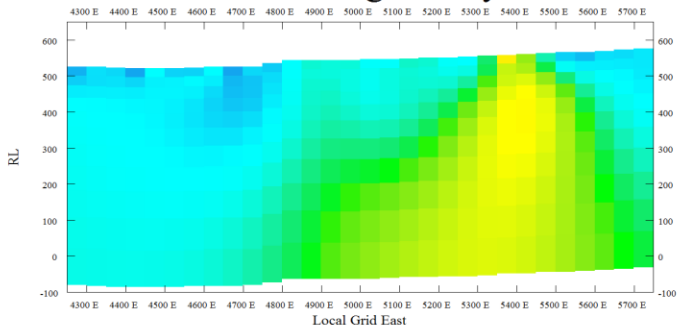
A-D Resistivity Error %: Rx/Tx:4850N/4450N



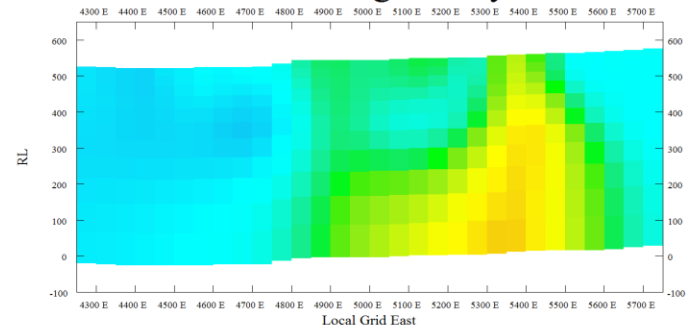
Models A-D Chargeability 4650N



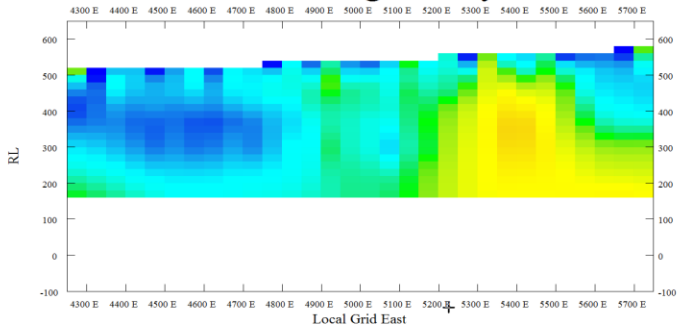
Inversion A Chargeability 4650N



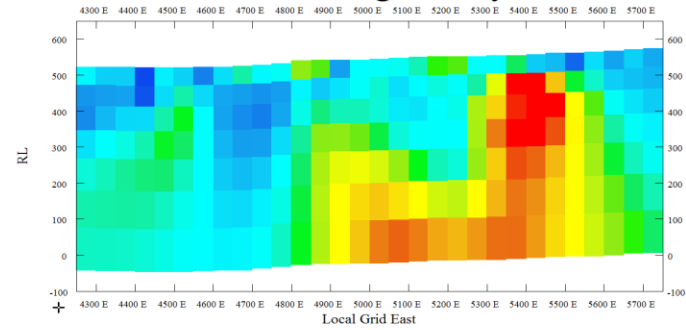
Inversion B Chargeability 4650N



