Silver Peak MT Survey 2009

3D inversion modelling results

March 11, 2010

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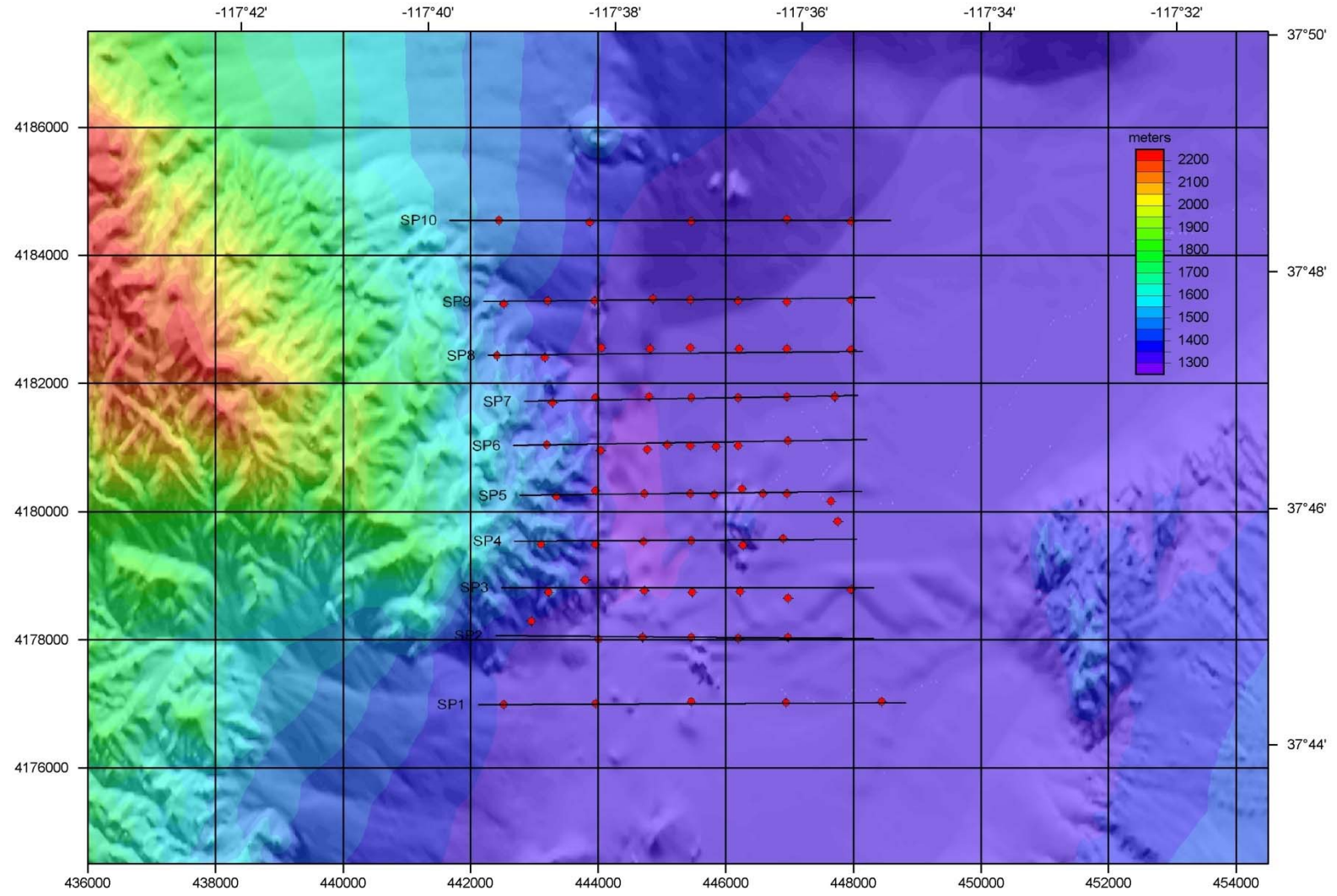
MT Station and Profile Locations



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Upgraded 3D inversion code

In this document we present a new 3D inversion model generated by the recently upgraded 3D inversion algorithm.

Please see AL_Model_08_Mar01.ppt document for the upgraded features of the 3D inversion algorithm.

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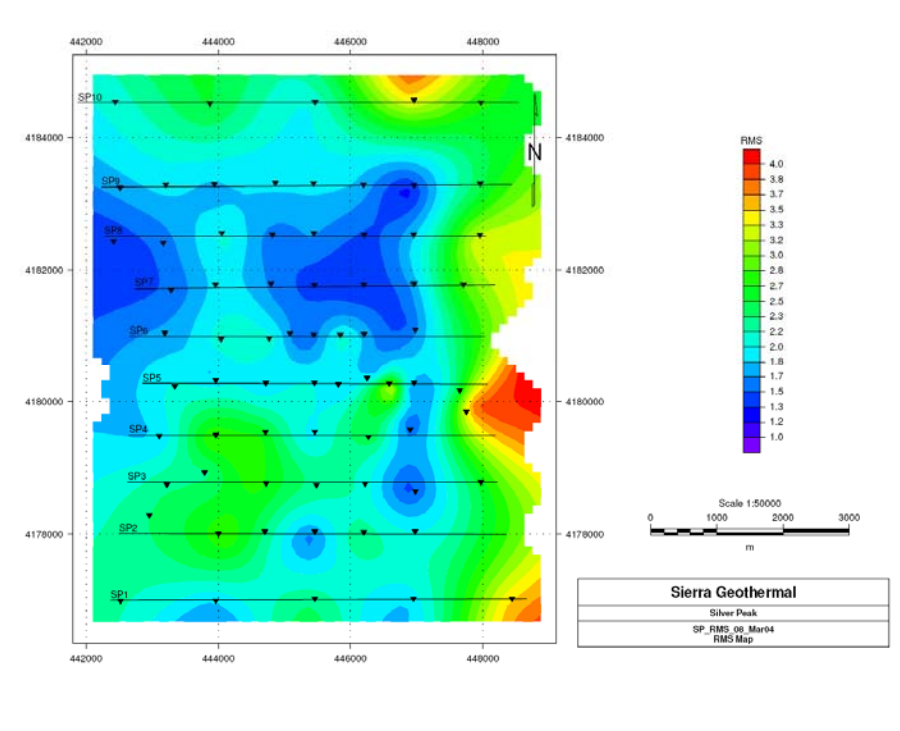
3D Model

Inversion parameters:

dx,dy (horiz cell dimensions)	150m
top cell thickness	10m
deeper cell thickness	100m
mesh rotation	0° N
mesh dimensions	72x74x50 km (78x88x141 cells)
number of sites	70
frequency range	0.003 to 1000 Hz
frequency per decade	4
start model	20 ohm.m
iterations (cumulative)	40
Tau (regulizer smoothing)	0.05 (40 iter.)
RMS	2.119
resistivity bounds	0.1-10000

Inversion Results: RMS



Gridding parameters for following sections and map plots:

- dx, dy 150m
- dz 40m

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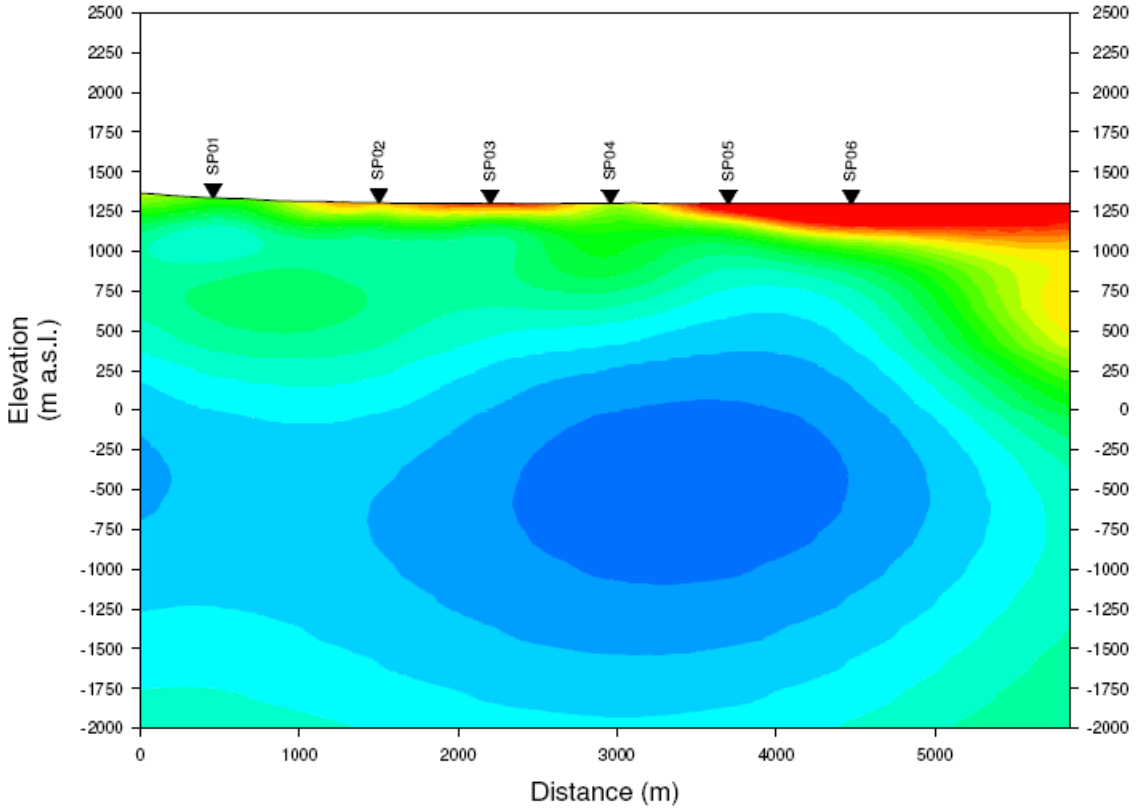
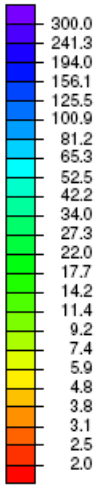
Profile SP2

