THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
GEOLOGICAL SURVEY OF ETHIOPIA (GSE)

DATA COLLECTION SURVEY FOR GEOTHERMAL DEVELOPMENT IN ETHIOPIA

FINAL REPORT (APPENDIX)

JUNE 2017

JAPAN ITERNATIONAL COOPEATION AGENCY (JICA)

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JMC GEOTHERMAL ENGINEERING CO., LTD.
SUMIKO RESOURCES EXPLORATION AND DEVELOPMENT CO., LTD.

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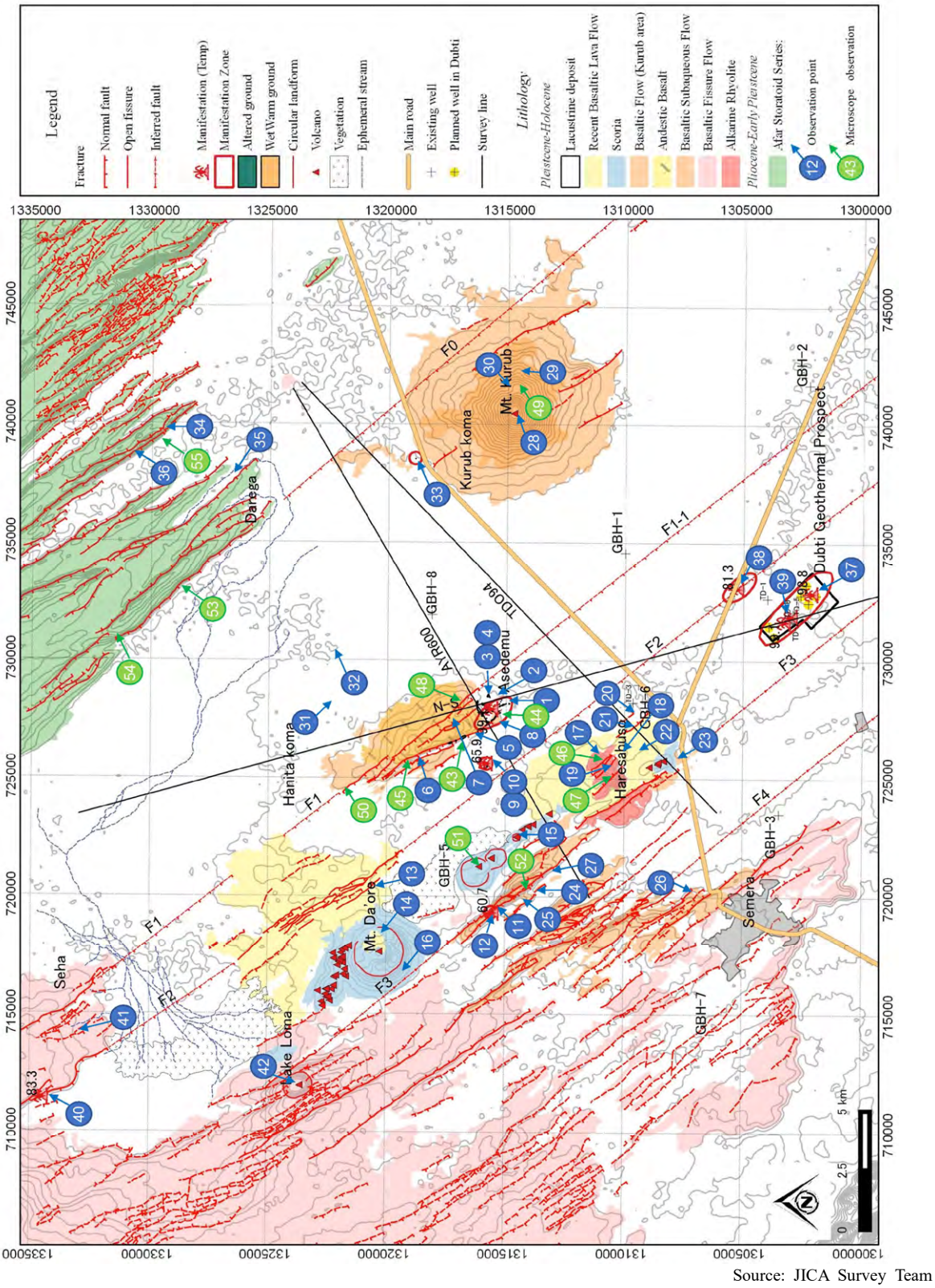
APPENDIX-1

Geological Reconnaissance Survey

Appendix-1 Geological Surface Survey

A1.1 Geological reconnaissance survey in Tendaho-2



Source: JICA Survey Team

Figure A1.1.1 Tendaho-2 Location Map of Photo Recording

Tendaho-2 (Ayrobera)

1. Wet/warm grounds with temperature over 50 °C aligned in NNE-SSW direction in Asedemu area. Due to wet condition, glass covers around the wet/warm ground

2. Fumarole with maximum temperature 99.1 °C in Asedemu area. Gas sample was collected in MP study. Dry steam is dominated.

3. White-colored calcite alternation in alluvium deposit around Asedemu area, which is supposed to be wet/warm ground. Shrub grows around the altered ground.

4. Close-up of calcite alternation. Univalve shell fossil and sand is cemented with calcite.

5. Small hill along fault F1 composed of silica-gypsum altered rocks

6. Fault cliff and rift along fault F1-2. Rift has around 150 km width and covered with sand.

7. Pillow structure observed in subaqueous basalt in Asedemu basaltic plateau.

8. Sedimentary layer composed of sand, silt, and clay with clear stratified structure in Asedemu area. Basaltic flow covers on the top of the layer. Lamination can be observed in the layer.

9. White colored and consolidated Calcite alternation surrounding basaltic eruption center.

10. Wet/warm ground with maximum temperature 65.9 °C around the basaltic eruption center. Glass also grows in wet/warm ground.

11. Fumaroles along fault F3 with maximum temperature 60.7 °C. Dry steam is dominated.

12. Horst topography between faults near the fumaroles. Sedimentary layer is interbedded in basalts.

13. Fresh and deep open fissure without displacement in recent basaltic lava flow.

14. Recent basaltic lava flow in dark brown scoria cone located in spreading main axis.

15. Maar with spring water with normal temperature 27.5 °C in the center of cone. Scoria, pumice, and basaltic lava are observed in the maar.

16. Scoria and pumice layer with clear stratified structure observed gully in Da'ore volcanic mountain showing tuff ring.

17. Rhyolite surrounded and partially covered by basaltic flows, which has clear flow structure.

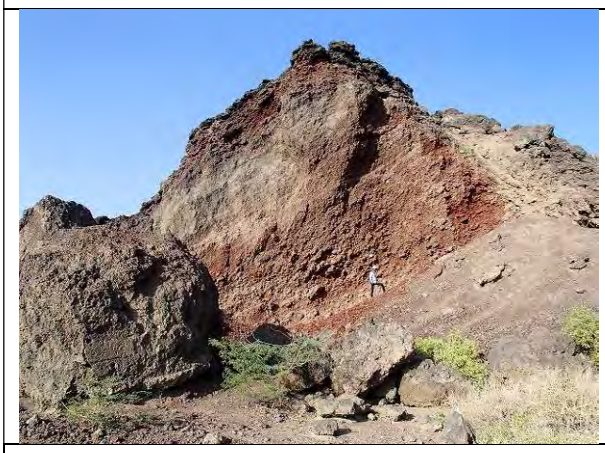
18. Plateau composed of Rhyolite is cut and displaced by several normal faults. Rhyolite is weathered and brown-colored.

19. Fault plane with slickenside in rhyolite with steep (85~90 degree dipping to east)

20. Termination of site survey due to bad road condition.

21. Ropy texture in pahoehoe lava. Due to fault movement, surface of the lava was tilting.

22. Fissure eruption of basaltic lava along open crack of the elder basaltic flow.



23. Pyroclastic deposit including tuff, scoria, and pumice with clear stratified structure.

24. Stratified silt and clay sedimentary layer. Basaltic lava covers on the top of the layer.

25. High and rectilinear fault cliff. Displacement of the layer by echelon pattern normal fault can be observed in the center of the photo. On the toe of the slope, there is a green bush due to spring water.

26. NNW-SSE oriented fault cliff composed of slightly weathered basalt.

27. Highly fractured and weathered fissure basalt.

28. Old volcanic vent at the top of Mt. Kurub, covered by sand and soil.

29. Small lateral volcano in Mr. Kurub.

30. Columnar joint in basaltic flow in Mt. Kurub

31. Sand dune in flat area of alluvium deposit east of Asedemu area

32. Overview of alluvium deposit area covered with sand and soil east of Asedemu area. 4WD vehicle can run throughout the desert.

33. "Geothermal Glass", which is commonly observed in geothermal manifestation. Calcite alternation can be observed near the glass.

34. Clear and rectilinear fault along fault F0, exposed with basalt in Afar stratoid series.

35. Fault cliff and alluvium deposit plane. White part in the plane shows assembly of univalve shell fossils.

36. Close-up of basalt of Afar stratoid series. The rock is hard and dense. Vesicles are aligned in some direction.

37. Hot spring in Dubti; the hot water contains mud and bubbles.

38. Wet/warm ground on alluvium deposit along fault F2.

39. Tilting wellhead valve of TD-6, due to deformation of ground.

40. Hot spring in Seha, with maximum temperature is 83.3 °C. *Photo was taken in the Master Plan study.

41. Weak fumarole found at cavity in basalt.
*Photo was taken in the Master Plan study.

42. Caldera lake named Lake Loma. Low temperature spring water was found.
*Photo was taken in the Master Plan study.

Microscope observation

Site No. 43 | Rock name Highly altered basalt

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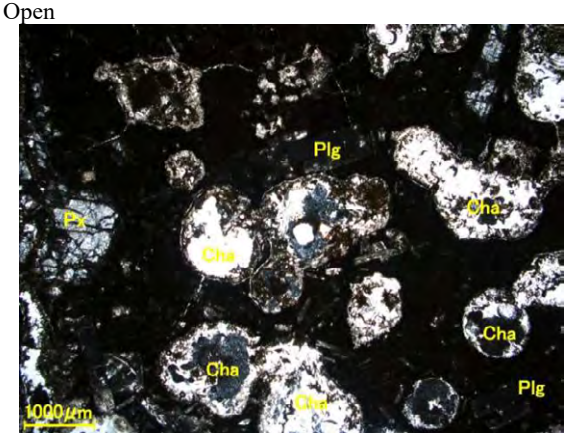

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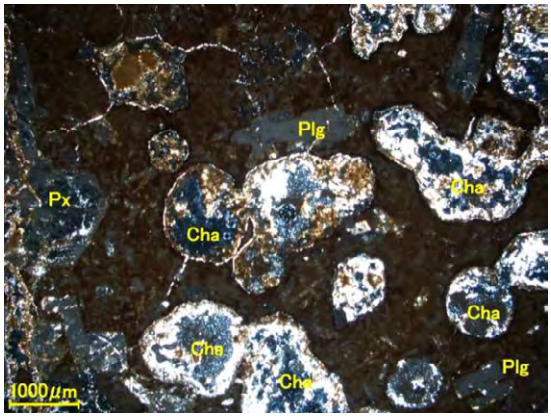


Plg: Plagioclase, Px: pyroxene, Cha: chalcedony

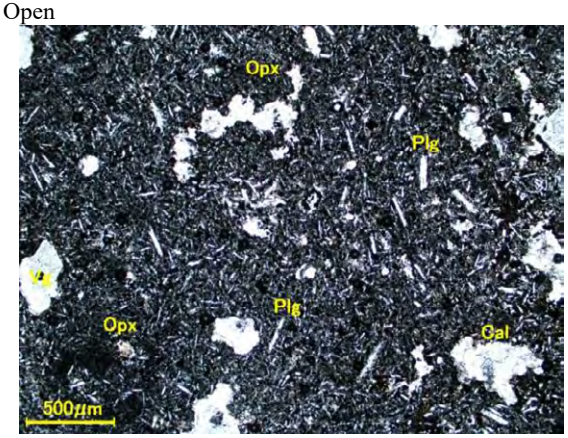
Mineral composition:

Mineral	Modal (%)	Texture
Volcanic glass	55	
Plagioclase	20	Anhedral
Pyroxene	18	Anhedral
Calcite	5	Anhedral
Chalcedony	2	Radial fibrous

Note:
Totally high alteration. Ground mass composed of volcanic glass, which is devitrified to chalcedony. Phenocrysts are plagioclase and pyroxene.

Site No. 44 | Rock name Intergranular vesicular basalt

Open



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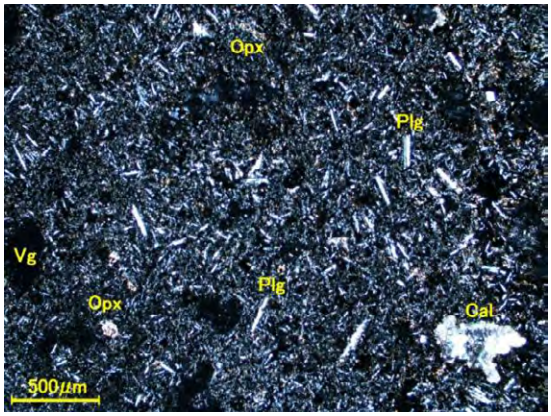


Plg: Plagioclase, Opx: orthopyroxene, Vg: Volcanic glass, Cal: Calcite

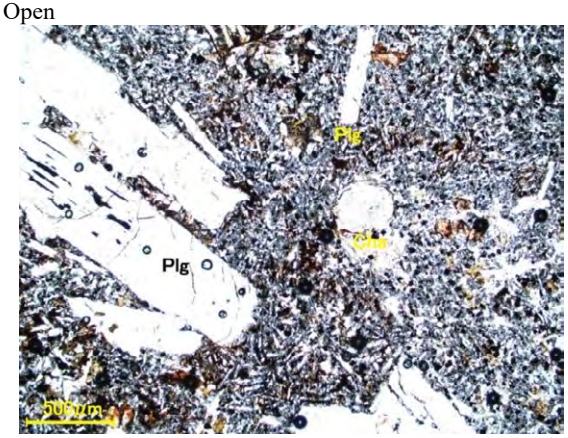
Mineral composition:

Mineral	Modal (%)	Texture
Microlite plagioclase	35	Microlitic
Pyroxene	20	Fine, Anhedral
Opaque (Fe-oxide)	17	Fine, Anhedral
Calcite	8	Anhedral
Chalcedony	2	Radial fibrous
Volcanic glass	15	
Zeolite	3	

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral which fill between lath plagioclase phenocrysts. Phenocrysts are plagioclase and orthopyroxene. Some of vesicles are filled with calcite.

Site No. 45	Rock name Intergranular and porphyritic basalt

Open



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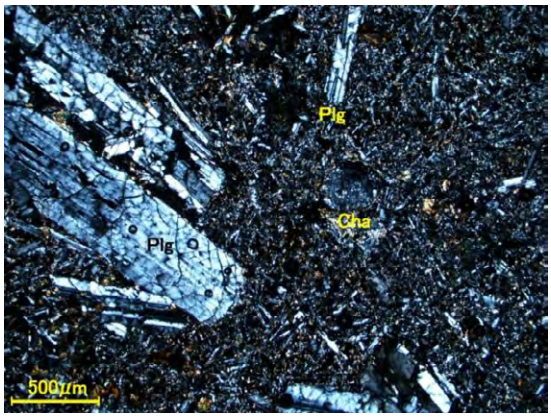


Plg: Plagioclase, Cha: chalcedony

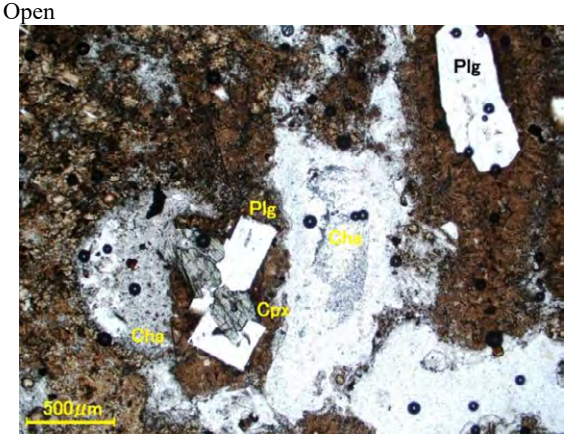
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	42	Lath, Tabular
Pyroxene	25	Fine, Anhedral
Devitrified volcanic glass	20	
Opaque (Fe-oxide)	7	Anhedral
Chalcedony	6	Radial fibrous

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral filling intergranular of lath plagioclases. Plagioclase is observed as phenocryst. Vesicle is partially and completely filled with volcanic glass and chalcedony.

Site No. 46	Rock name Vitrophyric rhyolitic tuff

Open



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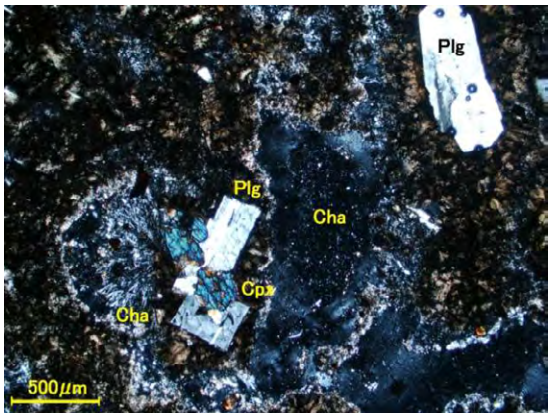


Plg: Plagioclase, Cpx: clinopyroxene, Cha: chalcedony

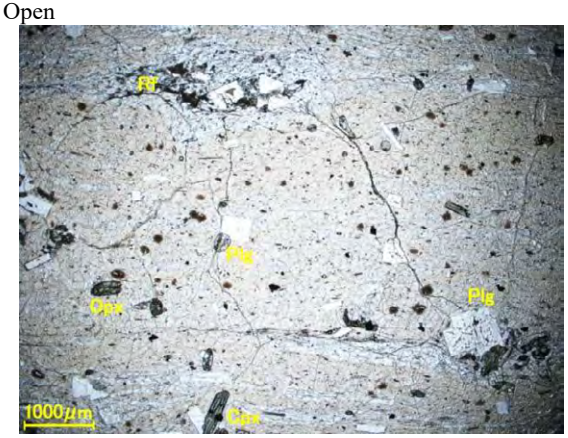
Mineral composition:

Mineral	Modal (%)	Texture
Volcanic glass	50	
Plagioclase	20	Anhedral
Pyroxene	15	Anhedral
Calcite	10	Anhedral
Opaque (Fe-oxide)	3	Anhedral
Chalcedony	2	Radial fibrous

Note:
Matrix is composed of volcanic glass, and plagioclase and clinopyroxene are observed as particle. Some chalcedony is radial and fibrous structure.

Site No. 47	Rock name Vitrophyric and lithic rhyolitic tuff

Open



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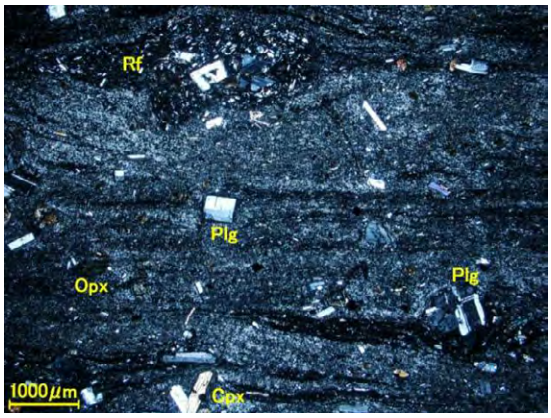


Plg: Plagioclase, Cpx: clinopyroxene, Opx: orthopyroxene, Rf: rock fragment

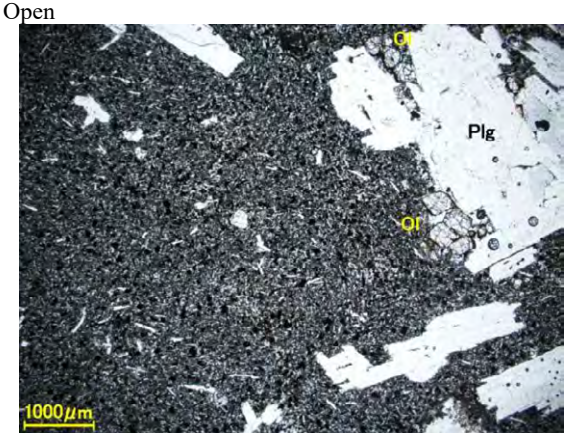
Mineral composition:

Mineral	Modal (%)	Texture
Volcanic glass	48	
Plagioclase	22	Tabular
Chalcedony	14	Radial fibrous
Pyroxene	8	Euhedral
Rock fragment	6	
Opaque (Fe-oxide)	2	Euhedral

Note:
Matrix composed of volcanic glass shows lamella structure. Plagioclase, pyroxene, and rock fragment lie on the matrix.

Site No. 48	Rock name Vesicular and glomeroporphyritic basalt

Open



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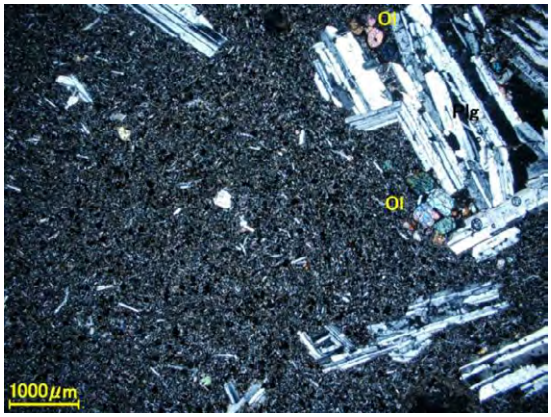


Plg: Plagioclase, Ol: Olivine

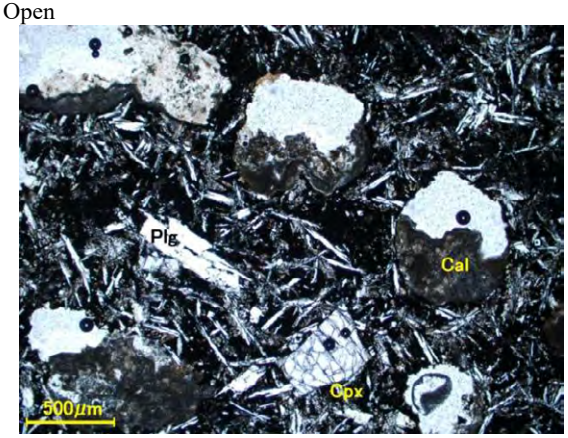
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	40	Lath, Tabular
Pyroxene	30	Anhedral-Euhedral
Opaque (Fe-oxide)	10	Anhedral-Euhedral
Olivine	7	Euhedral
Calcite	5	Anhedral
Volcanic glass	5	
Chalcedony	3	Radial fibrous

Note:
Ground mass is composed of fine plagioclase, pyroxene, and opaque mineral. Phenocrysts are plagioclase and olivine. Plagioclase phenocrysts shows glomeroporphyritic texture. Some vesicles are filled with calcite and chalcedony.

Site No. 49	Rock name Vesicular and intergranular basalt

Open



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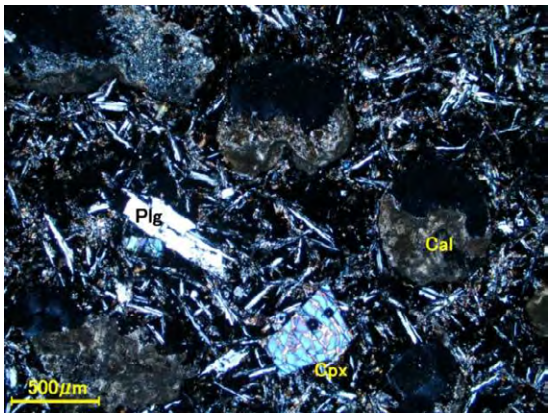


Plg: Plagioclase, Cpx: clinopyroxene, Cal: Calcite

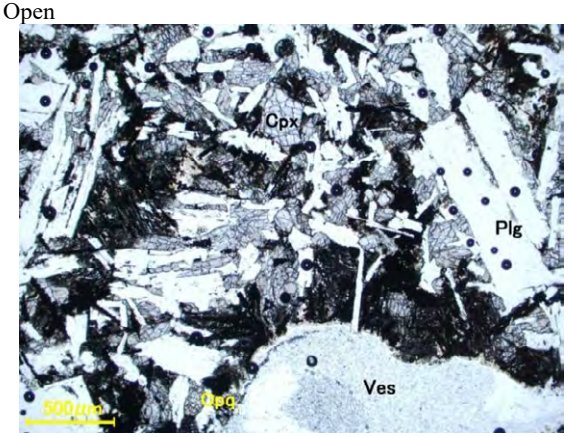
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	38	Anhedral
Pyroxene	36	Anhedral
Calcite	10	Anhedral
Opaque (Fe-oxide)	15	Anhedral
Volcanic glass	5	
Olivine	Trace	Anhedral

Note:
Ground mass in composed of colored mineral (pyroxene) and opaque mineral, which fill intergranular of lath plagioclase. Phenocrysts of plagioclase and clinopyroxene is observed. Calcite fills some vesicle.

Site No. 50	Rock name Vesicular and seriate basalt

Open



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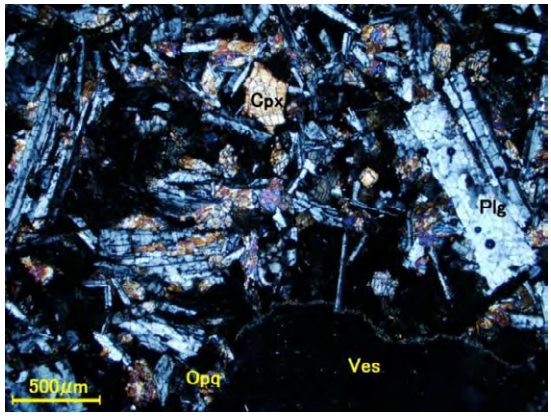


Plg: Plagioclase, Cpx: clinopyroxene, Opq: Opaque, Ves: vesicle

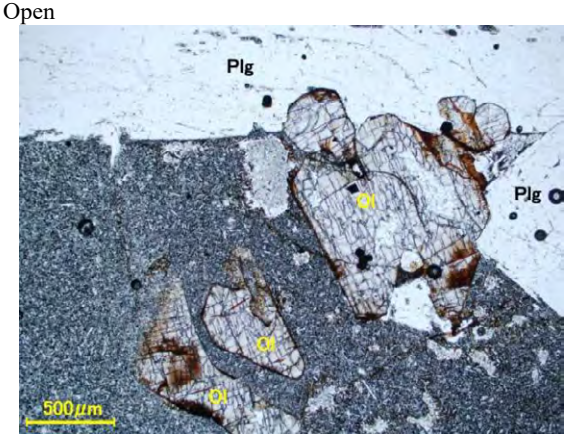
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	40	Lath
Pyroxene	38	Anhedral
Volcanic glass	12	
Opaque (Fe-oxide)	8	Euhedral-Anhedral
Calcite	2	Anhedral

Note:
Clinopyroxene and opaque mineral fill intergranular of strip form or lath plagioclases, which shows seriate texture that has several grain size of phenocryst from coarse to fine. Vesicle is also observed.

Site No. 51	Rock name Porphyritic olivine basalt

Open



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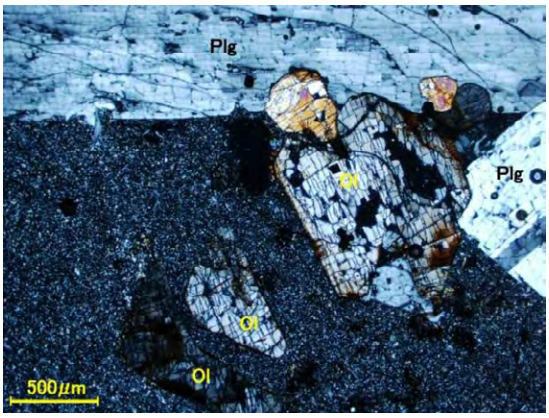


Plg: Plagioclase, Ol: Olivine

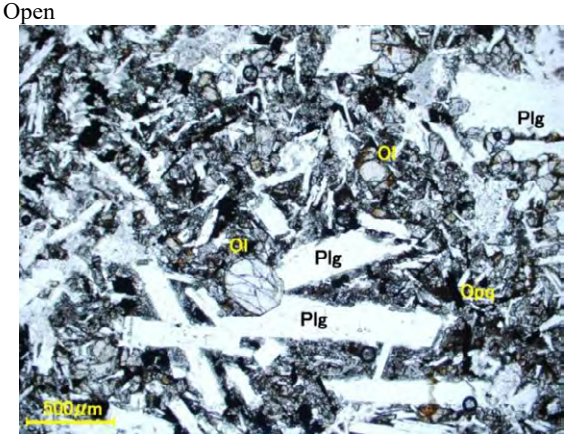
Mineral composition:

Mineral	Modal (%)	Texture
Microlite plagioclase	50	Microlitic
Pyroxene	24	Fine, Anhedral
Opaque (Fe-oxide)	20	Fine,Euhedral-Anhedral
Olivine	5	Euhedral
Chalcedony	1	Radial fibrous

Note:
Ground mass is observed very fine. Phenocrysts are plagioclase and olivine. Major axis of plagioclase phenocryst is maximum approx. 7mm.

Site No. 52	Rock name Intergranular basalt

Open



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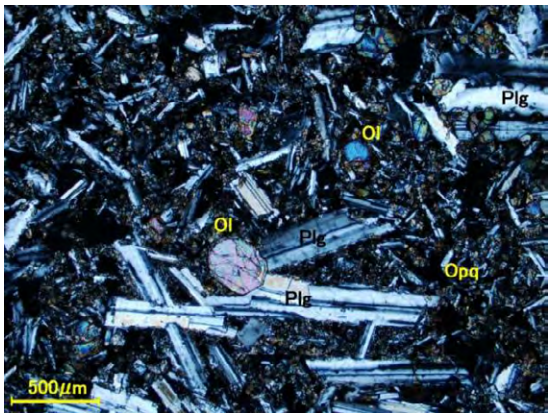


Plg: Plagioclase, Ol: Olivine, Opq: Opaque

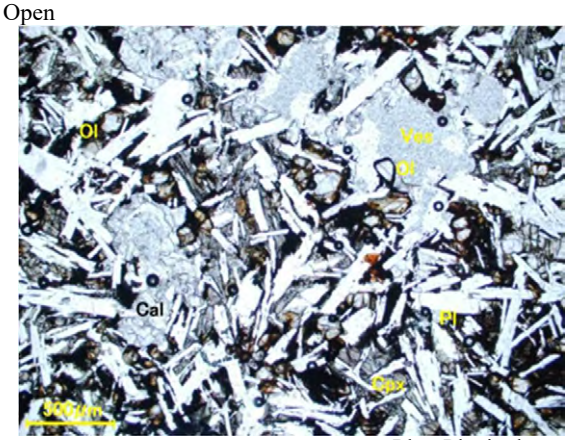
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	40	Lath
Pyroxene	38	Anhedral
Olivine	14	Euhedral
Opaque (Fe-oxide)	8	Euhedral-Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral filling intergranular of lath plagioclases. Phenocrysts are plagioclase and olivine.

Site No. 53	Rock name Intergranular basalt

Open



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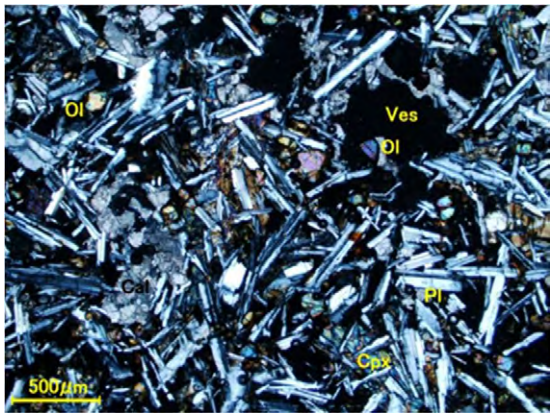


Plg: Plagioclase, Ol: Olivine, Cpx: Clinopyroxene, Cal: Calcite, Ves: Vesicle

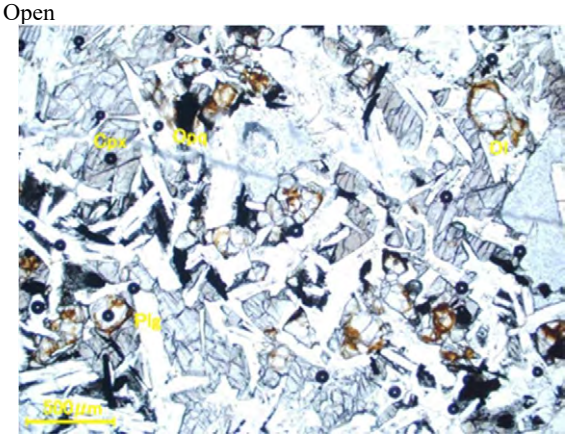
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	33	Lath
Pyroxene	32	Anhedral
Olivine	17	Euhedral
Calcite	7	Anhedral
Volcanic glass	7	
Opaque (Fe-oxide)	4	Euhedral-Anhedral

Note:
Colored mineral (pyroxene and olivine) and opaque mineral fill intergranular of lath plagioclases. Plagioclase phenocryst is observed approx. 2mm in major axis. Some vesicles are filled with calcite.

Site No. 54	Rock name Intergranular and porphyritic olivine basalt

Open



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Plg: Plagioclase, Ol: Olivine, Cpx: Clinopyroxene, Opq: Opaque

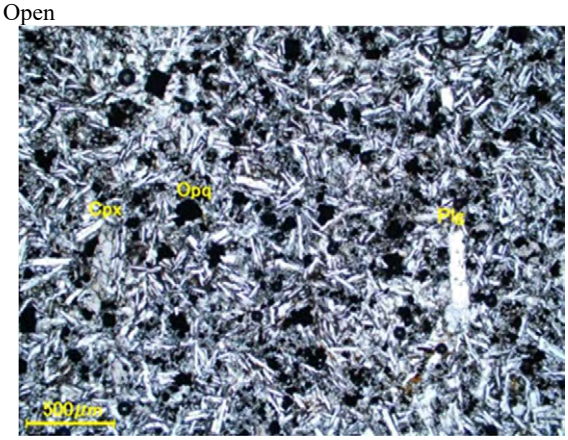
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	38	Lath, Tabular
Pyroxene	36	Anhedral
Olivine	16	Euhedral
Opaque (Fe-oxide)	7	Euhedral-Anhedral
Volcanic glass	3	

Note:
Colored mineral (pyroxene and olivine) and opaque mineral fill intergranular of lath plagioclases. Plagioclase phenocryst is observed approx. 5mm in major axis.

Site No. 55	Rock name Intergranular basalt

Open



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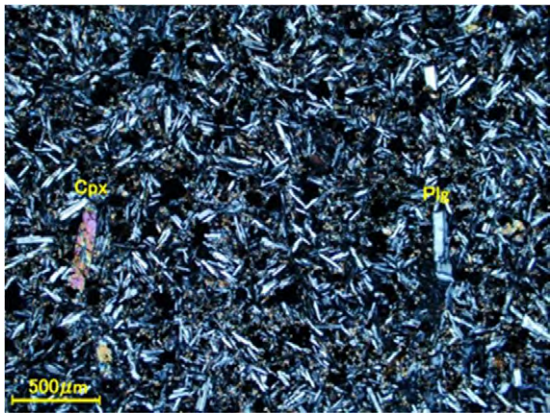


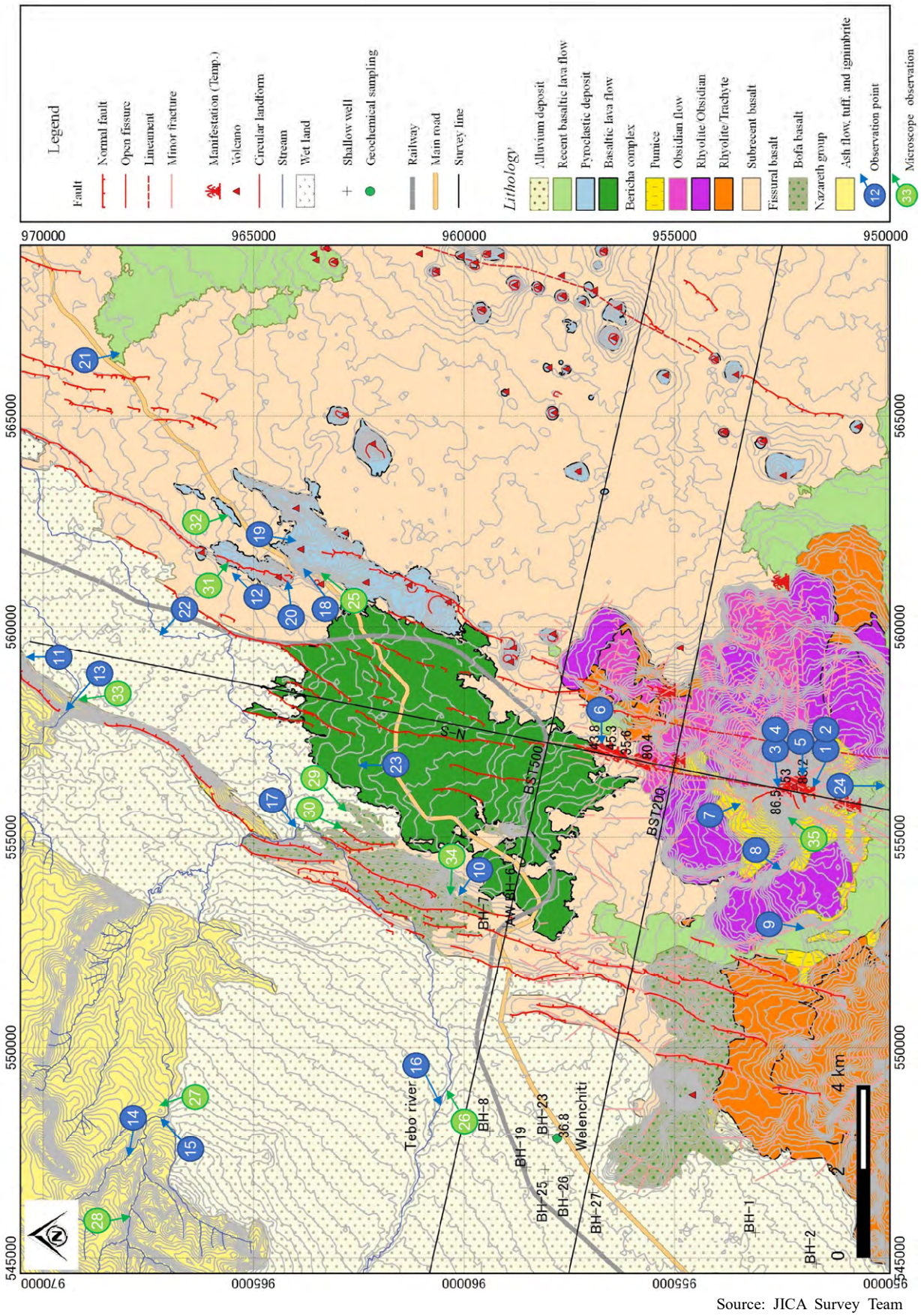
Plg: Plagioclase, Cpx: Clinopyroxene, Opq: Opaque

Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	40	Lath
Pyroxene	39	Anhedral
Opaque (Fe-oxide)	11	Euhedral-Anhedral
Volcanic glass	7	
Calcite	3	Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral filling intergranular of lath plagioclases. Phenocryst is not almost observed.

A1.2 Geological reconnaissance survey in Boseti



Source: JICA Survey Team

Figure A1.2.1 Boseti Location Map of Photo Recording

Boseti

1. Old volcanic vent on the top of Mt. Bericha. There are fumaroles around the vent. Lava flowed northward (upward of the photograph).

2. Fumaroles with dry steam of maximum temperature 82.8°C from altered pumice layer around the volcanic vent.

3. Open flank fissure with 5-10m deep near the top of Mt. Bericha. There are fumaroles from the fissure, and steam filled in the fissure.

4. Fumaroles in the flank fissure. Maximum temperature is 86.5 °C.

5. Fumaroles in the gully near the top of Mt. Bericha. Fumarole belched from
*Photo was taken in the Master Plan study.

6. One of fumaroles at the northern foot of the mountain. Hot steam from cavity in basaltic flow is utilized for sauna for local people. Temperature is from 35.6 to 80.4 °C.

7. Overview of Mt. Bericha, the flank fissure can be clearly observed on northern slope of the mountain.

8. Fresh and unconsolidated pumice layer on western side of Mt.Bericha.

9. Fresh recent basaltic lave flow filled in the valley, covered with green low glasses.

10. Hard and intact Bofa basalt in the quarry.

11. Fault cliff with about 200m height on the north of the survey area. Tuff layer can be observed on upper part of the cliff.

12. NNE-SSW oriented fault F1-1, dipping to west cuts scoria layer.

13. Dried-up water fall continuing fault cliff of fault F2. Tuff layer above ignimbrite can be observed on the slope.

14. Weathered ignimbrite interbedded with tuffaceous silt in dried-up valley.

15. . Calcite vein(near the hummer) with NNE-SSW and E-W direction in the highly weathered ignimbrite.

16. Fresh and clearly stratified ash deposit including pumice, observed on the undercut slope of river.

17. Basaltic flow observed on river bed. Highly fractured but dense and intact Aphyric basalt.

18. Rhyolite dome near the scoria cones. Rhyolite is highly weathered and fractured.

19. Silica vein in rhyolite dome.

20. Brown to reddish stratified volcanic ash layer including pumice coarse fragment and black scoria above light brown rhyolite with flow structure.

21. Aa lava at the tip of recent basaltic flow.

22. Stratified sedimentary layer of sand, silt, and clay..

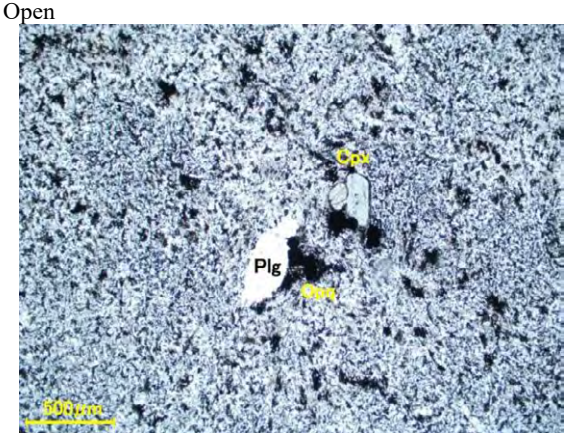
23. National highway build in the basaltic flows. Fault cliff continues back side of the basalt.