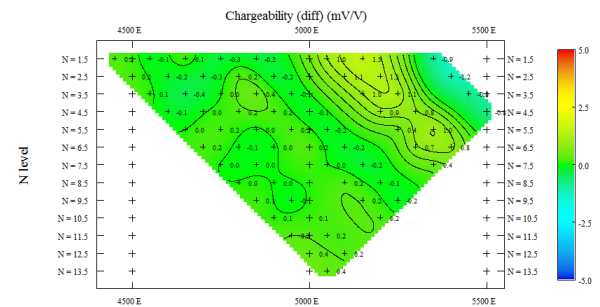
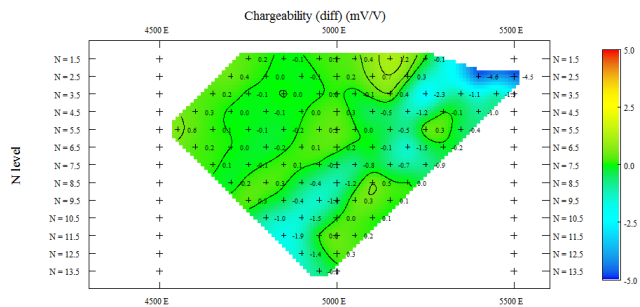
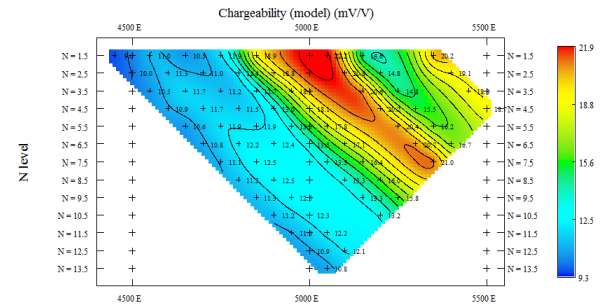
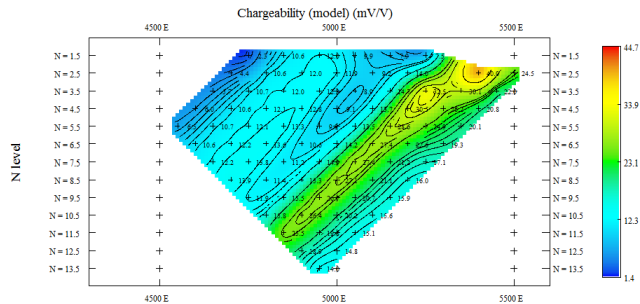
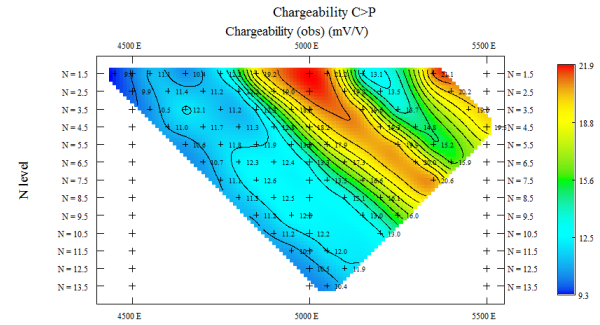
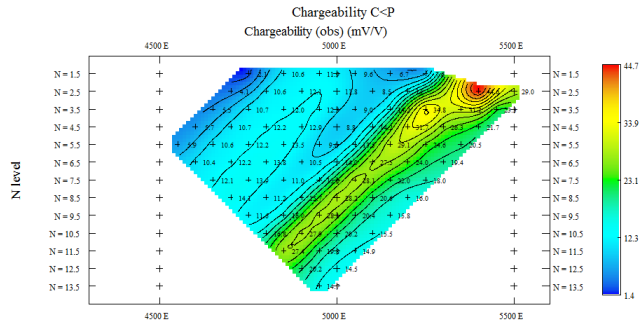
Inversion C Chargeability 4650N