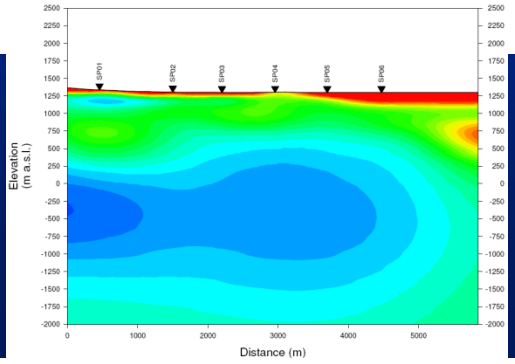




Horizontal Scale 1 : 35000
Vertical Scale 1 : 35000

Vertical Exaggeration = 1

Sierra Geothermal
Silver Peak
SP2 Model: 08_Mar04



Previous model (06_Jan25)

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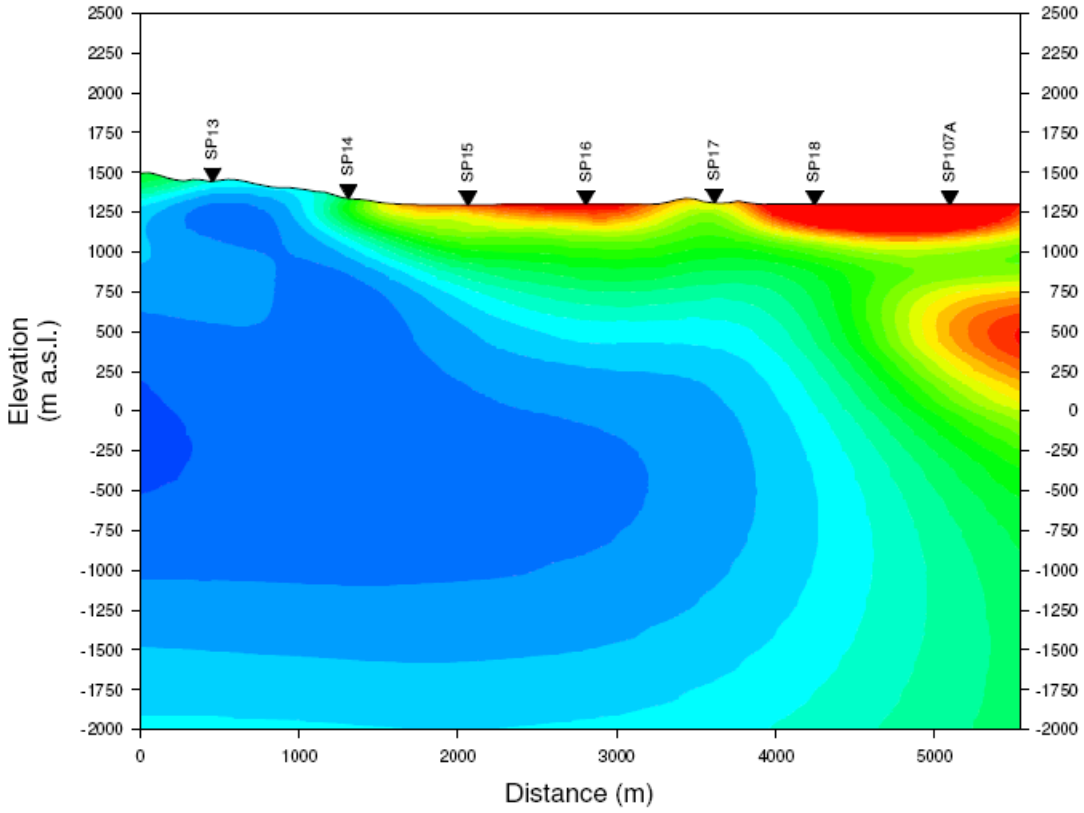
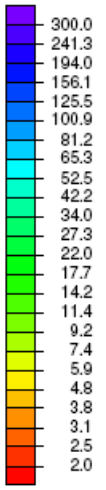
Profile SP4

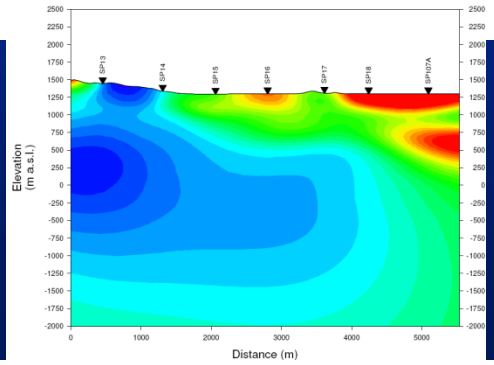




Horizontal Scale 1 : 35000
Vertical Scale 1 : 35000

Vertical Exaggeration = 1

Sierra Geothermal
Silver Peak
SP4 Model: 08_Mar04



Previous model (06_Jan25)

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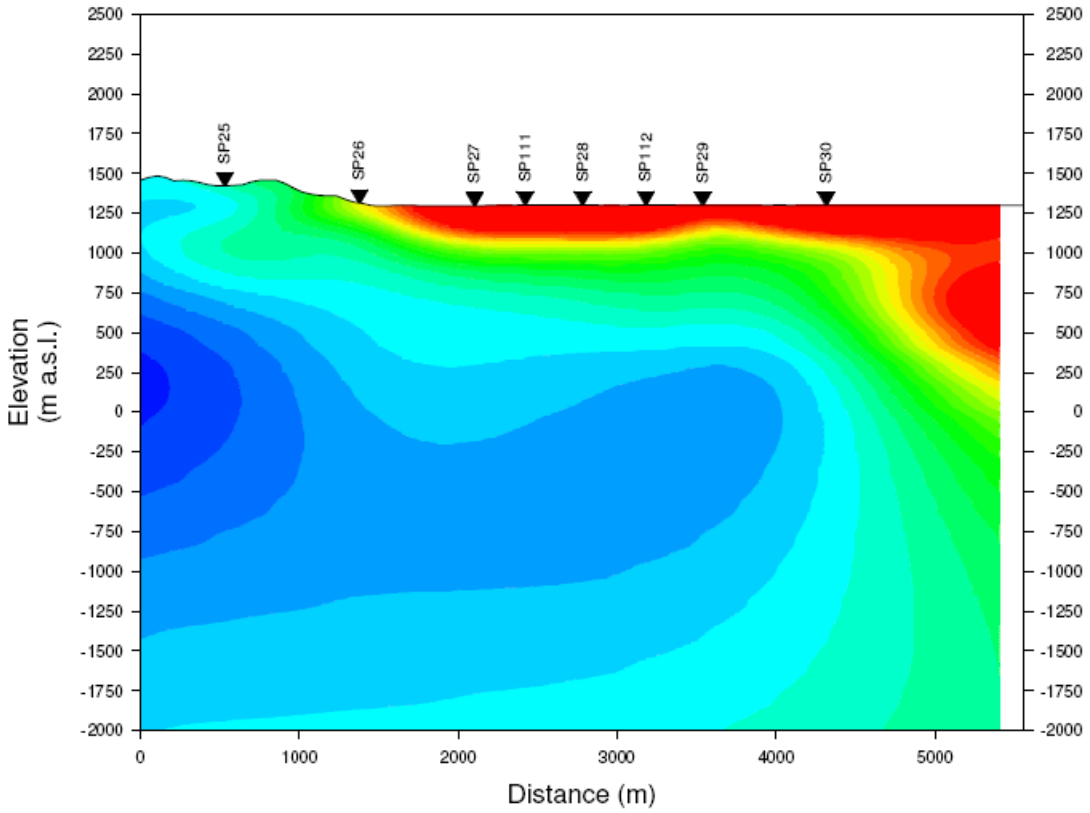
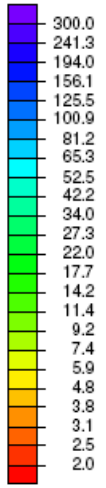
Profile SP6