24. Overview of Mt.Gudda, view form Mt.Bericha.

Microscope observation

Site No. 25 | Rock name Rhyolite

Open



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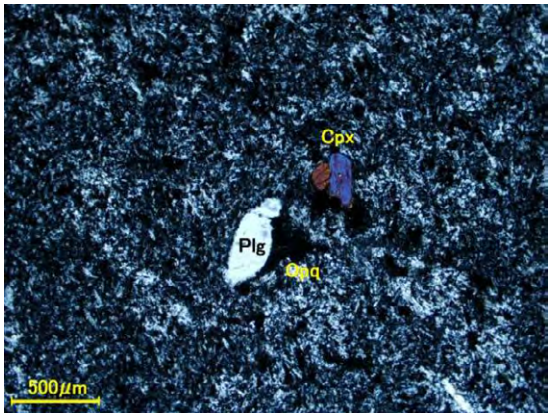


Plg: Plagioclase, Cpx: Clinopyroxene, Opq: Opaque

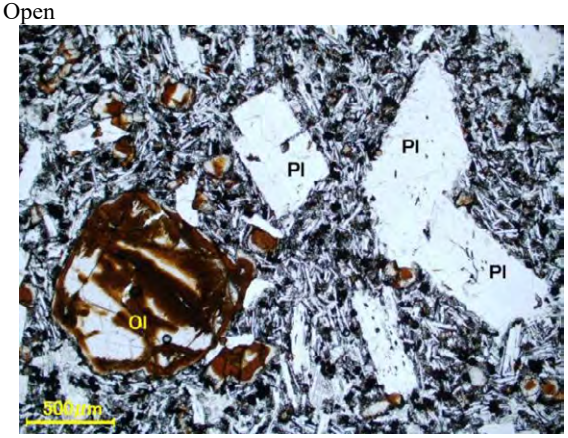
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	58	Lath, Anhedral
Pyroxene	25	Anhedral
Opaque (Fe-oxide)	10	Euhedral-Anhedral
Volcanic glass	7	

Note:
Ground mass is composed of very fine plagioclase, colored mineral (pyroxene), and opaque mineral, which slightly show preferred orientation. Phenocrysts of plagioclase and clinopyroxene are observed.

Site No. 26 | Rock name Intergranular and porphyritic basalt

Open



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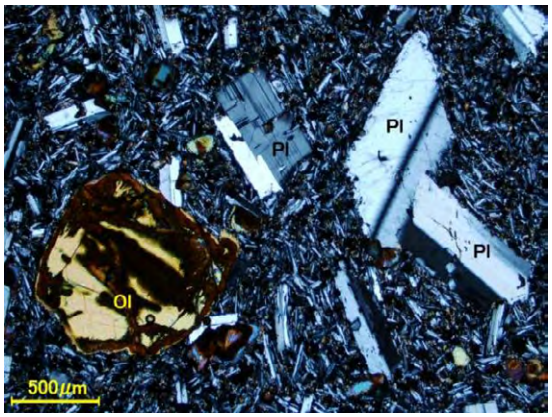


Plg: Plagioclase, Ol: Olivine

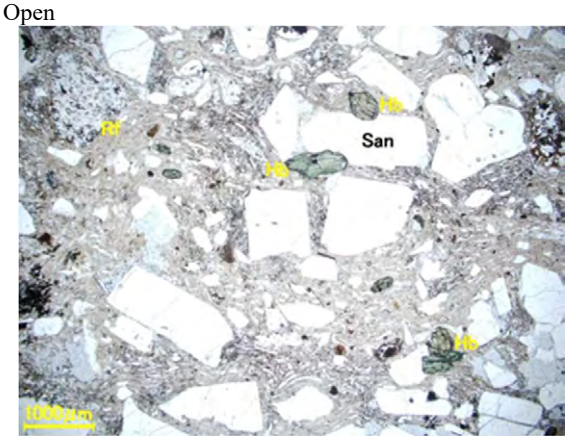
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	46	Lath,Anhedral
Pyroxene	39	Anhedral
Opaque (Fe-oxide)	10	Anhedral
Olivine	5	Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral filling intergranular of lath plagioclases. Reddish brown colored olivine and plagioclase phenocryst are often observed.

Site No. 27	Rock name Vitrophyric rhyolitic tuff

Open



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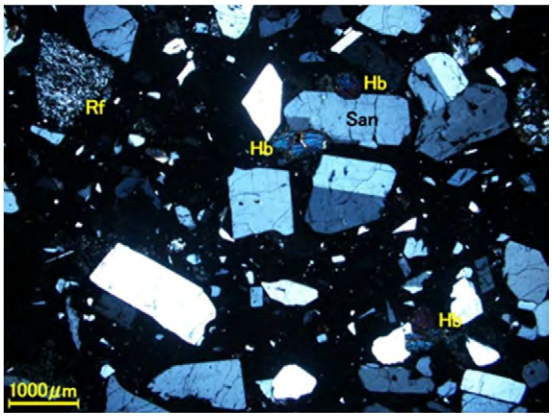


San: Sanidine, Hb: Hornblende, Rf: Rock fragment

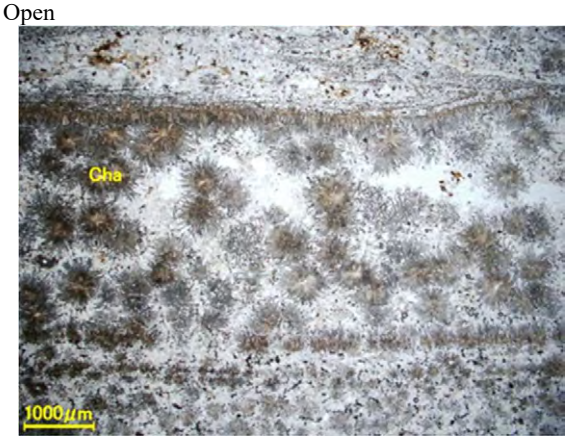
Mineral composition:

Mineral	Modal (%)	Texture
Volcanic glass	48	
Sanidine	25	Anhedral
Plagioclase	12	Anhedral
Quarts	10	Anhedral
Opaque (Fe-oxide)	3	Euhedral-Anhedral
Hornblende	2	Anhedral
Biotite	Trace	Anhedral

Note:
Sanidine, hornblende, and volcanic rock fragment lie on glassy matrix.

Site No. 28	Rock name Rhyolite

Open



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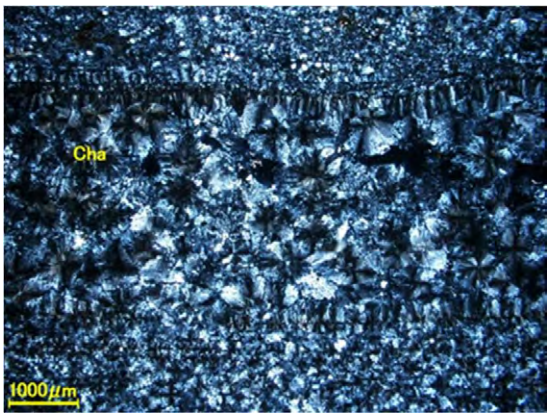


Cha: Chalcedony

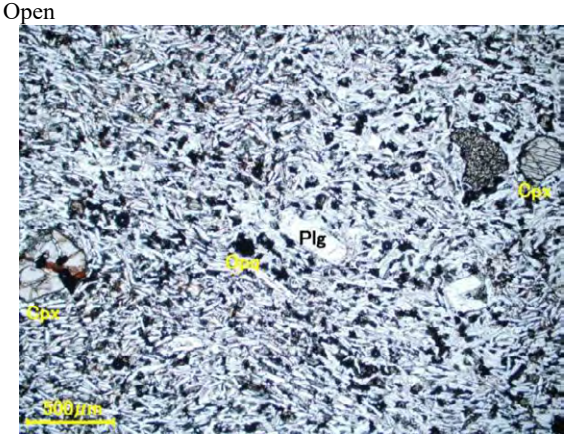
Mineral composition:

Mineral	Modal (%)	Texture
Chalcedony	35	Radial fibrous
Quarts	30	Anhedral
Volcanic glass	25	
Plagioclase	5	Tabular
Opaque (Fe-oxide)	5	Anhedral
Biotite	Trace	Anhedral

Note:
This rock is observed that rhyolite with flow structure was silicified completely. Quarts are sometimes find on the center of chalcedony with radial and fibrous texture.

Site No. 29	Rock name Pilotaxitic and porphyritic basalt

Open



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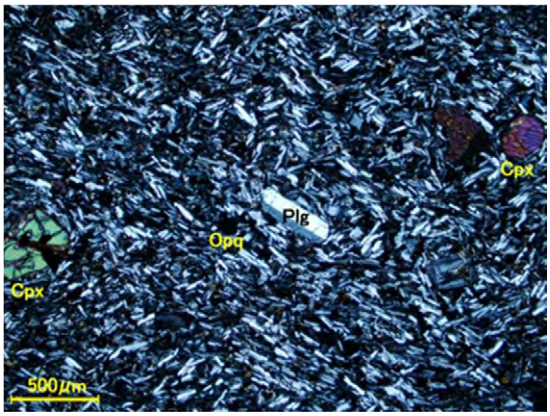


Plg: Plagioclase, Cpx: Clinopyroxene, Opq: Opaque

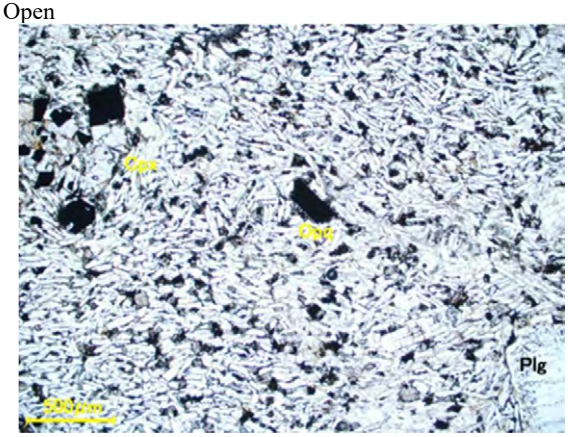
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	55	Anhedral
Pyroxene	35	Anhedral
Opaque (Fe-oxide)	10	Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral, which fill intergranular of strip form or lath plagioclases. Phenocrysts of plagioclase and clinopyroxene lie on the ground mass.

Site No. 30	Rock name Pilotaxitic and porphyritic basalt

Open



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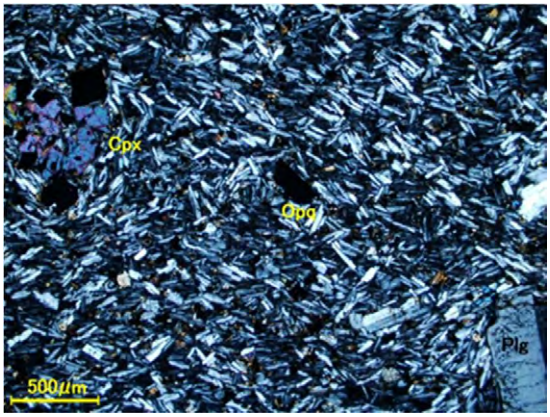


Plg: Plagioclase, Cpx: Clinopyroxene, Opq: Opaque

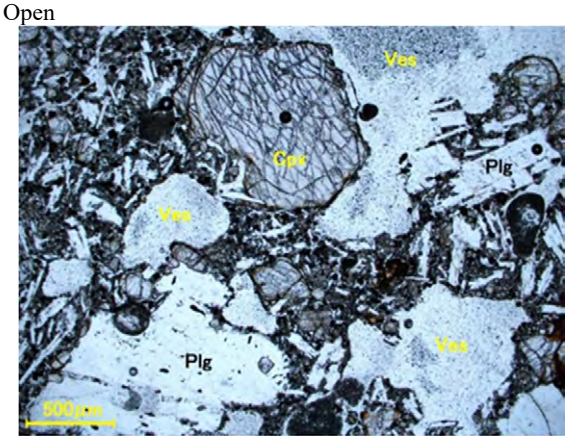
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	56	Anhedral
Pyroxene	35	Anhedral
Opaque (Fe-oxide)	9	Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral, which fill intergranular of strip form or lath plagioclases with preferred orientation. Phenocrysts of plagioclase and clinopyroxene lie on the ground mass. Vesicle is also observed.

Site No. 31	Rock name	Intergranular and porphyritic vesicular basalt

Open



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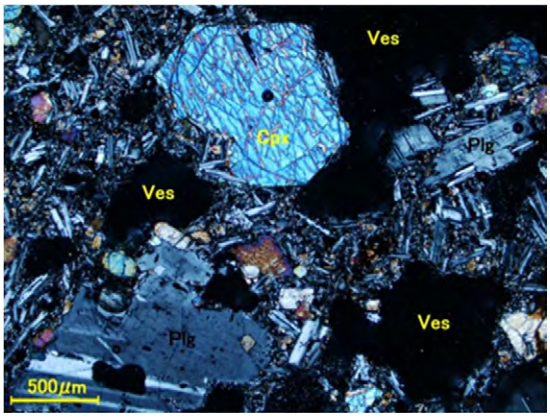


Plg: Plagioclase, Cpx: Clinopyroxene, Ves: Vesicle

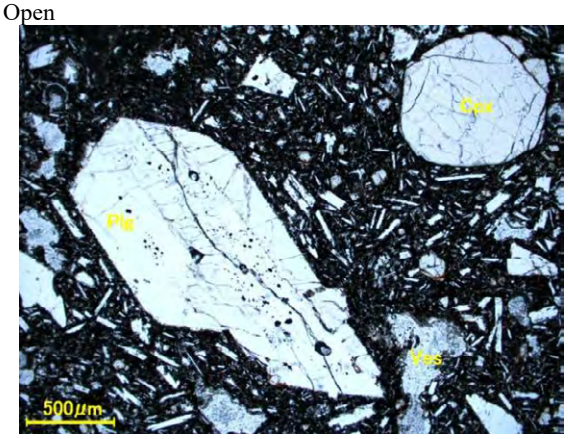
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	46	Anhedral
Pyroxene	42	Anhedral
Opaque (Fe-oxide)	9	Anhedral
Olivine	3	Euhedral-Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral, which fill intergranular of lath plagioclases. Phenocrysts of plagioclase and clinopyroxene are often observed. Vesicle is also observed.

Site No. 32	Rock name	Intergranular and porphyritic vesicular basalt

Open



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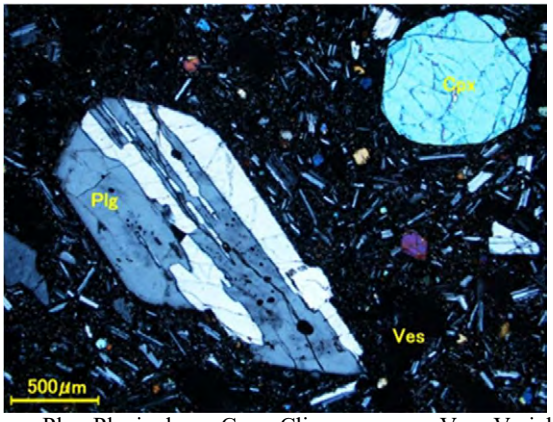


Plg: Plagioclase, Cpx: Clinopyroxene, Ves: Vesicle

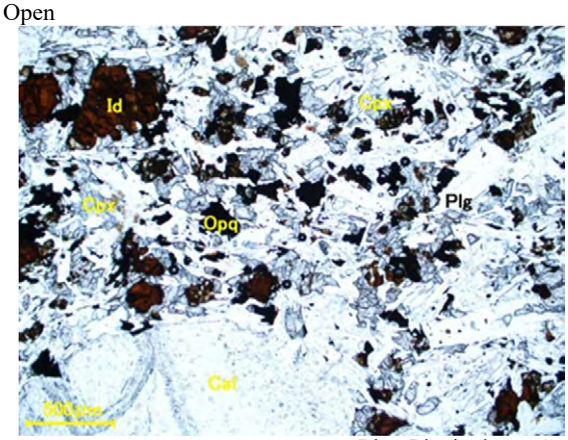
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	45	Anhedral, Lath
Pyroxene	40	Anhedral
Opaque (Fe-oxide)	12	Anhedral
Olivine	3	Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral, which fill intergranular of lath plagioclases. Phenocrysts of plagioclase and clinopyroxene are often observed.

Site No. 33	Rock name Intergranular basalt

Open



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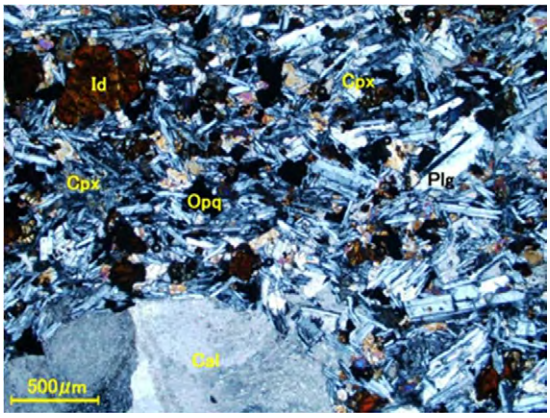


Plg: Plagioclase, Cpx: Clinopyroxene, Id: Iddingsite, Opq: Opaque, Cal: Calcite

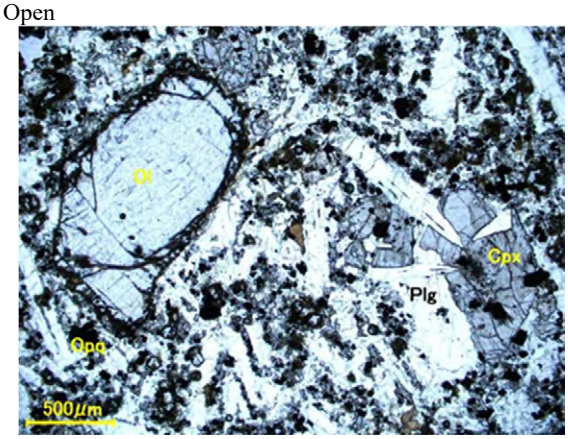
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	42	Anhedral, Lath
Pyroxene	39	Anhedral
Opaque (Fe-oxide)	12	Euhedral-Anhedral
Olivine	5	Anhedral

Note:
Clinopyroxene and opaque mineral fill intergranular of strip form or lath plagioclases showing preferred orientation. Reddish brown minerals are iddingsite which is altered from olivine. Calcite fills vesicles.

Site No. 34	Rock name Intergranular and porphyritic basalt

Open



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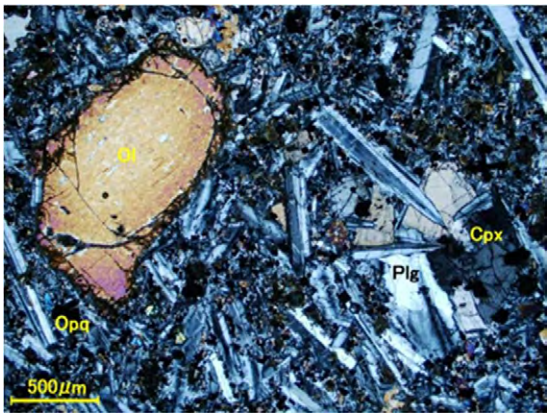


Plg: Plagioclase, Cpx: Clinopyroxene, Ol: Olivine

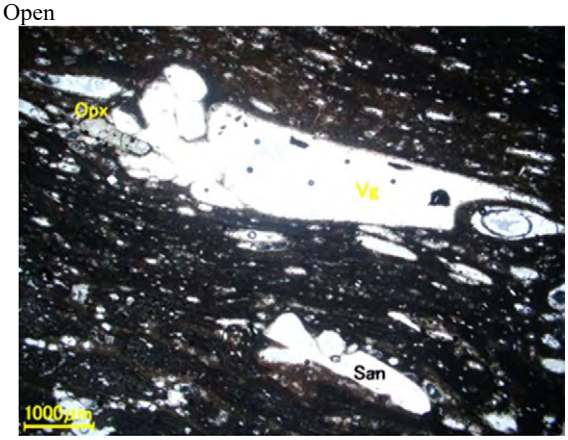
Mineral composition:

Mineral	Modal (%)	Texture
Plagioclase	44	Lath, Tubular
Pyroxene	41	Anhedral
Opaque (Fe-oxide)	12	Anhedral
Olivine	3	Euhedral-Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral, which fill intergranular of lath plagioclases. Phenocrysts are plagioclase, clinopyroxene, and olivine.

Site No. 35	Rock name Vitrophyric rhyolitic welded tuff

Open



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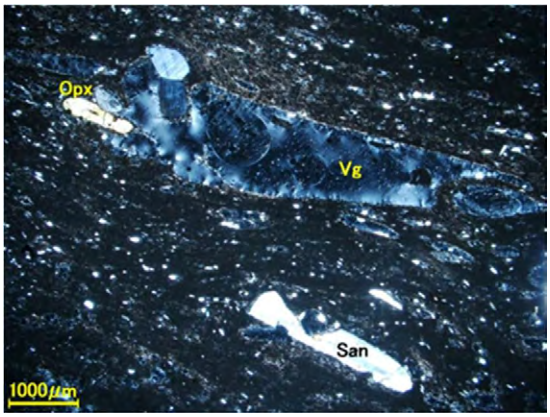


San: Sanidine, Opx: Orthopyroxene, Vg: Volcanic glass

Mineral composition:

Mineral	Modal (%)	Texture
Volcanic glass	53	
Quartz	15	Anhedral
Sanidine	11	Anhedral
Pyroxene	10	Anhedral
Opaque (Fe-oxide)	6	Anhedral
Plagioclase	5	Lath,Anhedral

Note:
Ground mass is composed of colored mineral (pyroxene) and opaque mineral filling intergranular of lath plagioclases. Plagioclase, clinopyroxene, and olivine are observed as phenocryst.

APPENDIX-2

MT/TEM Survey

Methodology and Survey Data

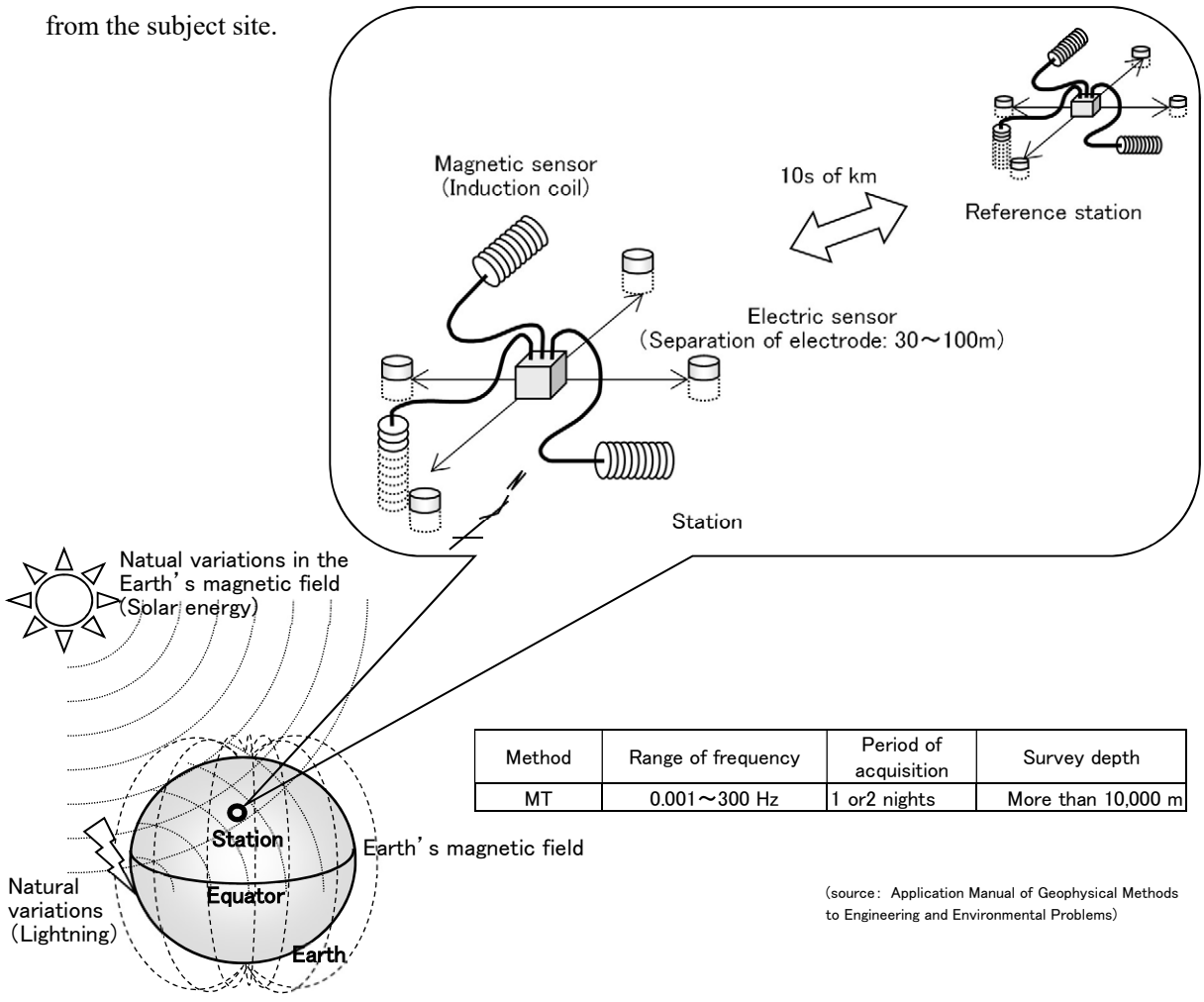
Appendix-2 Methodology of MT and TEM survey and results data

A2.1 MT Method

(1) Principle of Method

MT (Magnetotellurics) method observes the earth's magnetic field and telluric current in nature with magnetic and electric sensors to investigate underground structures. MT method can investigate more than 10,000 m deep.

The term "MT method" is an abbreviation for magnetotellurics method, derived from the combination of the earth's magnetism and telluric currents. It denotes a survey method using the earth's telluric currents produced in the ground by variations of the earth's magnetic field (Figure 1). The earth's magnetic field changes naturally and is thought to be due to the earth's magnetic oscillation, less than 1Hz, driven by solar activity and the earth's magnetic pulsation, more than 1Hz, produced by lightning. MT method observes these activities in the frequency range between 0.001Hz and 1,000Hz. Observation is commonly carried out overnight when the noise level is low. The remote reference method eliminates the noise at survey points. It uses an observation result at a reference station more than 50 km away from the subject site.



Method	Range of frequency	Period of acquisition	Survey depth
MT	0.001～300 Hz	1 or2 nights	More than 10,000 m

(source: Application Manual of Geophysical Methods to Engineering and Environmental Problems)

Figure A2.1.1 Schematic diagram of principles of MT method

The electromagnetic wave is attenuated gradually while it enters ground surface and penetrates underground. MT method is some of the

The skin depth where the energy intensity decreases to 1/e (about 0.37time) of the intensity at ground surface is regarded as a rule of thumb of the exploration depth for MT method.

The skin depth δ (m) depends on resistivity of ground ρ (ohm-m) and frequency f (Hz) of electromagnetic wave and is estimated as the following equation.

$$\delta = \sqrt{\frac{\rho}{\pi f \mu}} \cong 503\sqrt{\frac{\rho}{f}}$$

Where μ is electric permeability.

This equation shows that the higher the resistivity and the lower the frequency, the deeper the exploration depth into the ground. About MT method in the frequency range of 300 ~ 0.001Hz, the resistivity of 10ohm-m indicates the skin depth of about from 92m to 50km. It is said that the exploration depth of MT method is about 2-1/2 (≒0.707) of the skin depth.

As the variations of the earth's magnetism and telluric currents in low frequencies like the micropulsation affected by solar activity are observed for MT method, the measurement has to be carried out overnight when the culture noise level is low at least for one night. However, at MT measurement, the variations of the earth's magnetism and telluric currents are small and it is difficult to distinguish those signals from noises. The remote reference station is set up at the far place from the survey site and where noise is low and the measurement is carried out at the survey station and the remote reference station simultaneously. The variations of observed signals at the survey station which have the correlation with data at the remote reference station are recognized as correct signals and those signals reduce affection of noise to acquired data. This technique is called the remote reference method.

The resistivity is the electrical property obtained from the electromagnetic or electric surveys including MT method. The definition of resistivity is electric resistance per unit of length with electric current flowing through the unit cross section area. This means, the apparent resistivity value is different depending on the directions of the measurements in case of layered underground or fracture rock. In other words, the resistivity shows anisotropy. MT method routinely measure this apparent anisotropy of resistivity differently from electromagnetic surveys except for MT method or electric surveys. For example, in case of the survey for fault, the resistivity in parallel with the strike direction of fault is TE mode and that of the orthogonal direction of the strike is TM mode.

In MT method, generally **Hx** as magnetic field and **Ex** as electric field in NS direction (x axis) and **Hy** and **Ey** in EW direction (y axis) are observed. Bold characters mean complex number. The definition of impedance tensor **Z** is expressed as the next equation with the relationship of magnetic and electric field.

$$\begin{pmatrix} \mathbf{E}_x \\ \mathbf{E}_y \end{pmatrix} = \mathbf{Z}\begin{pmatrix} \mathbf{H}_x \\ \mathbf{H}_y \end{pmatrix} = \begin{pmatrix} \mathbf{Z}_{xx} & \mathbf{Z}_{xy} \\ \mathbf{Z}_{yx} & \mathbf{Z}_{yy} \end{pmatrix}\begin{pmatrix} \mathbf{H}_x \\ \mathbf{H}_y \end{pmatrix}$$

The resistivity is related to the mutually-perpendicular components Zxy and Zyx of impedance tensor. Therefore 2 orthogonal directions of the resistivity are obtained in MT method. If x axis is rotated from NS direction to another, each component value of impedance tensor Z is varied. It means that by using the impedance tensor Z calculated from the observed data at NS and EW directions, the resistivity at arbitrary direction can be estimated.

(2) Measurement Method

Figure 2 shows the schematic drawing for deployment of MT data acquisition system in the project. For data acquisition, MTU-5A system of Phoenix Geophysics (compatible with MT/AMT) was used and 2 components of the electric field and 3 components of the magnetic field were observed as time series. at each station.

The Pb-$PbCl_2$ non-polarized electrodes PE4 of Phoenix Geophysics were used at the measurement of the telluric current and according to the condition of each station, the dipole of 50~100m range was selected. The 2 directions of the dipole were NS and EW direction referring the magnetic north as standard. The electrodes were buried with water and bentonite to reduce contact resistivity in the hole of about 30m depth.

At the measurement of the magnetic field, the induction coils MTC-50/80 of Phoenix Geophysics were used to observe the magnetic field in the direction of NS and EW (magnetic north as standard) and verticality.

The remote reference stations were set up at more than 60 km far from the survey sites. The measurements were conducted simultaneously at the survey station and the remote reference station for more than 14 hours overnight and the survey equipment were moved and set up at next station during daytime. At the beginning of each survey, the calibration was executed to test magnetic sensors and decide coil coefficients.

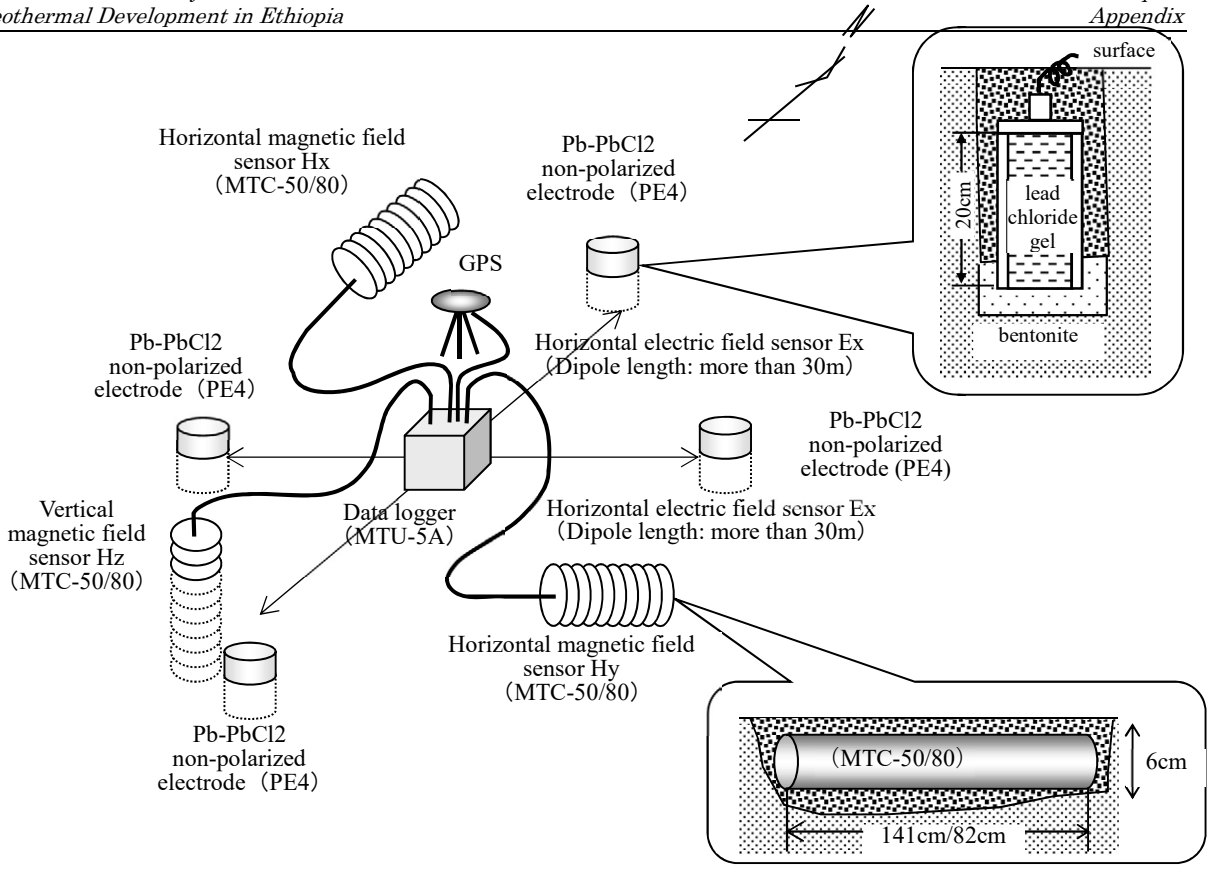


Figure A2.1.2 Schematic drawing for deployment of MT data acquisition system

(3) Data Processing

The time series data including 3 components of magnetic field and 2 components of electric field acquired by data logger were moved to the laptop computer soon in the field after finishing the measurement. each component of the time series data was processed by Fourier transform and each power spectrum at every frequency f (Hz) was obtained. The spectral ratios of horizontal magnetic field Hx(f) and Hy(f), electric field Ex(f) and Ey(f) compose each component of impedance tensor Z(f) at every frequency. The mutually-perpendicular resistivity ρxy(f), ρyx(f) and phase difference $\Delta\phi$xy(f), $\Delta\phi$yx(f) were computed from the impedance tensor Z(f) using the next equation.

$$\rho_{xy}(f) = \frac{1}{2\pi f\mu}\left|\mathbf{Z}_{xy}(f)\right| = \frac{1}{5f}\frac{\left|\mathbf{E}_x(f)\right|}{\left|\mathbf{H}_y(f)\right|}, \quad \Delta\phi_{xv}(f) = \phi\{\mathbf{H}_y(f)\} - \phi\{\mathbf{E}_x(f)\}$$

$$\rho_{yx}(f) = \frac{1}{2\pi f\mu}\left|\mathbf{Z}_{yx}(f)\right| = \frac{1}{5f}\frac{\left|\mathbf{E}_y(f)\right|}{\left|\mathbf{H}_x(f)\right|}, \quad \Delta\phi_{xv}(f) = \phi\{\mathbf{H}_y(f)\} - \phi\{\mathbf{E}_x(f)\}$$

Where,

f: frequency (Hz), π: the ratio of the circumference of a circle to its diameter, μ: magnetic permeability

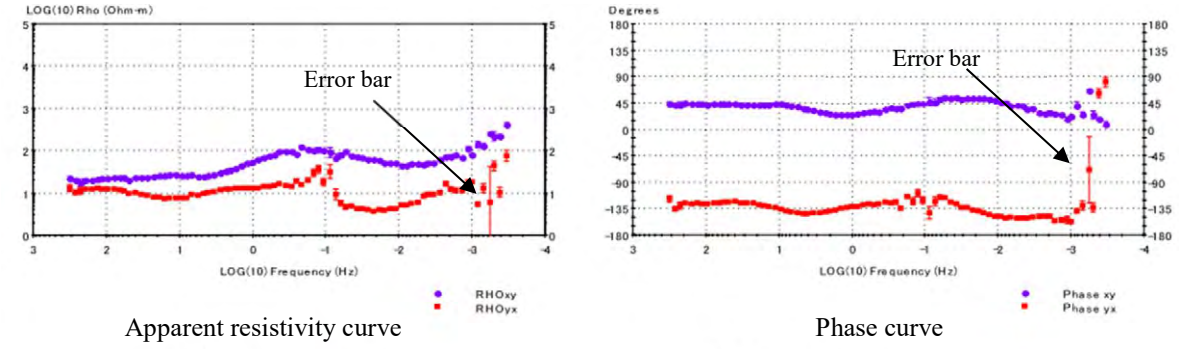
$|\mathbf{E}_x(f)|$、$|\mathbf{E}_y(f)|$: intensity of electric field (V/m), $|\mathbf{H}_x(f)|$, $|\mathbf{H}_y(f)|$: intensity of magnetic field (nT)

$\phi\{\mathbf{E}_x(f)\}$, $\phi\{\mathbf{E}_y(f)\}$: phase of electric field (degree), $\phi\{\mathbf{H}_x(f)\}$, $\phi\{\mathbf{H}_y(f)\}$: phase of magnetic field (degree)

Calculated resistivity ρxy(f) and ρyx(f) mean exact resistivity in case that the ground resistivity is equal. Actually, as they mean approximate resistivity because of the unequal ground resistivity, it is called "apparent resistivity" in MT method. Phase difference is called "phase" ϕxy(f), ϕyx(f). An example of apparent resistivity and phase curve is shown in Figure 3.

In the project, the observed time series data were divided to 20 segments and each apparent resistivity and phase is calculated at every segment. 20 processed values were obtained at every frequency and statistically

mean and variance are calculated and variance is expressed as error bar on apparent resistivity curve or phase curve. Generally, it is desirable and means high quality to have low scatter, moderate curvature and well-joined frequency-band curve segments. Data processing by using only the observation data at survey station is called local processing. In the project, after downloading data to the laptop computer, the local processing was done and data quality of the observed data was estimated with the apparent resistivity and phase curve.



Apparent resistivity curve　　Phase curve

Figure A2.1.3 An example of an apparent resistivity and phase curve

About data processing of this survey, at 80 frequencies in the range between 320Hz ~ 0.00034Hz of MT data, each impedance tensor Z(f) was computed.

After the field survey finishing, by using the acquired data at remote reference station, the remote reference processing technique was applied to the acquired data at survey stations to remove local noises. A concept of remote reference processing is given in Figure 4. Both the observed data and the remote reference data have artificial electromagnetic noises generated by power lines, residences, and traffic of vehicles etc. in circles of Figure. If the distance between the survey site and the remote reference station is fully far, the correlation of the signal is good and at the same time, noise shows no correlation. Therefore after cross-correlation data processing, the processed data without noise are created.

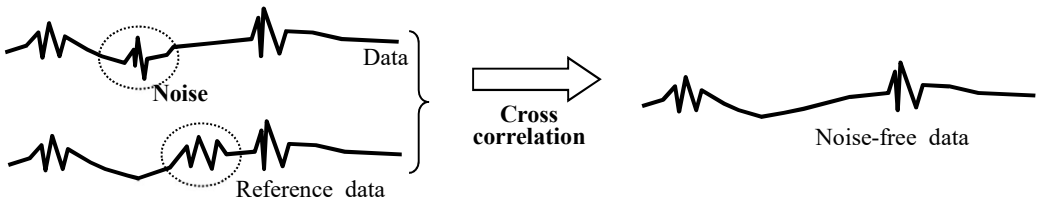


Figure A2.14 A concept of remote reference processing

SSMT2000 software of Phoenix Geophysics was used for a series of remote reference data processing technique. The processed data were edited by selecting the segment with high S/N at every frequency so that the apparent resistivity and phase curves have small error bar and smooth curvature. For edit, MT-editor software of Phoenix Geophysics was used.

(4) Data Analysis

1) Dimensionality analysis

Impedance tensor obtained by MT measurement can be rotated to any other coordinate system by the rotation matrix. In case of 1 dimensional layered resistivity structure, Zxx=Zyy=0 and Zxy=-Zyx(≠0) are satisfied at arbitrary direction. In case of 2 dimensionality structure, Zxx=Zyy=0 and Zxy≠-Zyx(≠0) are satisfied when the strike direction of the resistivity structure is parallel to x axis and perpendicular to y axis. Therefore, by the rotation of impedance tensor, the strike direction of the resistivity structure and the index of the structure complexity can be obtained.

Impedance polar diagram is the drawn trace when Zxy and Zxx are rotated mathematically. In 1 dimensional structure, Zxy diagram is should be circle and Zxx diagram is should be minimal. In 2 dimensional structure, Zxy is peanut shape or elliptic shape. The long axis is parallel to the strike direction if the station is at conductive side or is perpendicular to the strike direction if the station is at resistive side. In 3 dimensional structure, Zxy and Zxx change shape largely to cloverleaf shape. The qualitative interpretation of the resistivity structure can be conducted by impedance polar diagram.

The vertical magnetic field Hz shows large value near the vertical structure. Then, Hz correlates well with the horizontal magnetic field Hr. Tipper strike is defined as r + 90 degrees and the parameter of the strike direction. In case that the station is far from the discontinuity of the structure, the vertical magnetic field Hz becomes small drastically so that it is difficult to determine tipper strike precisely.

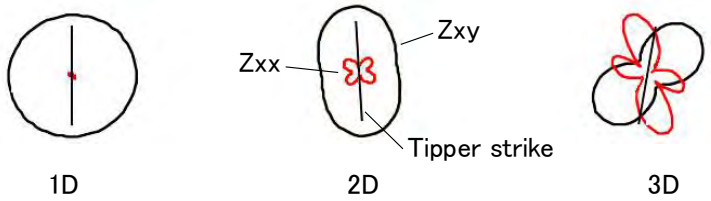


Figure A2.1.5 Impedance polar diagram and tipper strike

Tipper magnitude is the calculated parameter from 3 components of the magnetic field and indicates dimensionality. In case that the magnitude is almost zero (or less than 0.2), it indicates the presence of 1 dimensional subsurface resistivity structure. In case that the magnitude is more than 0.5, 2 dimensional or 3 dimensional structure may present. Tipper magnitude becomes large around the boundary of the resistivity structure.

$$TipMag = (A^2 + B^2)^{1/2}$$

2) 2D analysis

As mentioned above, the apparent resistivity ρxy(f) and ρyx(f) computed through data processing just indicate the mean value of resistivity to the exploration depth (about 0.707times skin depth). 2D analysis was executed using apparent resistivity and phase curves to infer the resistivity structure.