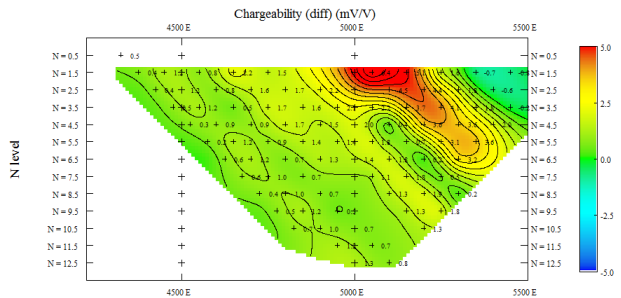
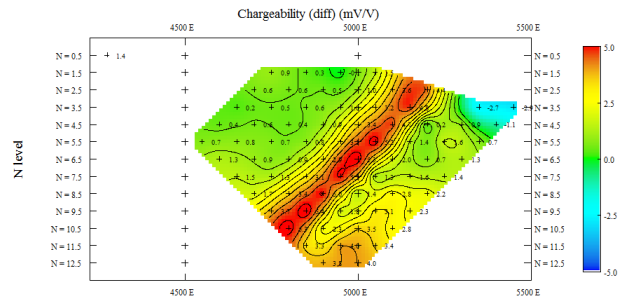
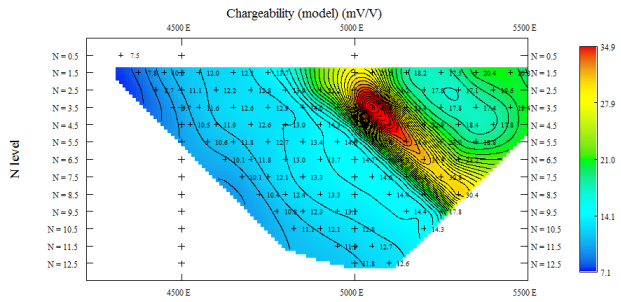
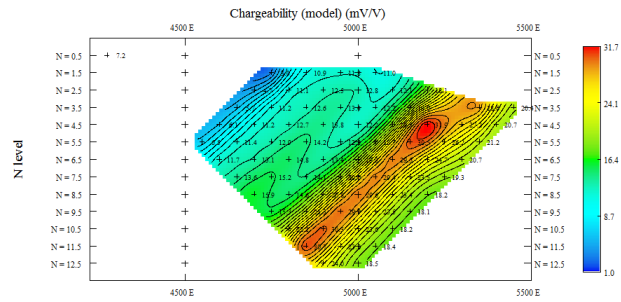
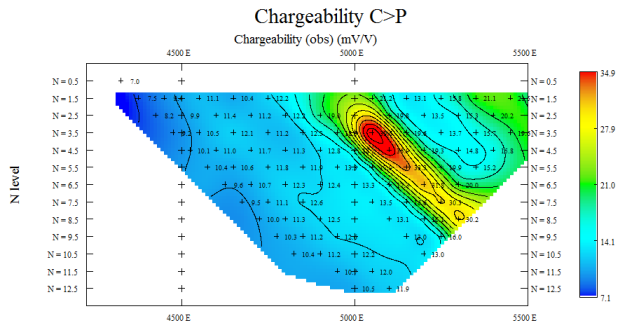
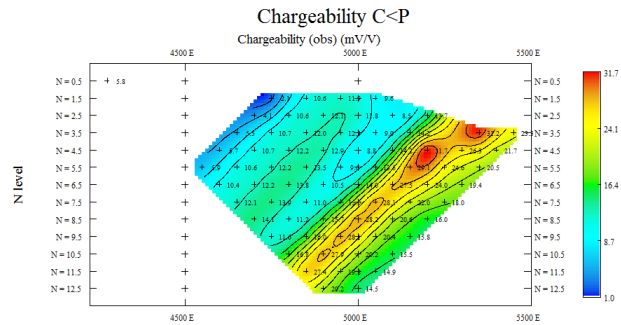
Inversion D Chargeability 4650N