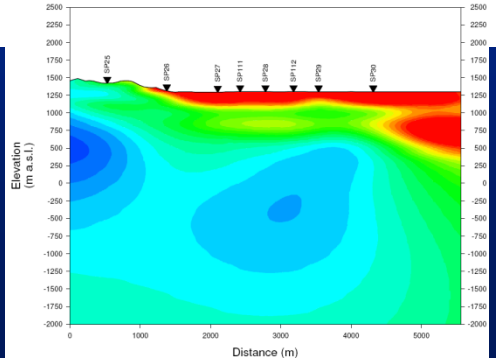




Horizontal Scale 1 : 35000
Vertical Scale 1 : 35000

Vertical Exaggeration = 1

Sierra Geothermal
Silver Peak
SP6 Model: 08_Mar04



Previous model (06_Jan25)

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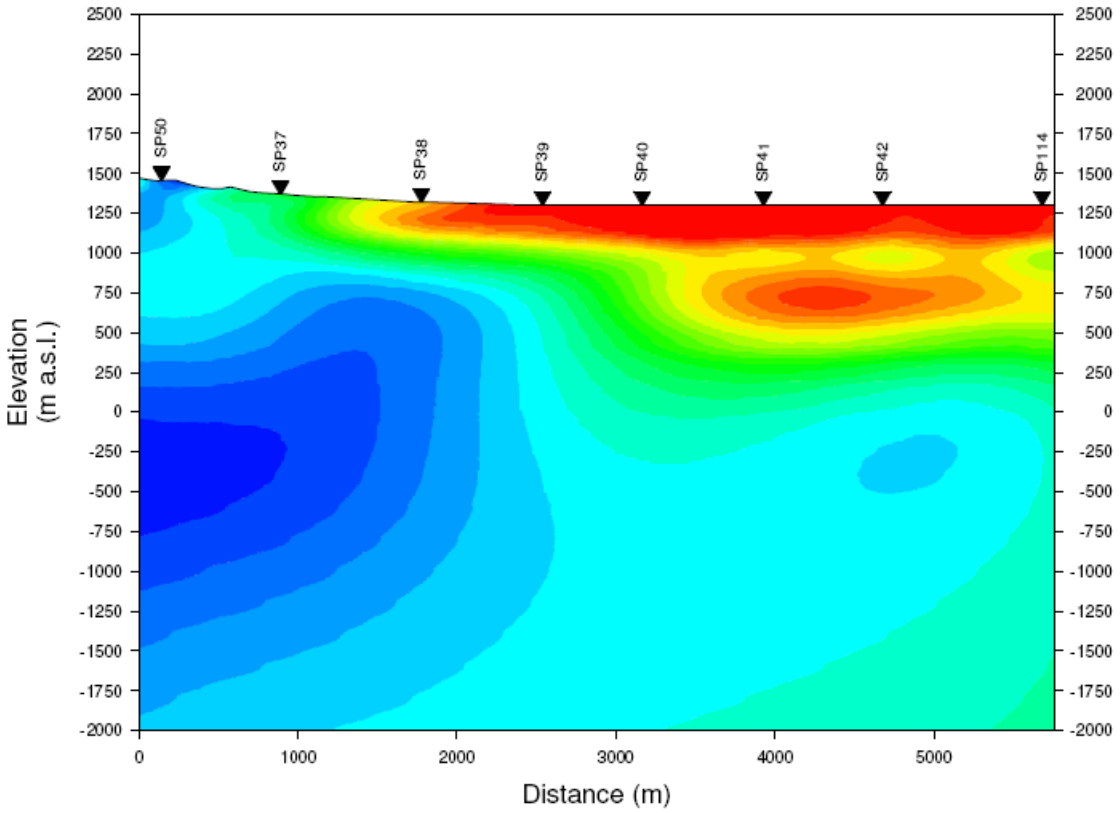
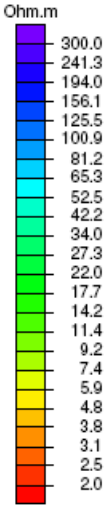
Profile SP8

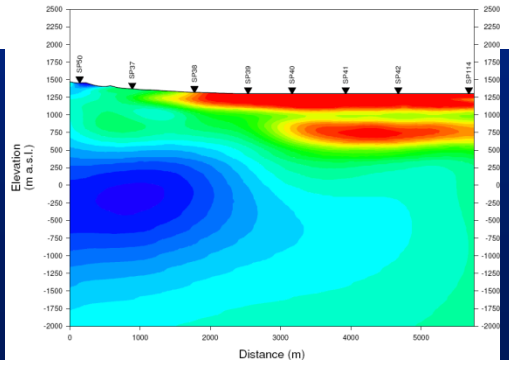




Horizontal Scale 1 : 35000
Vertical Scale 1 : 35000

Vertical Exaggeration = 1

Sierra Geothermal
Silver Peak
SP8 Model: 08_Mar04



Previous model (06_Jan25)

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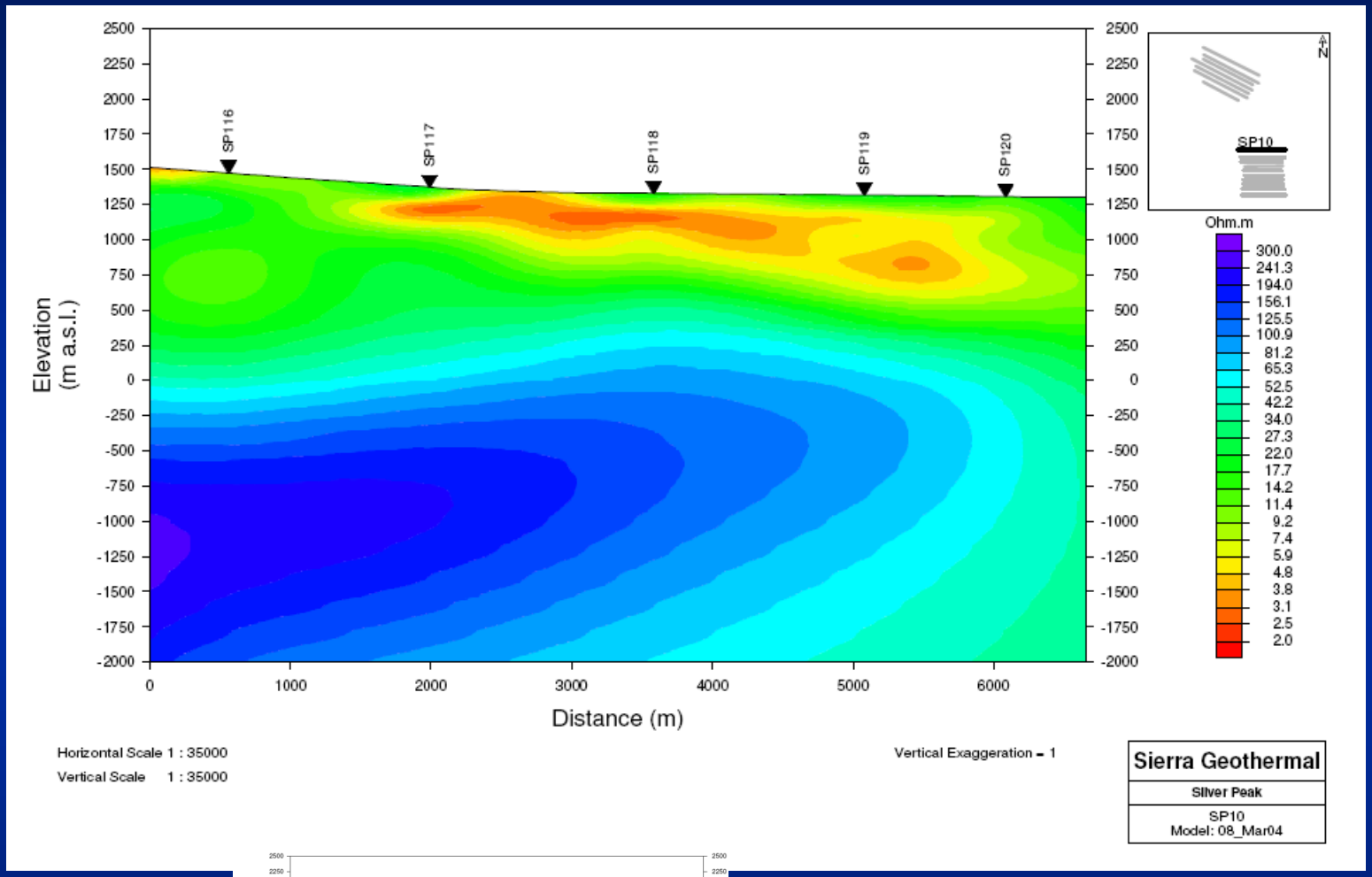
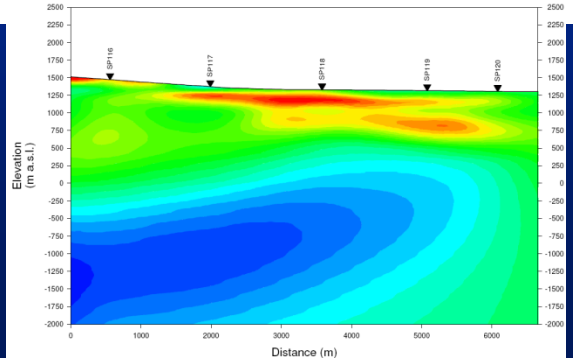
Profile SP10