For data analysis, considering dimensional parameters and the comprehensive geological strike direction of the survey site, profiles were set up and y axis was put in the direction of the profile and x axis was put in the perpendicular direction of the profile.

Impedance tensor was rotated and the apparent resistivity from the combination of electric field of x direction and magnetic field of y direction as TE mode (parallel to structure) and the apparent resistivity from the combination of electric field of y direction and magnetic field of x direction as TM mode (perpendicular to structure) are computed respectively and used for 2D inversion as input data.

In 2D analysis , under the assumption that the resistivity structure doesn't change and continue infinitely in the direction perpendicular to profile, 2D resistivity model is computed automatically so that the response of 2D resistivity model fits to the observed impedance. The resistivity value of each cell in the resistivity model is calculated from all apparent resistivities of the profile by non-linear least squares method. As apparent resistivity of adjacent survey station and adjacent resistivity cell are considered, a relatively continuous model is obtain as reasonable analysis result.

In the project, 2D resistivity inversion analysis was executed using WinGLink of GEOSYSTEM SRL which has a function of 2D inversion. The cross section of profile is composed by the elements of finite difference method for model calculation and resistivity cells combined by elements. The size of the element and the resistivity cell are made enough fine at shallow zone and larger to the direction of marginal and deep zone.

And next, the homogeneous model of 100 ohm-m resistivity is used as initial model and the response of resistivity model by finite element method was computed at each survey station. Comparing the calculated apparent resistivity with the observed apparent resistivity, the iteration of correcting resistivity was continued until RMS (abbreviation of Root Mean Square) error becomes less than the threshold.

3) 3D analysis

In 3D analysis, the electric and the magnetic field are calculated by the resistivity structure of every direction to obtain the resistivity structure model which explains well apparent resistivity and phase calculated from the observed data. Apparent resistivity (ρ xy, ρ yx) and phase (Phasexy, Phaseyx) data were not rotated to use for analysis as the strike direction didn't need to be assumed.

In this project, 3D resistivity inversion analysis was executed using EMVision® of TechnoImaging. The resistivity model for data analysis is divided to the cells with size of 184 m x 184 m in horizontal direction evenly. The size of the cells in vertical direction varies logarithmically from 25 m to 3162 m. In the deeper zone, the size is large as sensitivity per unit (MT response to change of resistivity) is low. Though the special resolution becomes low because of the large cell in size, the parameters of the resistivity structure converge stably.

The analysis area is 18 km (East-West) x 27 km (South-North) and 32 km depth from the surface. Data of 199 stations were used for data analysis and the frequency range for calculation is from 0.001 Hz to 100 Hz.

A2.2 TEM Method

(1) Principle of Method

TEM method is an abbreviation for transient electromagnetic method. It means a method that observes the transients of magnetic field after turning off an input artificial magnetic field (Figure 6)

An artificial magnetic field is transmitted in a vertical direction when an electric current flows in an electric square loop on the ground (transmission loop). The loop may be rectangle or circle. When the electric current is turned off, a secondary electric current starts in the ground in a circle to maintain the input magnetic field. This current gradually spreads under the ground further. This current is called the eddy current, or often called "smoke ring" comparing to the smoke loop from cigar. The input artificial magnetic field decays in time and its rate is less where the resistivity is low. The resistivity of the subsurface is estimated by measuring the decay of the artificial magnetic field by an induction (receiver) coil. The decay immediately after stopping the current signal (early time response) indicates resistivity at shallow ground and the late time response resistivity at deeper parts.

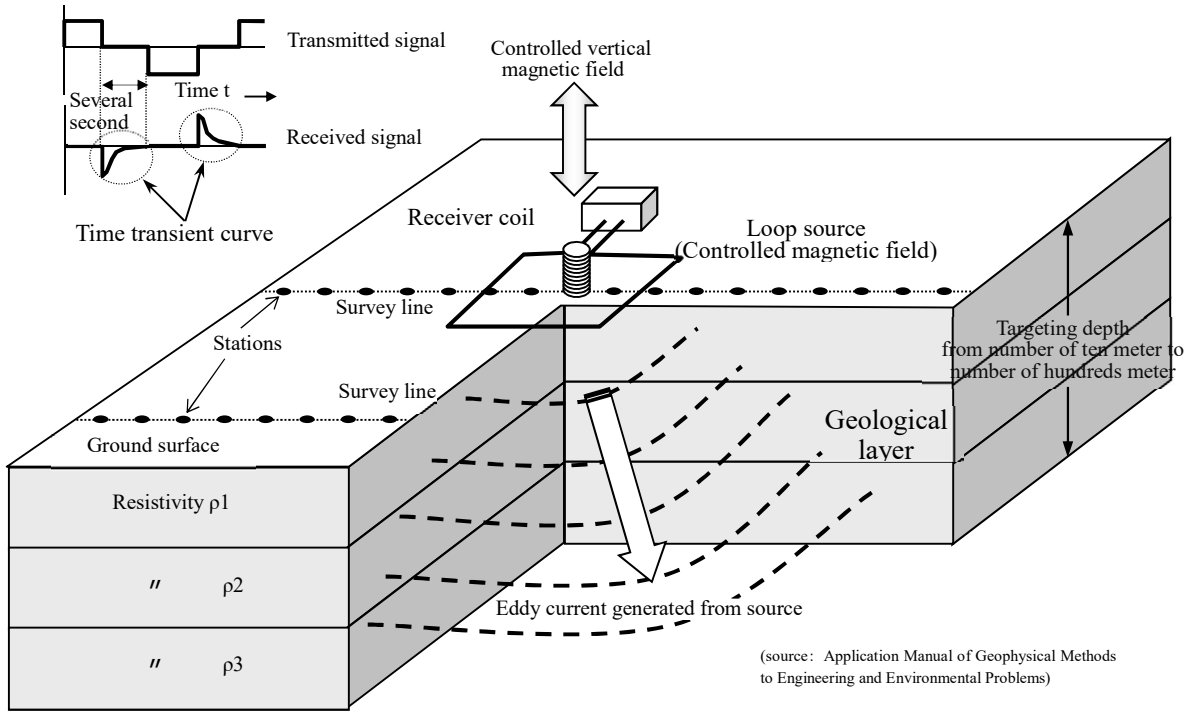


Figure A2.2.1 Schematic diagram of principles of TEM method

Especially, TEM method is useful to the structure which shows low resistivity (high conductance) due to groundwater, argillation, weathered deep layer, alteration etc.

The diffusion depth δ (m) is regarded as a rule of thumb of the exploration depth for TEM method and it is estimated as the following equation.

$$\delta = \sqrt{\frac{2t\rho}{\mu}}$$

Where, ρ: ground resistivity (ohm-m), t: time after turning off the primary field (sec), μ: magnetic permeability

This equation shows that the higher the resistivity and the longer the time, the deeper the exploration depth into the ground.

It is difficult to investigate the structure under the distribution of low resistivity with electric methods at the survey site where low resistivity distributes such as argillation or alteration at the shallower zone. But TEM method is available to investigate deeper zone. Especially, in the survey site where argillation or saline groundwater exists at the surface layer TEM method is suitable.

(2) Measurement Method

In the project, TEM method is used for static correction of MT data. As about 100m is needed as exploration depth, 40m square loop was set up on the ground and the current was passed by the portable transmitter to induce magnetic field. After turning off the current, the transient response of magnetic field was measured by the induction coil in the center of the loop for a few times in central loop system. Figure 7 shows the survey schematic drawing for deployment of TEM data acquisition system in the project. PROTEM CM HP system of Geonics Limited was used and the transient response of vertical magnetic field was measured at each station. The transmitter current is about 2A, the number of time windows is 20, the number of stacks is more than 10 times and 3 kinds of the repeat rate 237.5Hx, 62.5Hz and 25.0Hz were mainly used.

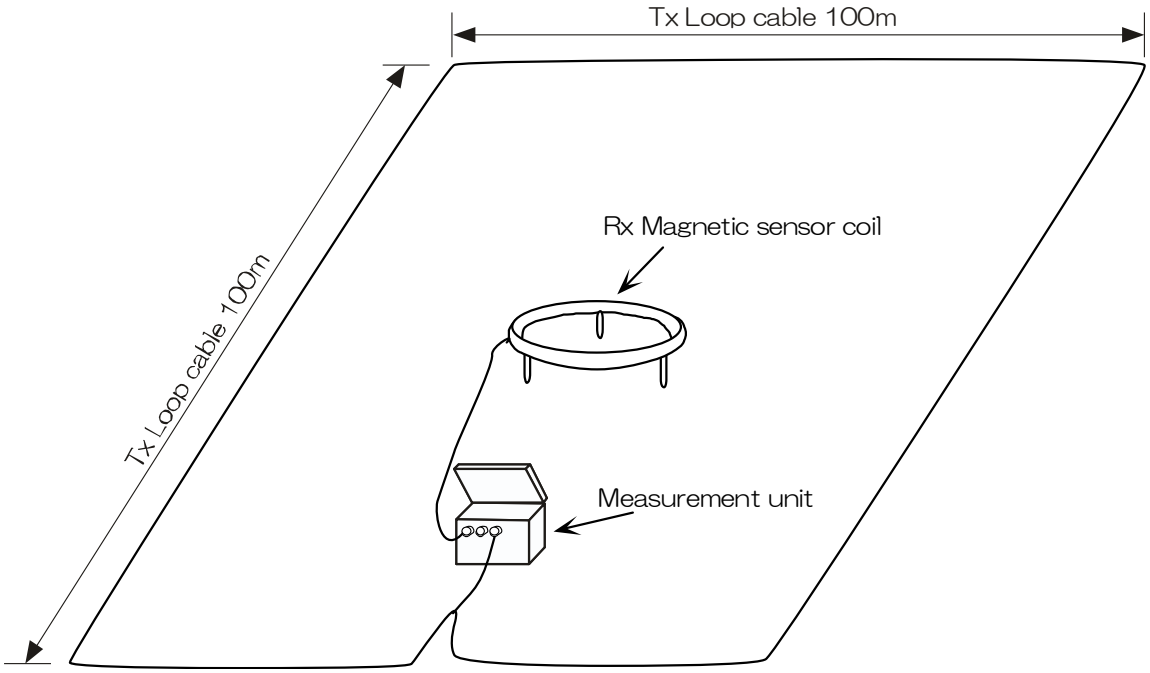
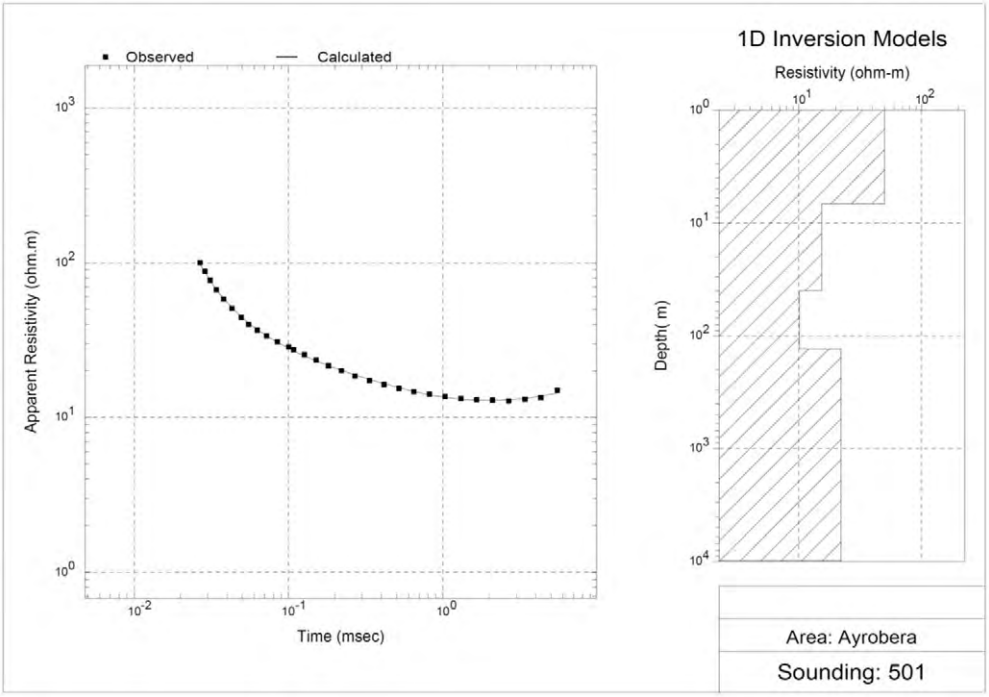


Figure A2.2.2 Schematic drawing for deployment of TEM data acquisition system

(3) Data Processing and Analysis

The 1D inversion analysis was carried out from the acquired TEM data. The analysis software is WinGLink of GEOSYSTEM SRL. At each survey station, 5 or 6 layers' structure was assumed and the values of resistivity and layer's thickness of the 1D layered model was obtained by 1D inversion analysis so that the transient response of the 1D layered model fitted the observed transient response. An example of the acquired TEM data and the result of 1D layered inversion analysis are shown in Figure 8.

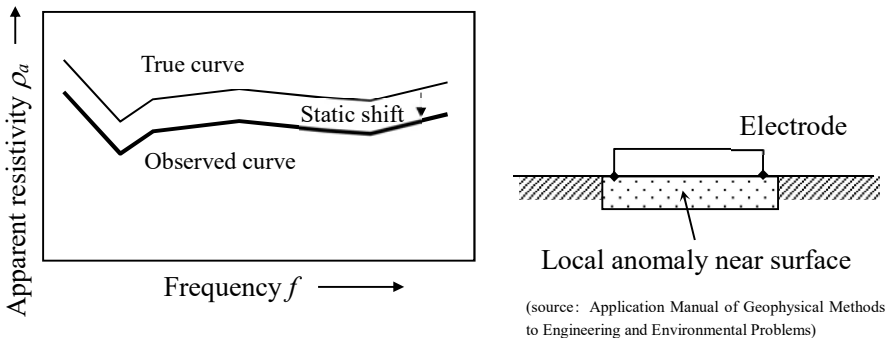


Observed data: □ and calculated curve: solid line (left) and 1D inversion result (right)

Figure A2.2.3 An example of TEM data analysis

(4) Static Correction of MT data

An important feature in the data processes with MT method is static shift. The apparent resistivity curve in Figure 9 contains a static shift caused by a local resistivity anomaly in the shallow ground near the survey station. Before starting the analysis, it is necessary to move the apparent resistivity curve back to its normal position, where it would be without the anomaly. A qualitative process is used for this purpose, incorporating shallow resistivity information by resistivity or other electromagnetic methods like TEM, or the difference in a pair of apparent resistivity of higher frequency band.



(source: Application Manual of Geophysical Methods to Engineering and Environmental Problems)

Figure A2.2.4 Static-shift due to a near-surface anomaly

In the project, TEM measurement was taken at the same station as MT measurement in the southern part of the survey site and 1D analysis for TEM data was executed. By using the result of the 1D analysis, the static correction was applied to MT data. MT response of the analyzed 1D model was calculated and

the apparent resistivity curve of MT data was shifted so that the curve of MT data in the highest frequency match MT response curve of 1D model from TEM. The list of shift value for each station is at the back of the report.

A2.3 MT/TEM Survey Results

Results of MT/TEM survey carried out in this project are shown as follows.

Coordinate of measuring stations (1/2) (Tendaho-2 Ayrobera)

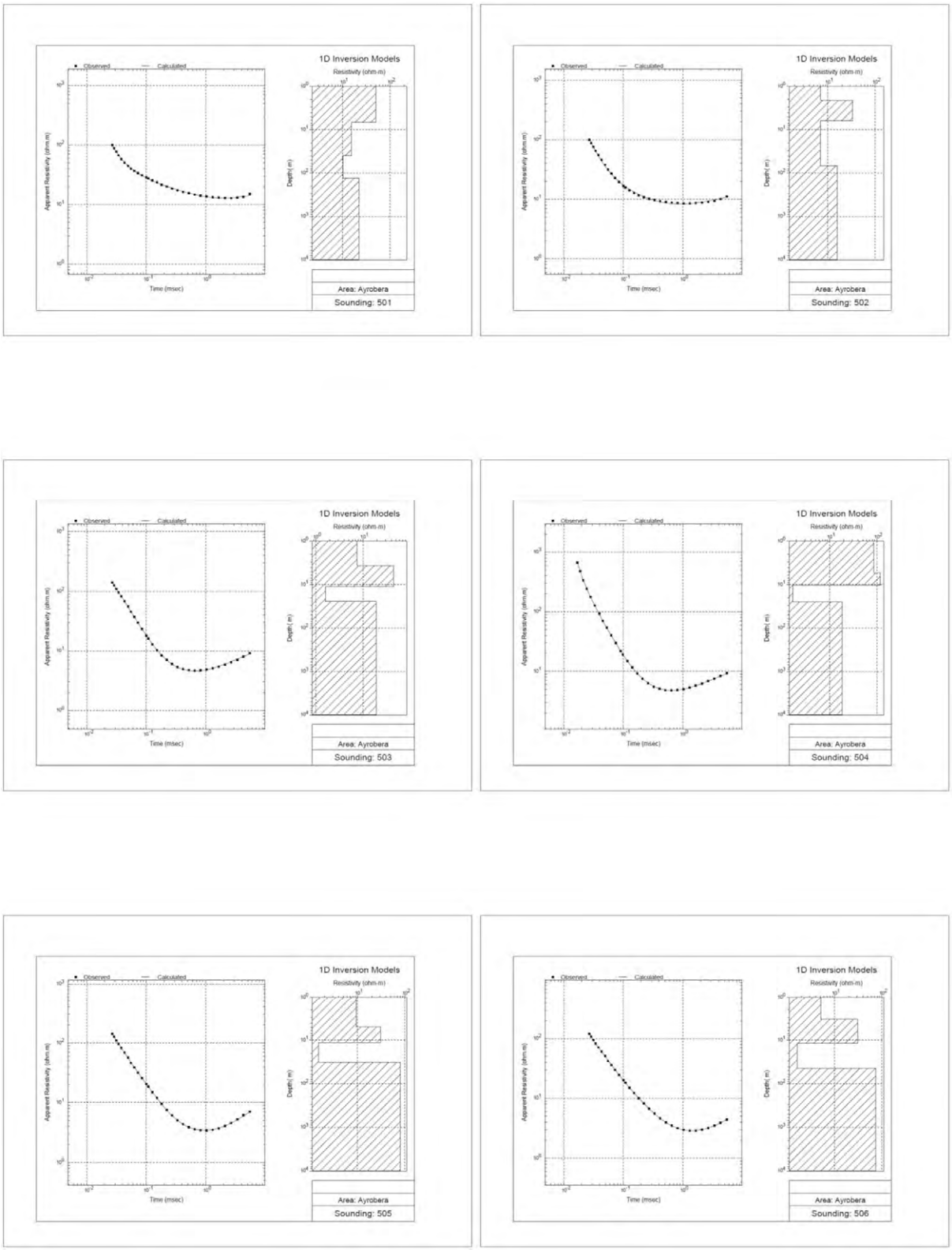
Station	Coordinate (WGS84)		Elevation (m)
	Latitude	Longitude	
AYR-301	11°55'19.9"	41°5'37.1"	389
AYR-302	11°55'39.5"	41°6'8.89"	374
AYR-303	11°55'56.4"	41°6'37.0"	373
AYR-304	11°56'13.1"	41°7'4.89"	372
AYR-305	11°56'30.4"	41°7'33.3"	371
AYR-306	11°56'48.9"	41°8'3.39"	372
AYR-307	11°57'4.50"	41°8'29.2"	372
AYR-397	11°53'28.7"	41°3'20.1"	364
AYR-398	11°53'44.8"	41°3'46.2"	372
AYR-399	11°54'0.90"	41°4'12.4"	372
AYR-400	11°54'16.9"	41°4'38.4"	378
AYR-401	11°55'4.60"	41°5'57.7"	384
AYR-402	11°55'12.8"	41°6'11.2"	377
AYR-403	11°55'21.5"	41°6'25.8"	373
AYR-404	11°55'30.3"	41°6'40.2"	373
AYR-405	11°55'39.1"	41°6'54.7"	373
AYR-406	11°55'47.9"	41°7'9.19"	372
AYR-407	11°55'56.6"	41°7'23.7"	373
AYR-408	11°56'5.40"	41°7'38.4"	374
AYR-409	11°56'14.0"	41°7'52.5"	372
AYR-410	11°56'22.9"	41°8'7.09"	373
AYR-411	11°56'31.6"	41°8'21.6"	373
AYR-412	11°56'40.4"	41°8'36.0"	373
AYR-501	11°54'39.0"	41°6'3.29"	391
AYR-502	11°54'59.5"	41°6'36.5"	373
AYR-503	11°55'16.4"	41°7'4.89"	372
AYR-504	11°55'33.1"	41°7'32.6"	374
AYR-505	11°55'50.6"	41°8'1.19"	372
AYR-506	11°56'9.10"	41°8'31.3"	373
AYR-507	11°56'24.7"	41°8'57.4"	373
AYR-599	11°53'2.90"	41°4'6.49"	366
AYR-600	11°53'13.2"	41°4'24.7"	367
AYR-601	11°53'22.9"	41°4'43.3"	370
AYR-602	11°53'35.8"	41°5'3.59"	372
AYR-603	11°53'44.0"	41°5'21.5"	377
AYR-604	11°54'3.50"	41°5'52.9"	378
AYR-605	11°54'13.3"	41°6'13.9"	382
AYR-606	11°54'23.7"	41°6'29.4"	376
AYR-607	11°54'32.5"	41°6'44.9"	373
AYR-608	11°54'41.3"	41°7'0.59"	372
AYR-609	11°54'50.2"	41°7'15.9"	372
AYR-610	11°54'59.2"	41°7'31.5"	372
AYR-611	11°55'7.90"	41°7'47.1"	372
AYR-612	11°55'16.9"	41°8'2.79"	373
AYR-613	11°55'25.7"	41°8'18.2"	373
AYR-614	11°55'34.6"	41°8'33.7"	373
AYR-615	11°55'43.6"	41°8'49.4"	374
AYR-616	11°55'52.3"	41°9'4.89"	373
AYR-617	11°56'1.10"	41°9'20.3"	373
AYR-700	11°52'57.3"	41°4'33.8"	367
AYR-701	11°53'10.1"	41°5'4.69"	372
AYR-702	11°53'26.1"	41°5'34.3"	373
AYR-703	11°53'42.1"	41°6'5.99"	377
AYR-704	11°53'58.3"	41°6'36.4"	375
AYR-705	11°54'14.6"	41°7'6.79"	373
AYR-706	11°54'39.1"	41°7'52.5"	372
AYR-707	11°54'59.0"	41°8'29.6"	373
AYR-708	11°55'9.10"	41°8'48.6"	373
AYR-709	11°55'29.9"	41°9'27.4"	374
AYR-799	11°52'22.7"	41°4'35.1"	368

Coordinate of measuring stations (2/2) (Tendaho-2 Ayrobera)

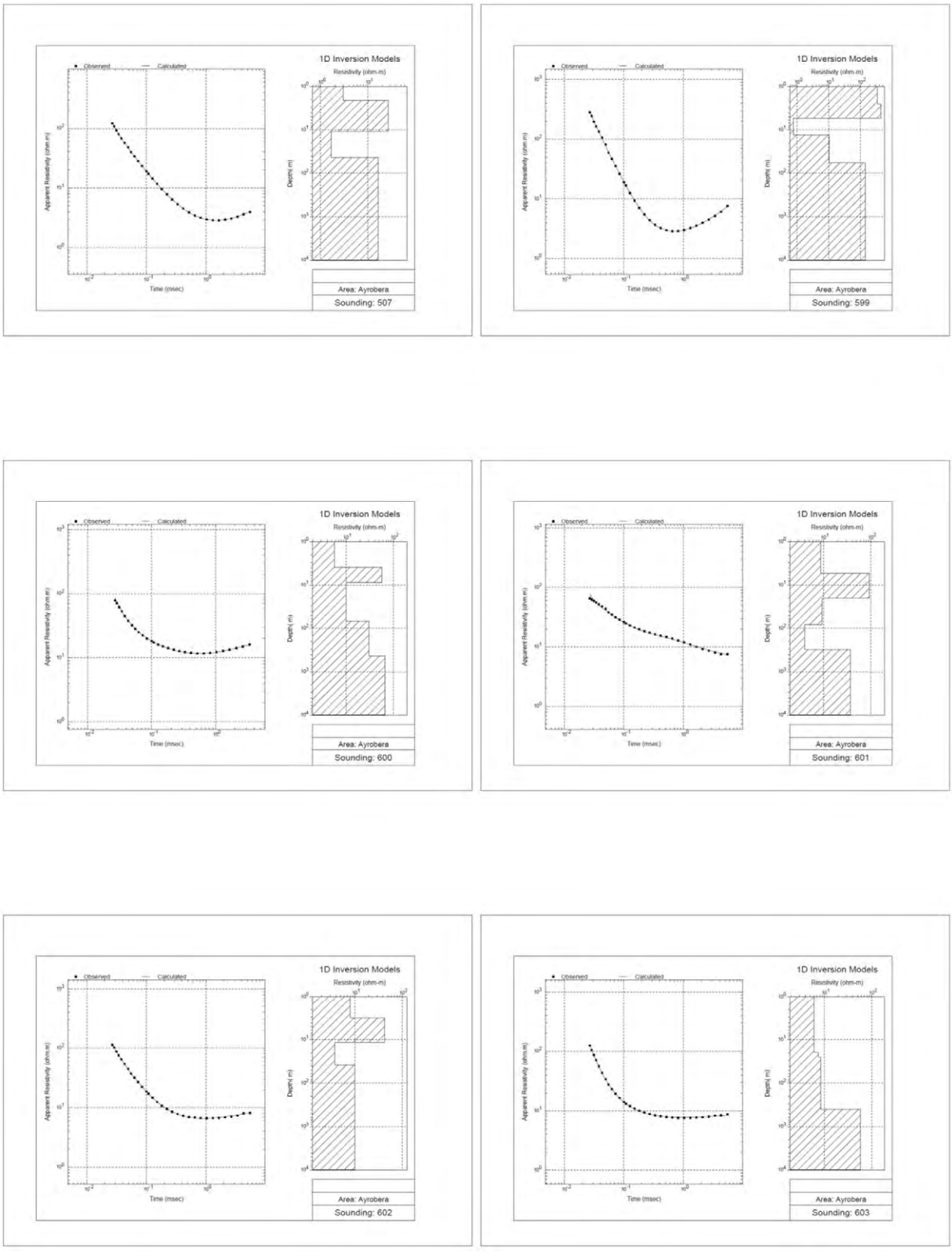
Station	Coordinate (WGS84)		Elevation (m)
	Latitude	longitude	
AYR-800	11°52'33.0"	41°4'53.6"	368
AYR-801	11°52'42.2"	41°5'12.7"	371
AYR-802	11°52'53.8"	41°5'30.0"	374
AYR-803	11°53'4.60"	41°5'47.3"	377
AYR-804	11°53'15.7"	41°6'5.89"	376
AYR-805	11°53'26.6"	41°6'23.8"	376
AYR-806	11°53'37.6"	41°6'41.8"	373
AYR-807	11°53'48.4"	41°6'59.7"	371
AYR-808	11°53'58.3"	41°7'16.9"	374
AYR-809	11°54'8.40"	41°7'35.1"	373
AYR-810	11°54'18.5"	41°7'53.3"	374
AYR-811	11°54'28.8"	41°8'11.4"	373
AYR-812	11°54'38.9"	41°8'29.6"	373
AYR-813	11°54'49.1"	41°8'47.7"	372
AYR-814	11°54'59.2"	41°9'6.09"	373
AYR-815	11°55'9.40"	41°9'24.1"	373
AYR-816	11°55'19.6"	41°9'42.2"	374
AYR-899	11°52'5.00"	41°4'49.2"	369
AYR-900	11°52'15.2"	41°5'7.49"	369
AYR-901	11°52'25.7"	41°5'25.8"	371
AYR-902	11°52'36.6"	41°5'43.8"	374
AYR-903	11°52'47.6"	41°6'1.79"	377
AYR-904	11°52'58.5"	41°6'19.6"	377
AYR-905	11°53'9.50"	41°6'37.6"	374
AYR-906	11°53'20.3"	41°6'55.5"	373
AYR-907	11°53'31.4"	41°7'13.4"	371
AYR-908	11°53'40.9"	41°7'30.9"	374
AYR-909	11°53'50.8"	41°7'49.2"	374
AYR-910	11°54'1.10"	41°8'7.39"	373
AYR-911	11°54'11.0"	41°8'25.2"	373
AYR-912	11°54'21.5"	41°8'44.2"	373
AYR-913	11°54'31.7"	41°9'1.79"	373
AYR-914	11°54'41.9"	41°9'19.9"	373
TDH-900 (MT-Ref: Mille)	11°16′37.0″	40°42′16.0″	512

Static shift correction value

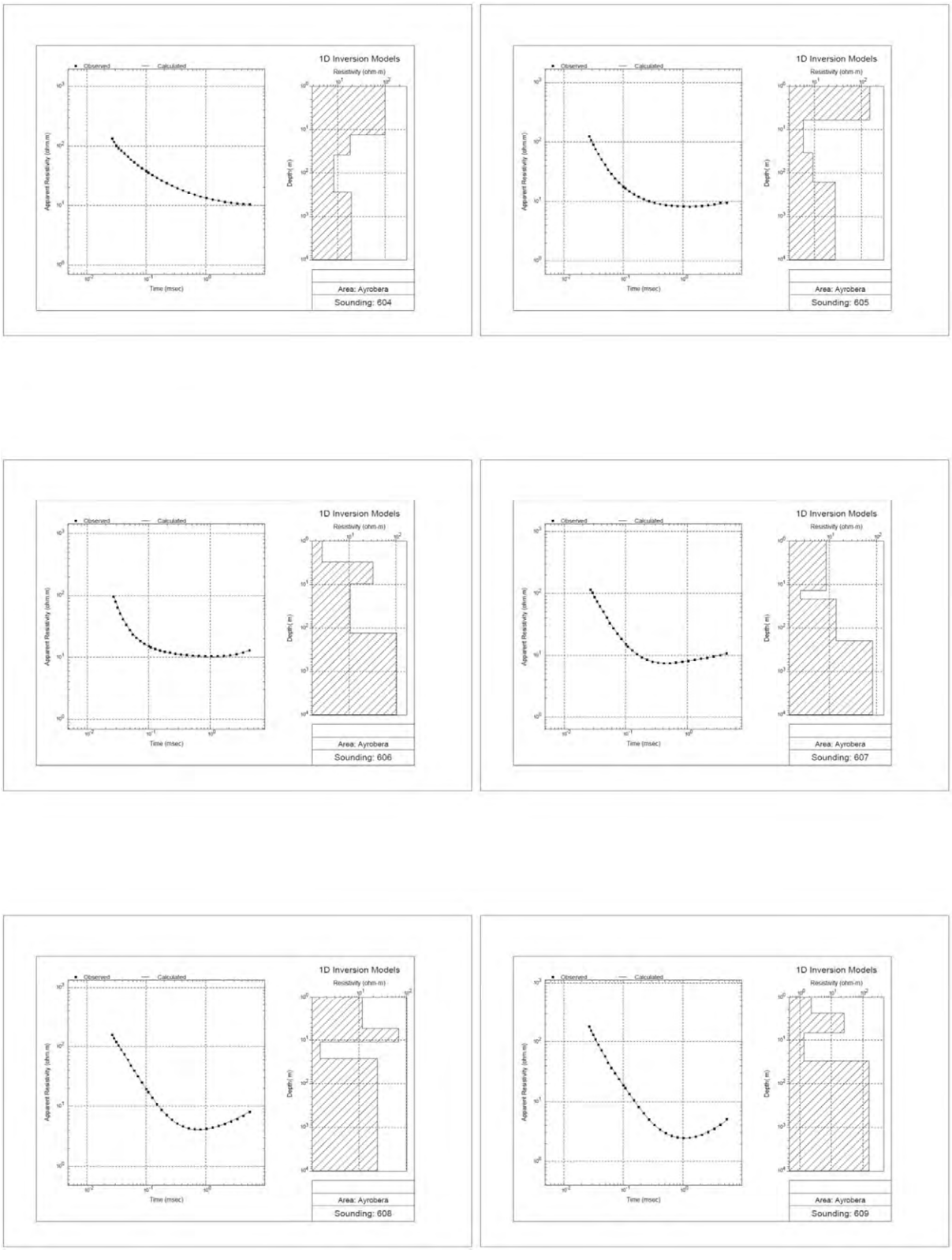
Station	Static Shift (xy)	Static Shift (yx)	Station	Static Shift (xy)	Static Shift (yx)
AYR-501	1.000	1.162	AYR-803	1.152	0.832
AYR-502	1.000	0.825	AYR-804	1.000	1.137
AYR-503	1.117	1.108	AYR-805	1.131	1.073
AYR-504	1.120	1.182	AYR-806	1.110	1.000
AYR-505	1.192	1.108	AYR-807	1.000	1.000
AYR-506	1.215	1.088	AYR-808	1.000	1.189
AYR-507	1.149	1.000	AYR-809	55.61	1.409
AYR-599	1.534	1.224	AYR-810	1.895	1.943
AYR-600	1.000	1.000	AYR-811	1.121	1.189
AYR-601	1.437	0.796	AYR-812	1.457	1.201
AYR-602	1.269	1.041	AYR-813	1.179	1.106
AYR-603	1.221	1.000	AYR-814	1.227	1.089
AYR-604	1.000	1.000	AYR-815	1.130	1.130
AYR-605	1.000	1.000	AYR-816	1.145	1.078
AYR-606	1.384	1.136	TDO9701	1.000	1.000
AYR-607	1.257	1.075	TDO9702	1.049	1.128
AYR-608	1.146	1.410	TDO9703	1.232	1.433
AYR-609	1.208	1.244	TDO9705	1.000	1.000
AYR-610	2.241	1.985	TDO9706	0.846	0.702
AYR-611	1.387	0.736	TDO9707	1.392	1.066
AYR-612	1.000	0.729	TDO9708	1.000	1.183
AYR-613	1.470	1.000	TDO9709	1.540	1.178
AYR-614	1.328	1.151	TDO9710	2.126	1.766
AYR-615	1.000	1.000	TDO9711	1.992	2.090
AYR-616	1.245	1.146	TDO9712	1.000	1.000
AYR-617	1.159	1.140	TDO9713	1.000	1.289
AYR-700	1.000	0.656	TDO9714	0.890	1.270
AYR-701	0.707	1.000	TDO9801	1.503	1.459
AYR-702	1.229	1.085	TDO9802	1.000	1.625
AYR-703	1.112	1.004	TDO9803	1.752	0.734
AYR-704	1.280	1.094	TDO9804	1.097	1.103
AYR-705	1.457	1.000	TDO9805	1.923	1.051
AYR-706	0.874	0.854	TDO9806	1.000	1.000
AYR-707	1.432	1.000	TDO9807	1.326	1.780
AYR-708	1.000	0.727	TDO9808	1.569	1.364
AYR-709	1.082	1.131	TDO9809	1.316	1.000
AYR-799	1.249	1.137	TDO9810	1.140	0.699
AYR-800	1.131	1.110	TDO9811	1.167	1.207
AYR-801	1.102	0.857	TDO9812	1.405	0.901
AYR-802	1.217	1.074	TDO9813	1.101	1.217



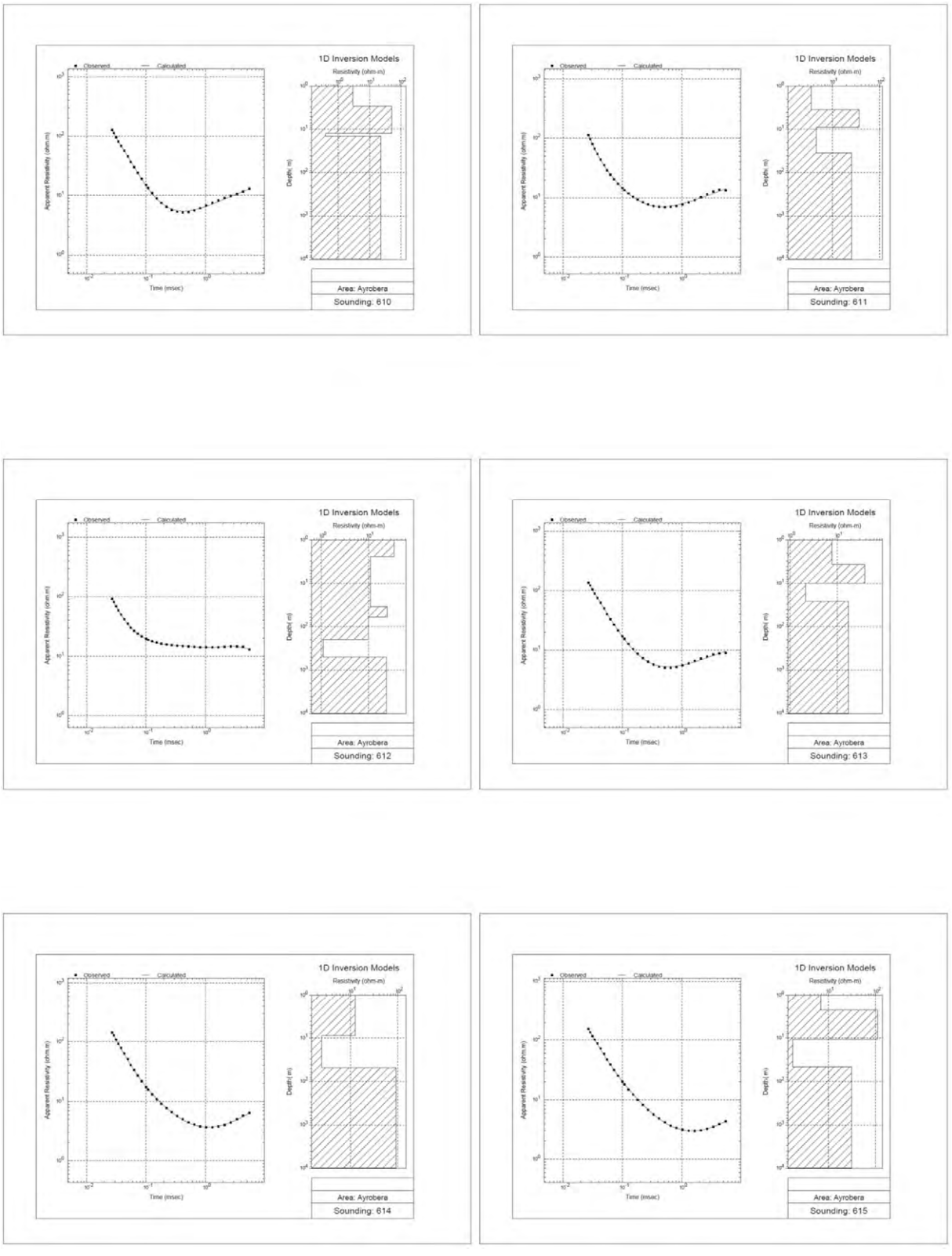
One-dimensional analysis result of TEM survey (1/14)



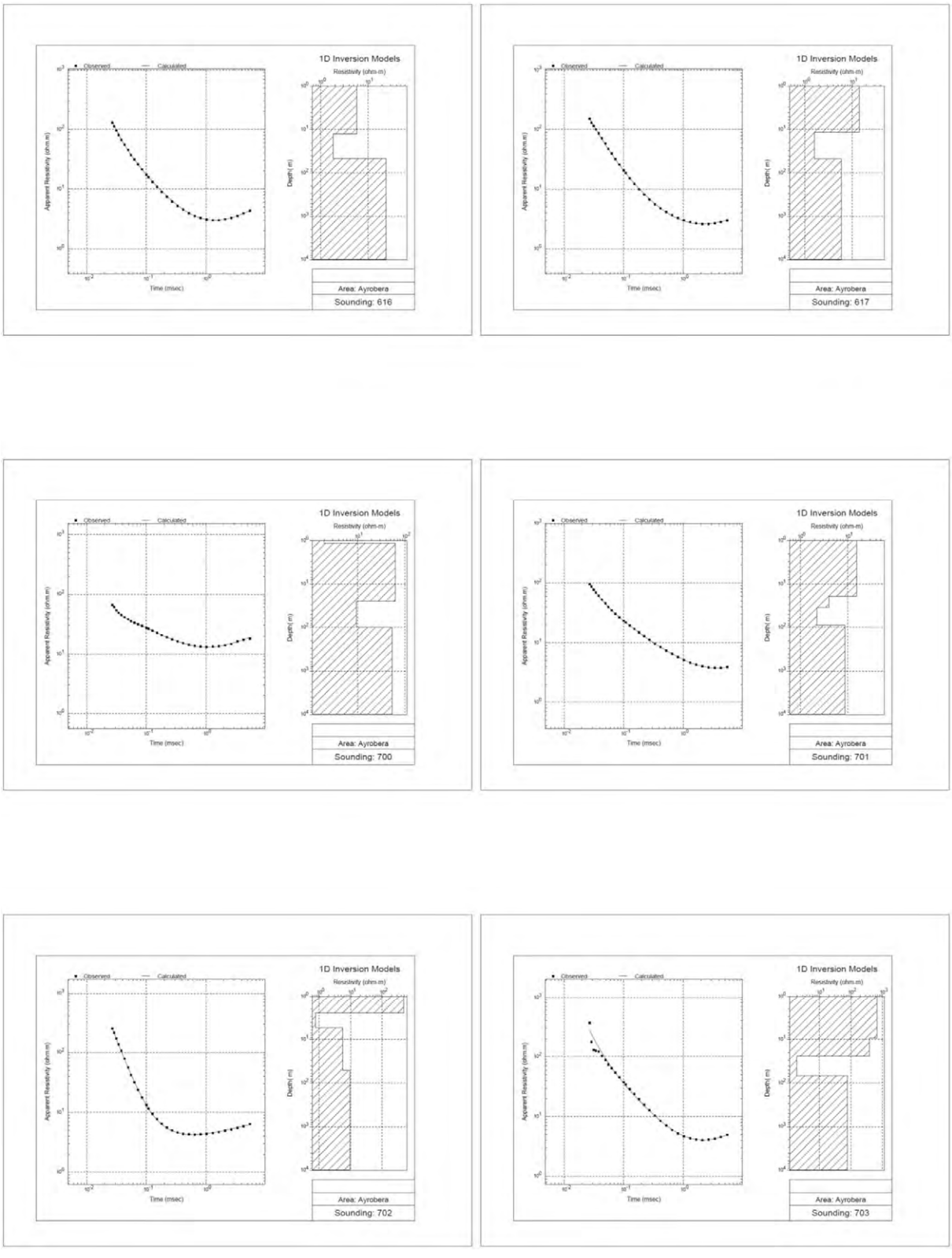
One-dimensional analysis result of TEM survey (2/14)