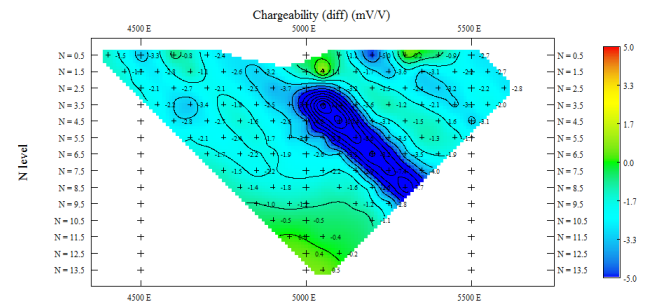
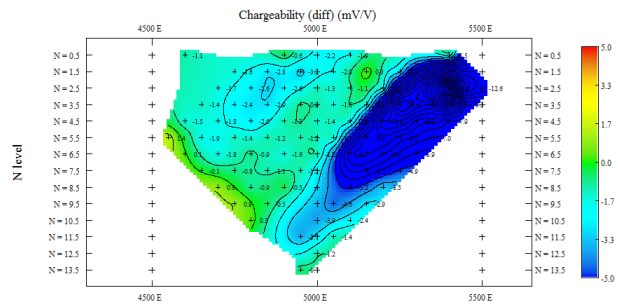
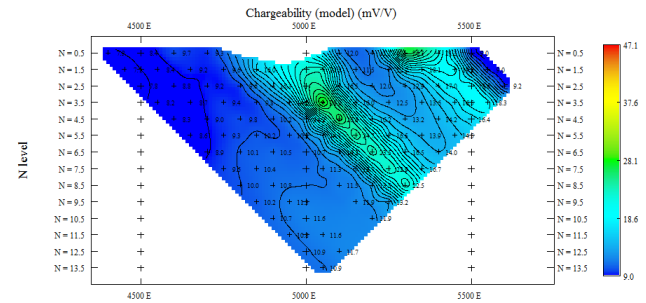
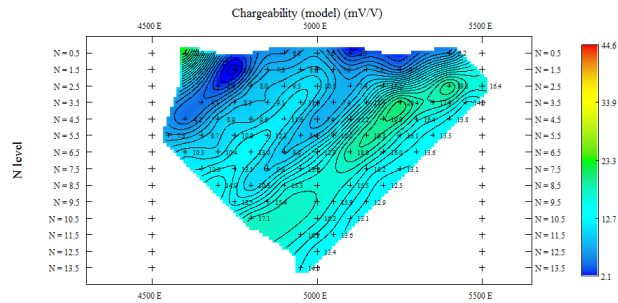
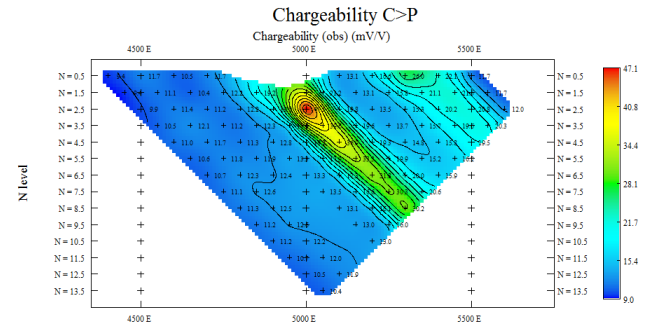
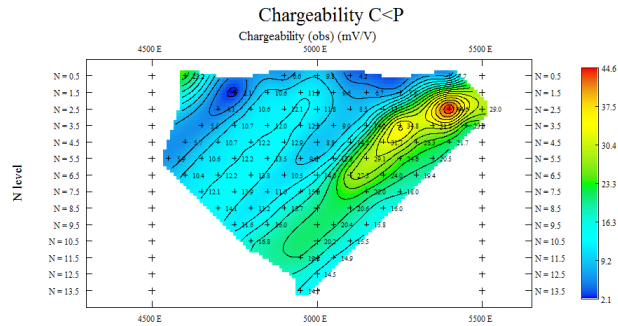
Inversion A Chargeability : Rx/Tx:4850N 4450N