Previous model (06_Jan25)

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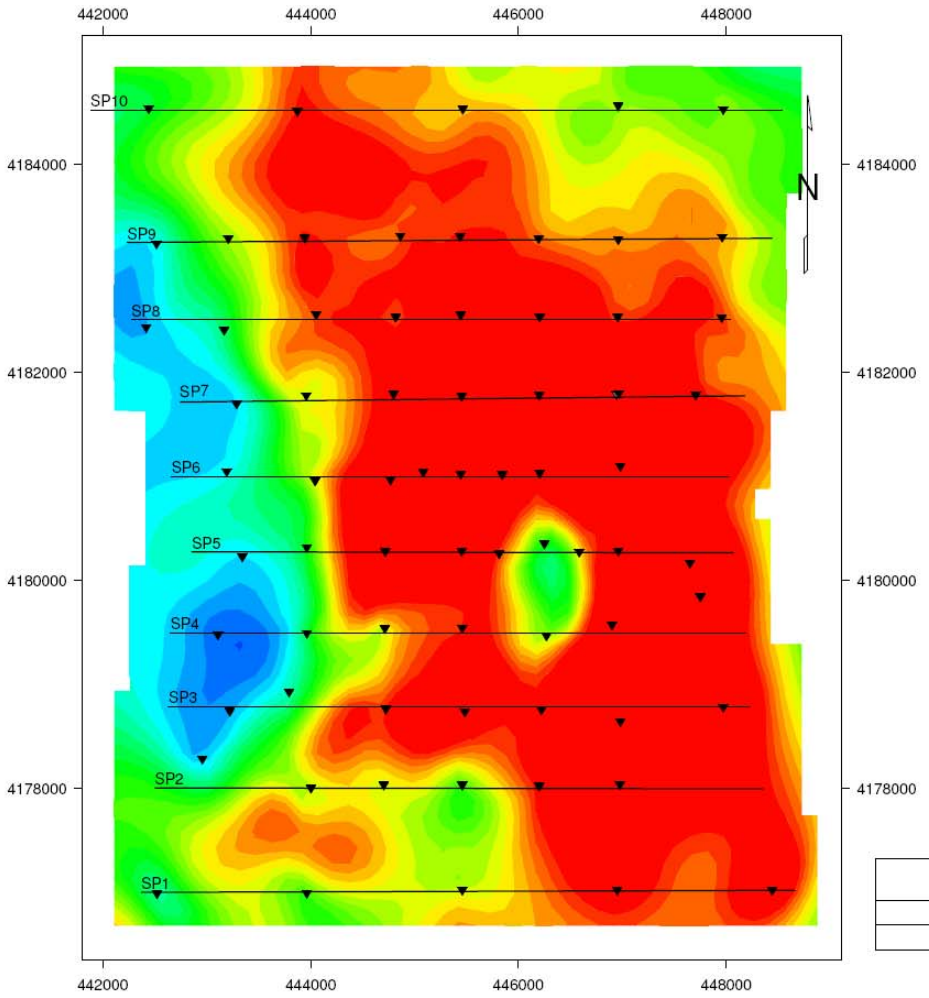
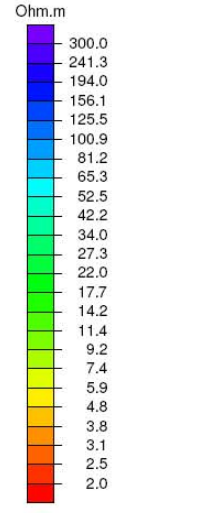
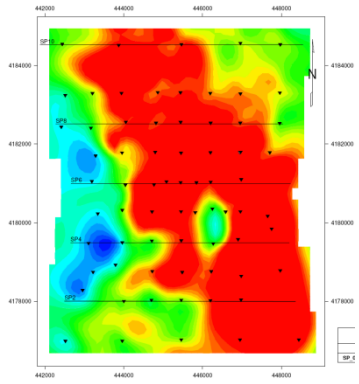
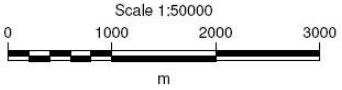
Resistivity slice at 1250m msl







Previous model (06_Jan25)

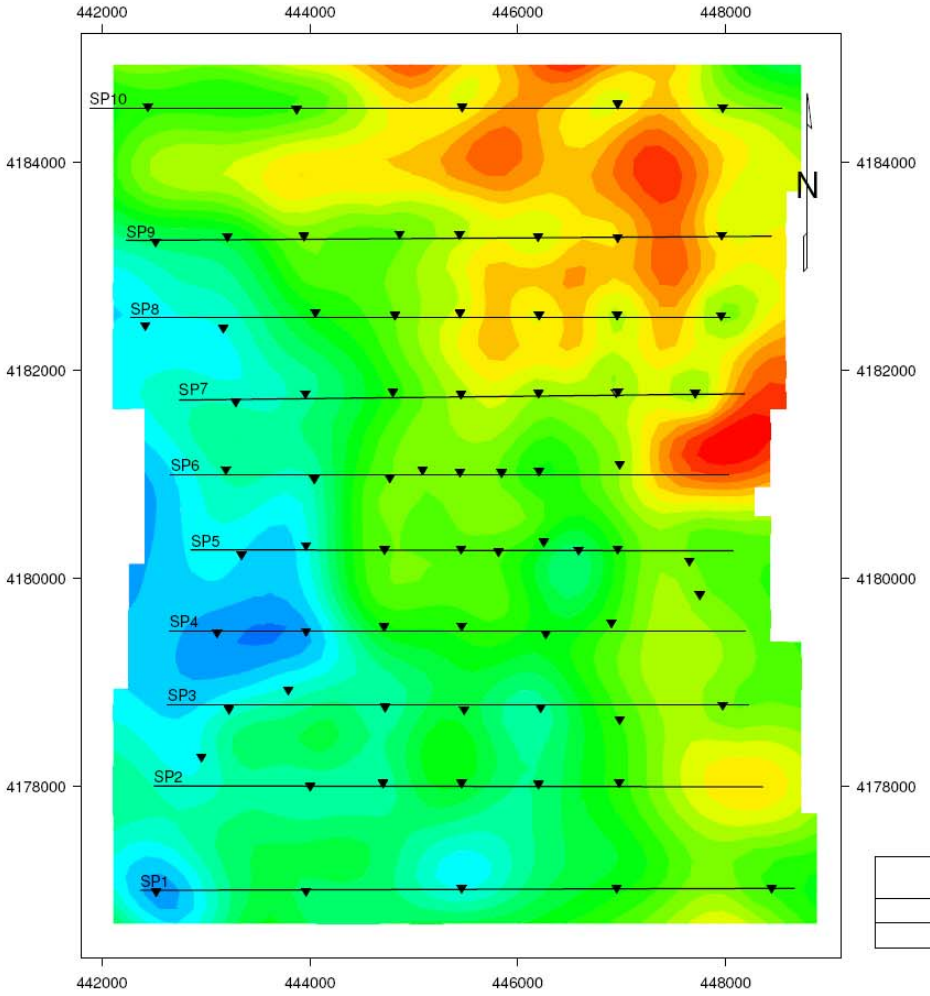


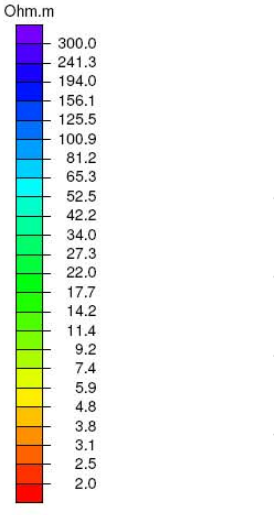
Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at 1250.000 m Elev