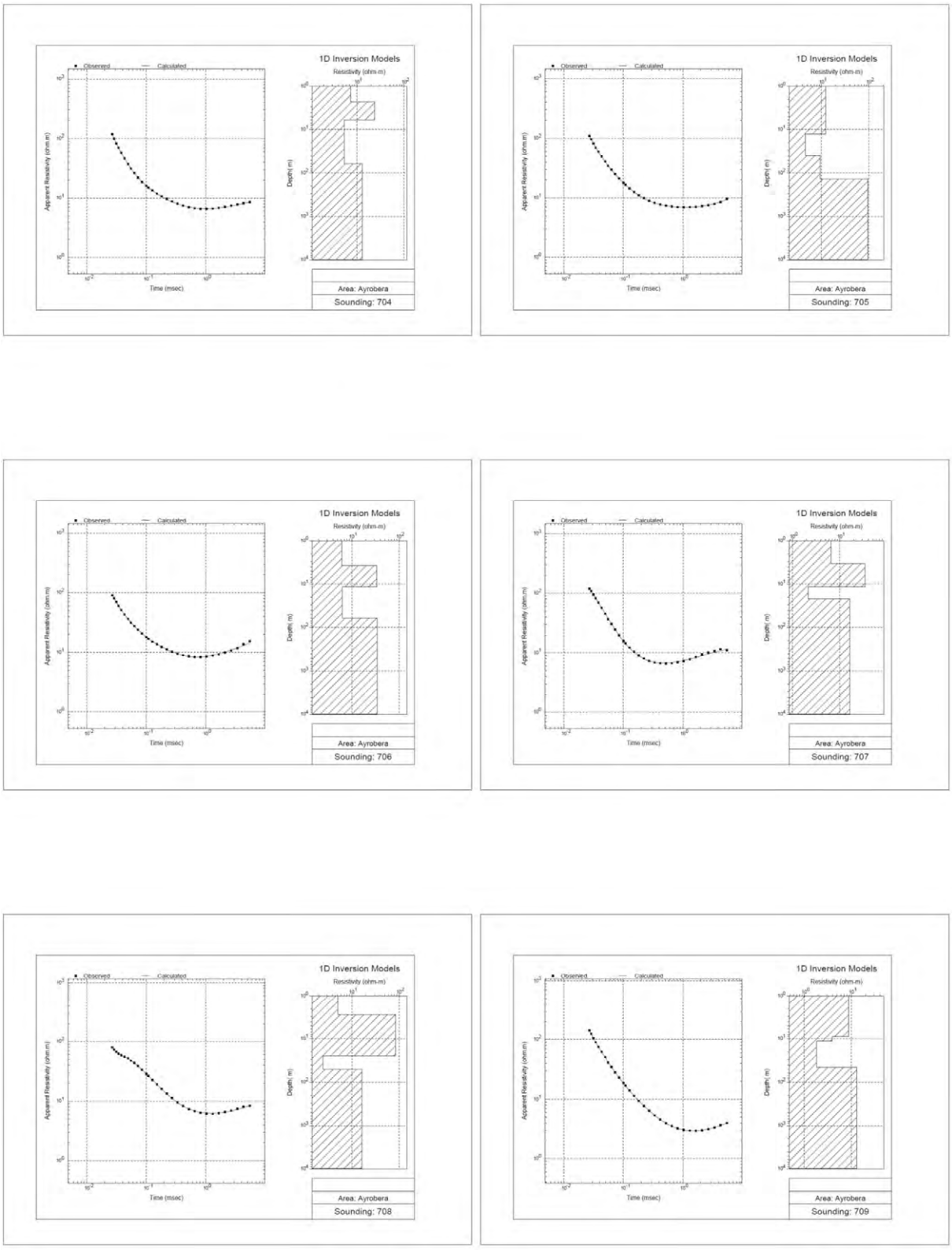
One-dimensional analysis result of TEM survey (3/14)



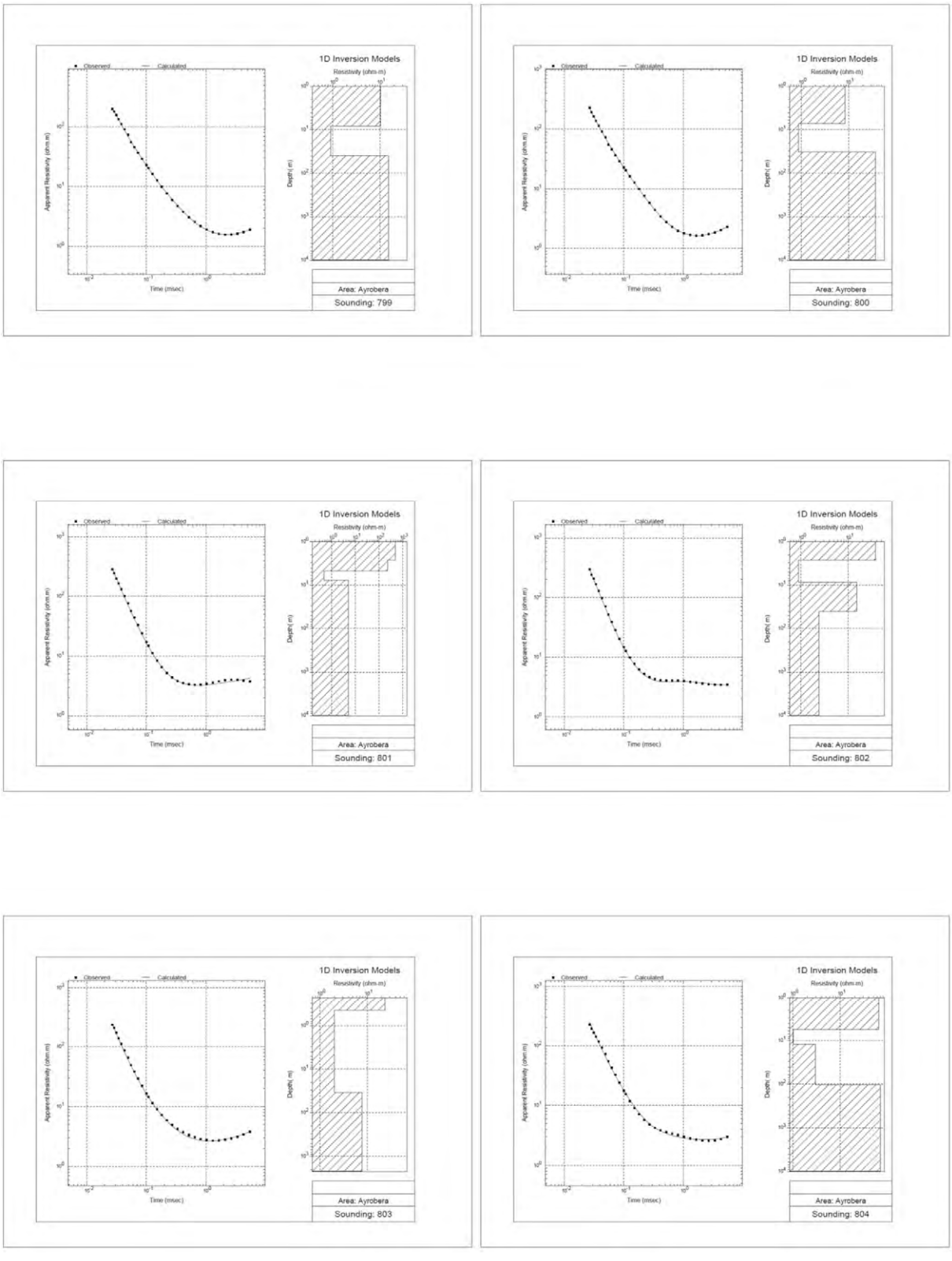
One-dimensional analysis result of TEM survey (4/14)



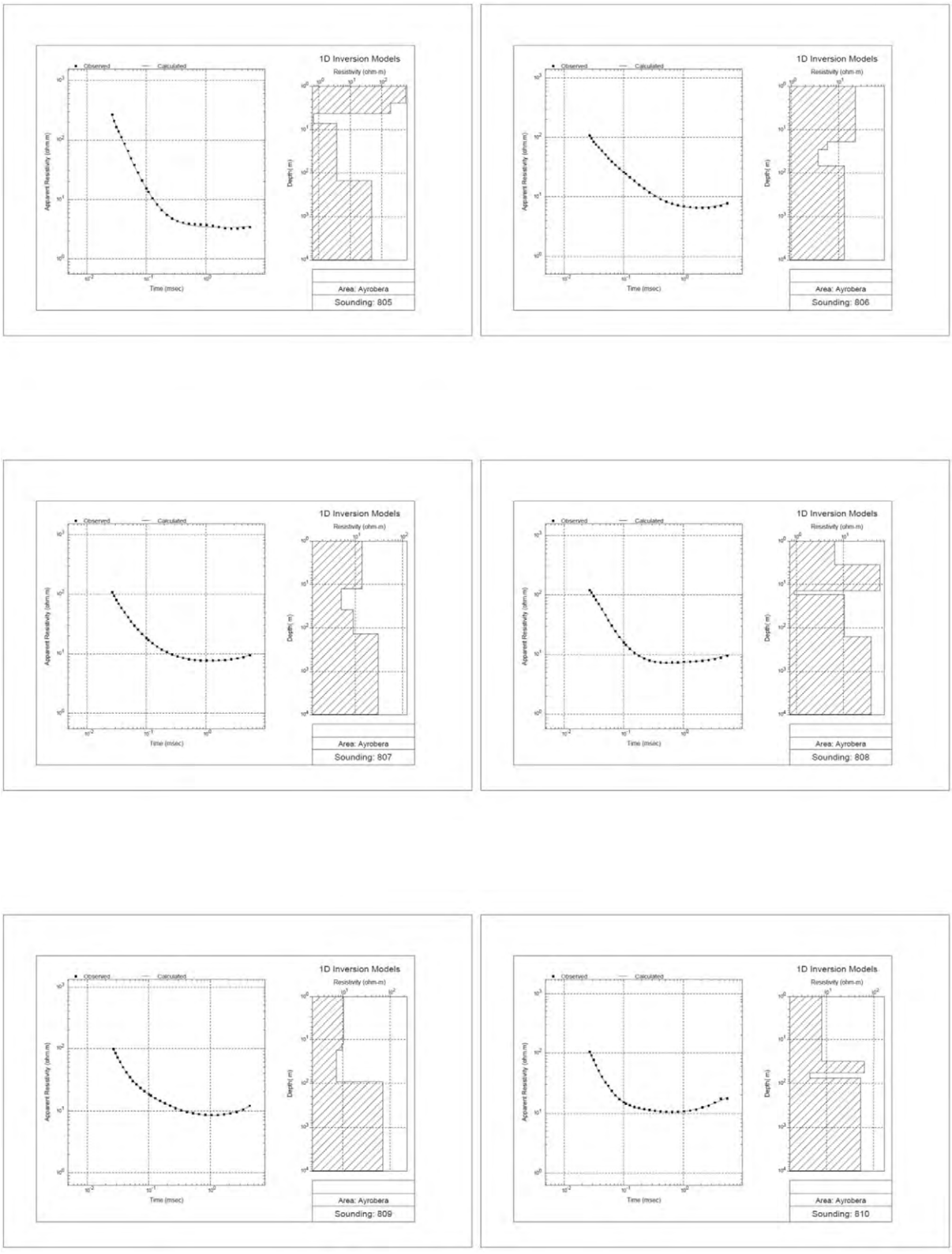
One-dimensional analysis result of TEM survey (5/14)



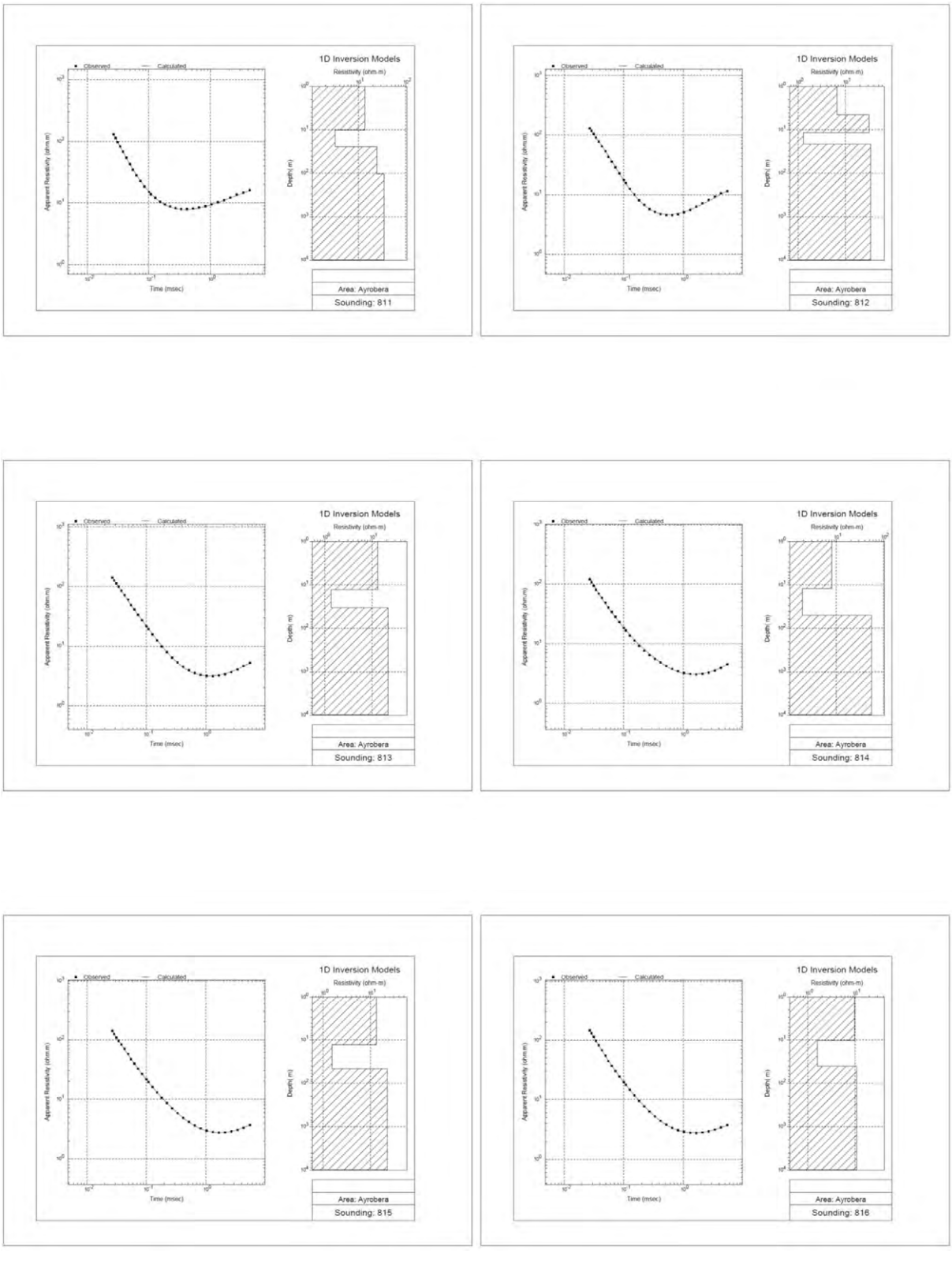
One-dimensional analysis result of TEM survey (6/14)



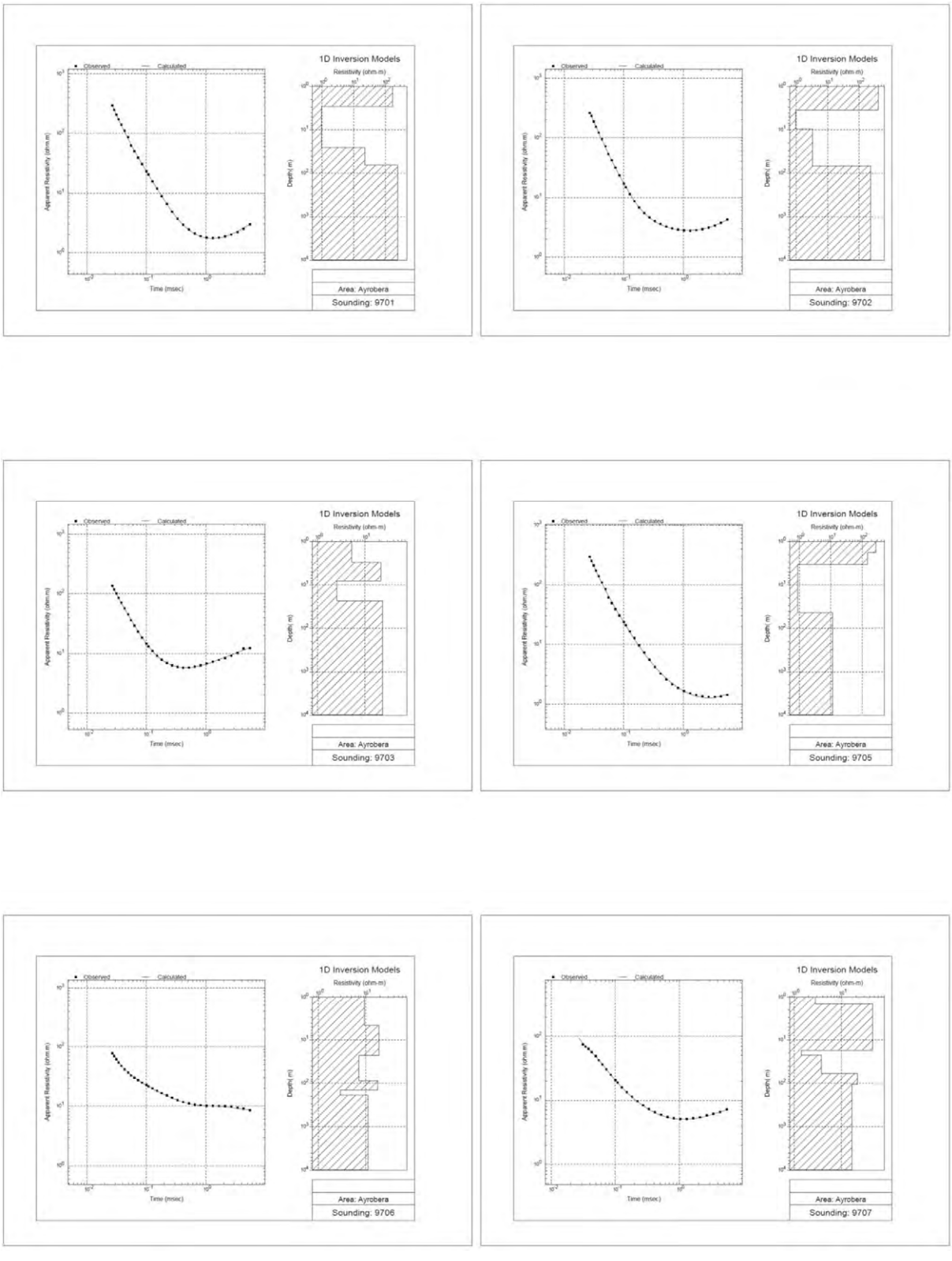
One-dimensional analysis result of TEM survey (7/14)



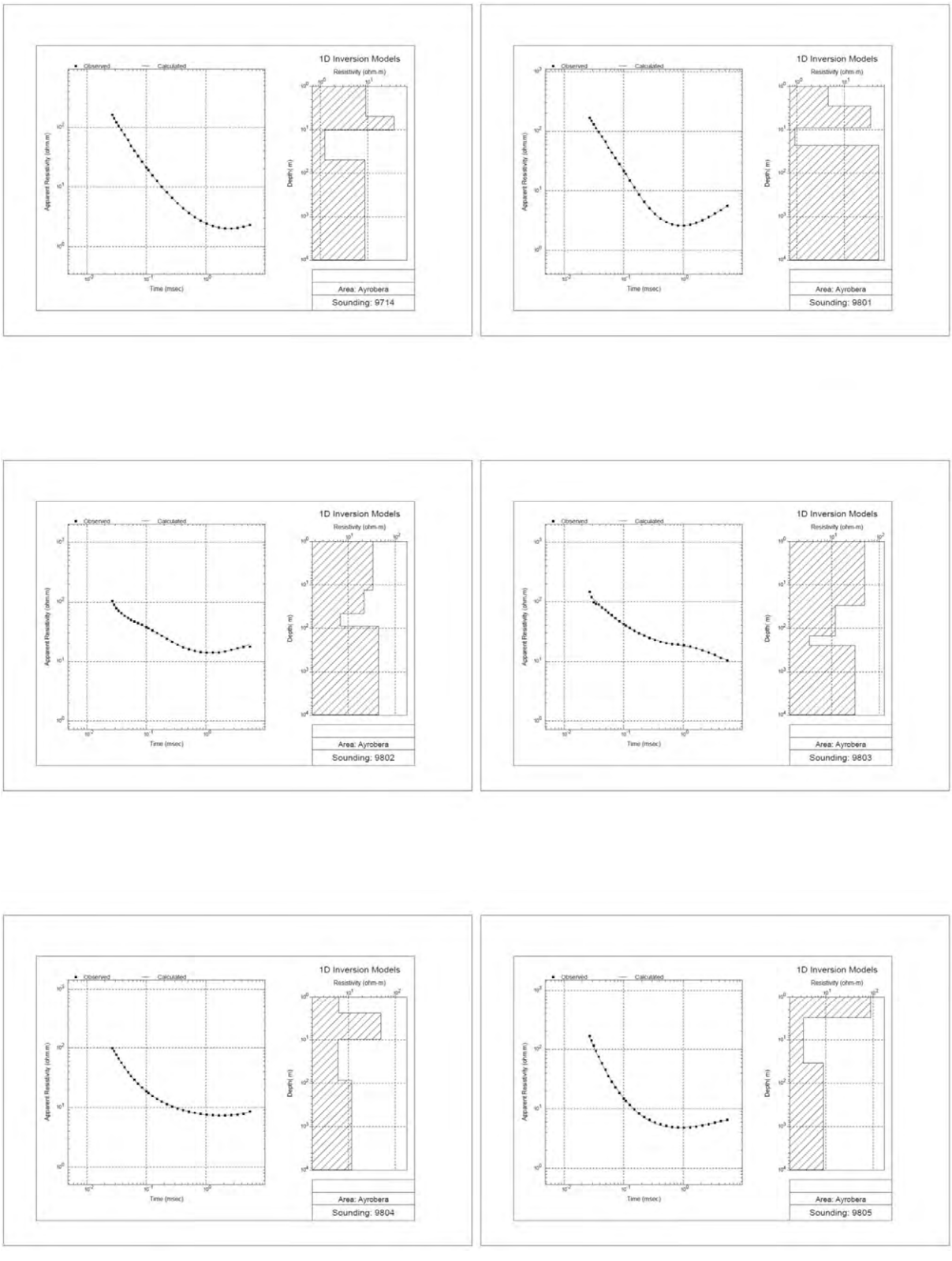
One-dimensional analysis result of TEM survey (8/14)



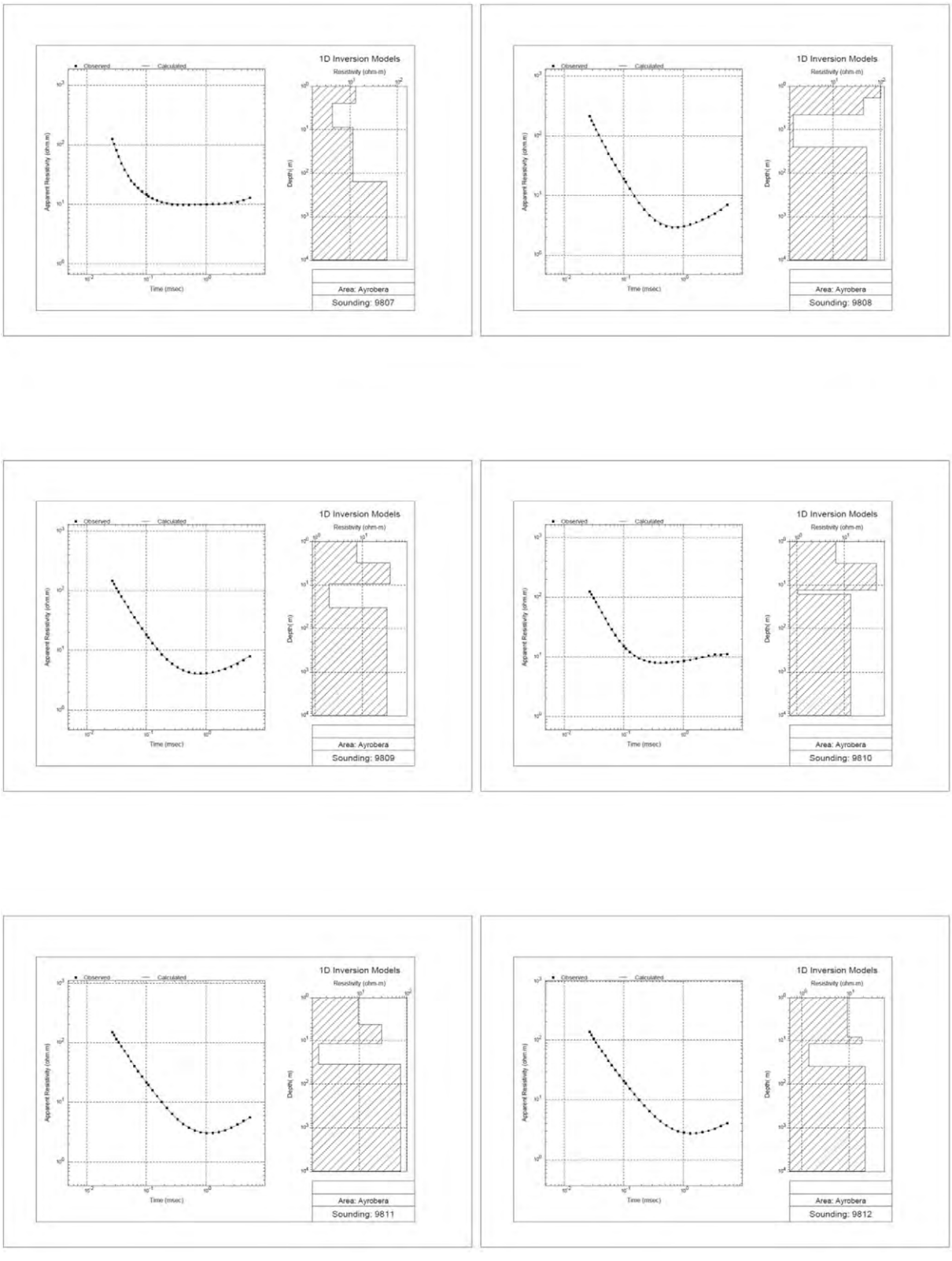
One-dimensional analysis result of TEM survey (9/14)



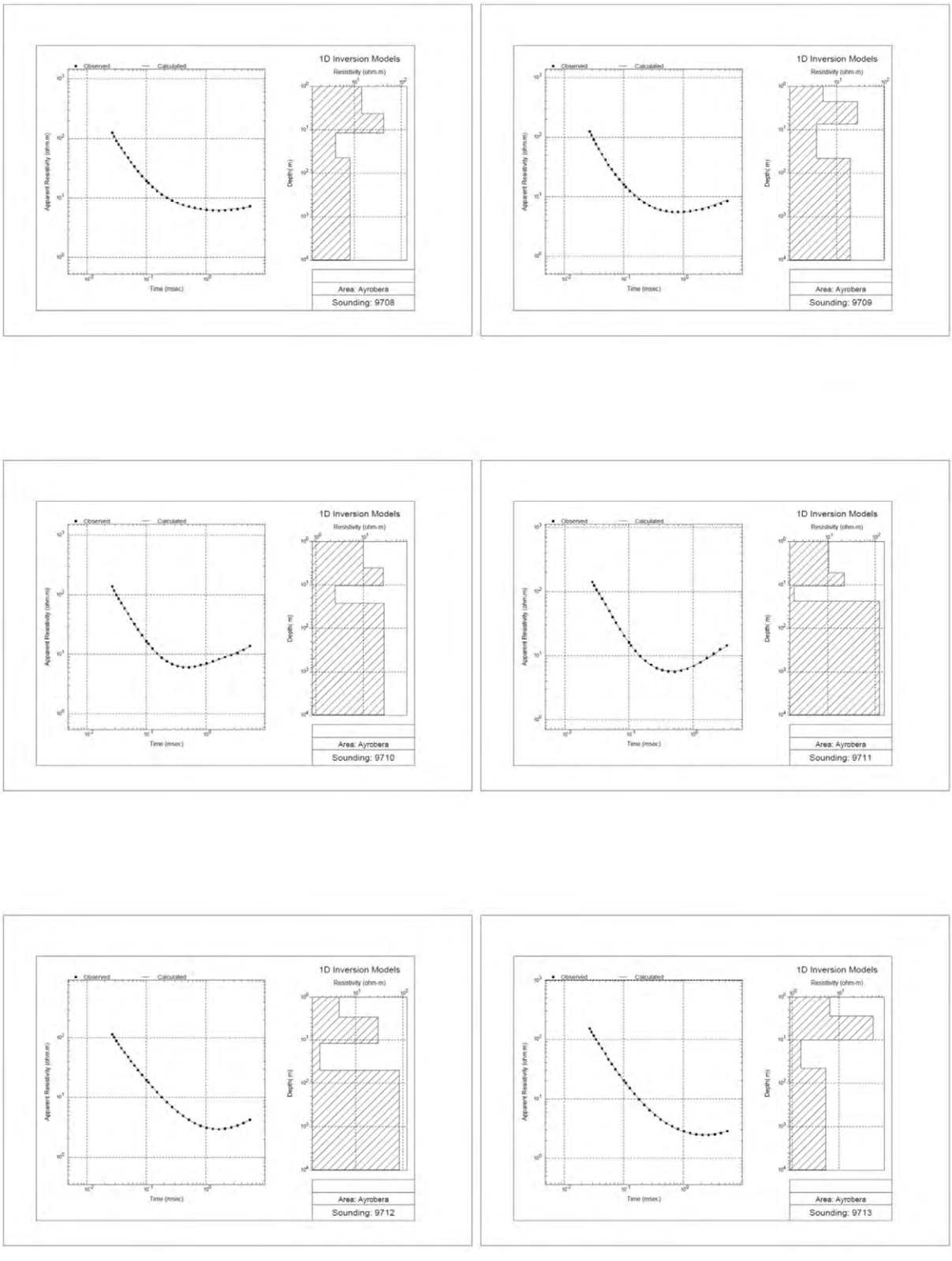
One-dimensional analysis result of TEM survey (10/14)



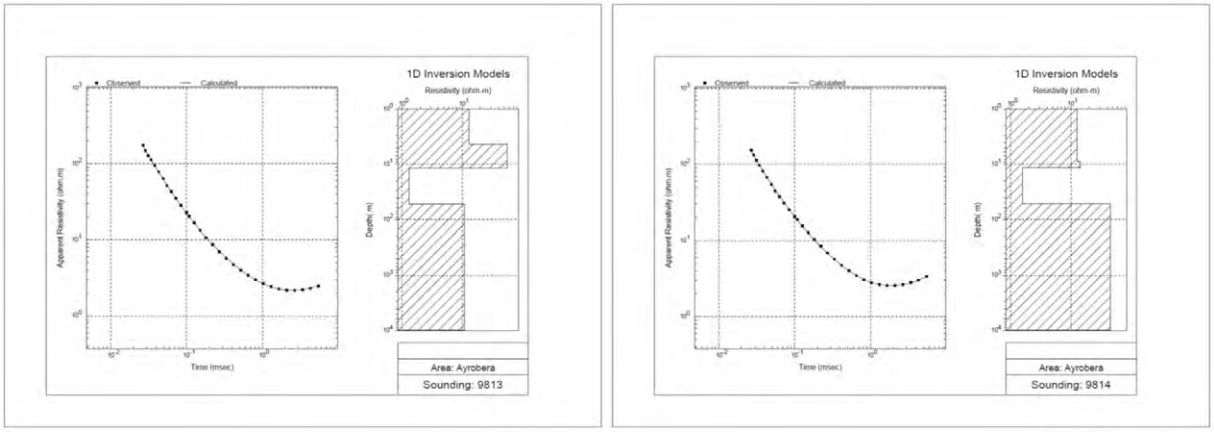
One-dimensional analysis result of TEM survey (11/14)



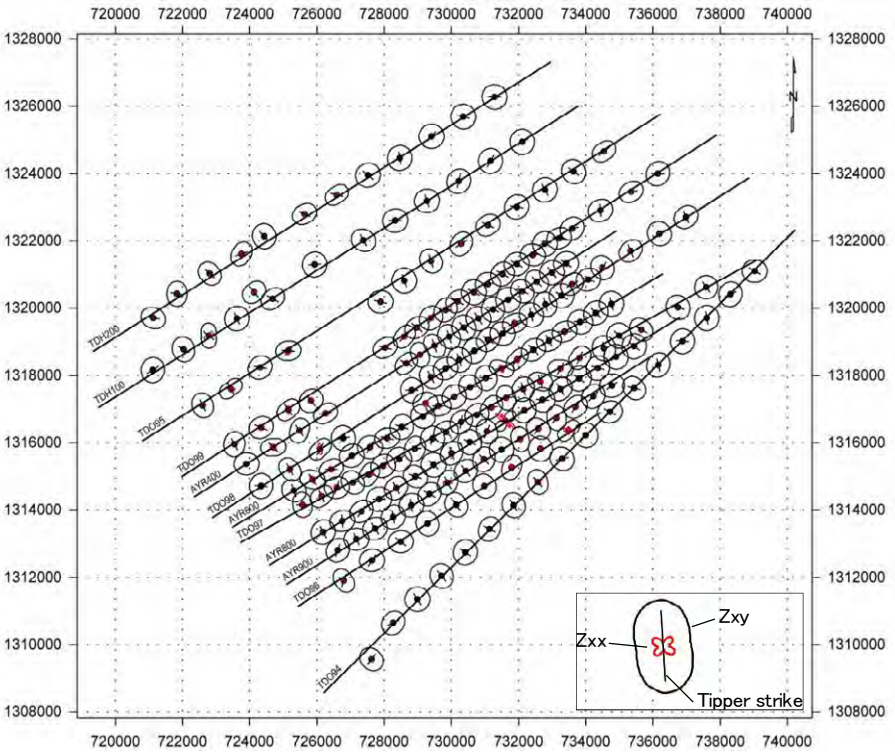
One-dimensional analysis result of TEM survey (12/14)



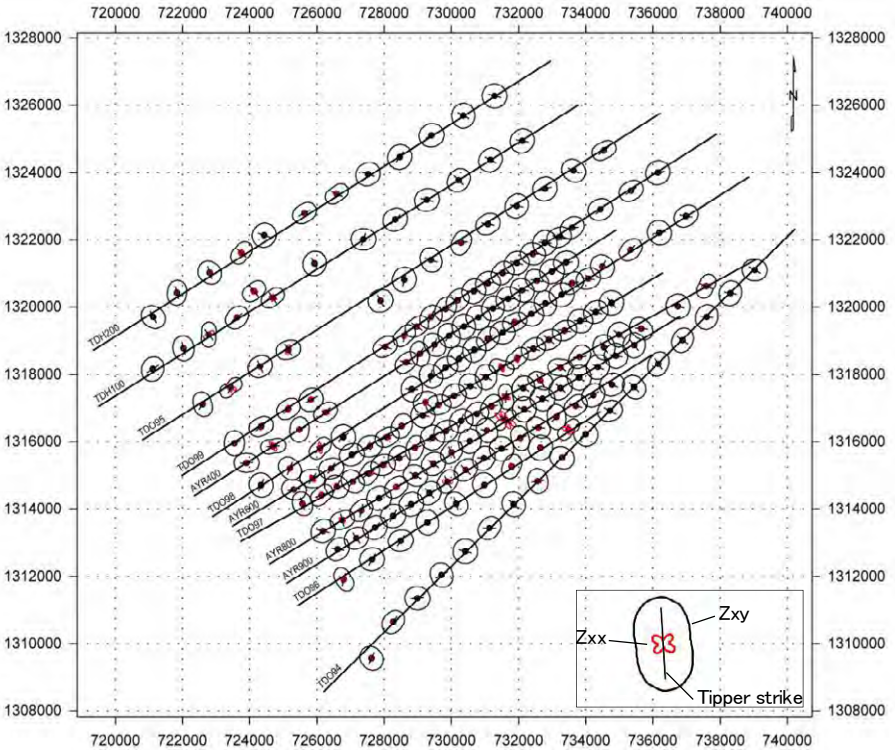
One-dimensional analysis result of TEM survey (13/14)



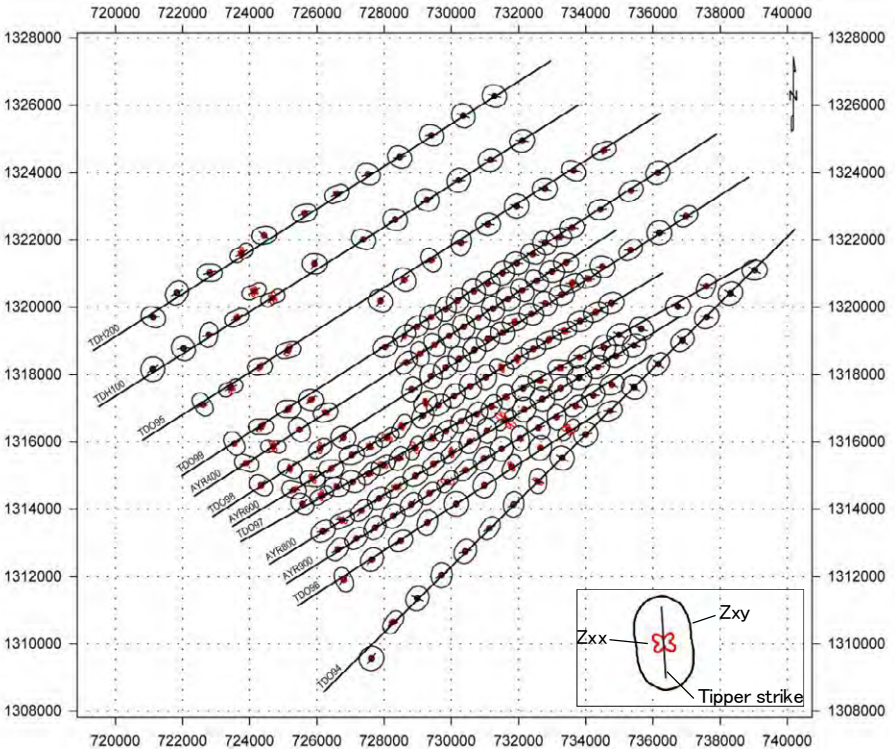
One-dimensional analysis result of TEM survey (14/14)



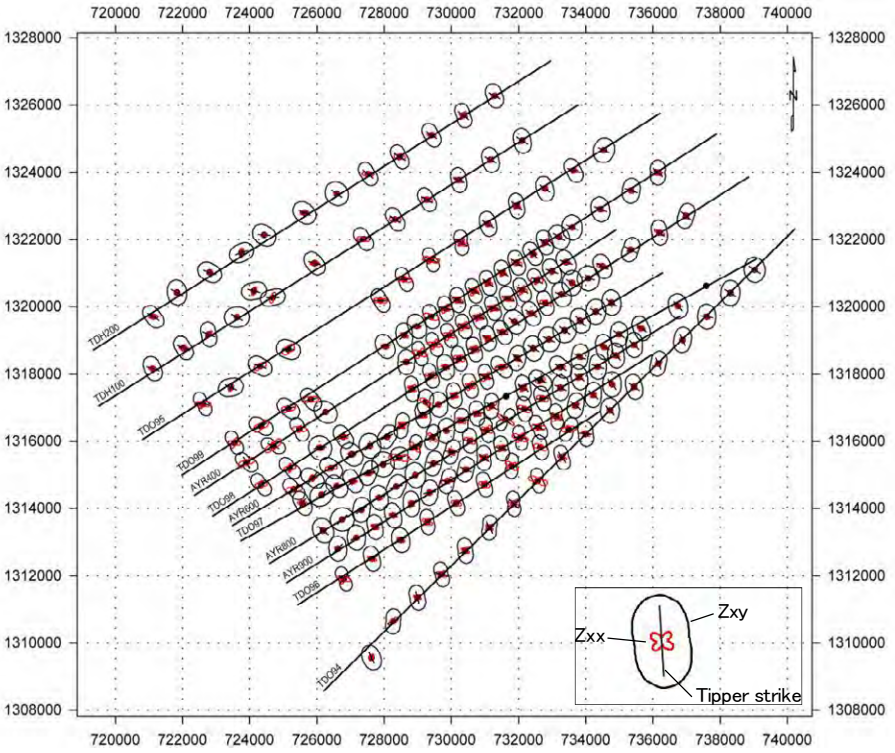
Impedance polar diagram and tipper strike (10Hz)



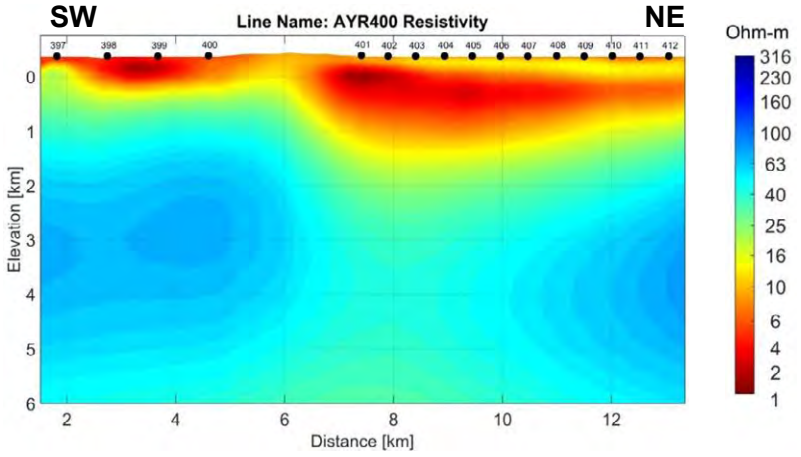
Impedance polar diagram and tipper strike (1Hz)



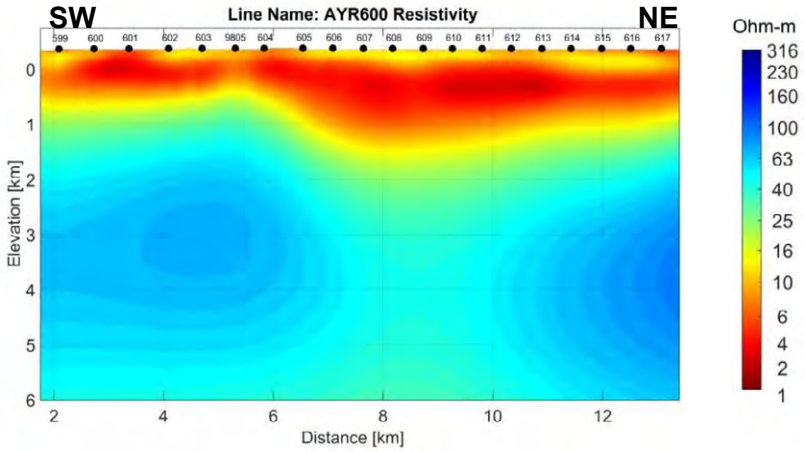
Impedance polar diagram and tipper strike (0.1Hz)