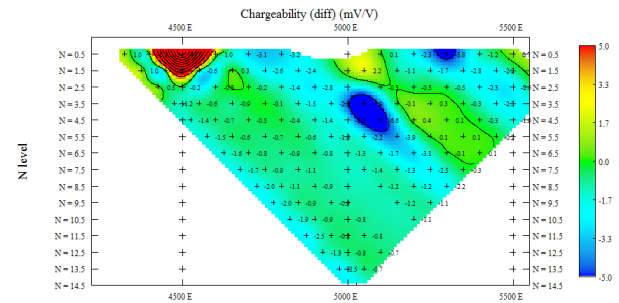
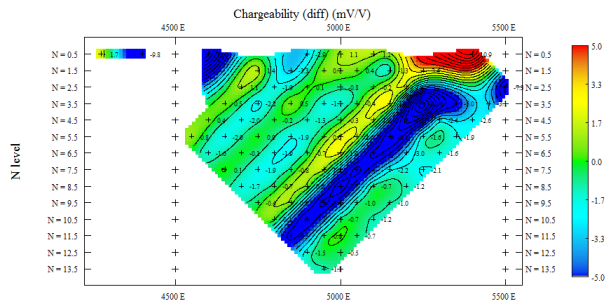
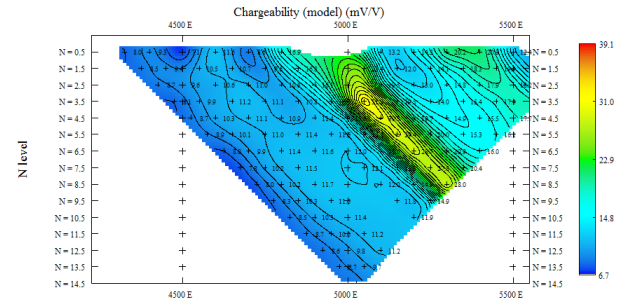
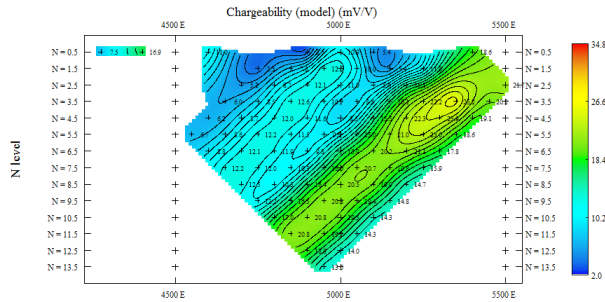
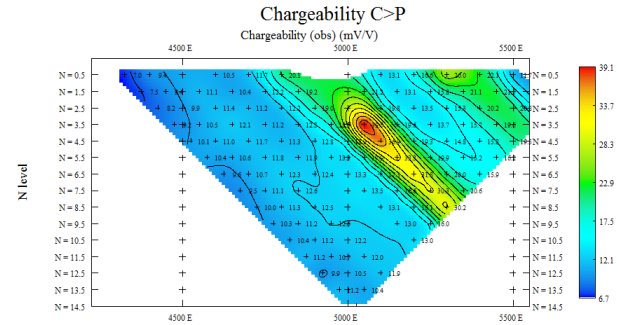
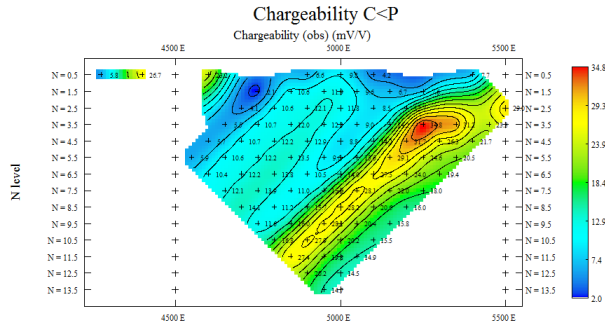
Inversion B Chargeability : Rx/Tx:4850N 4450N