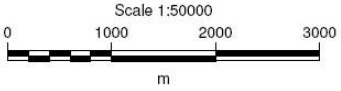
©WesternGeco

GEOSYSTEM WesternGeco

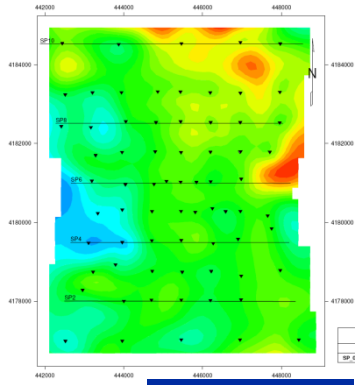
Resistivity slice at 1000m msl







Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at 1000.000 m Elev



Previous model (06_Jan25)

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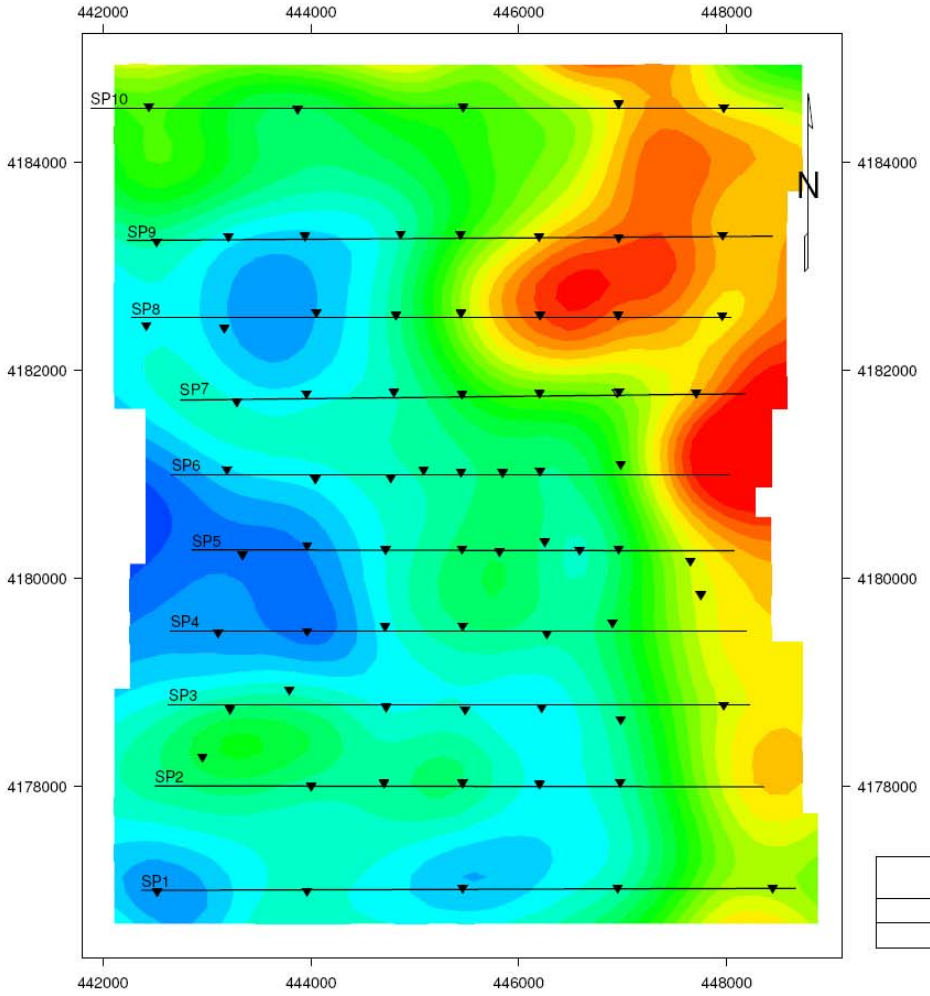
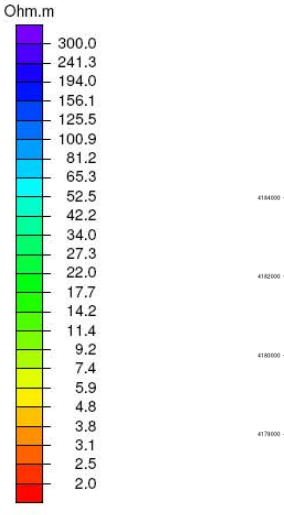
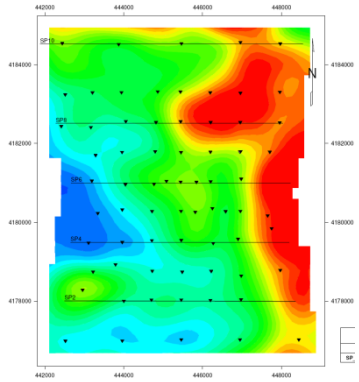
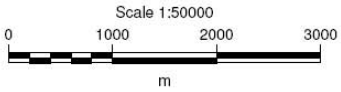
Resistivity slice at 750m msl







Previous model (06_Jan25)

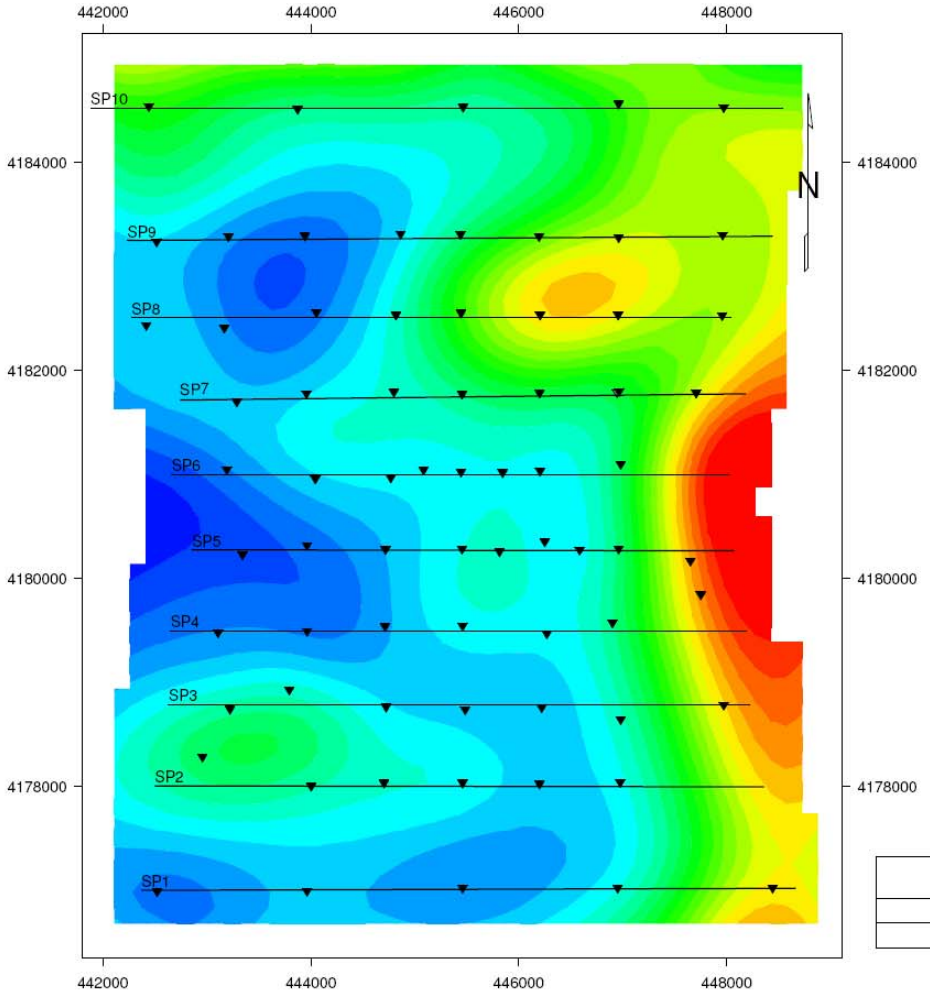


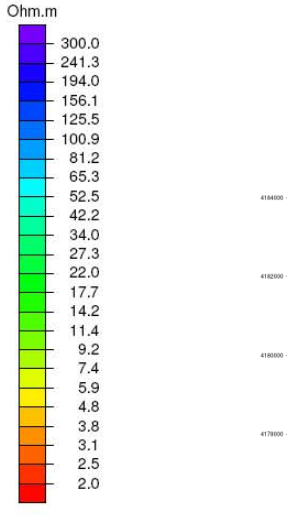
Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at 750.000 m Elev