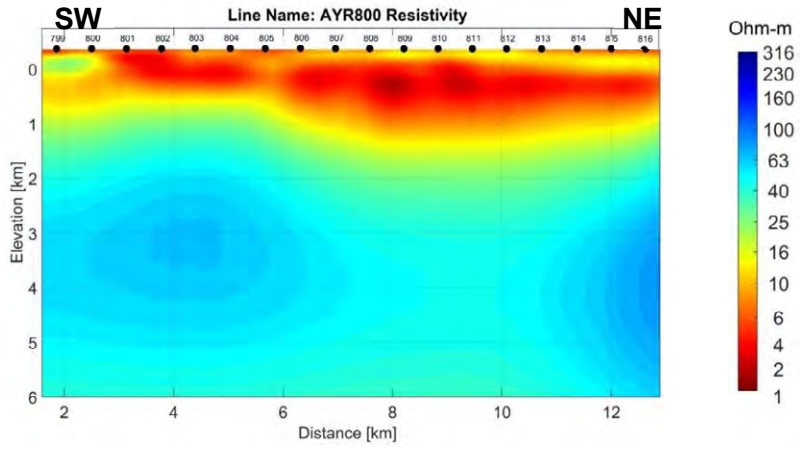
Impedance polar diagram and tipper strike (0.01Hz)



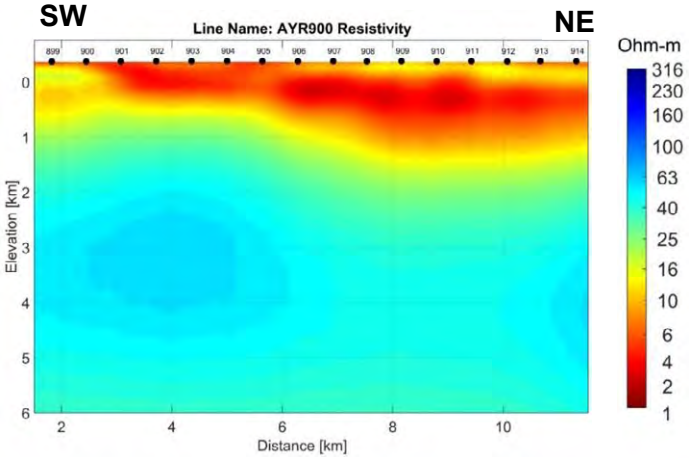
Resistivity cross section map (3D model) (AYR400)



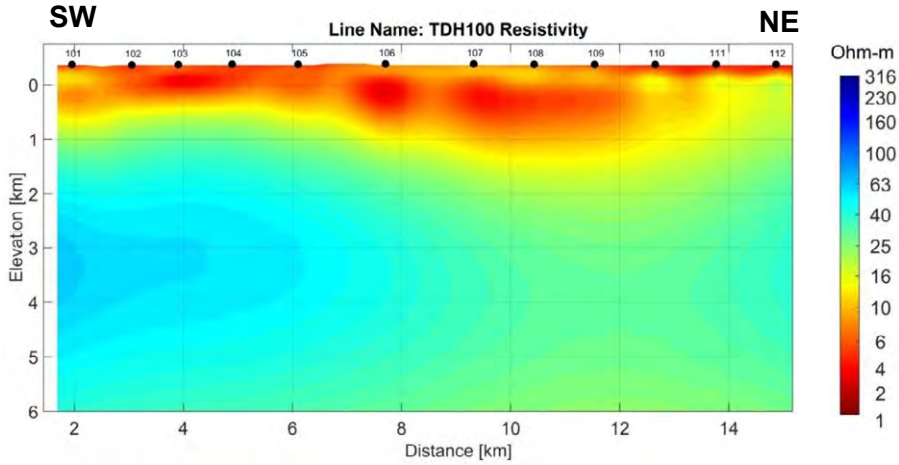
Resistivity cross section map (3D model) (AYR600)



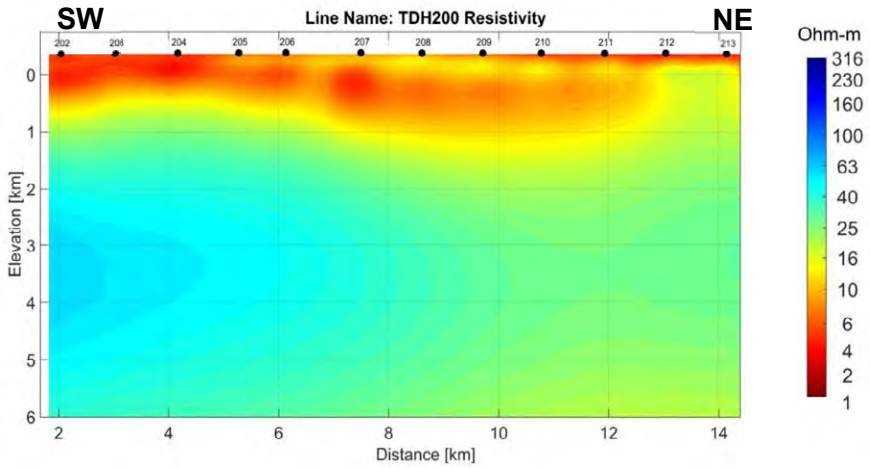
Resistivity cross section map (3D model) (AYR800)



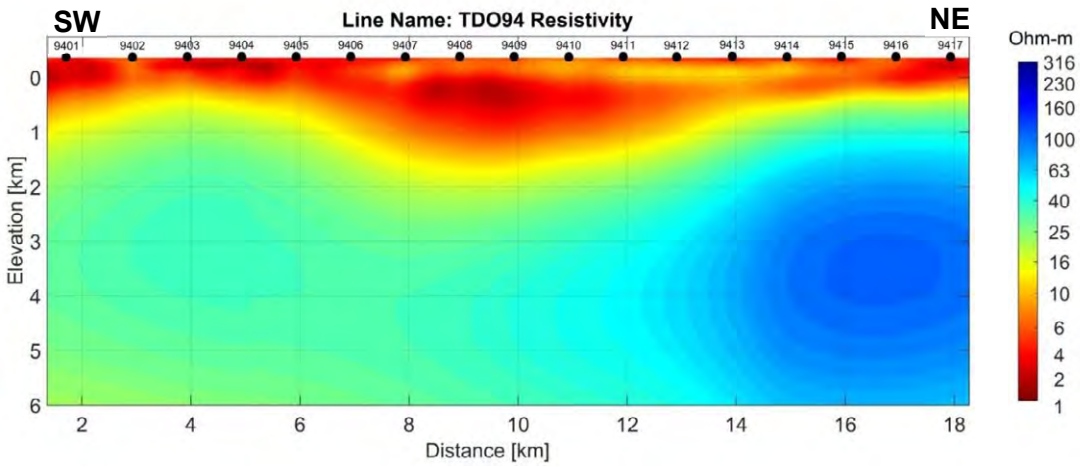
Resistivity cross section map (3D model) (AYR900)



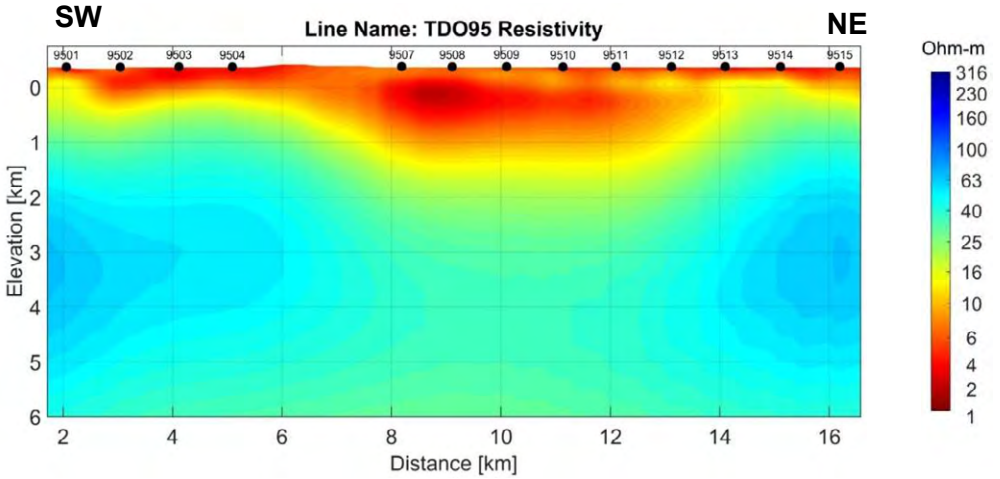
Resistivity cross section map (3D model) (TDH100)



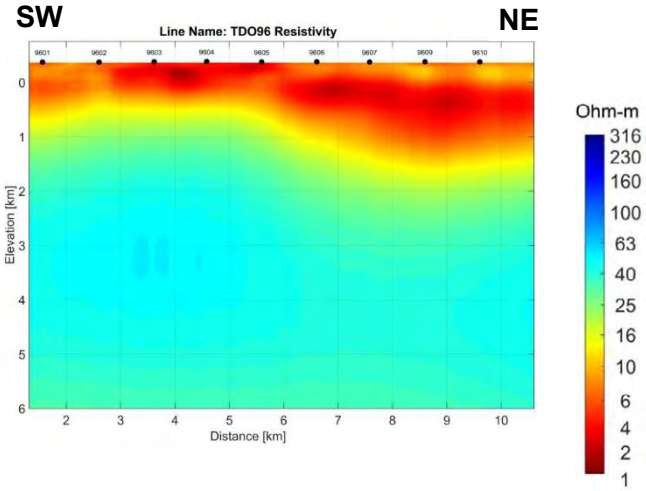
Resistivity cross section map (3D model) (TDH200)



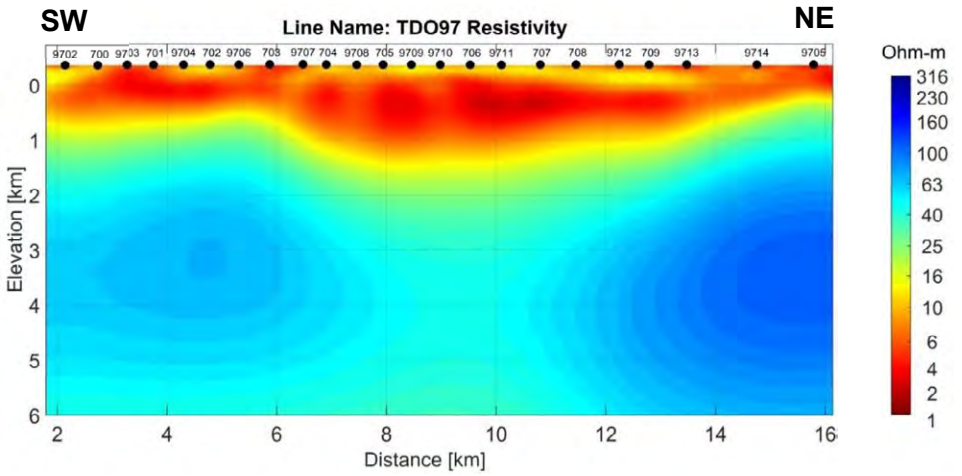
Resistivity cross section map (3D model) (TDO94)



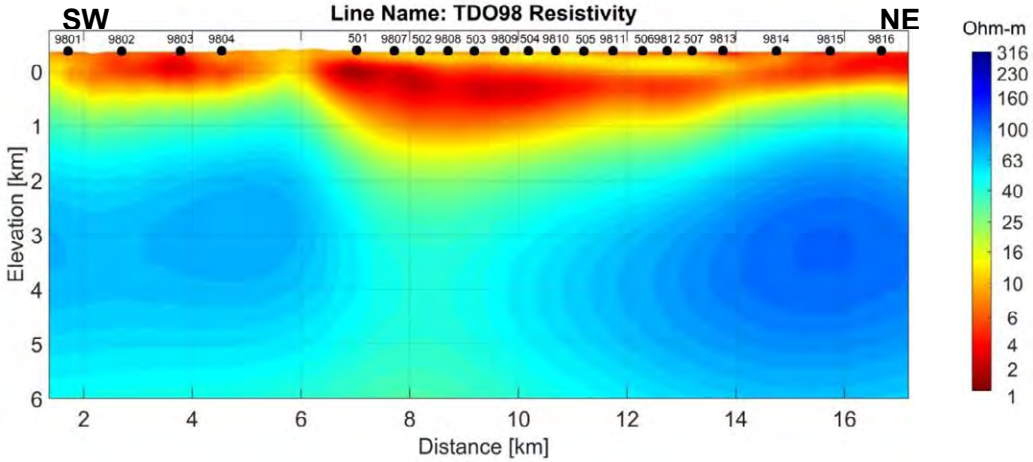
Resistivity cross section map (3D model) (TDO95)



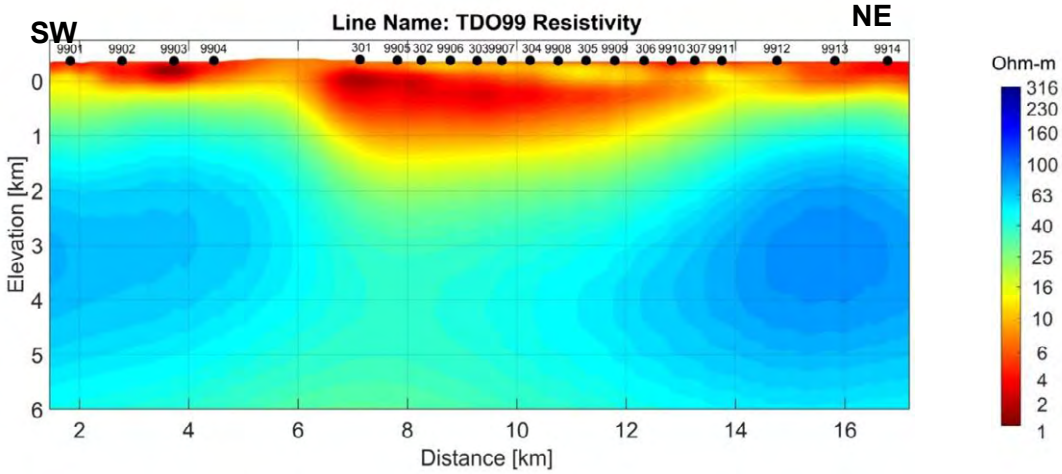
Resistivity cross section map (3D model) (TDO96)



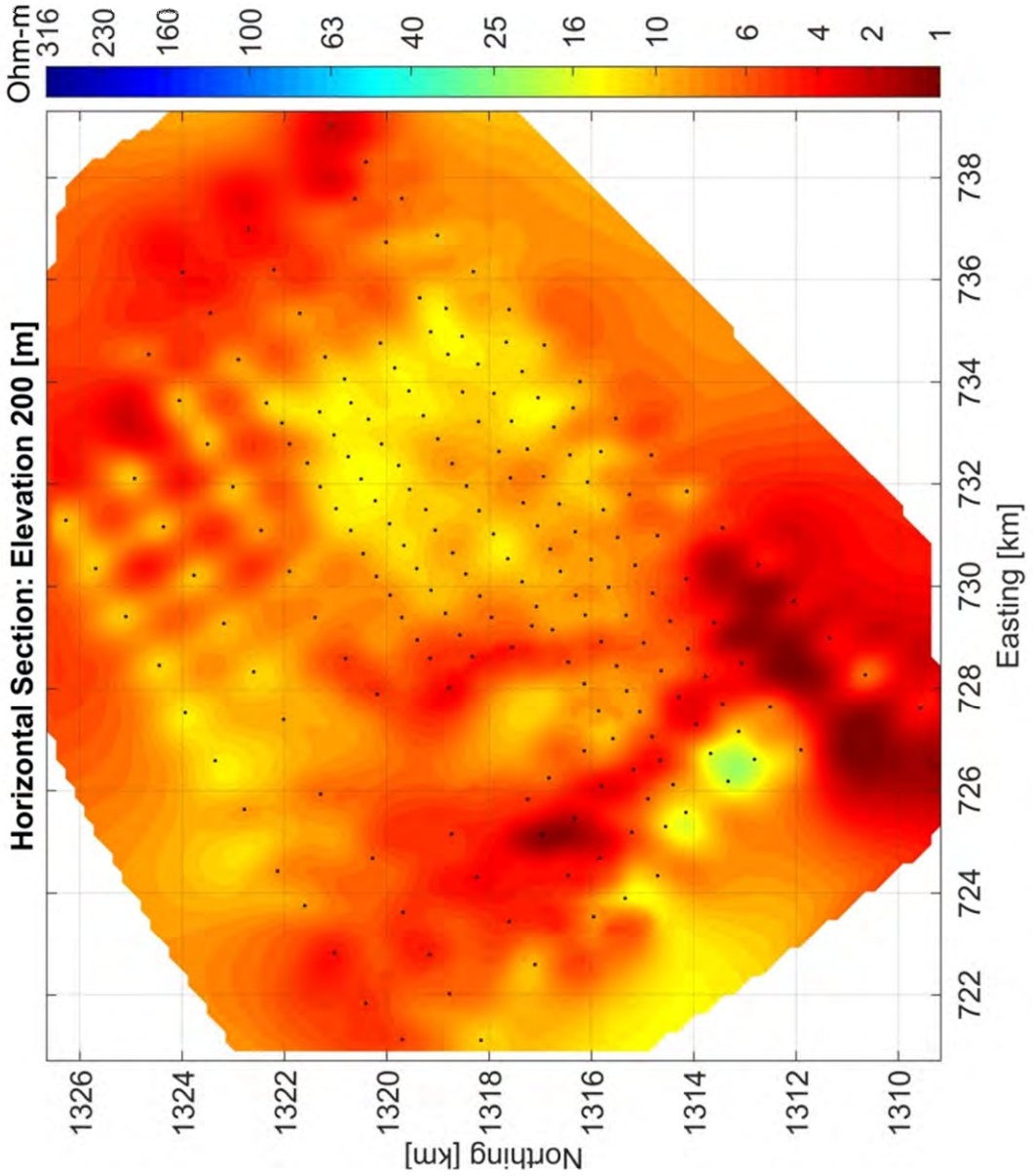
Resistivity cross section map (3D model) (TDO97)



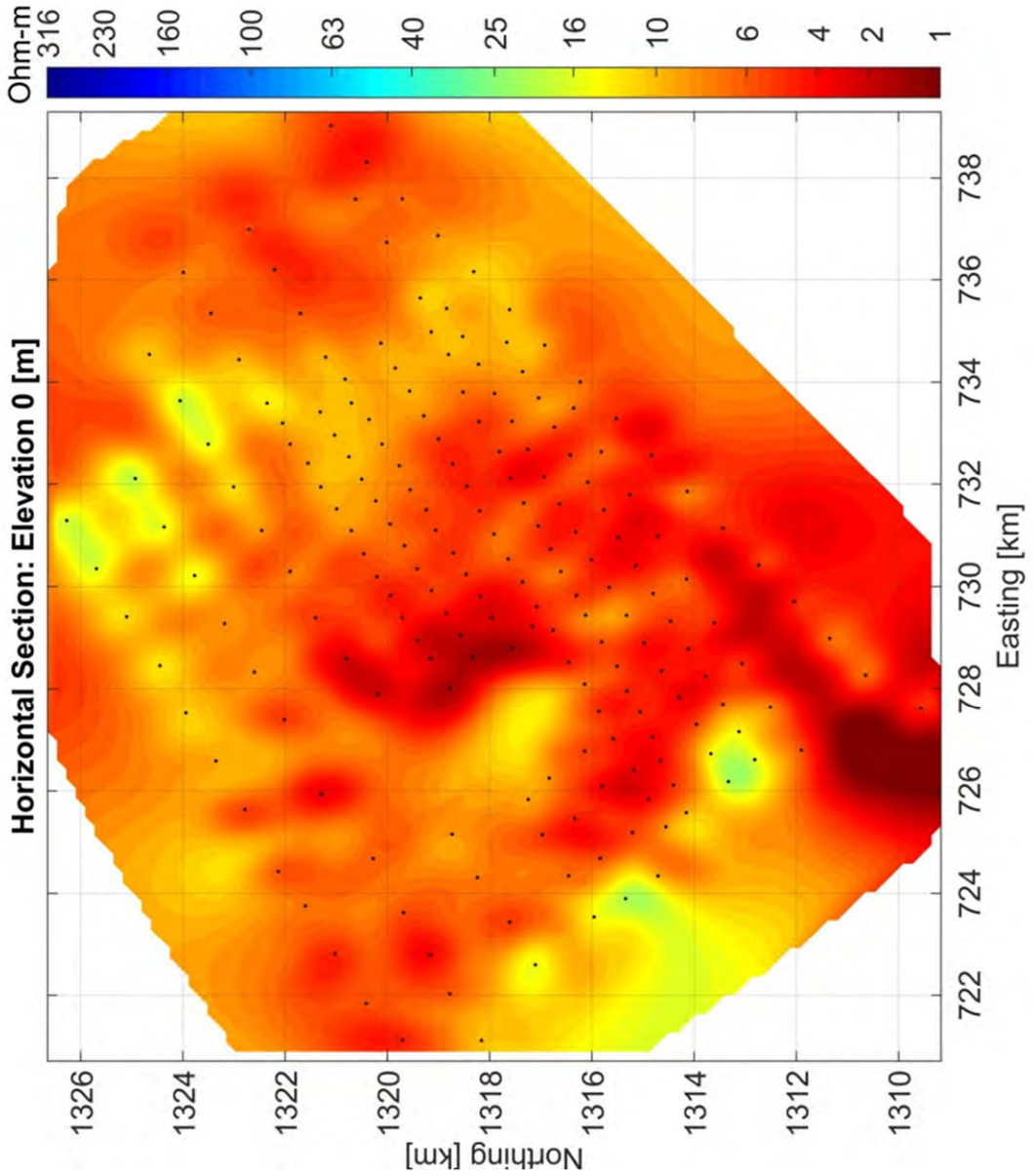
Resistivity cross section map (3D model) (TDO98)



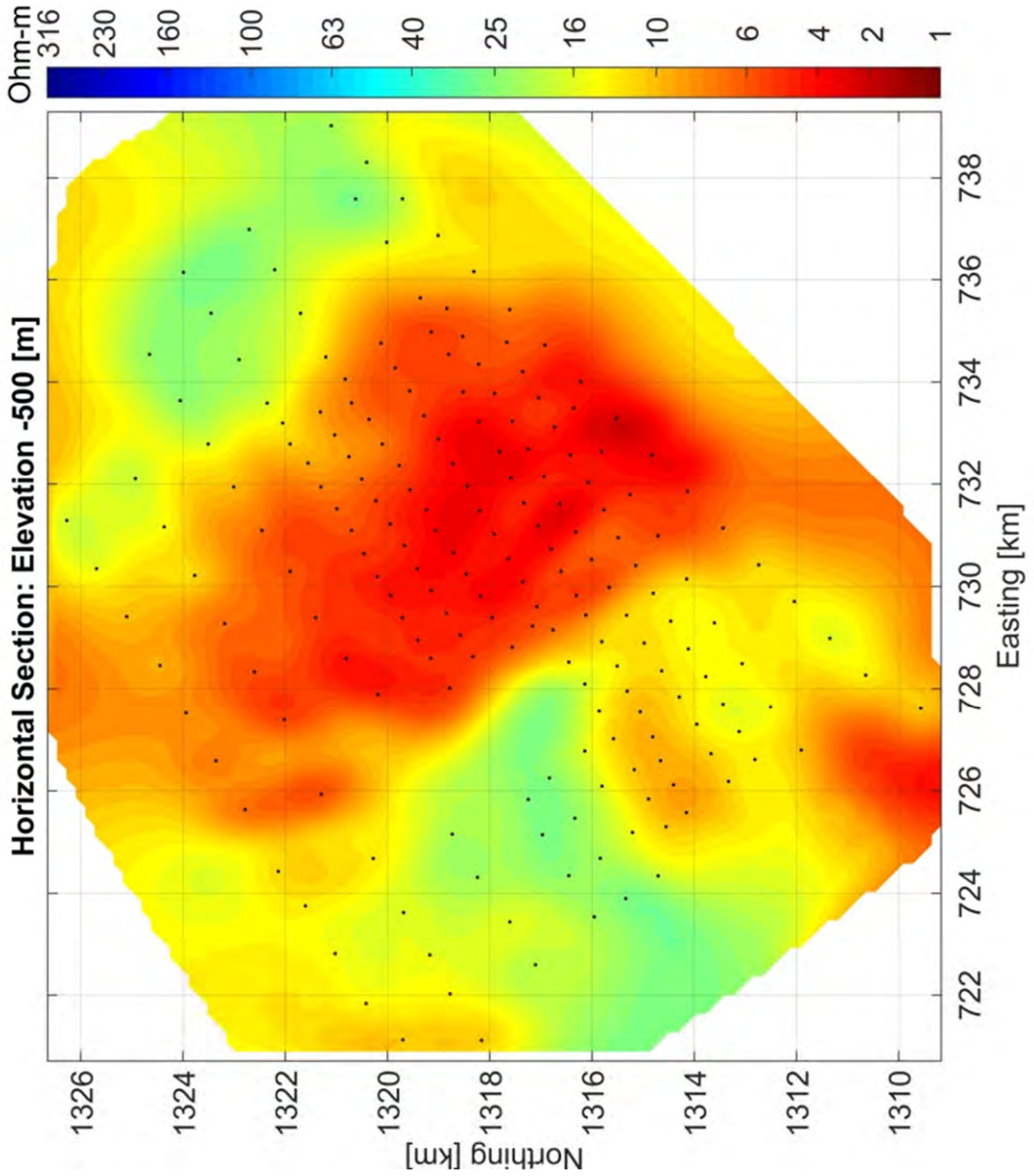
Resistivity cross section map (3D model) (TDO99)



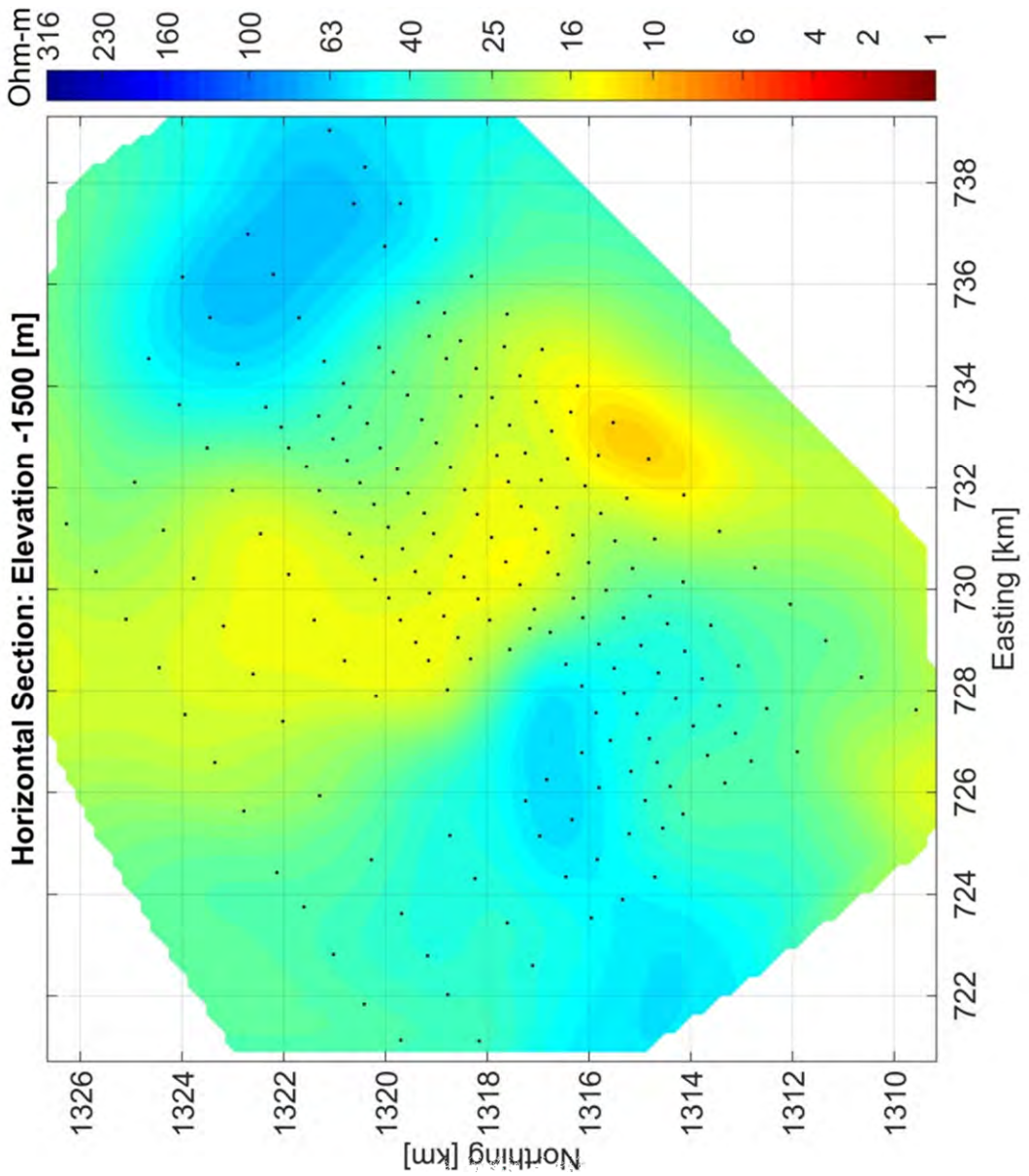
Resistivity plan view map (3D model) (Elevation 200m)



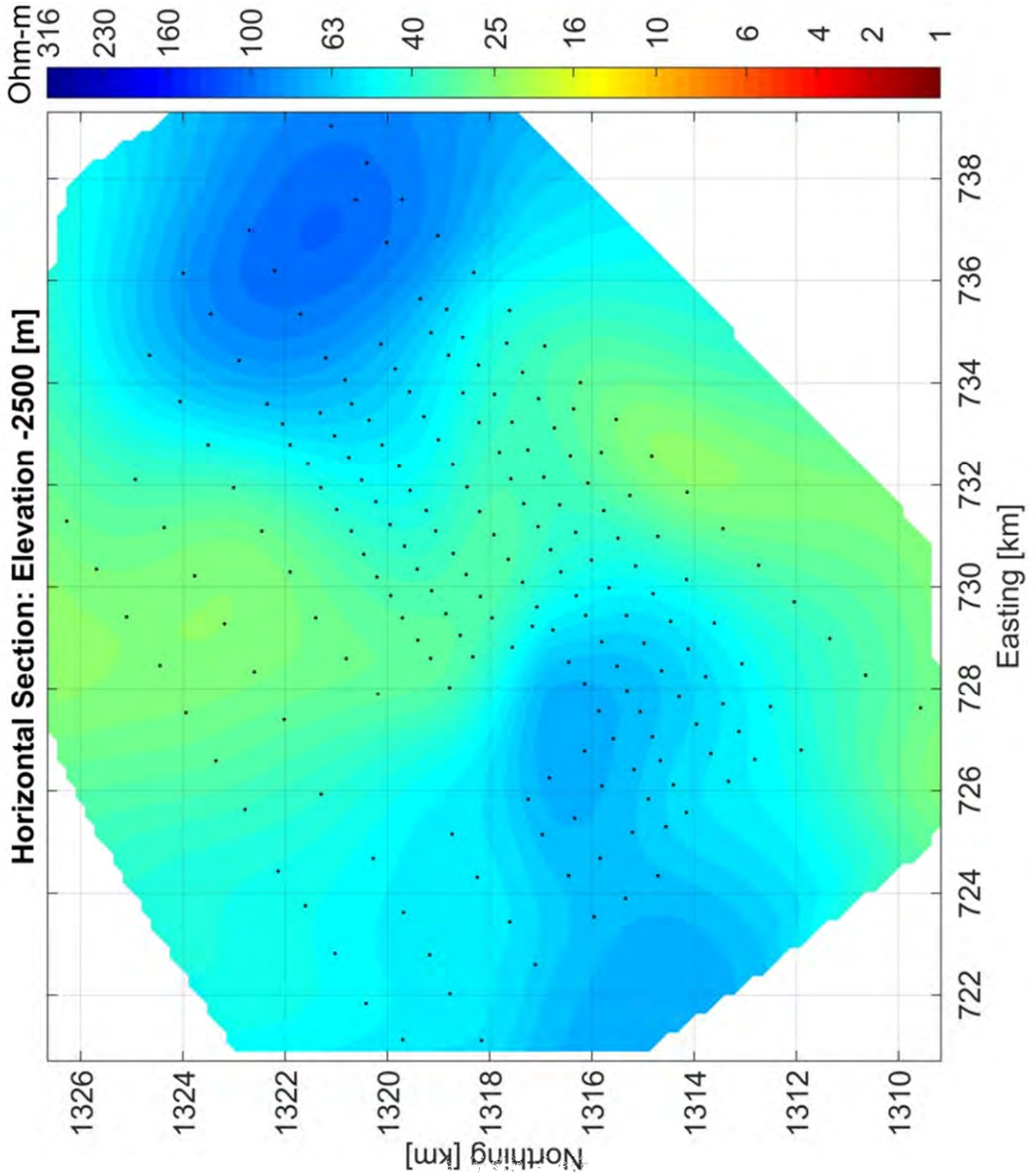
Resistivity plan view map (3D model) (Elevation 0m)



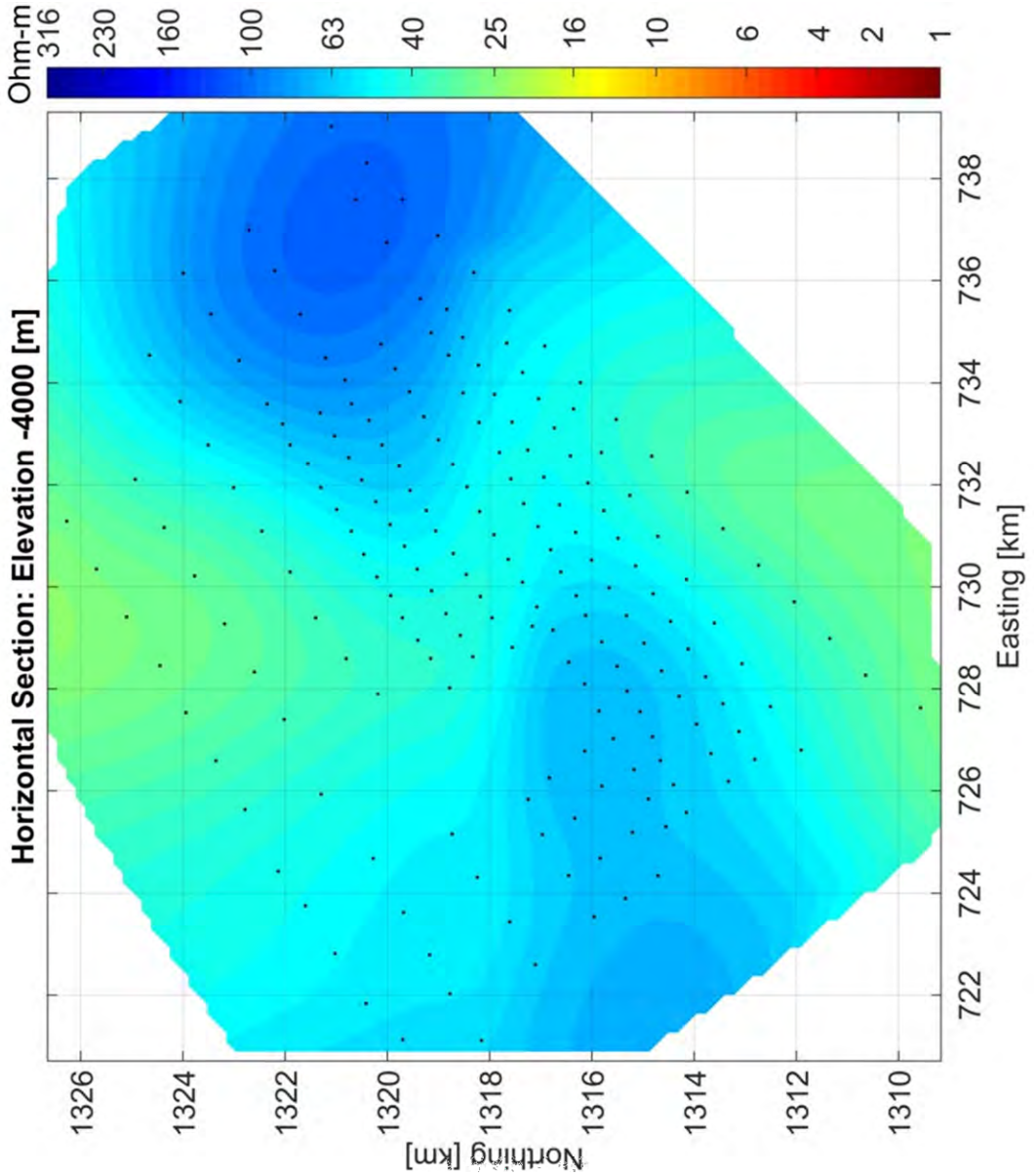
Resistivity plan view map (3D model) (Elevation 500m)



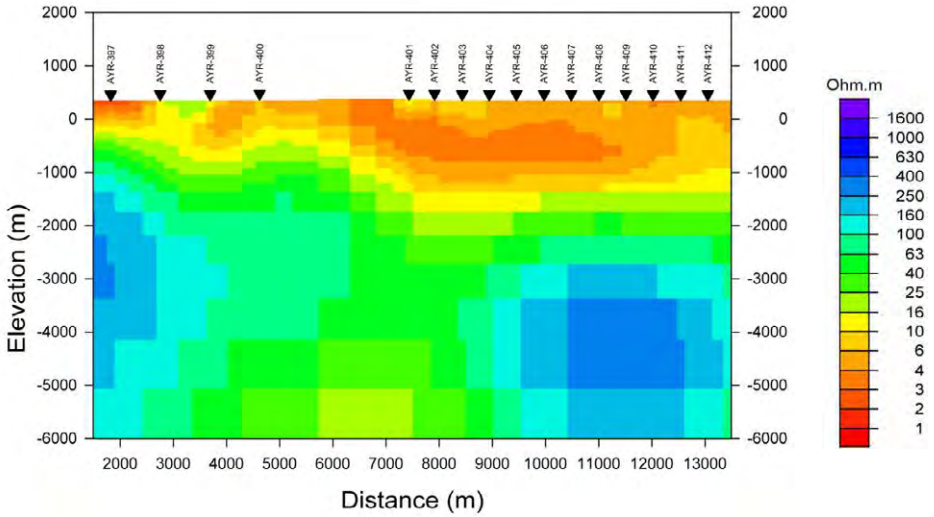
Resistivity plan view map (3D model) (Elevation 1500m)



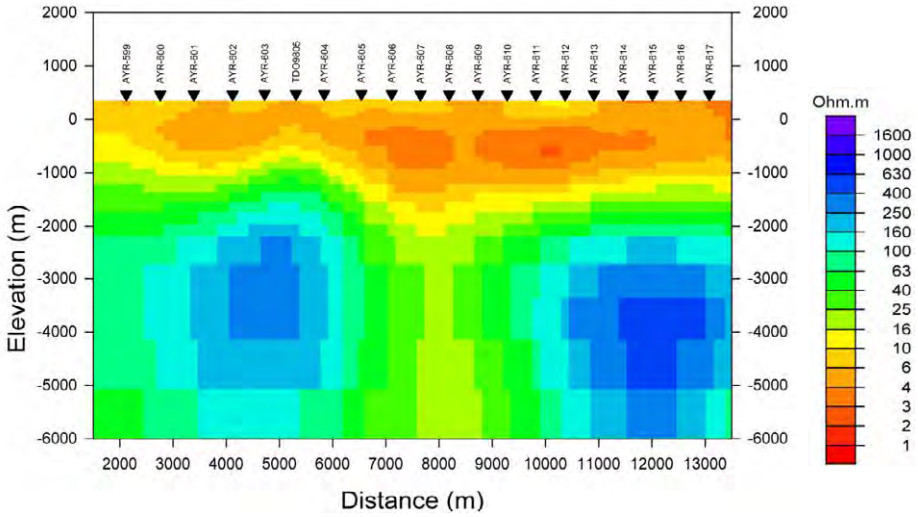
Resistivity plan view map (3D model) (Elevation 2500m)



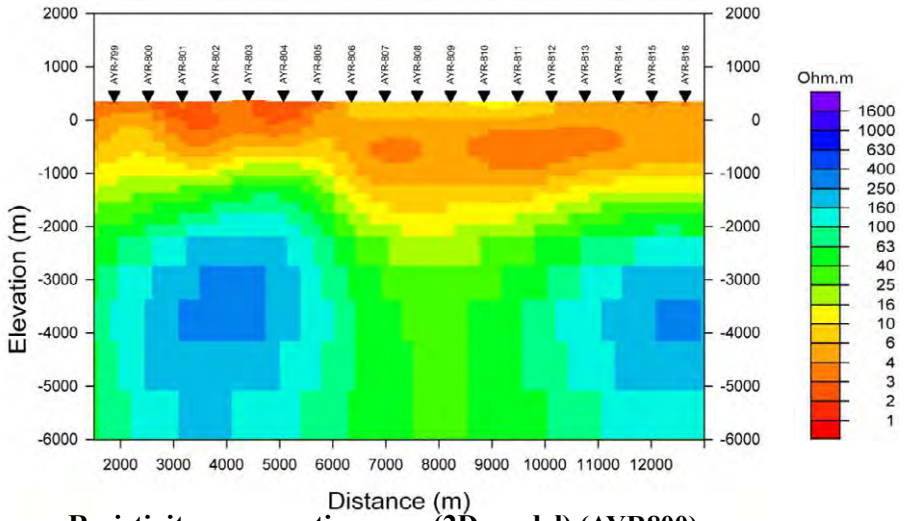
Resistivity plan view map (3D model) (Elevation 4000m)