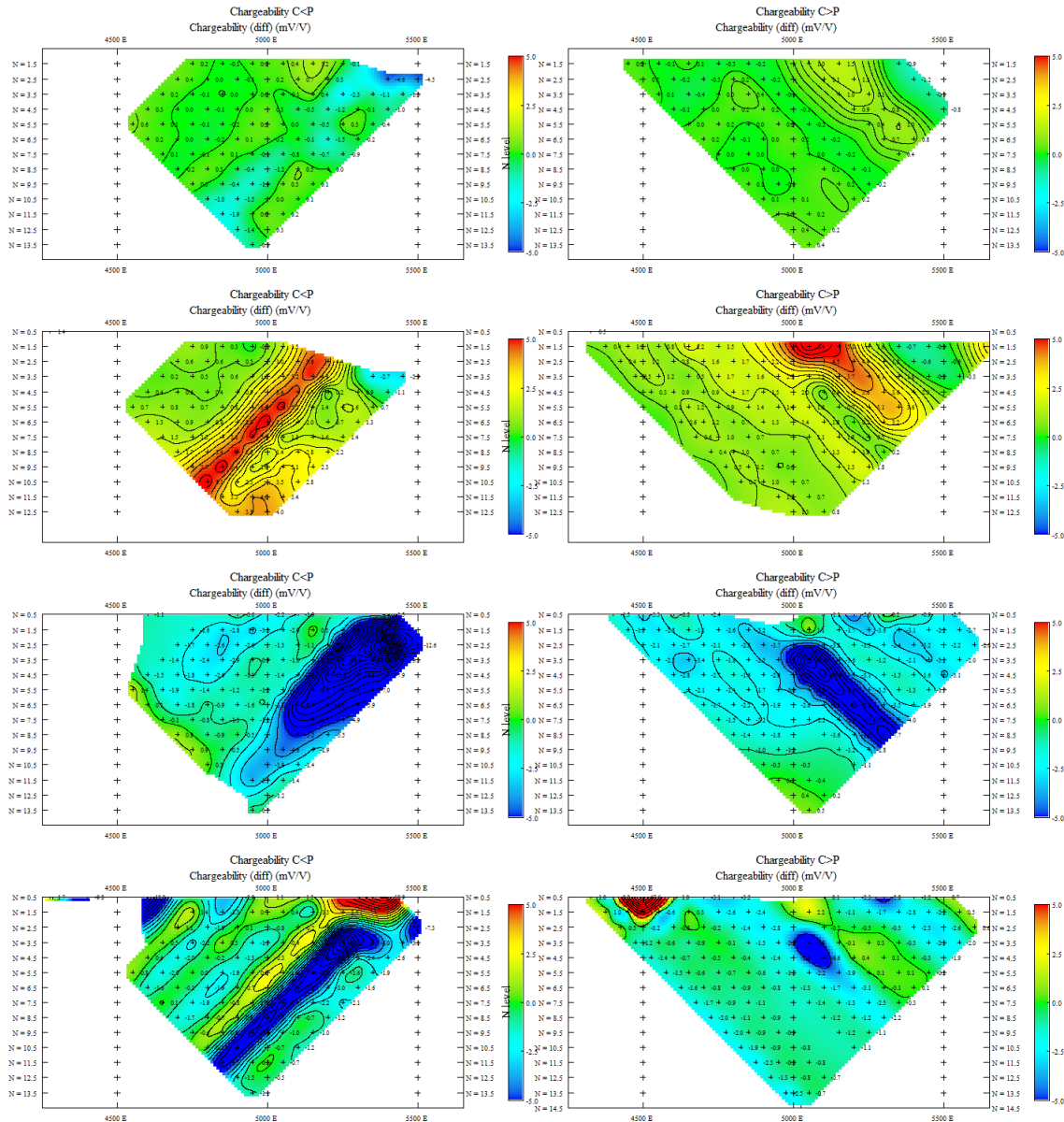
Inversion C Chargeability : Rx/Tx:4850N 4450N



Inversion D Chargeability : Rx/Tx:4850N 4450N



A-D IP Error: Rx/Tx:4850N/4450N



3D Models A – D, Top View, Surface ~575m RL Slice 300m – 525m RL, Mx surfaces 10, 20 Ms