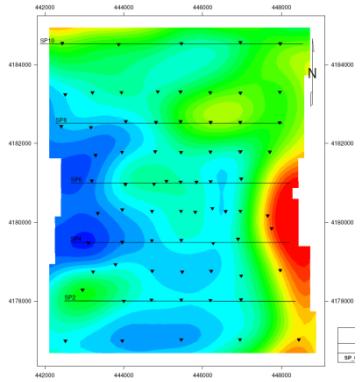
©WesternGeco

GEOSYSTEM WesternGeco

Resistivity slice at 500m msl







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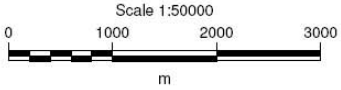

Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at 500.000 m Elev

©WesternGeco

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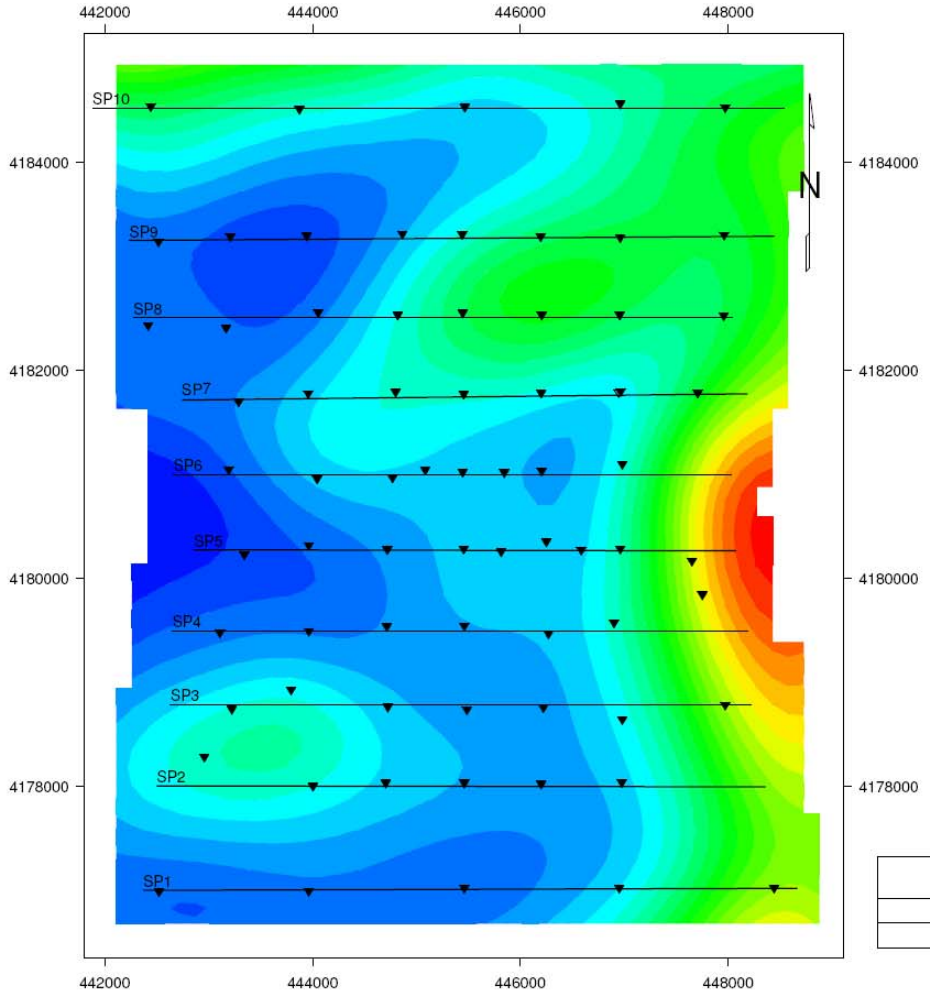
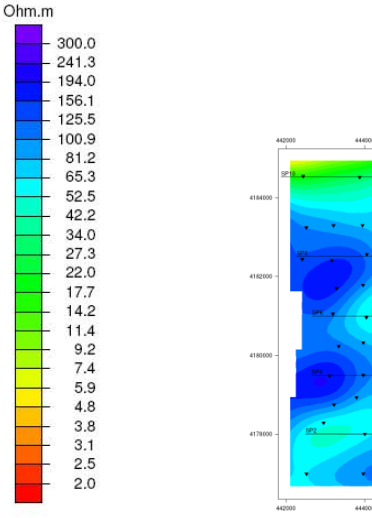
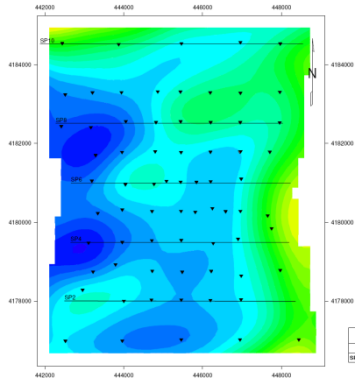
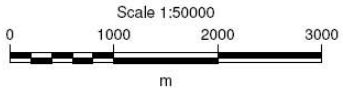
Resistivity slice at 250m msl







Previous model (06_Jan25)



Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at 250.000 m Elev

©WesternGeco

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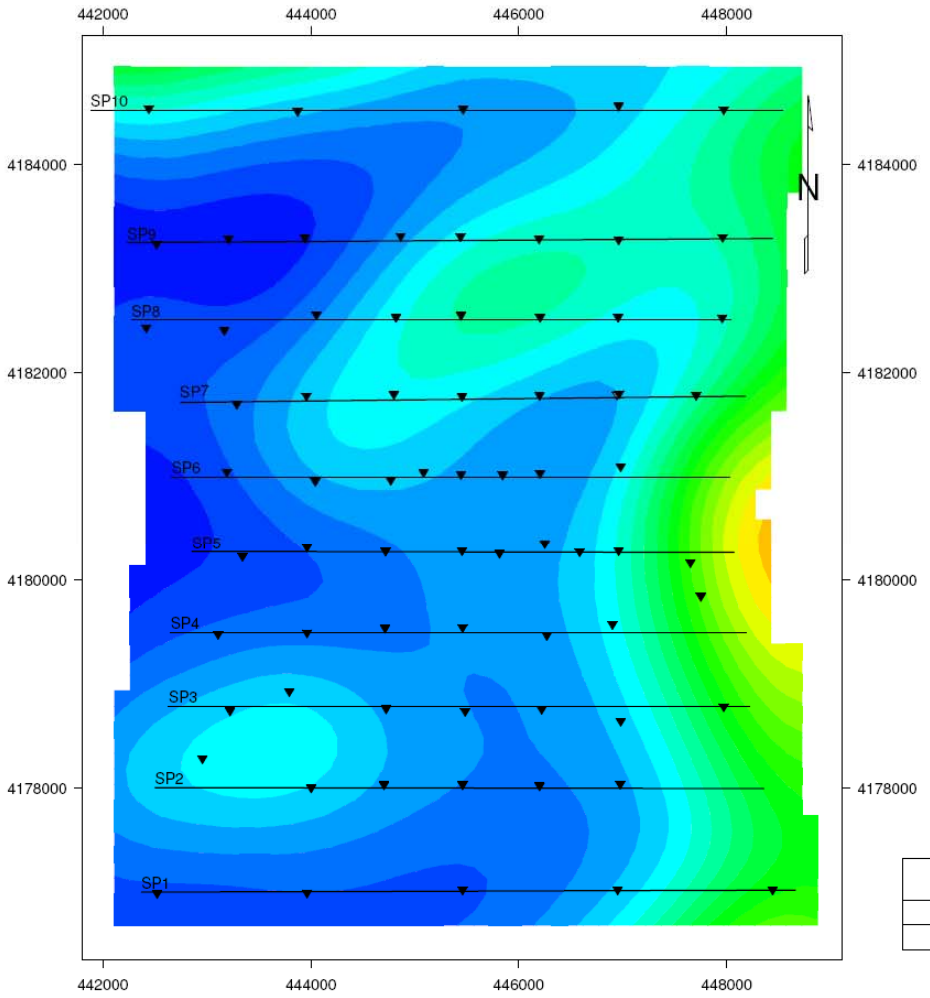
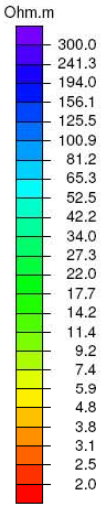
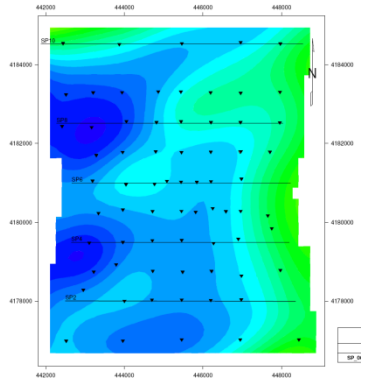
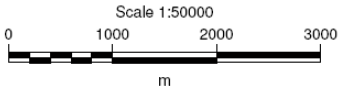
Resistivity slice at 0m msl