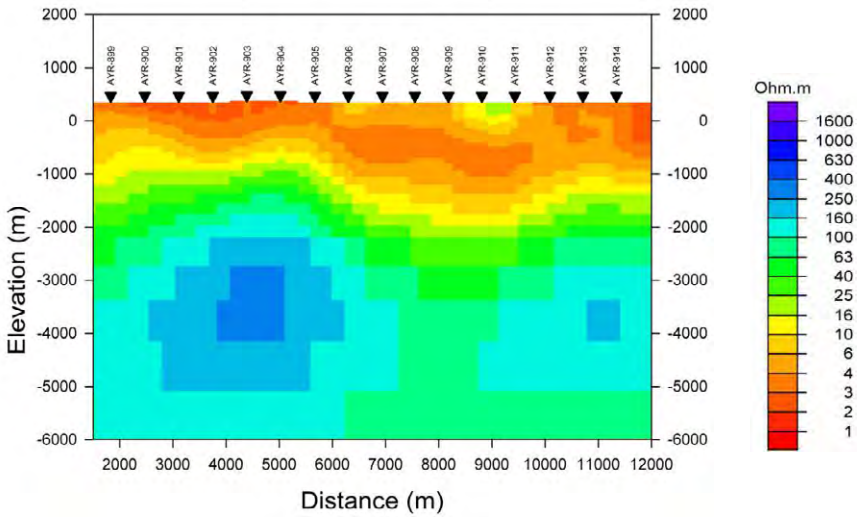
Resistivity cross section map (2D model) (AYR400)



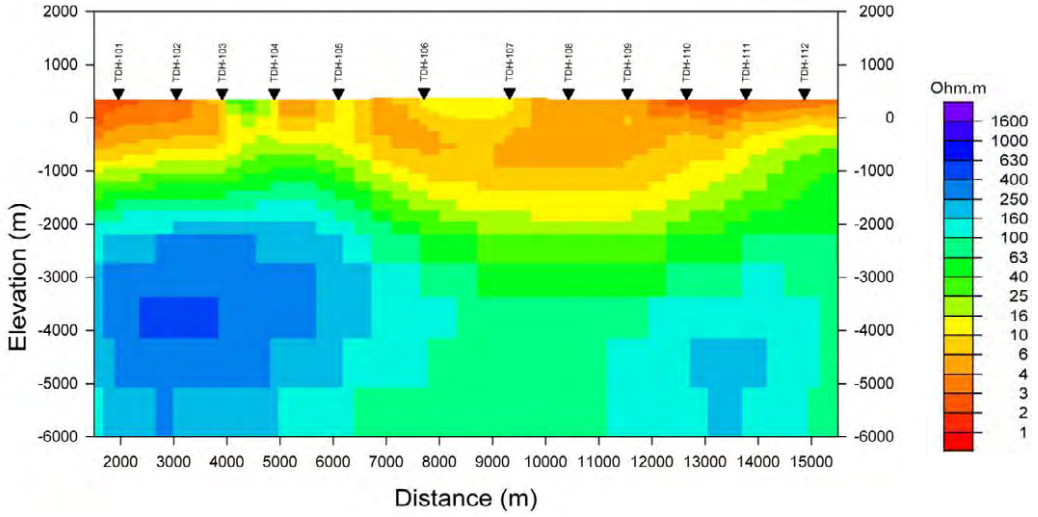
Resistivity cross section map (2D model) (AYR600)



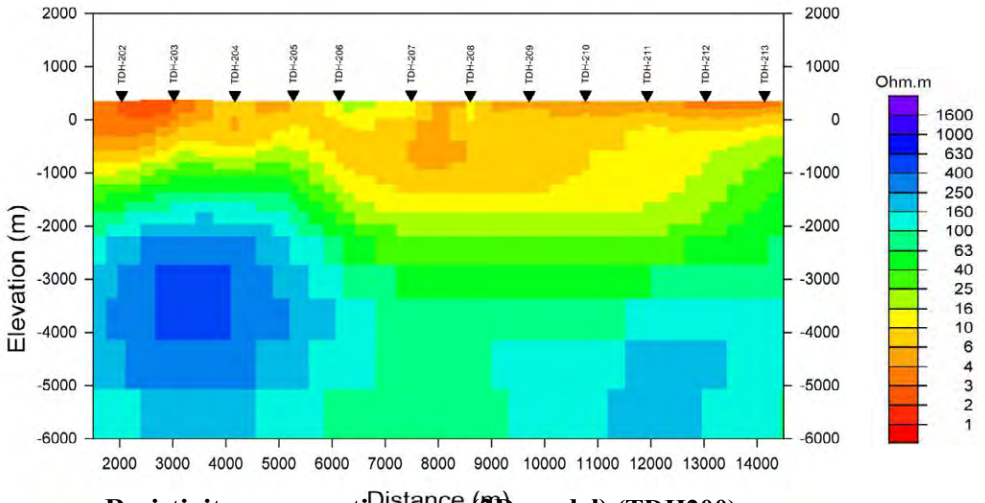
Resistivity cross section map (2D model) (AYR800)



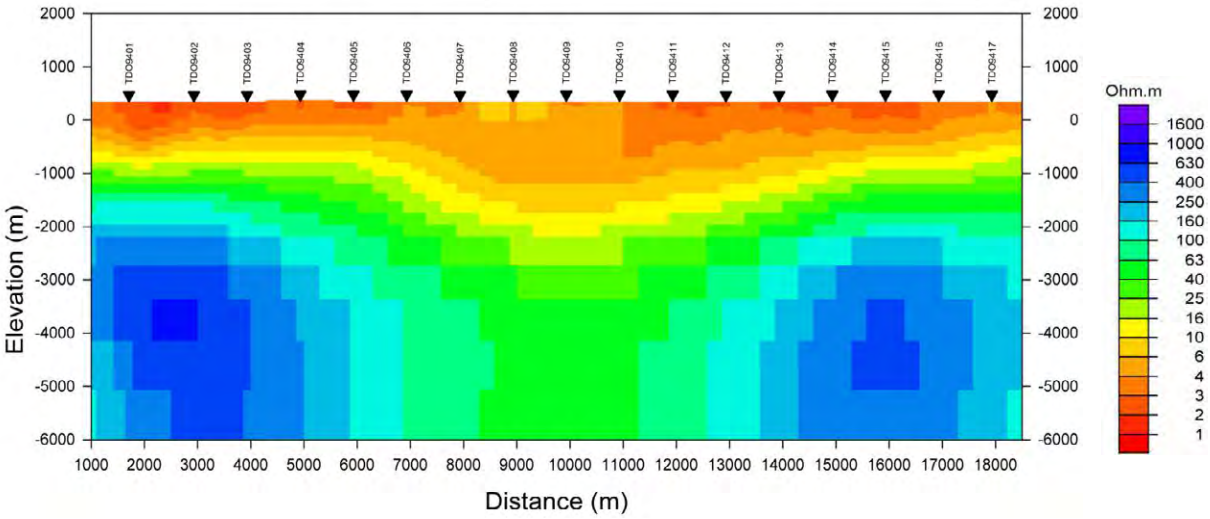
Resistivity cross section map (2D model) (AYR900)



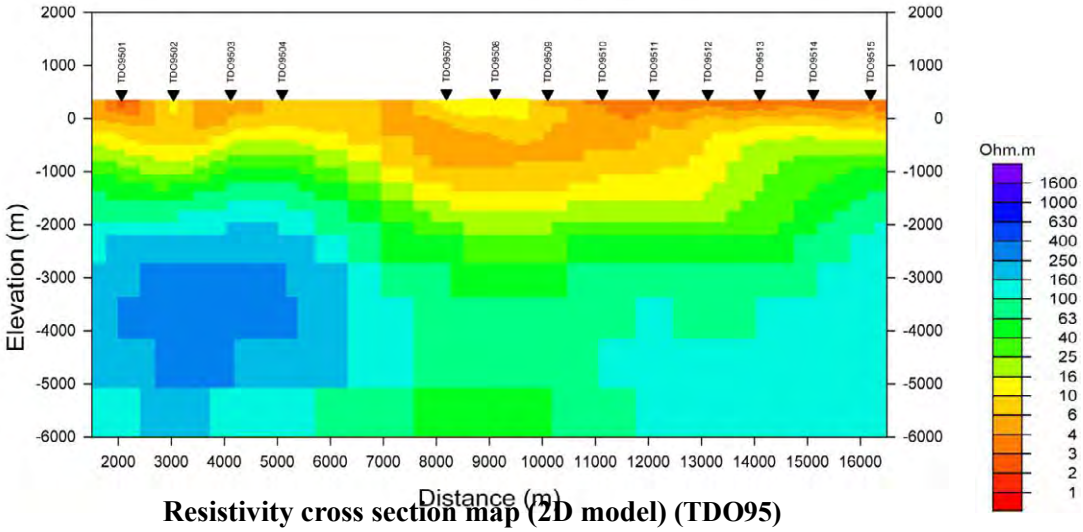
Resistivity cross section map (2D model) (TDH100)



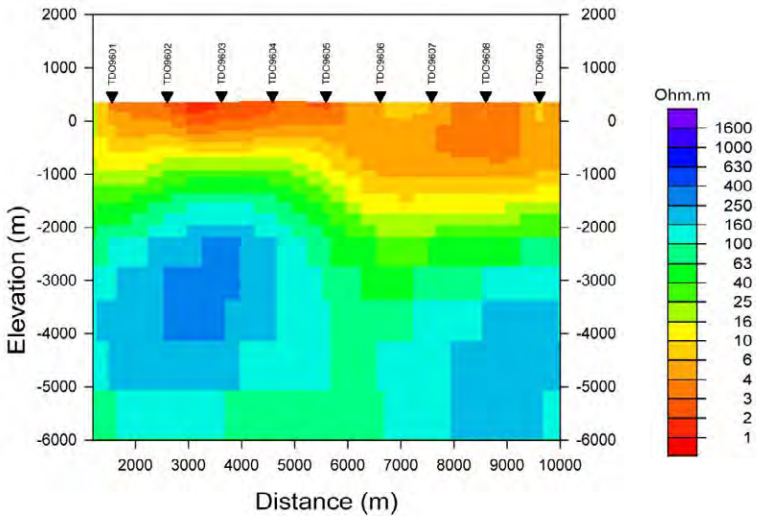
Resistivity cross section map (2D model) (TDH200)



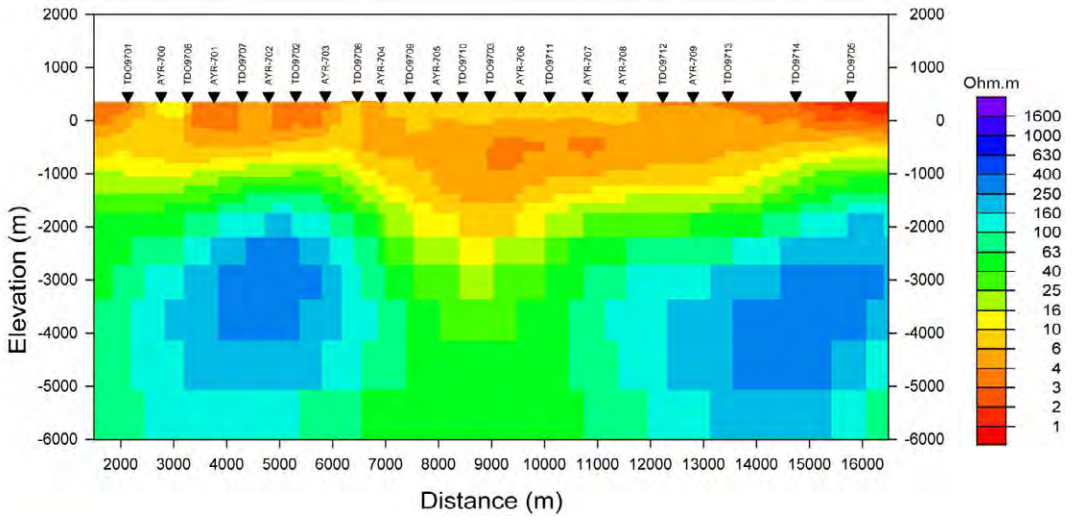
Resistivity cross section map (2D model) (TDO94)



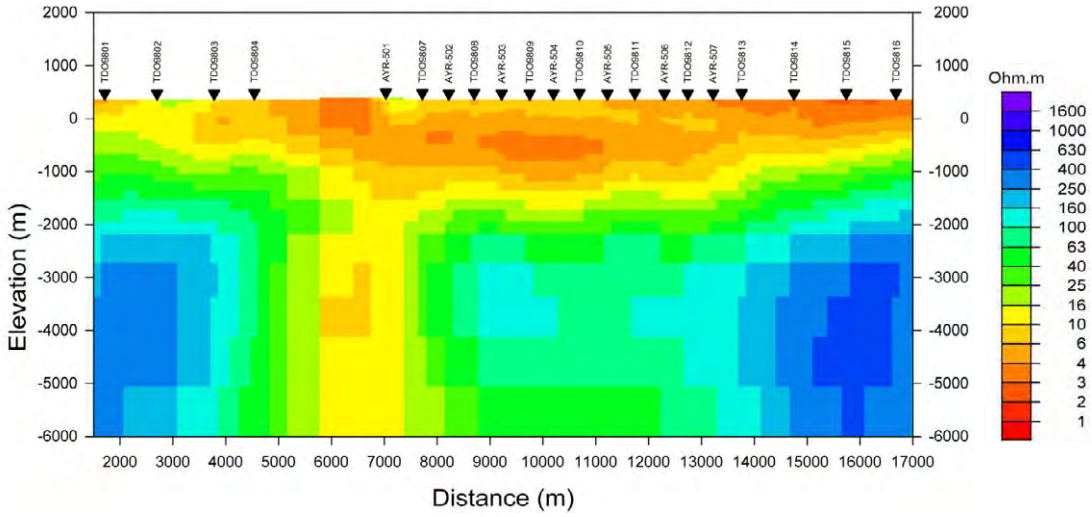
Resistivity cross section map (2D model) (TDO95)



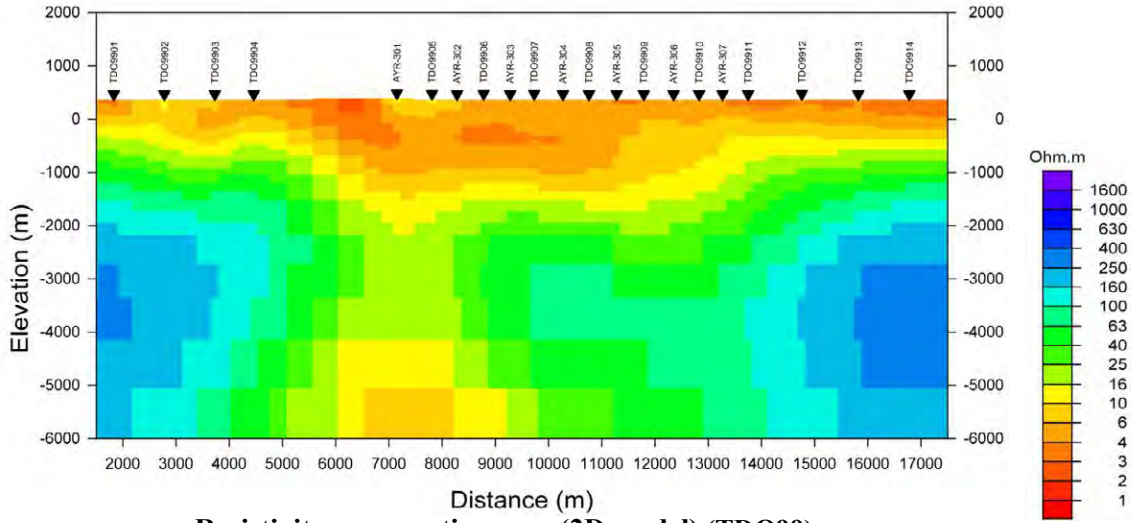
Resistivity cross section map (2D model) (TDO96)



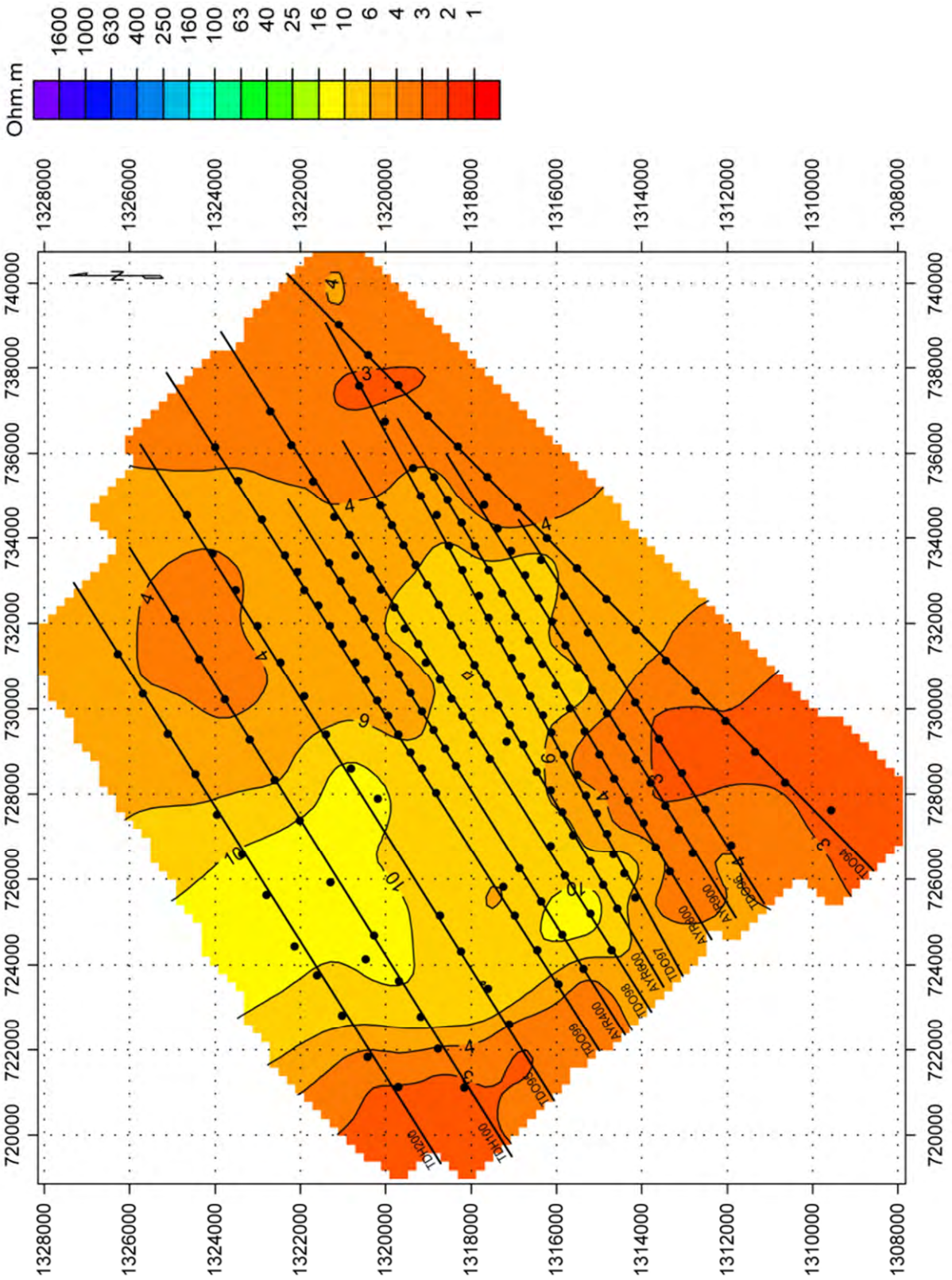
Resistivity cross section map (2D model) (TDO97)



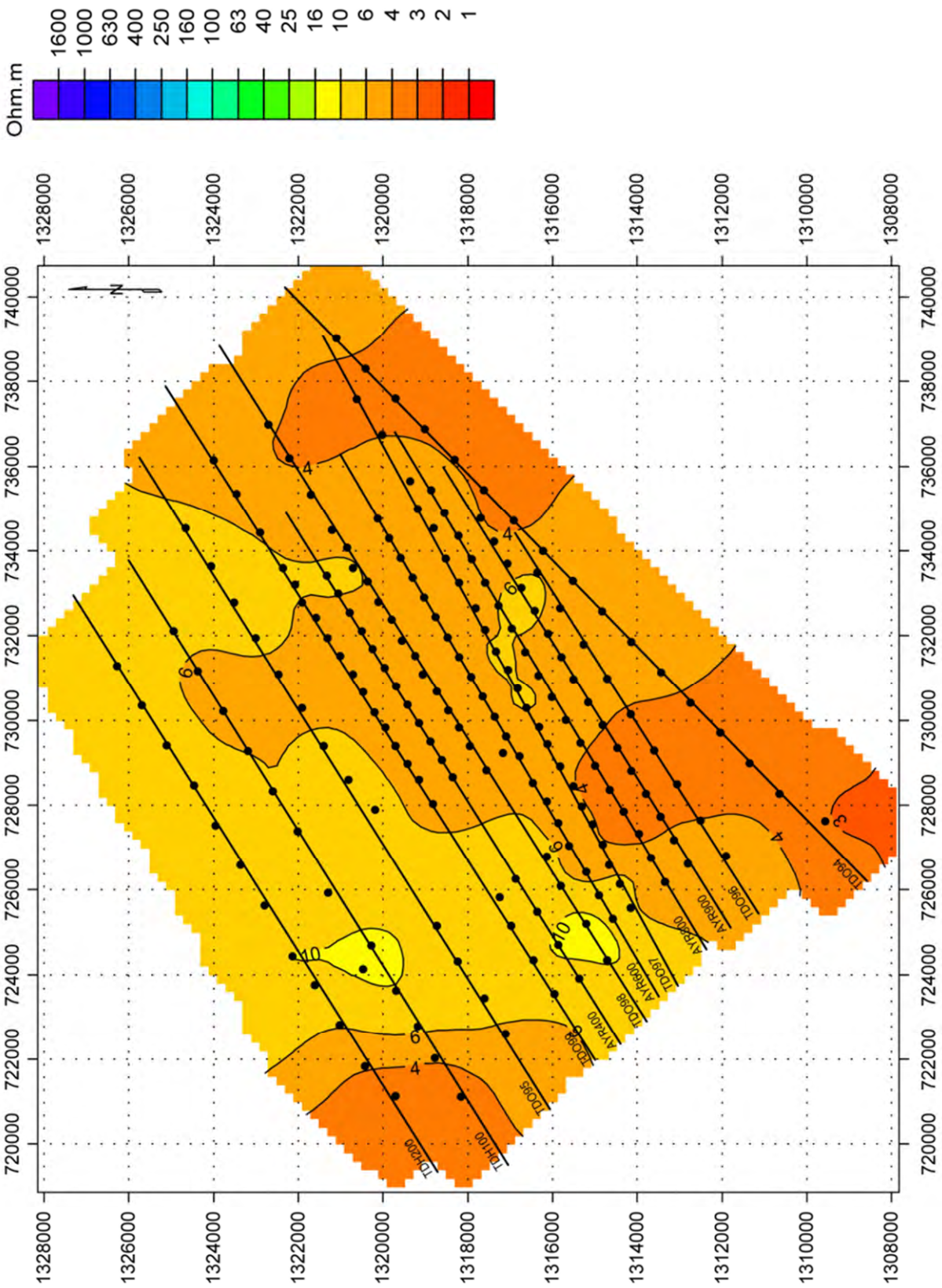
Resistivity cross section map (2D model) (TDO98)



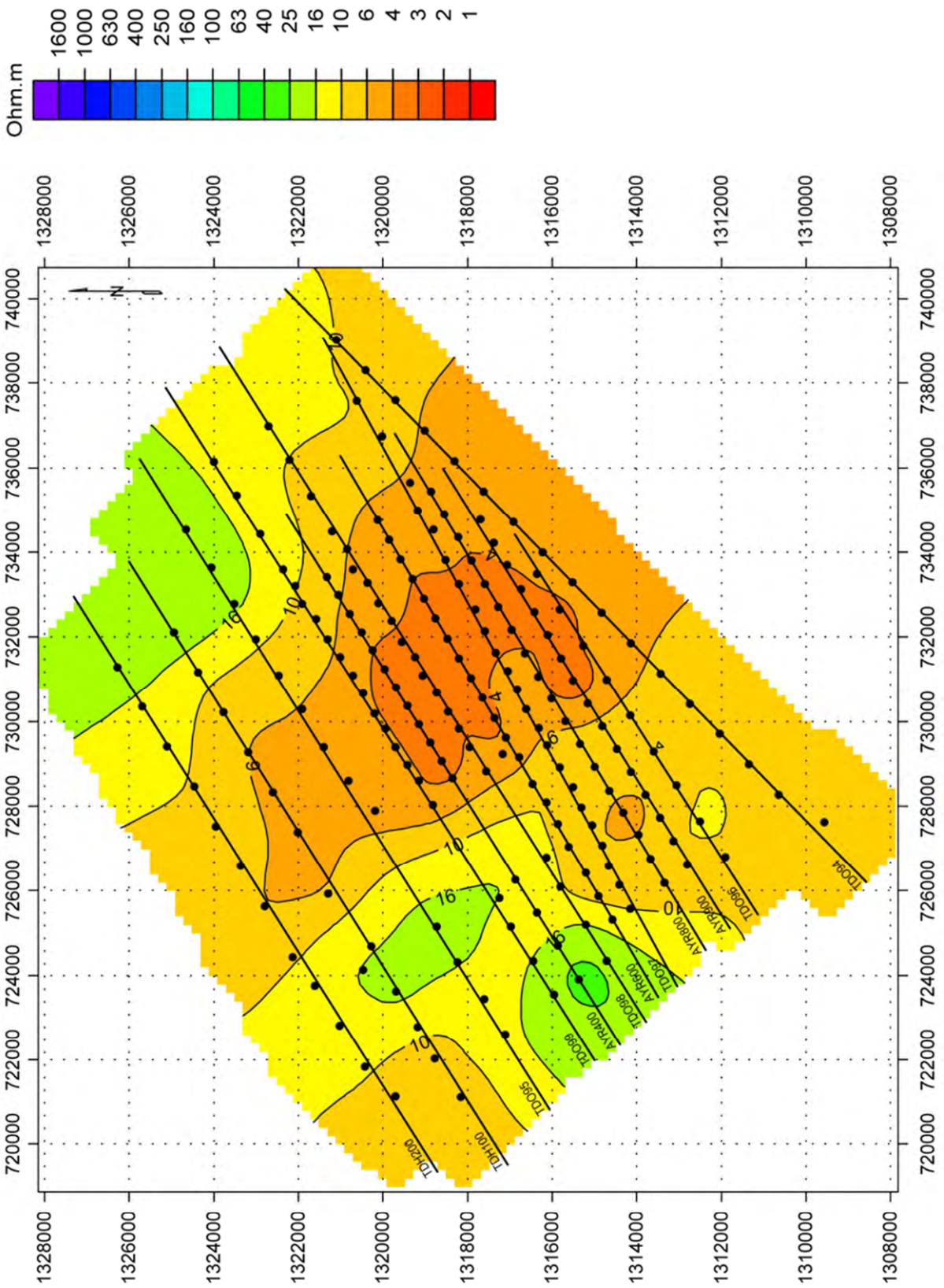
Resistivity cross section map (2D model) (TDO99)



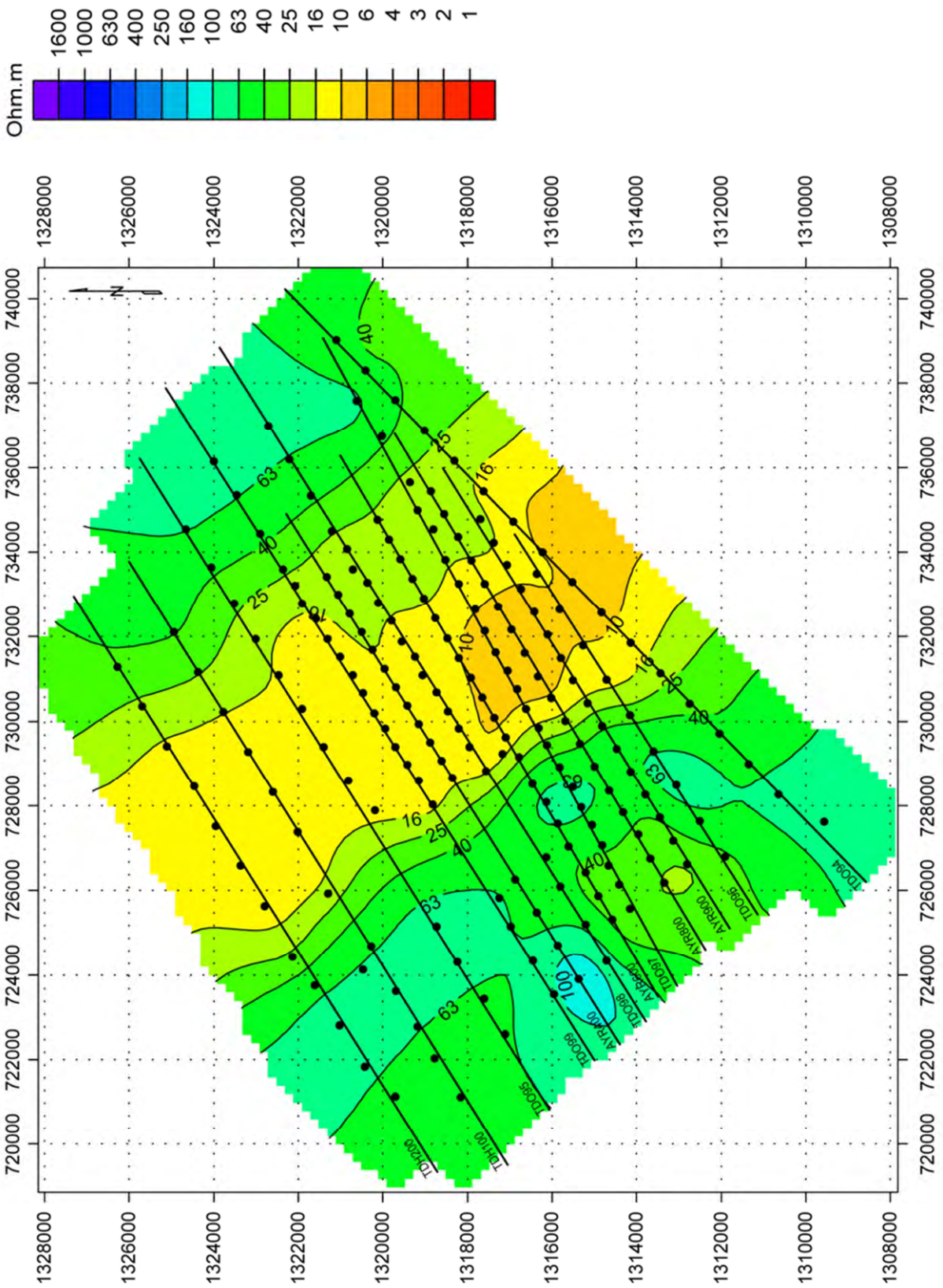
Resistivity plan view map (2D model) (elevation 200m)



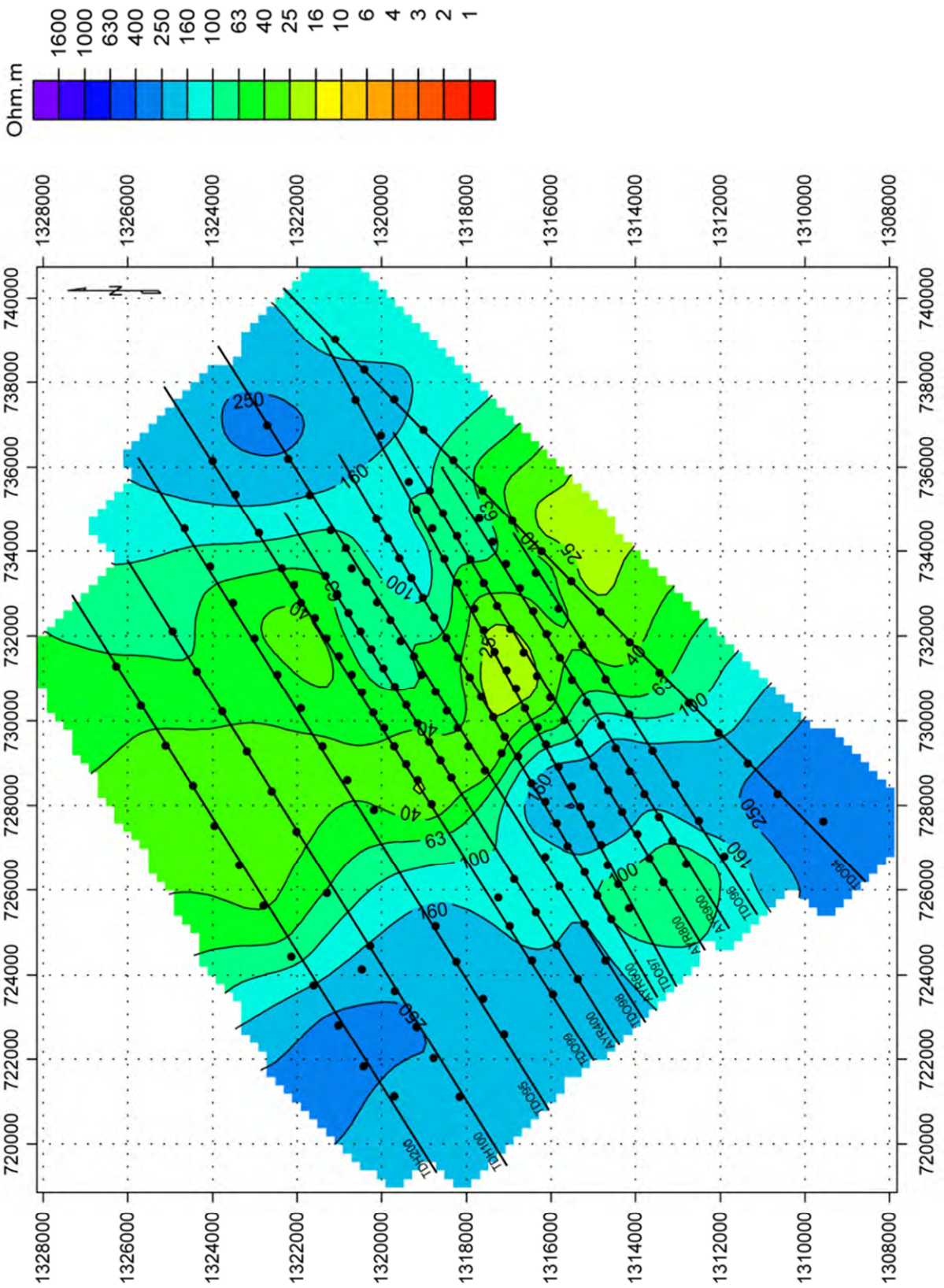
Resistivity plan view map (2D model) (elevation 0m)



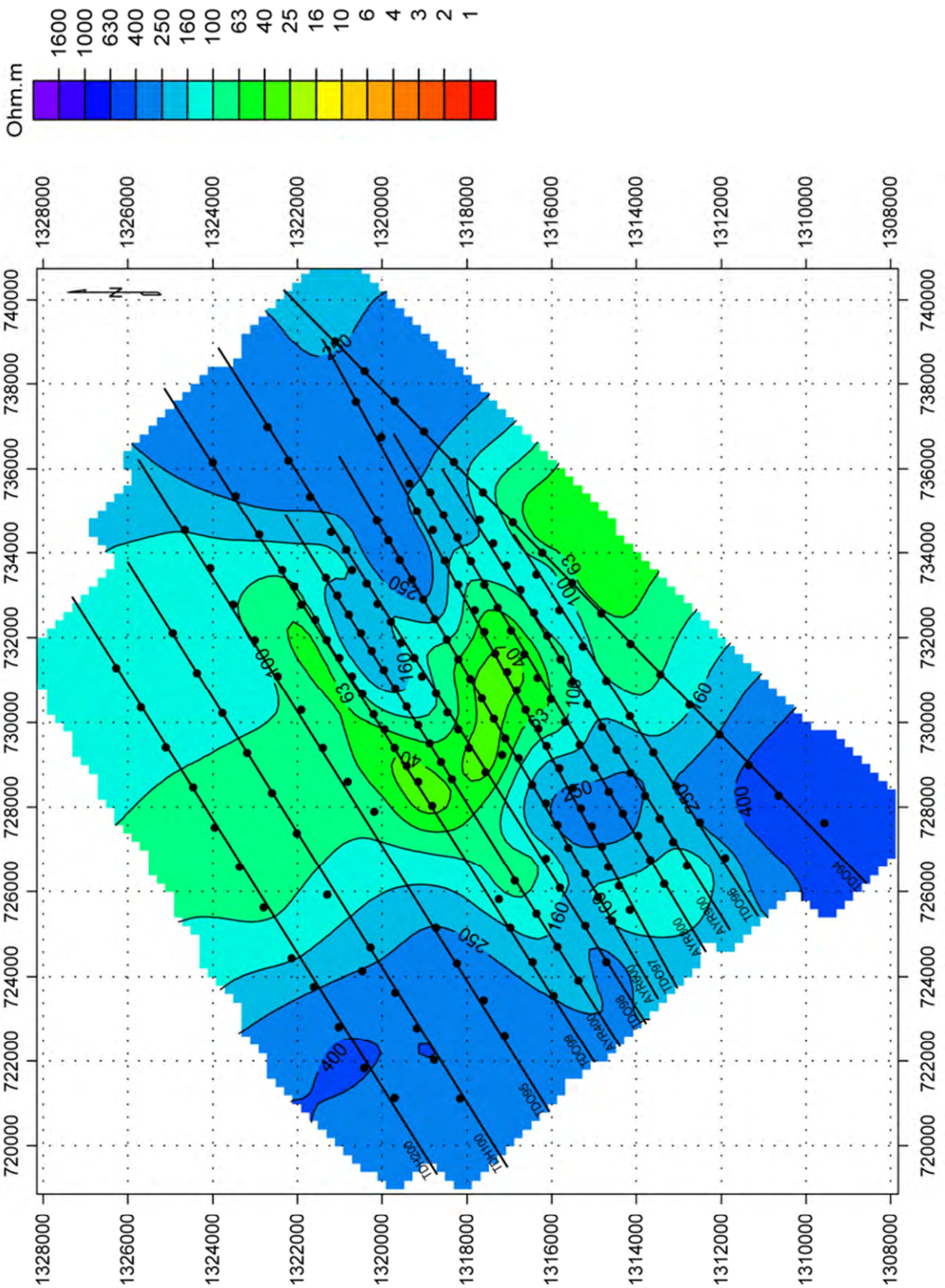
Resistivity plan view map (2D model) (elevation 500m)



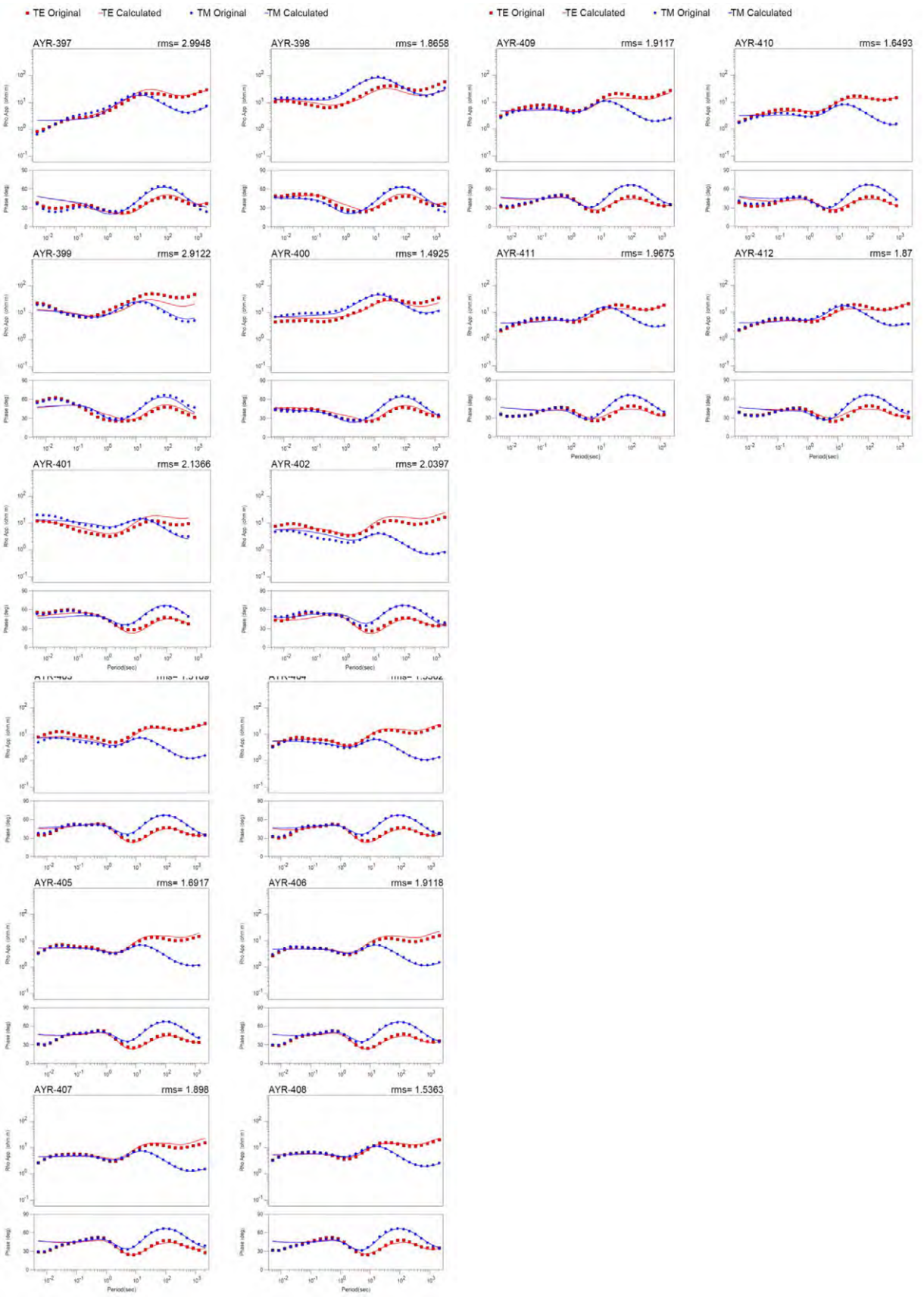
Resistivity plan view map (2D model) (elevation 1500m)



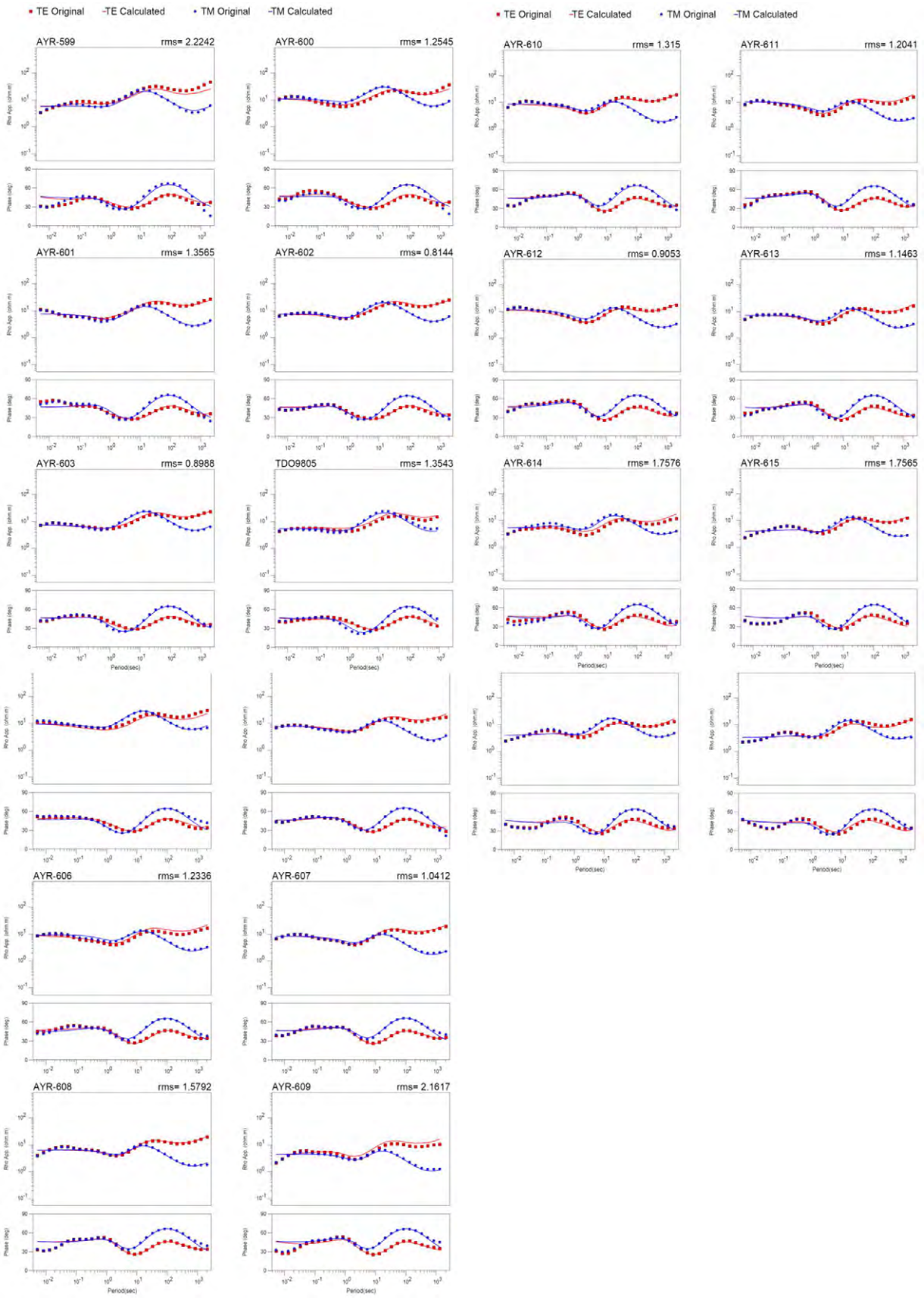
Resistivity plan view map (2D model) (elevation 2500m)



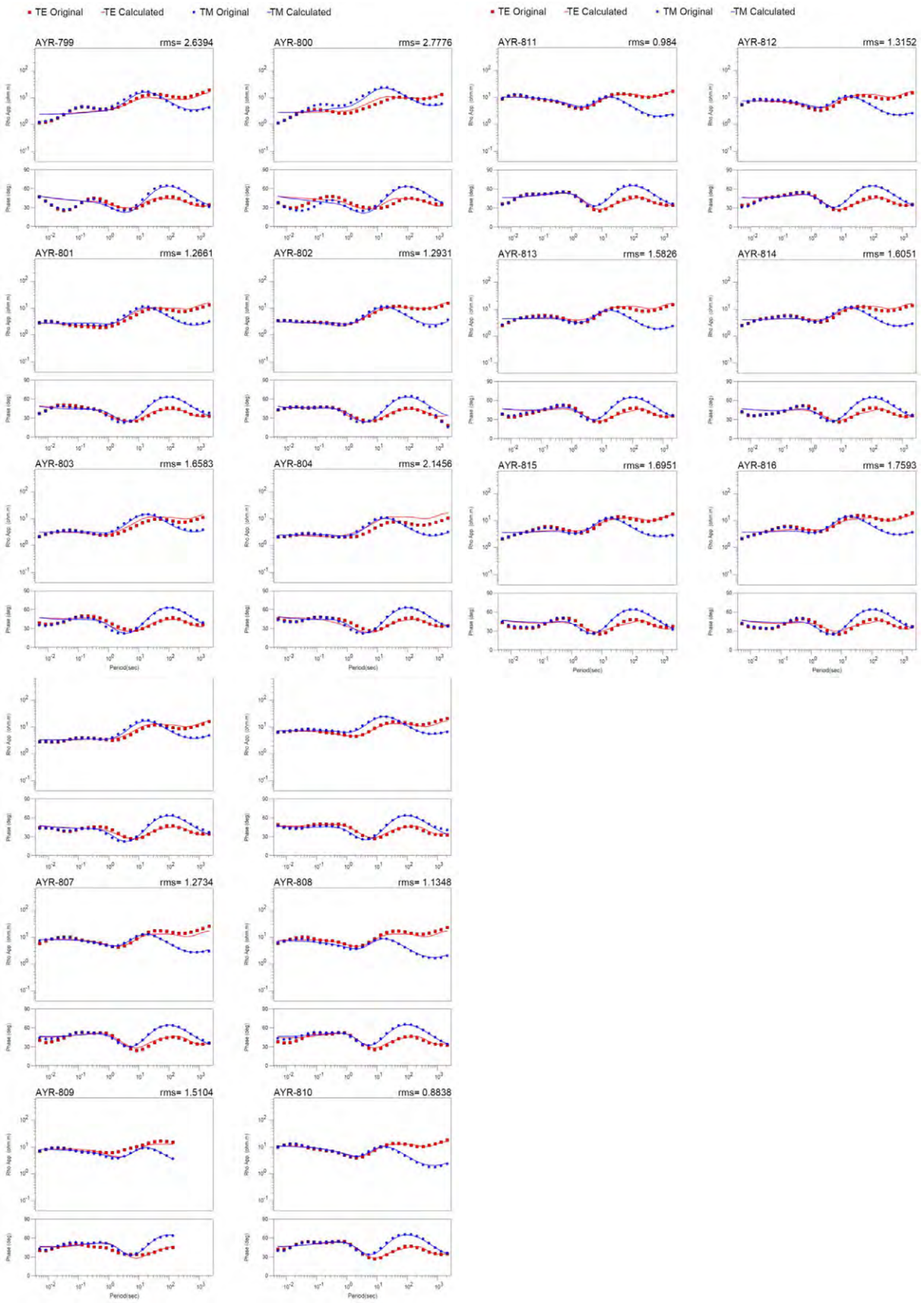
Resistivity plan view map (2D model) (elevation 4000m)



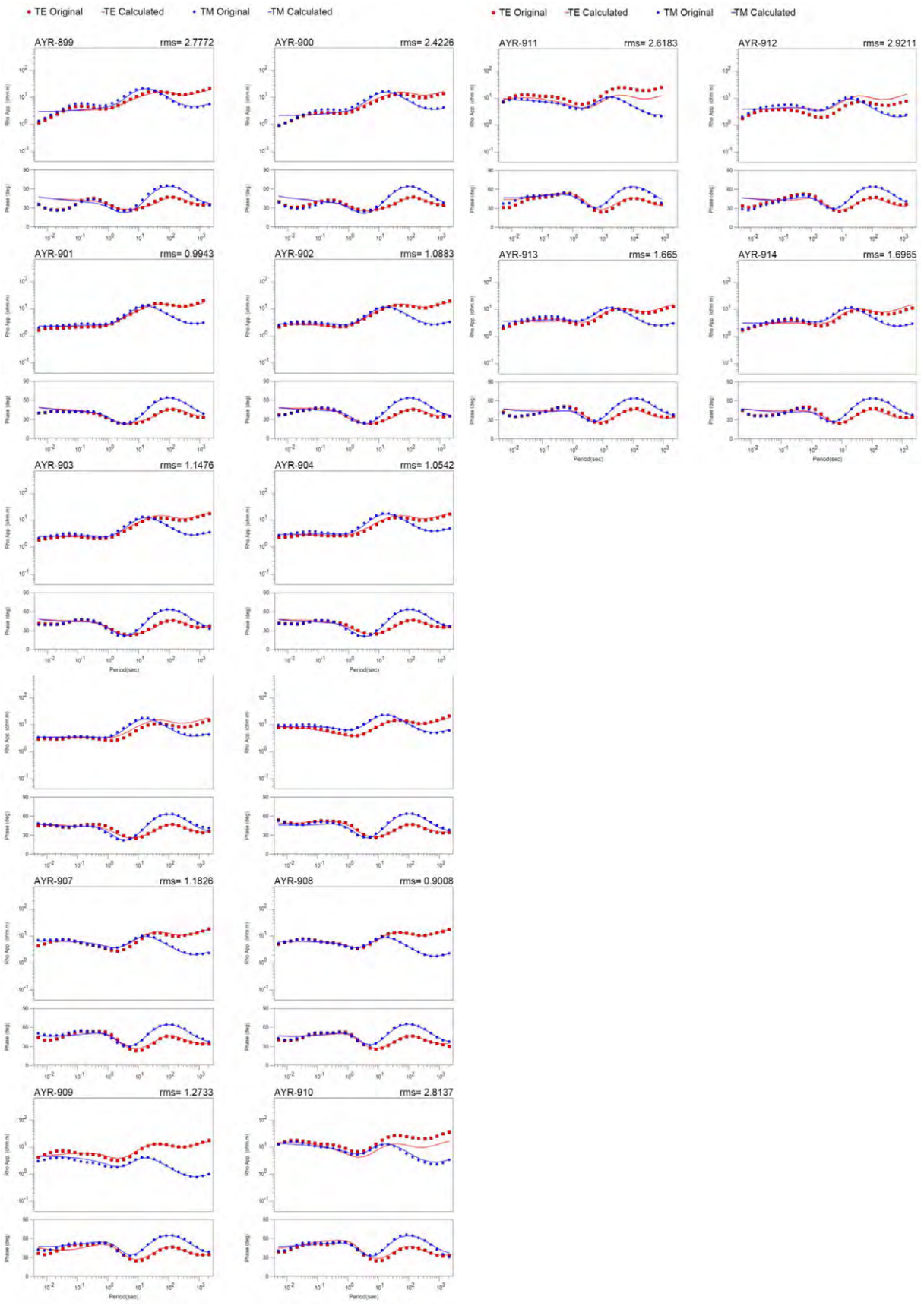
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR400)



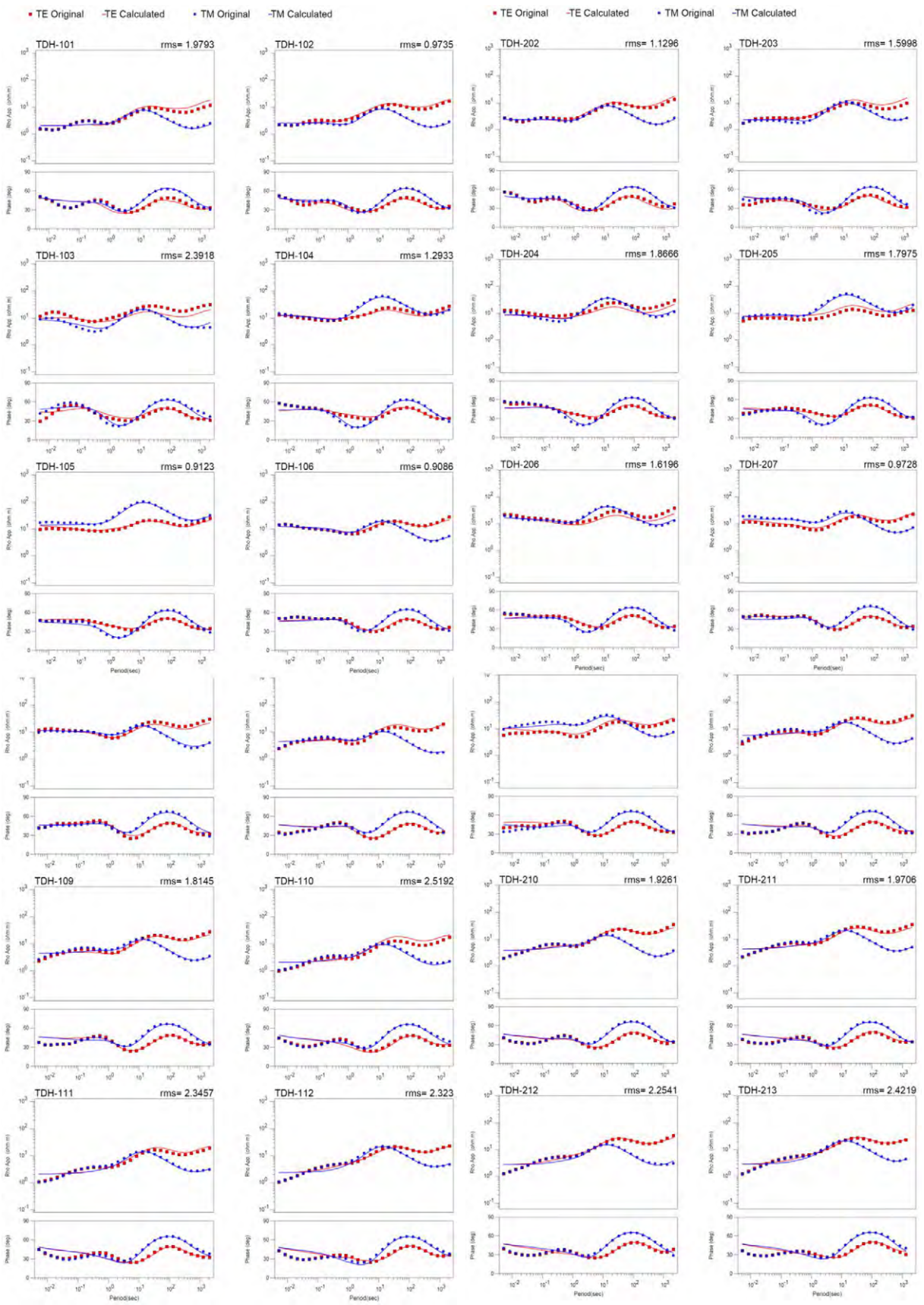
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR600)



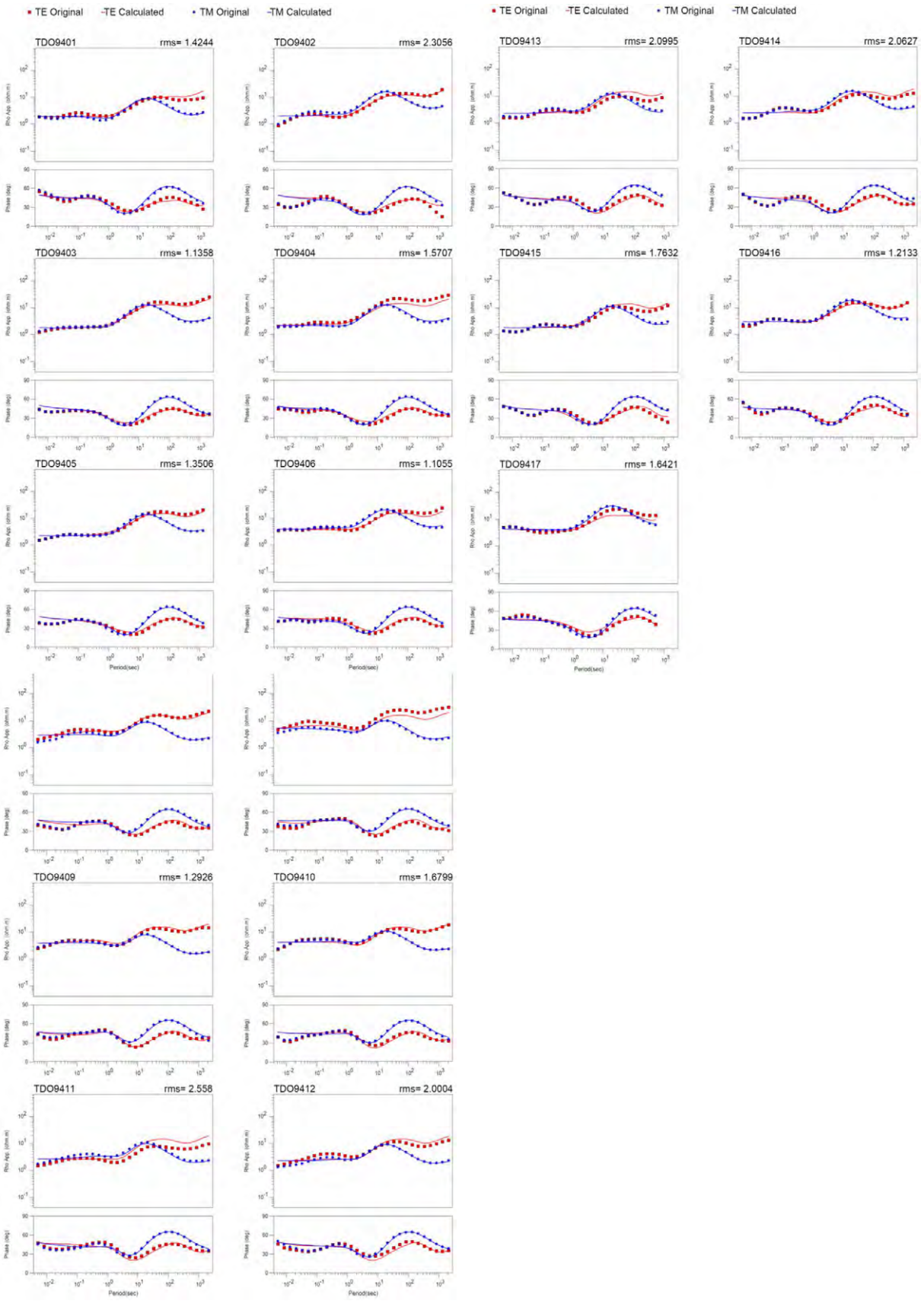
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR800)



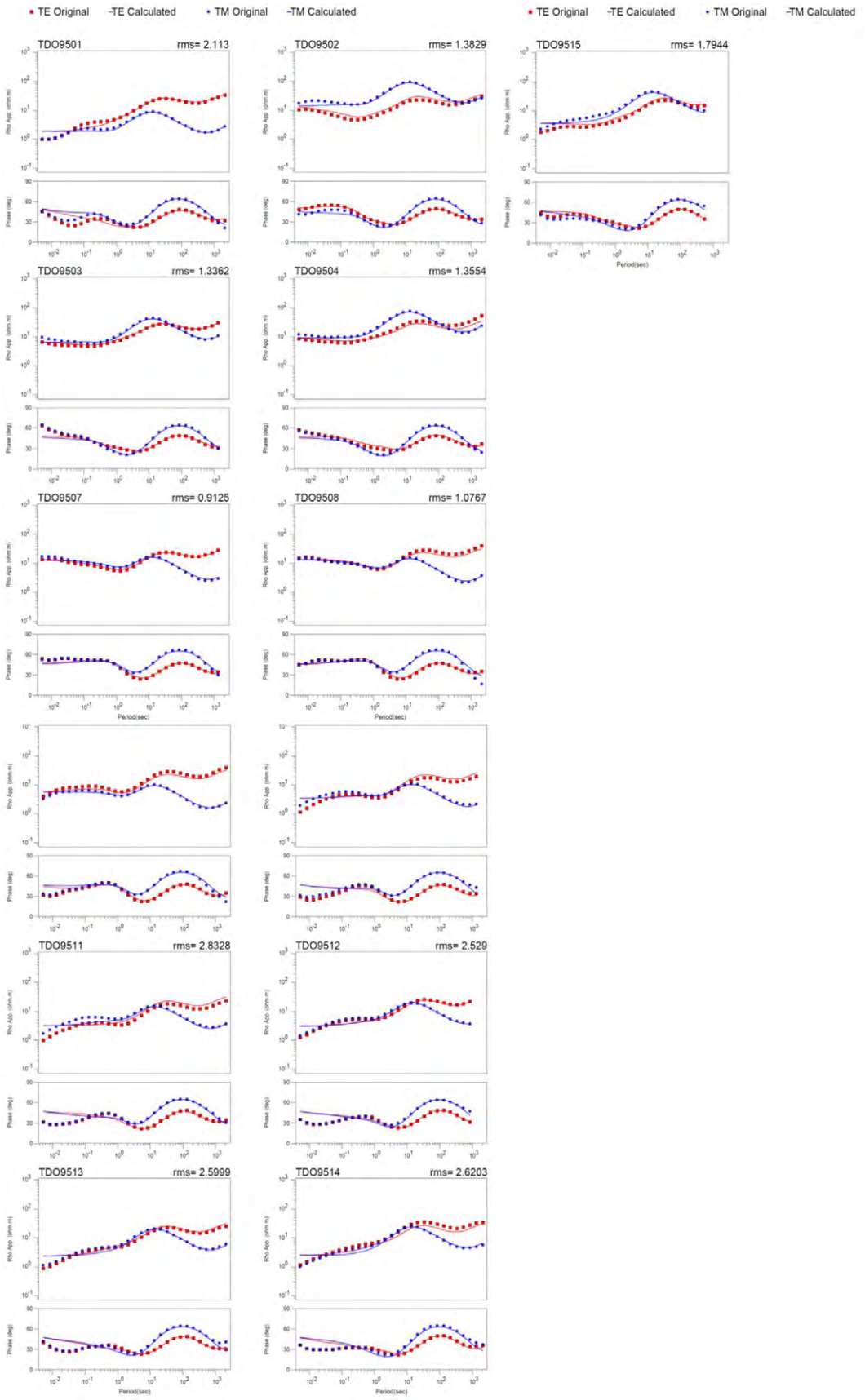
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR900)



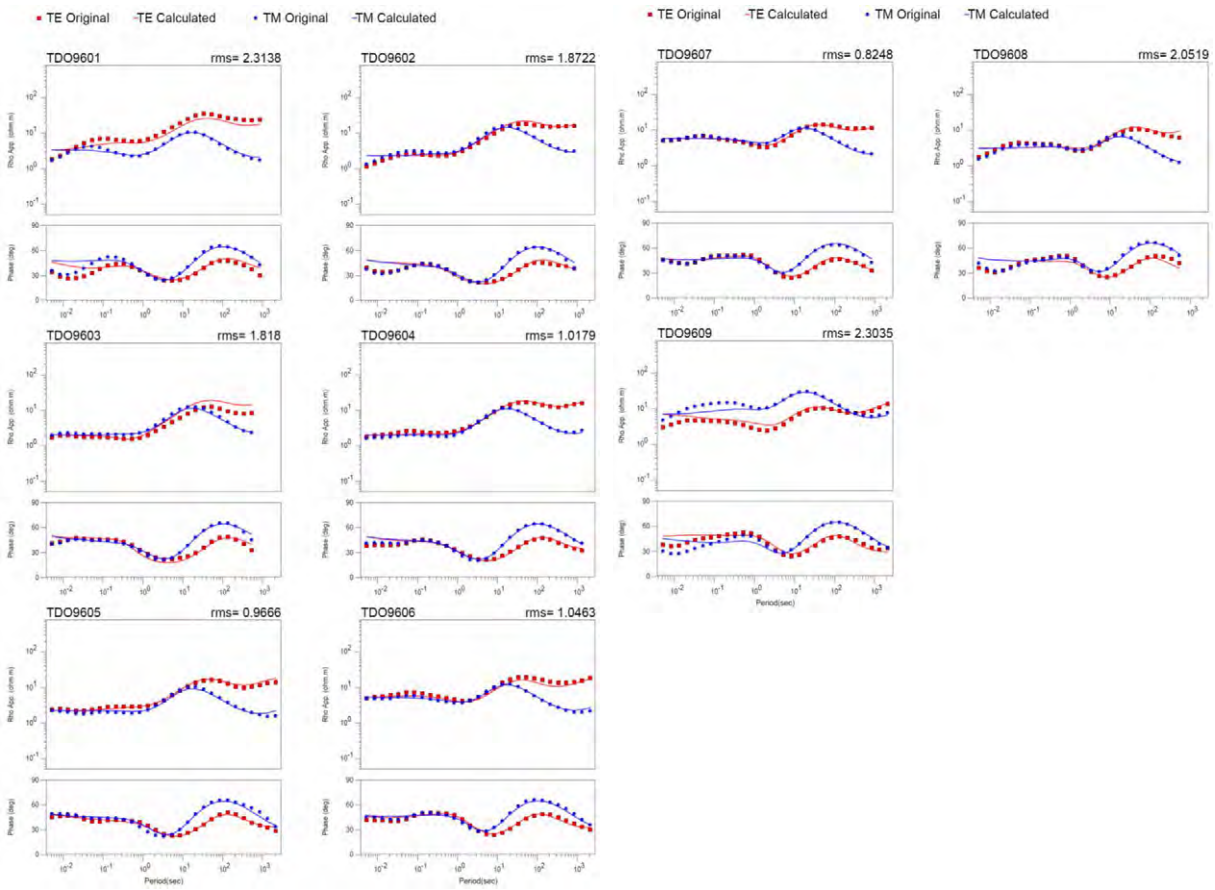
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDH100, TDH200)



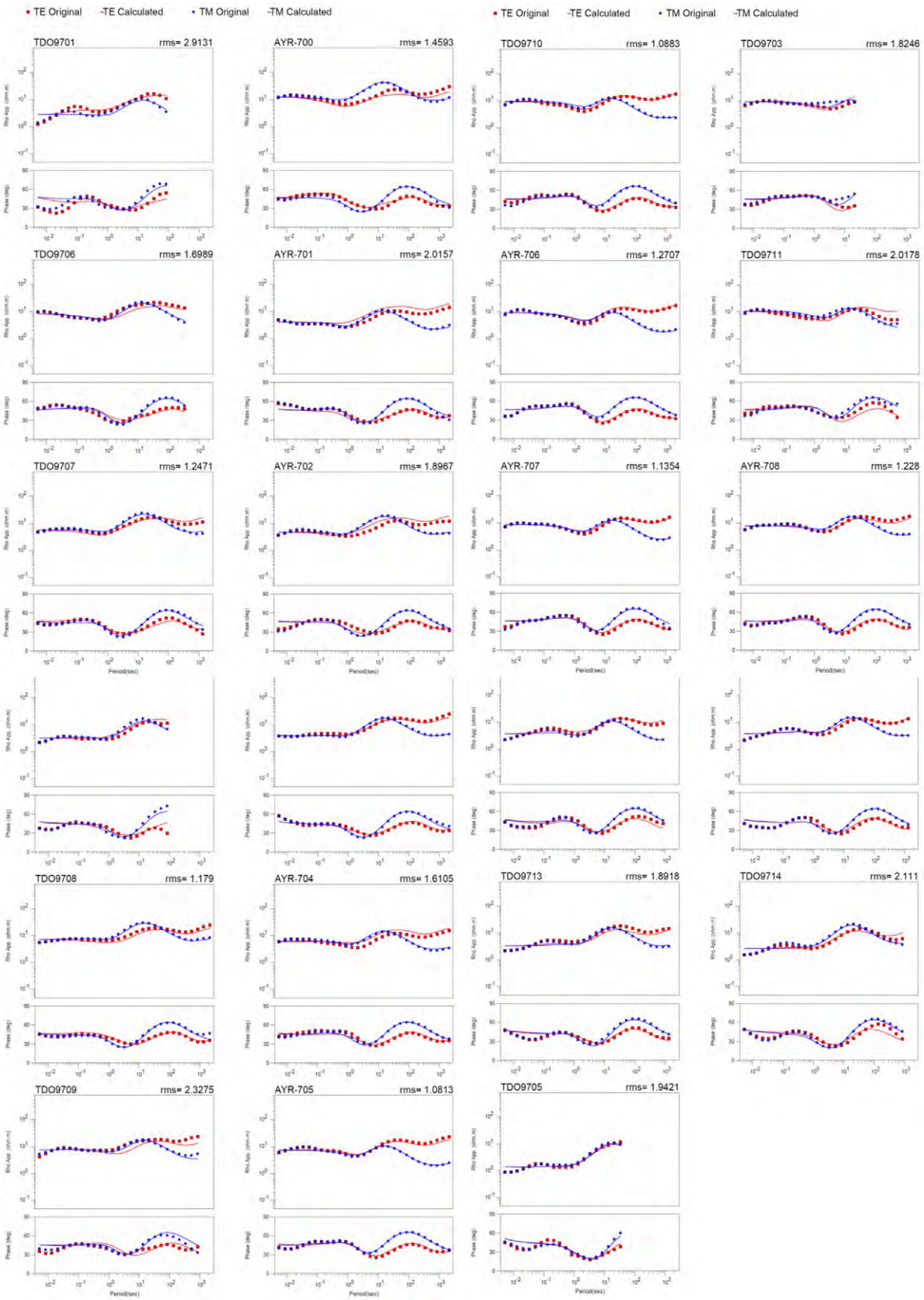
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO94)



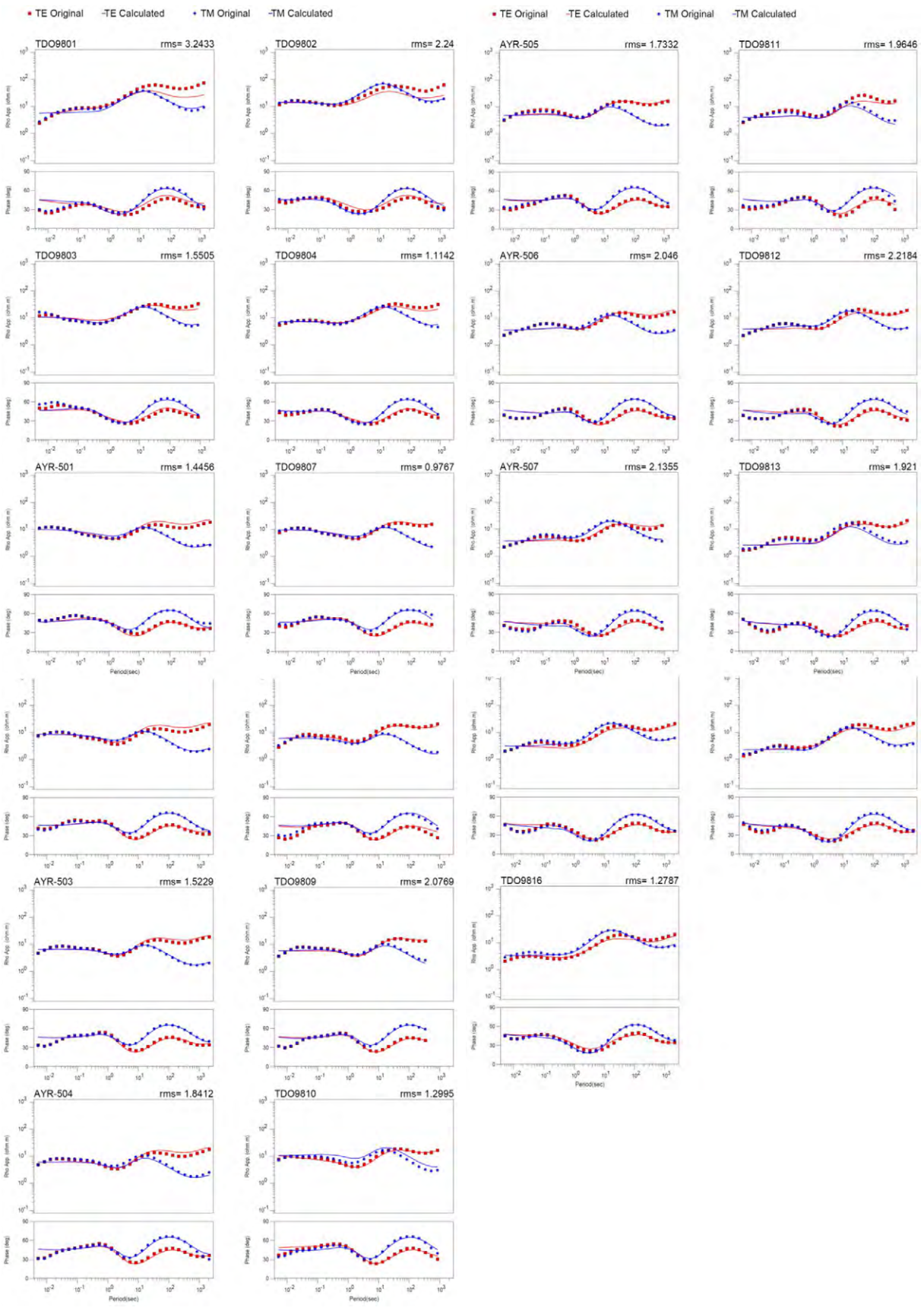
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO95)



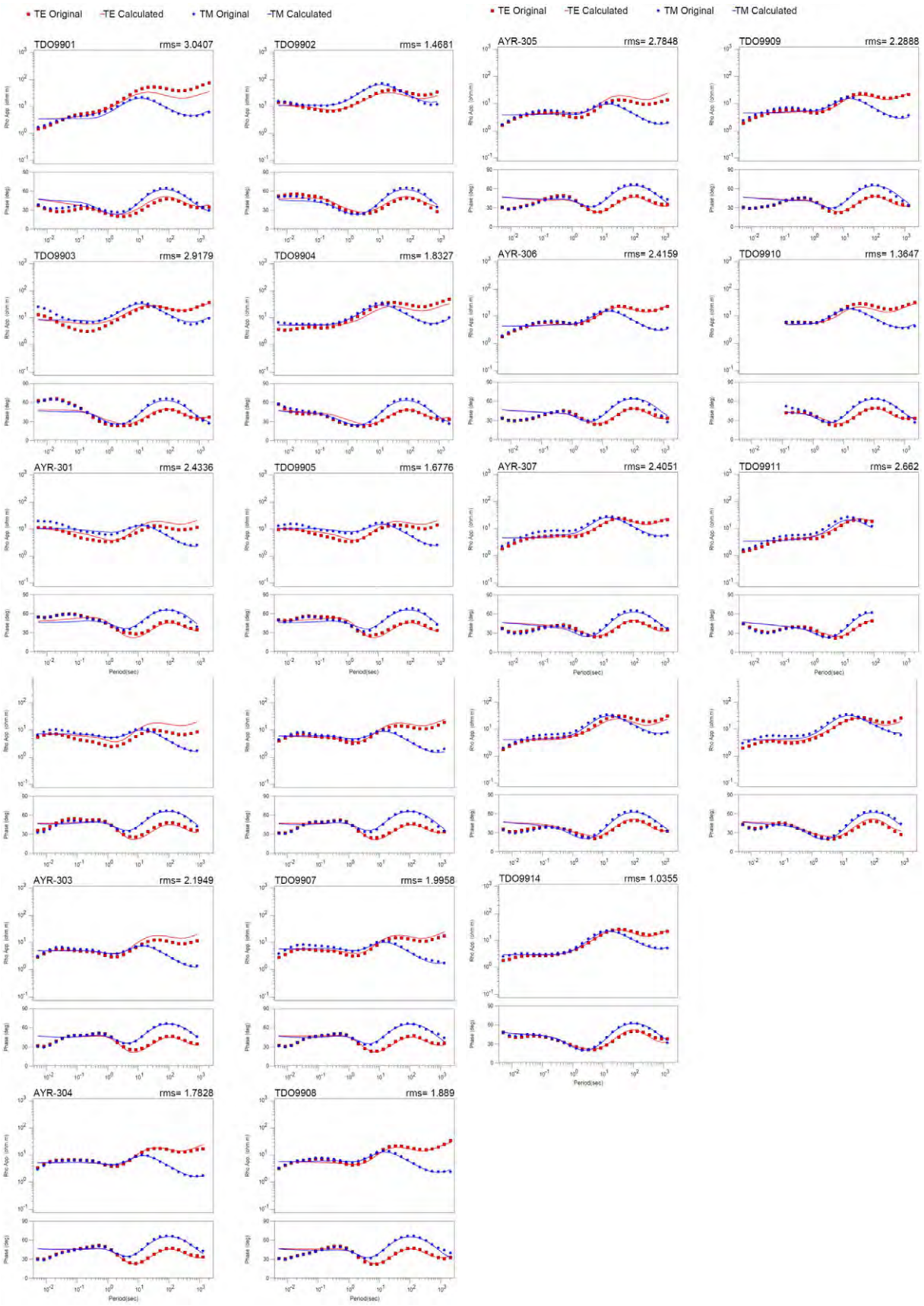
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO96)



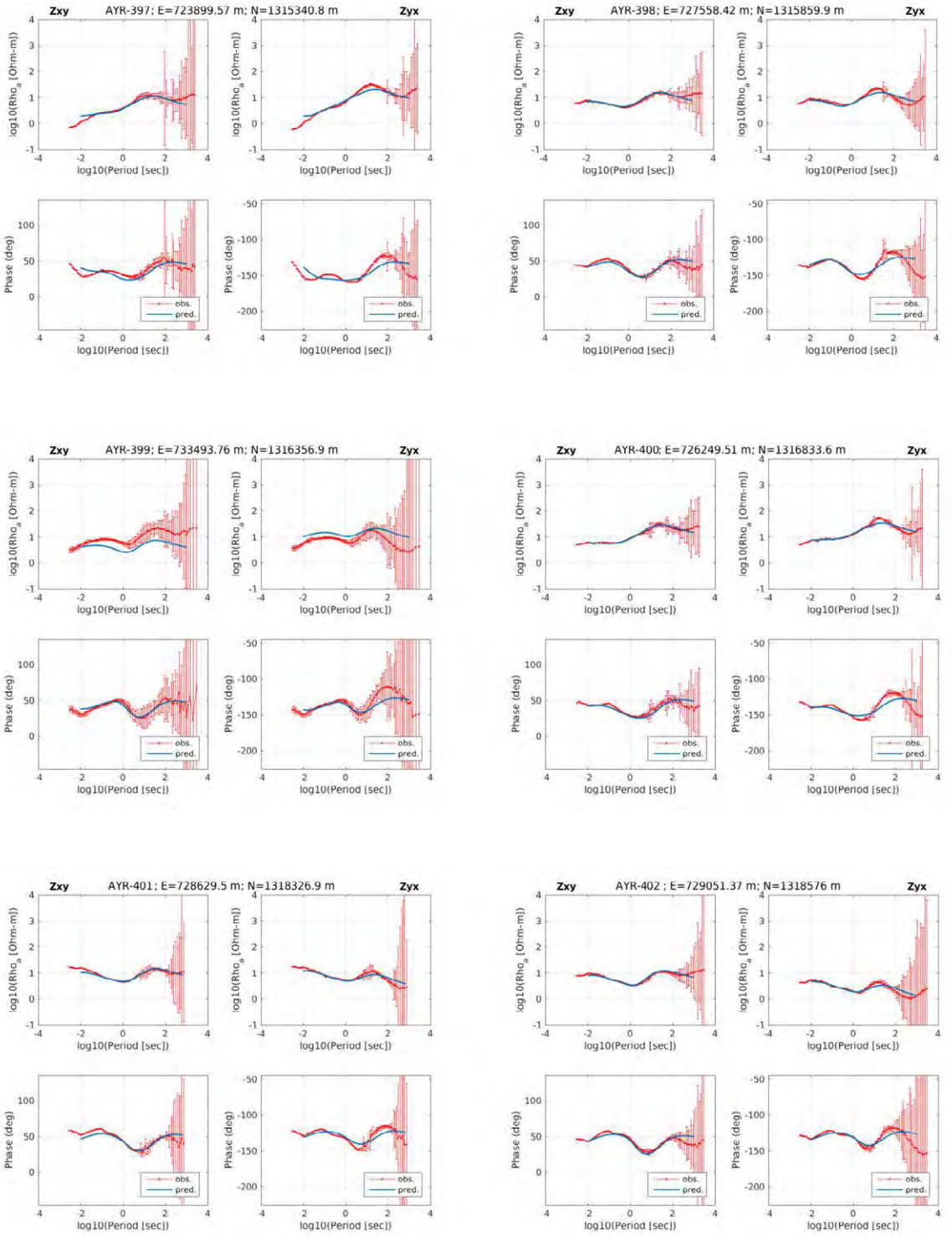
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO97)



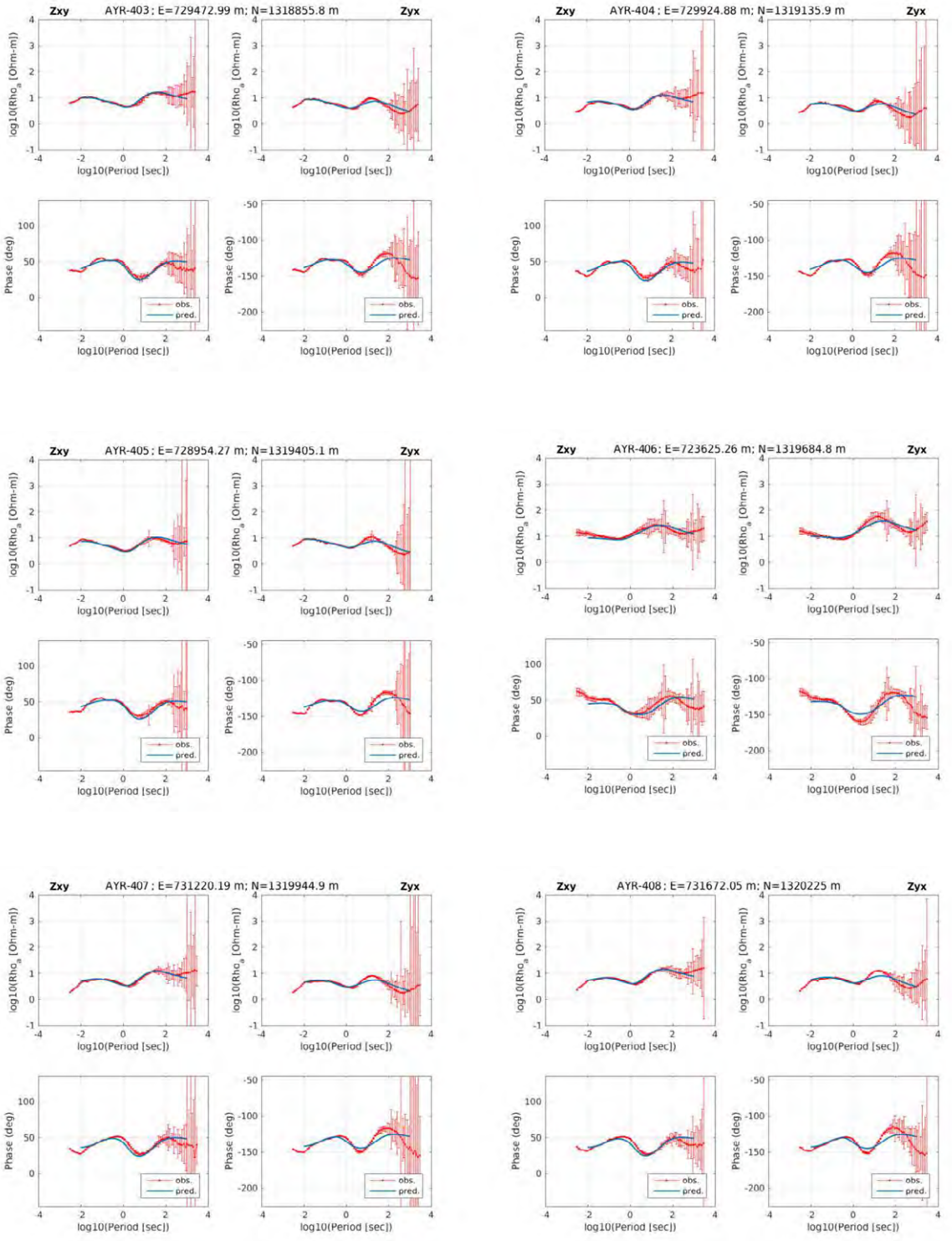
2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO98)