Previous model (06_Jan25)

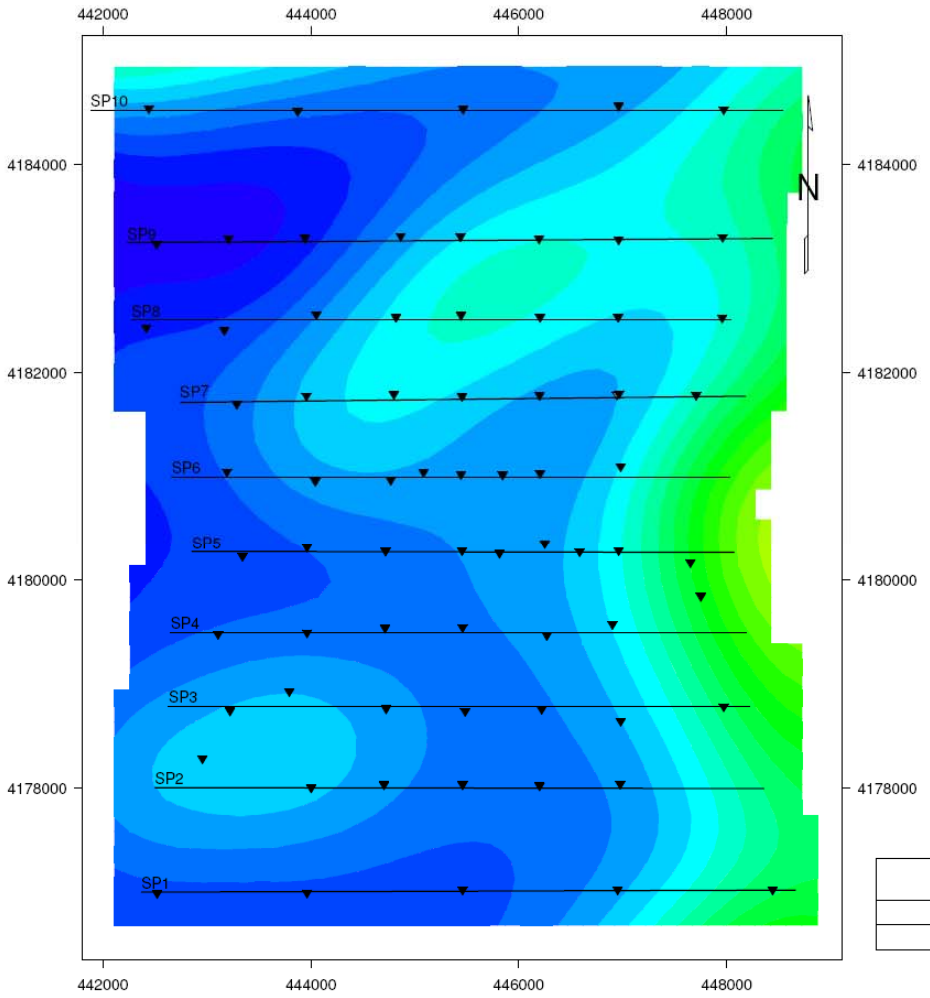


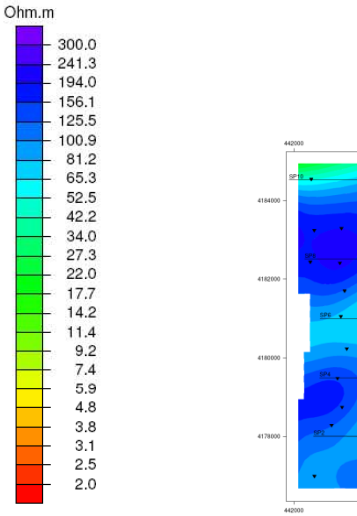
Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at 0.000 m Elev

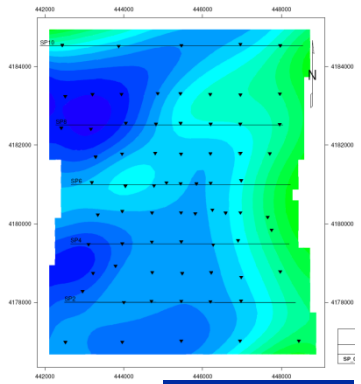
©WesternGeco

GEOSYSTEM WesternGeco

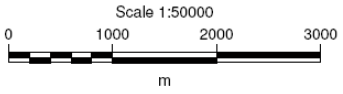
Resistivity slice at -250m msl







Previous model (06_Jan25)

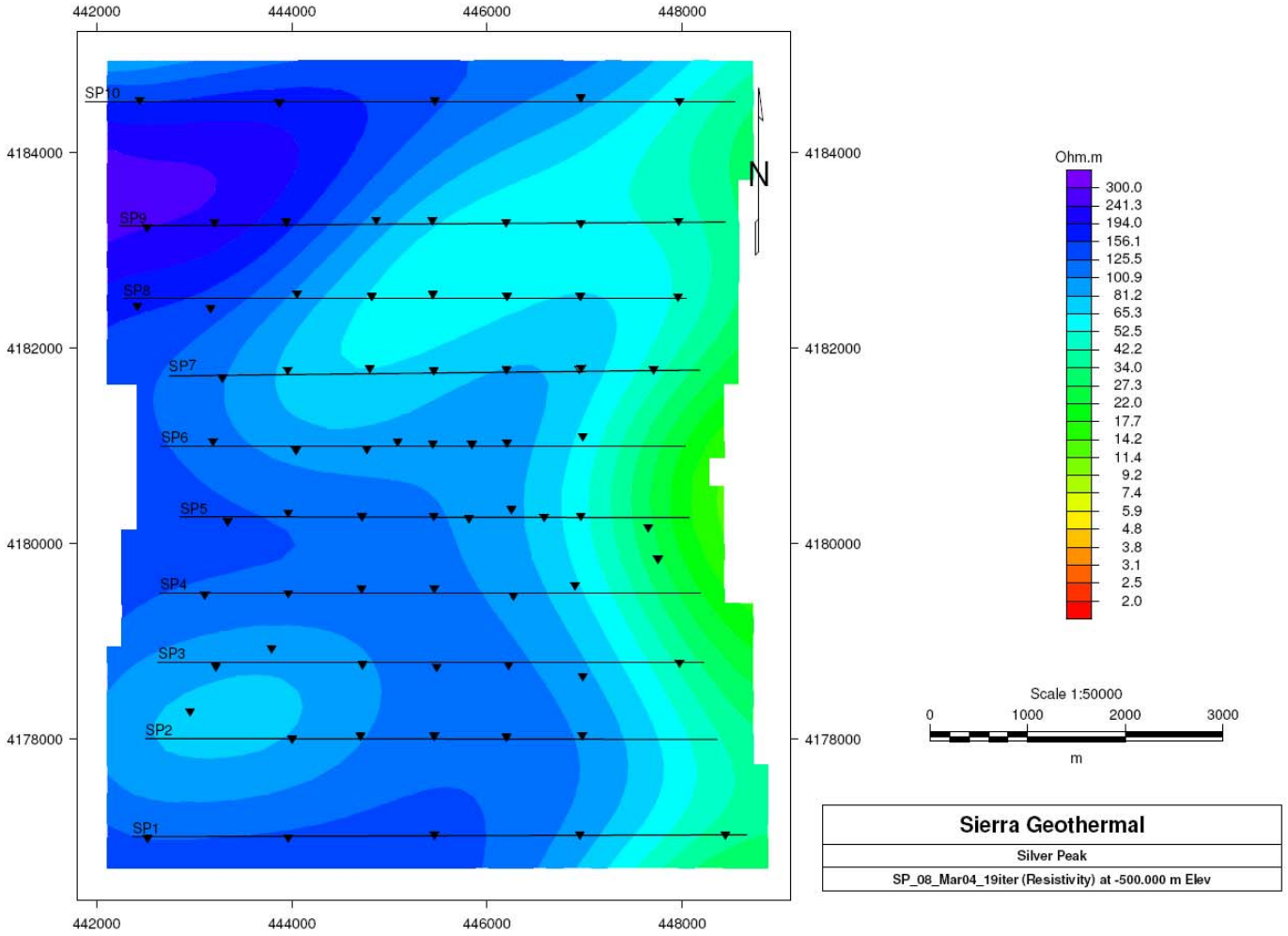


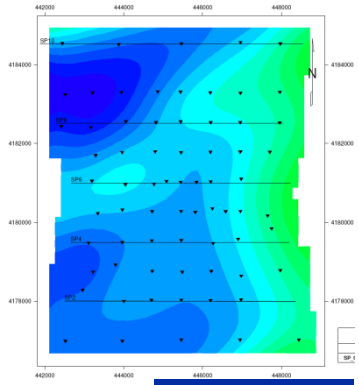
Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at -250.000 m Elev

©WesternGeco

GEOSYSTEM WesternGeco

Resistivity slice at -500m msl





Previous model (06_Jan25)

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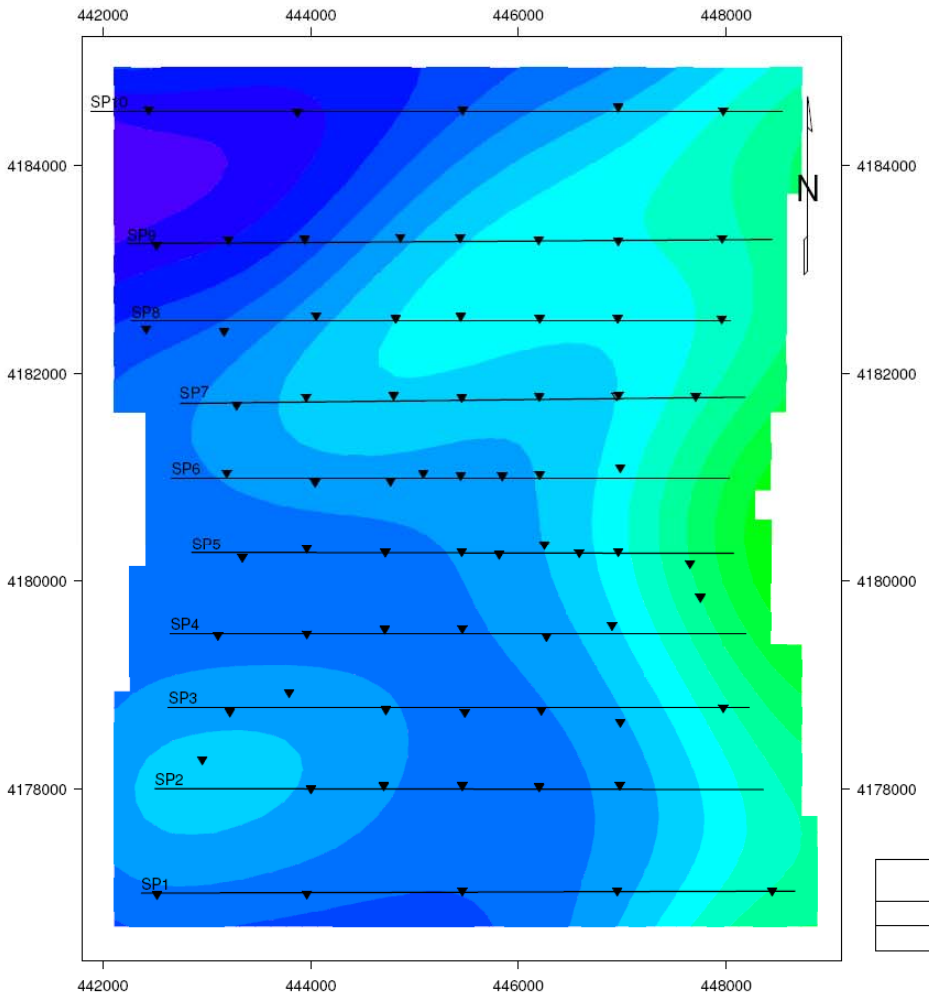
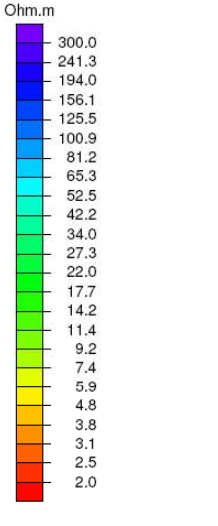
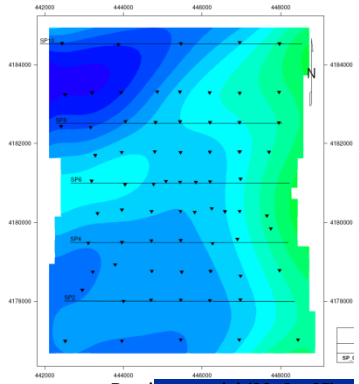
Resistivity slice at -750m msl







Previous model (06_Jan25)

Scale 1:50000

0 1000 2000 3000

m

Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at -750.000 m Elev

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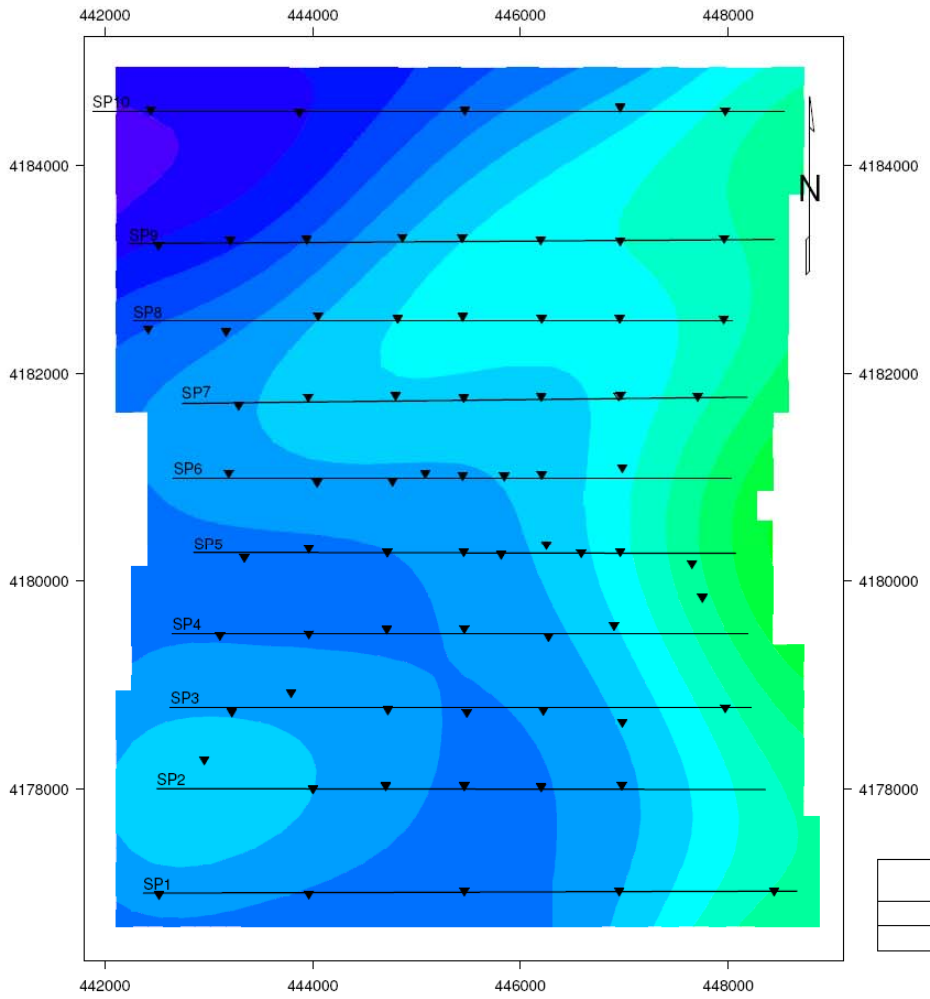
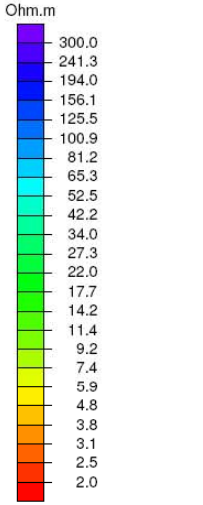
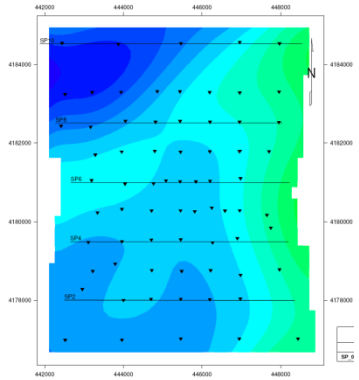
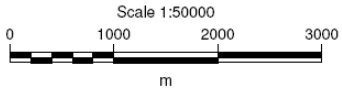
Resistivity slice at -1000m msl







Previous model (06_Jan25)



Sierra Geothermal
Silver Peak
SP_08_Mar04_19iter (Resistivity) at -1000.000 m Elev

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