2D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO99)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR400 1/3)



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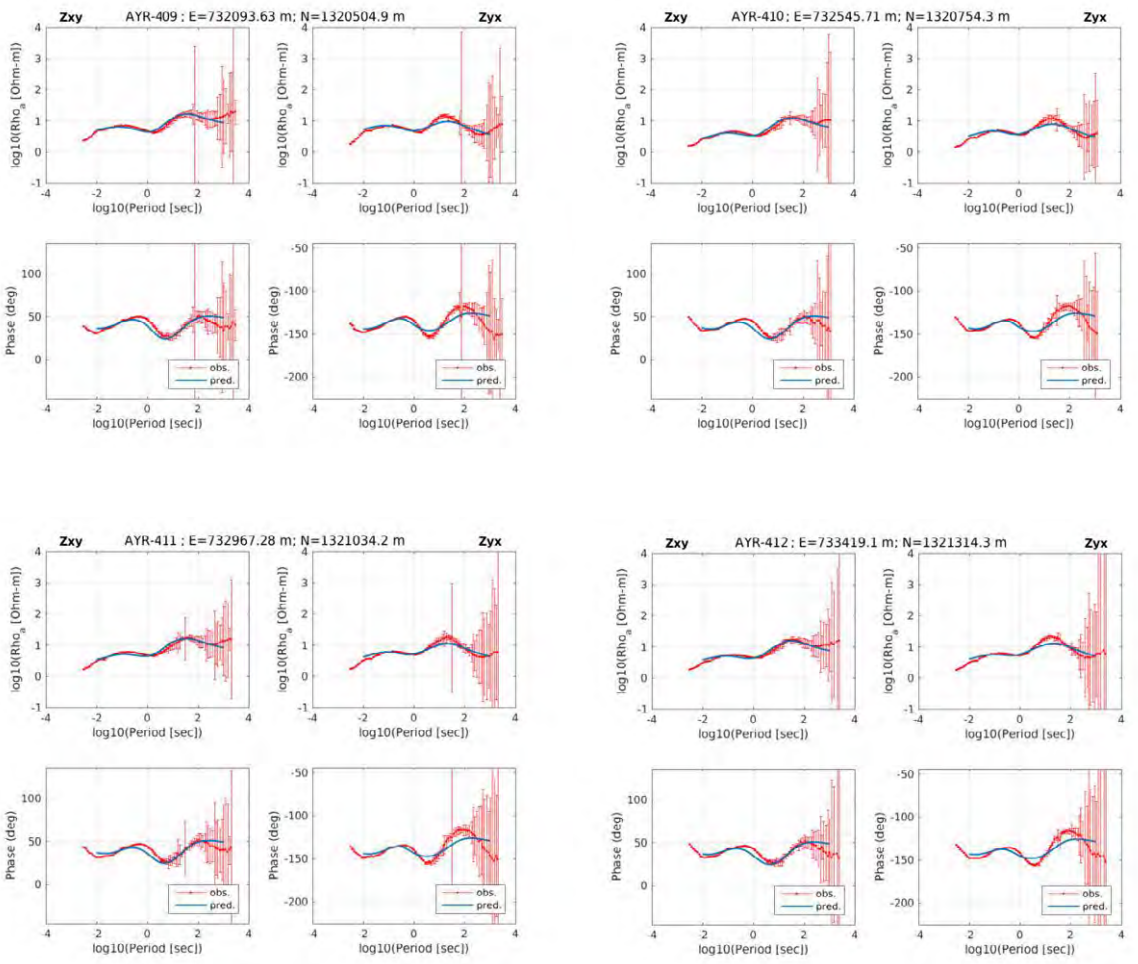

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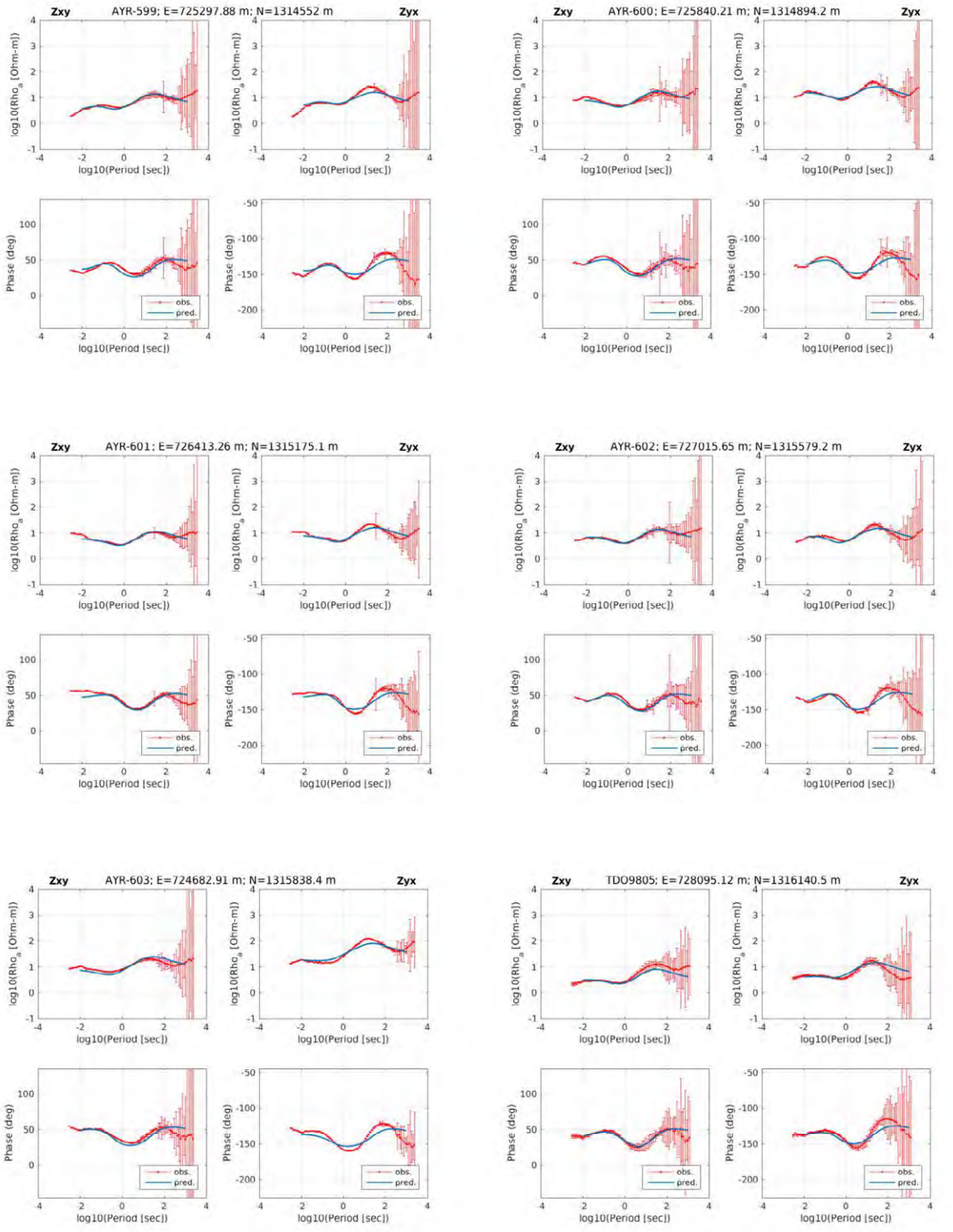

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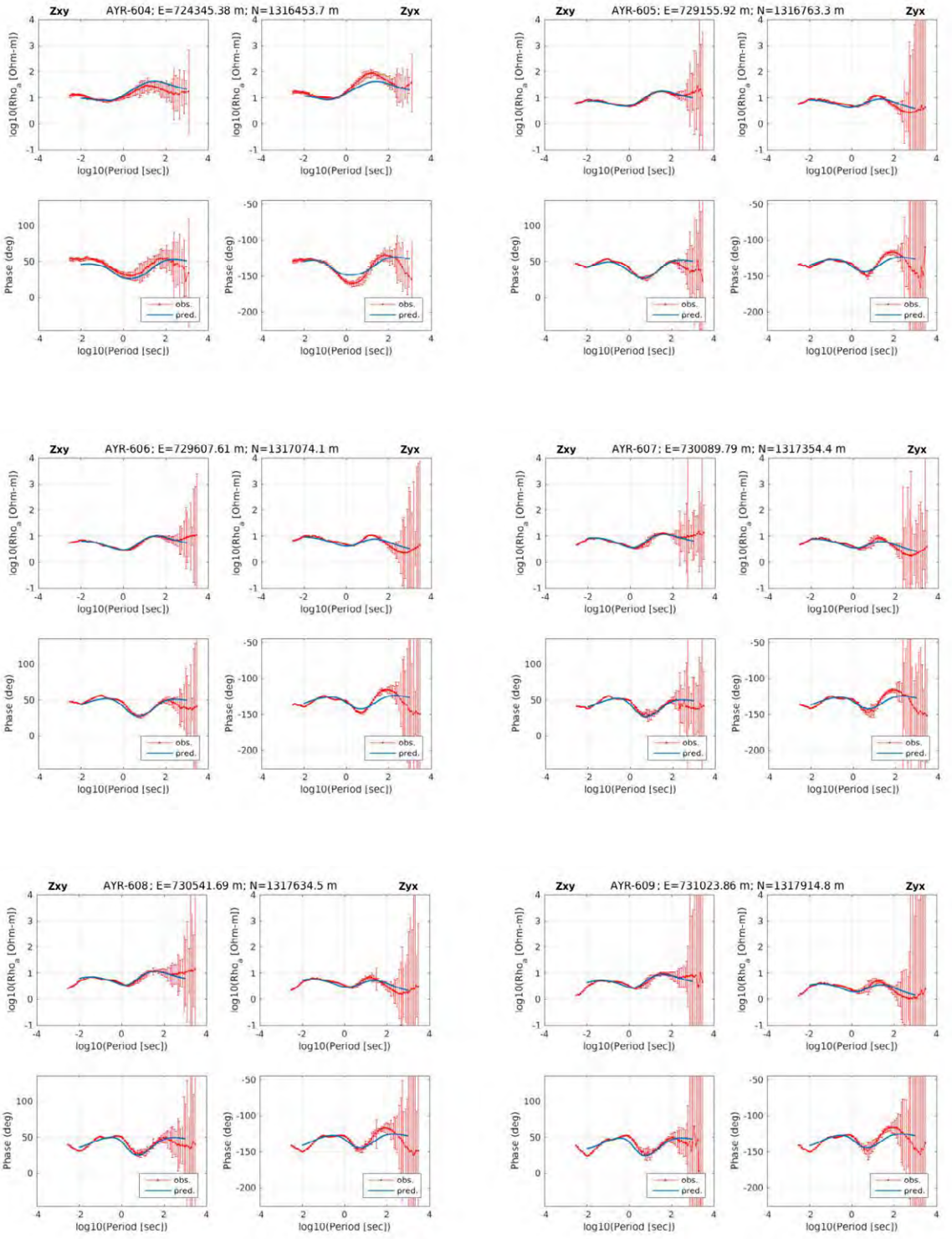

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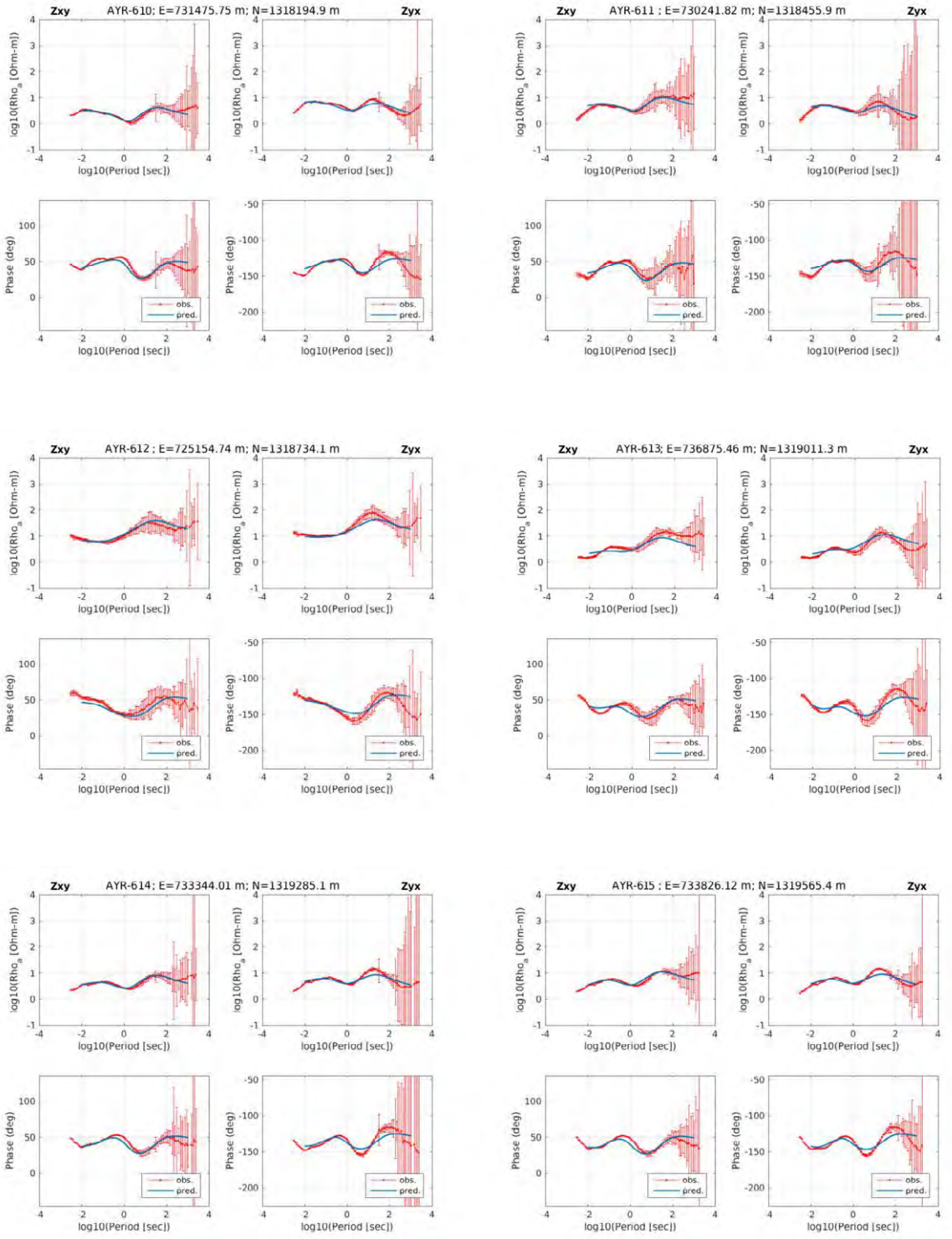

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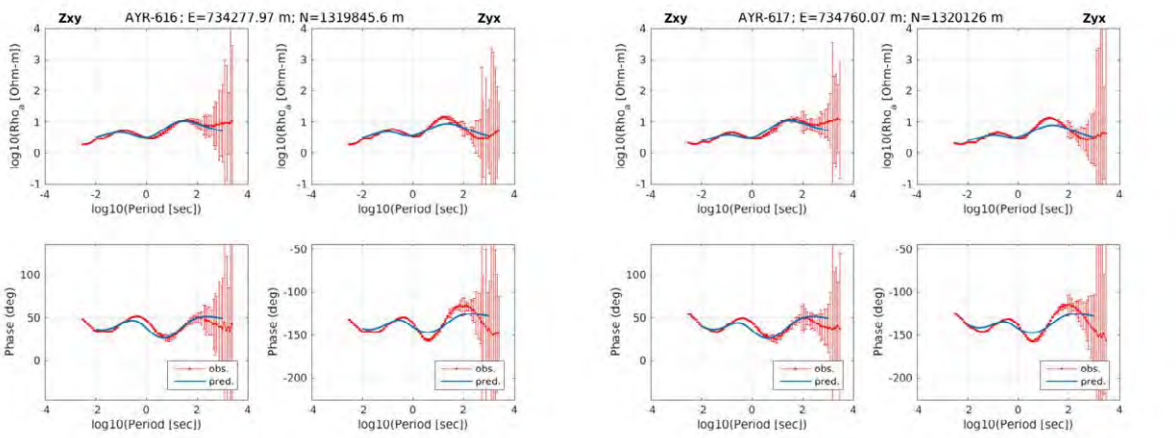

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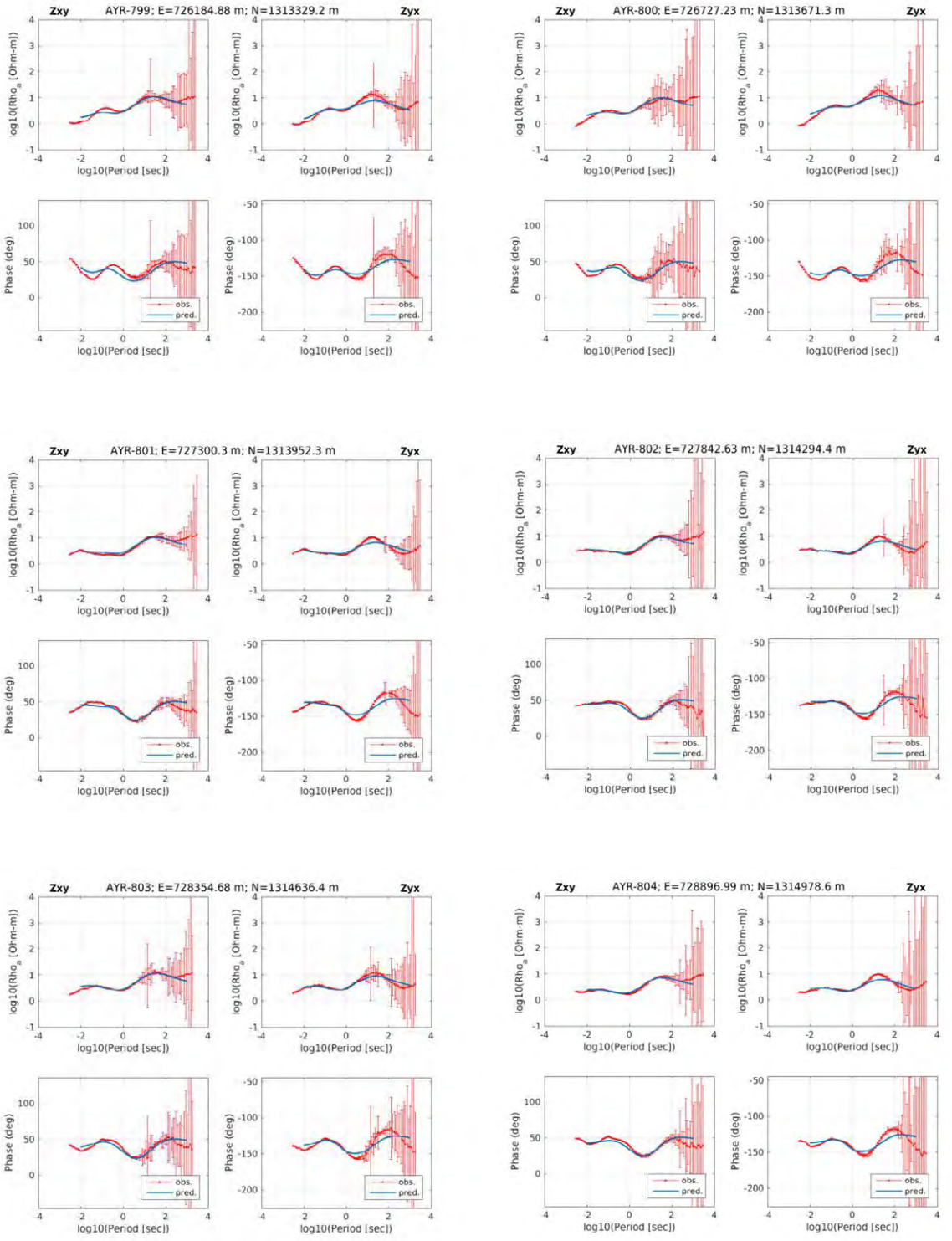

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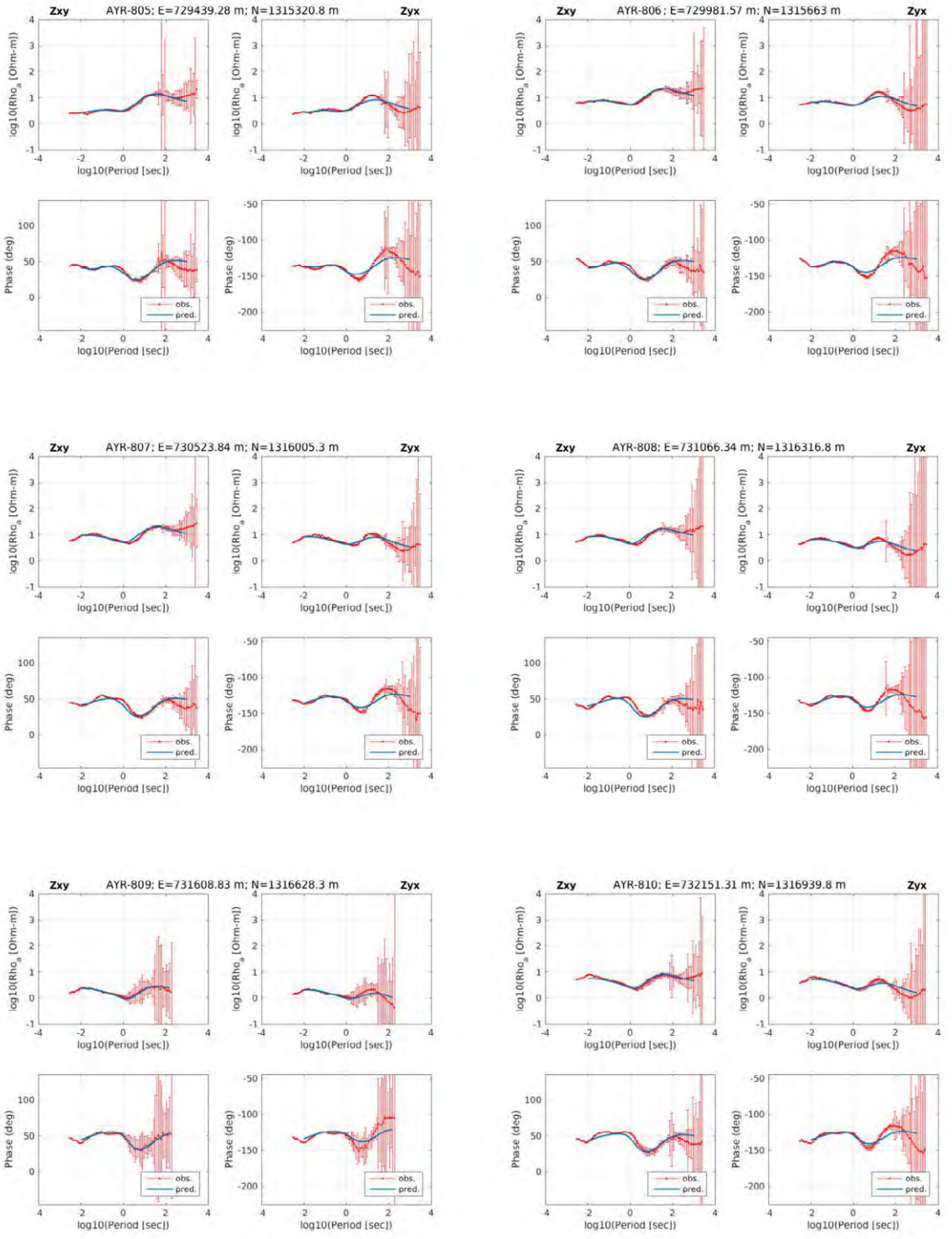

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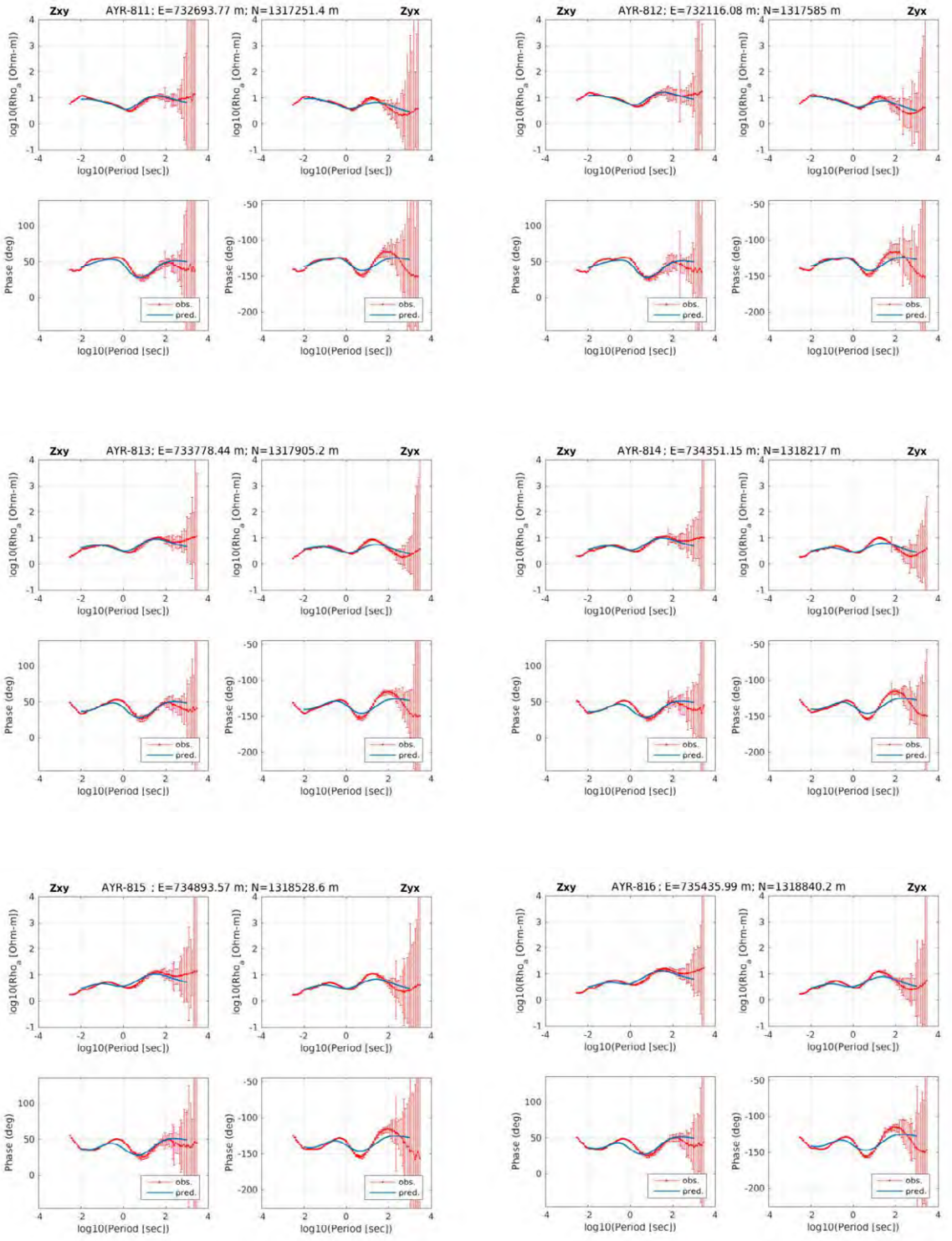

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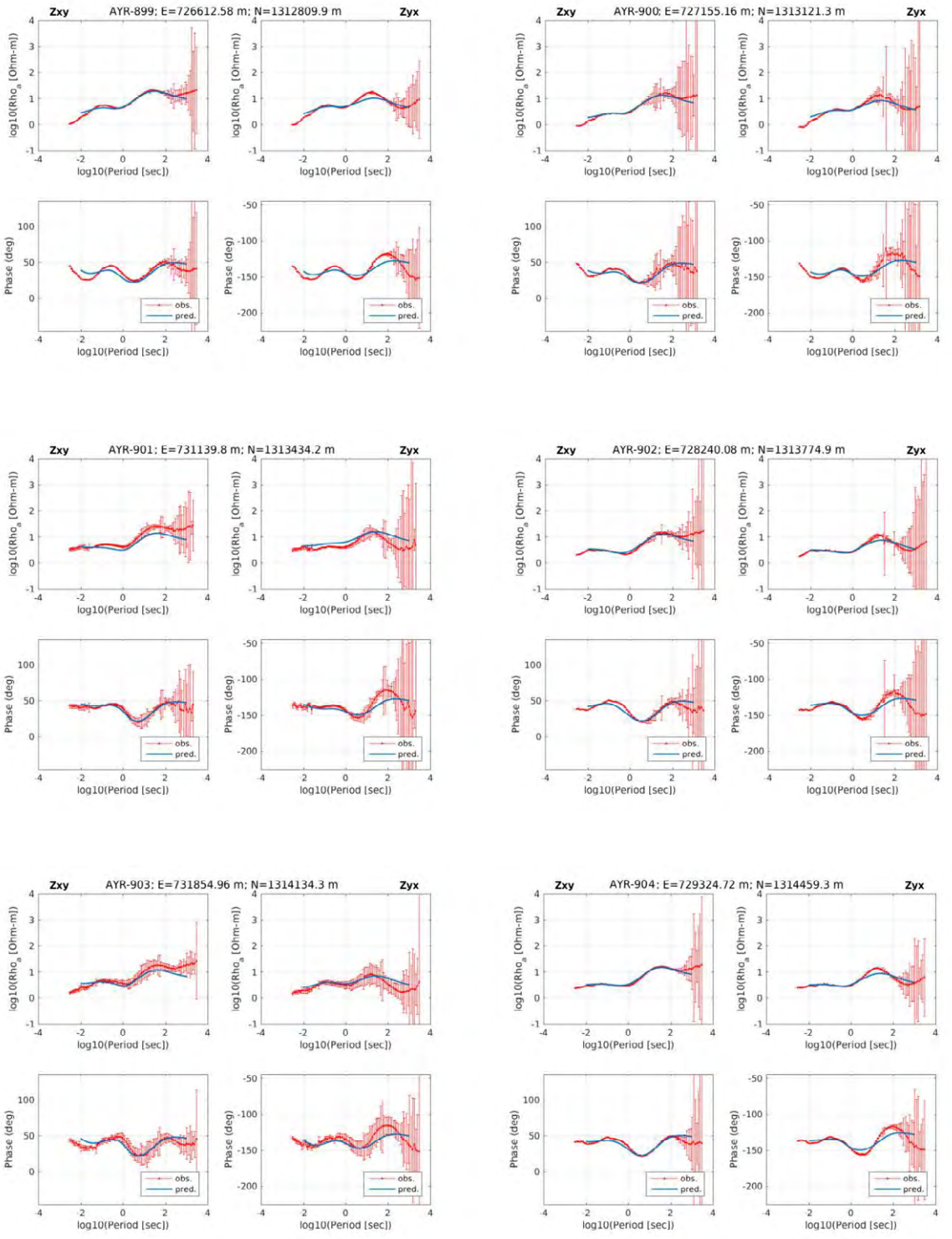
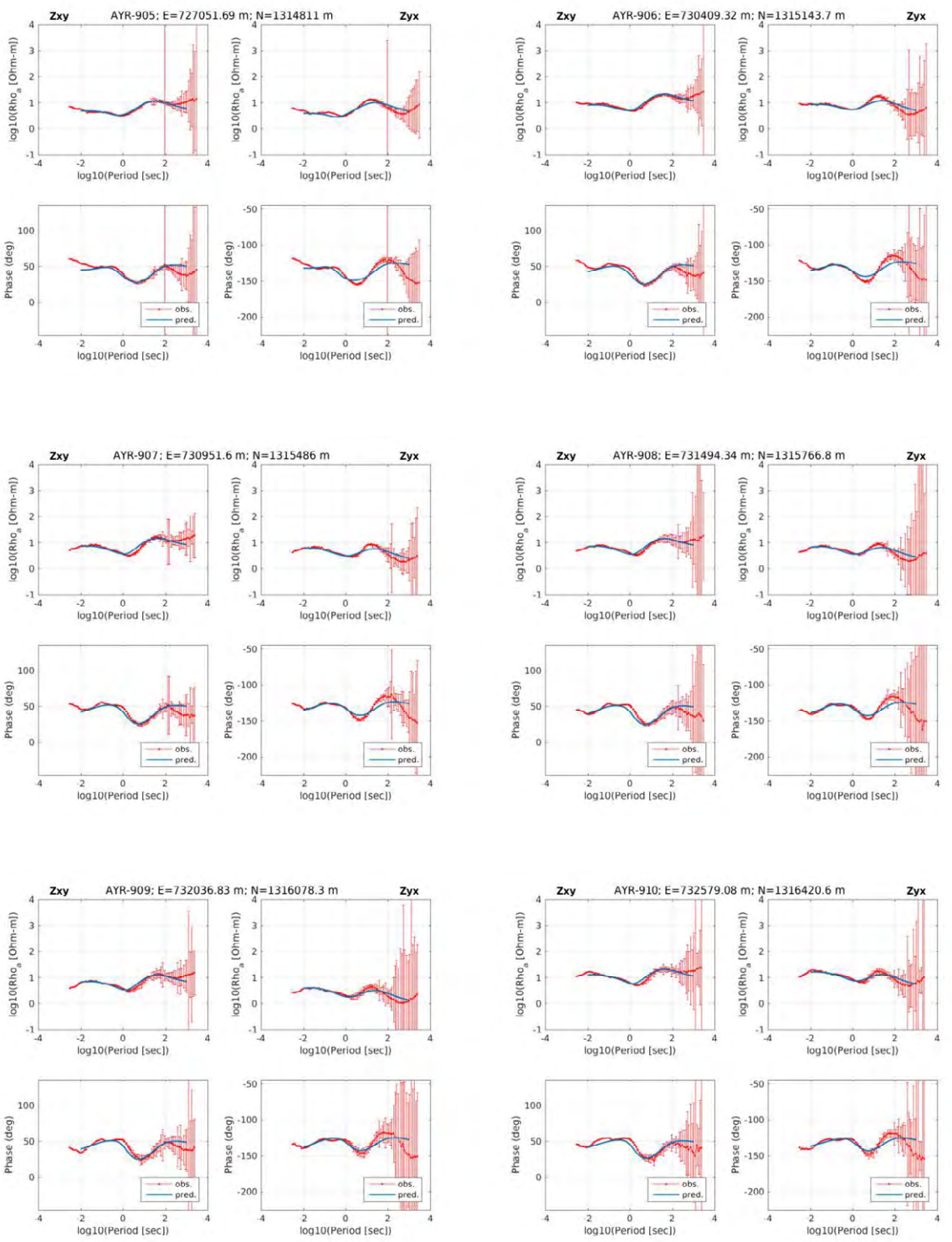


3D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR900 1/3)



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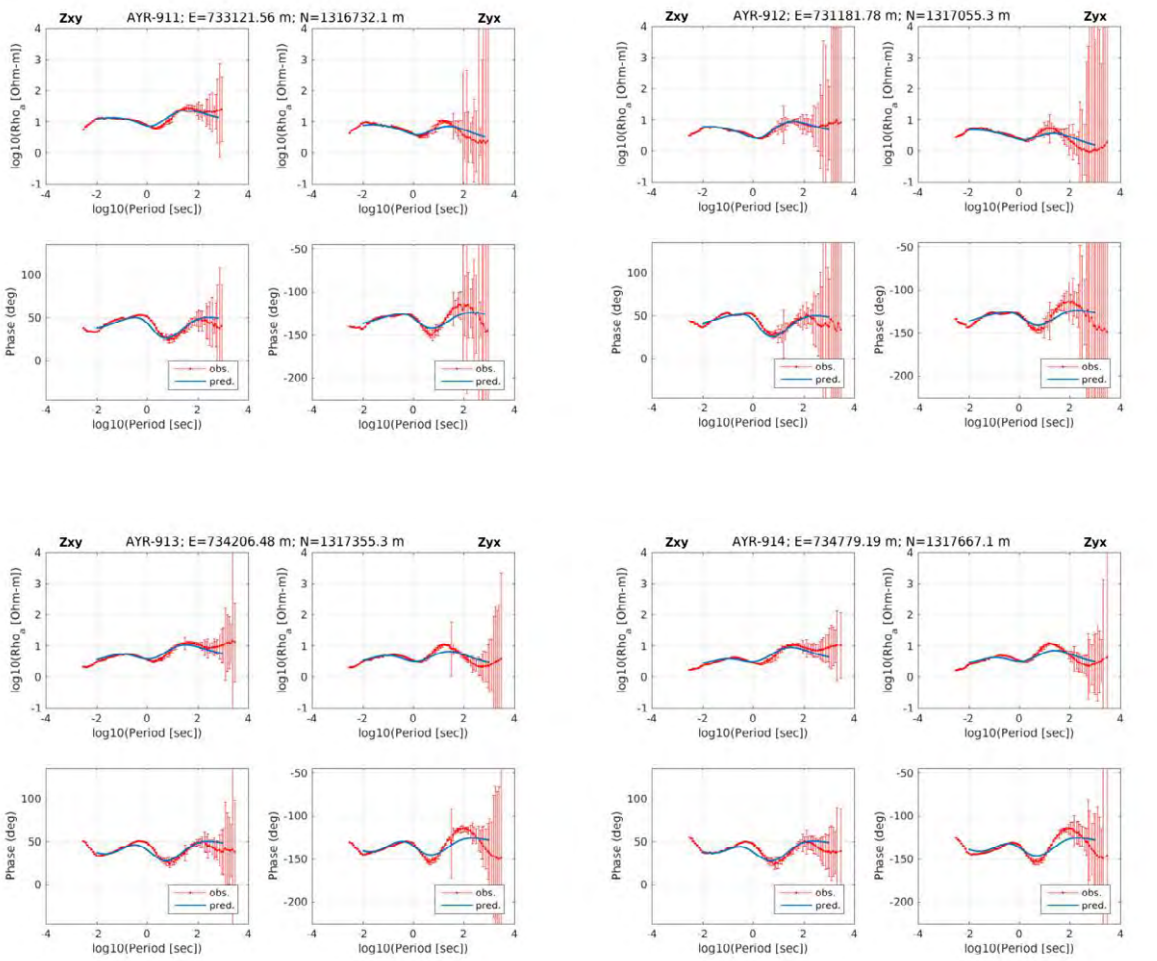
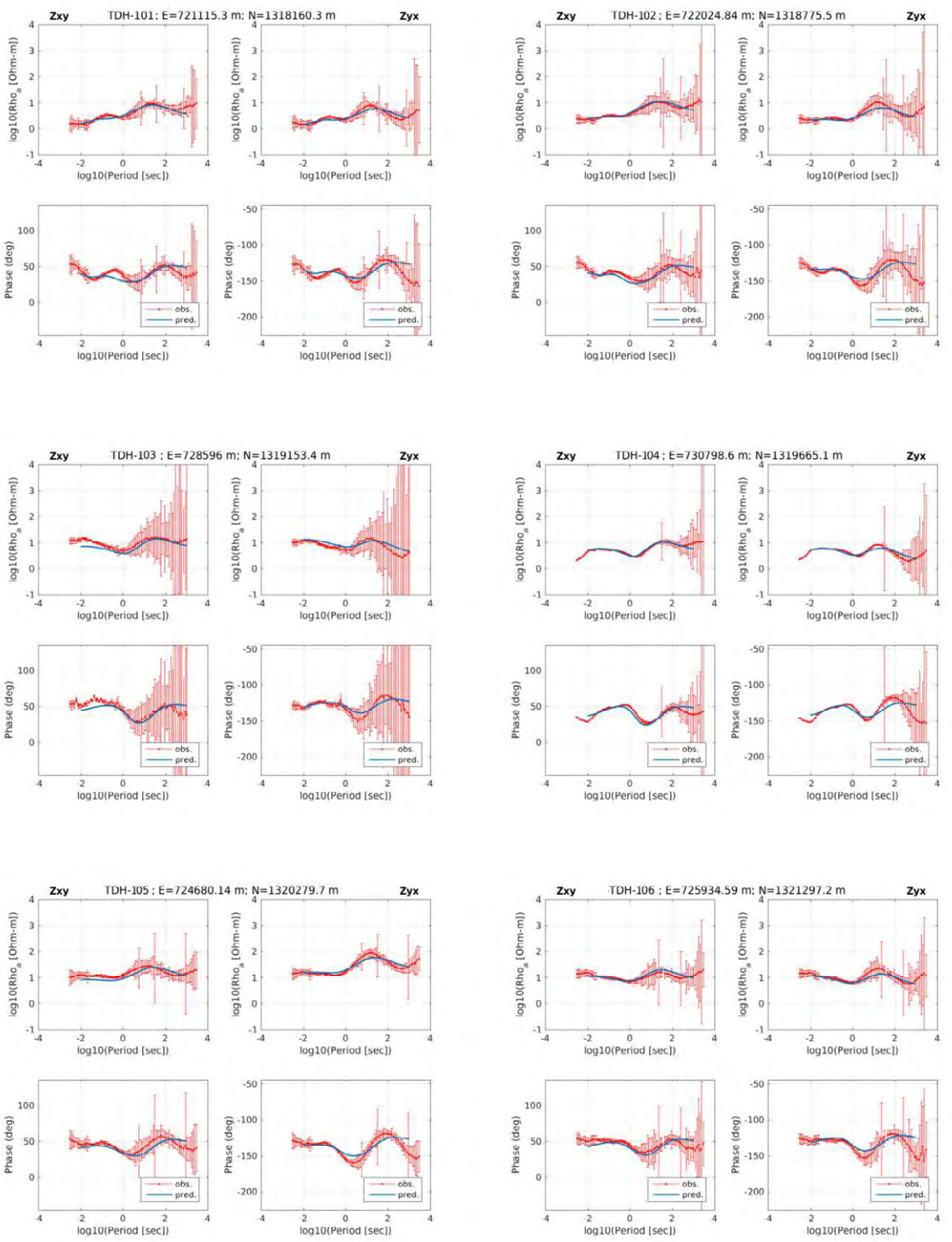
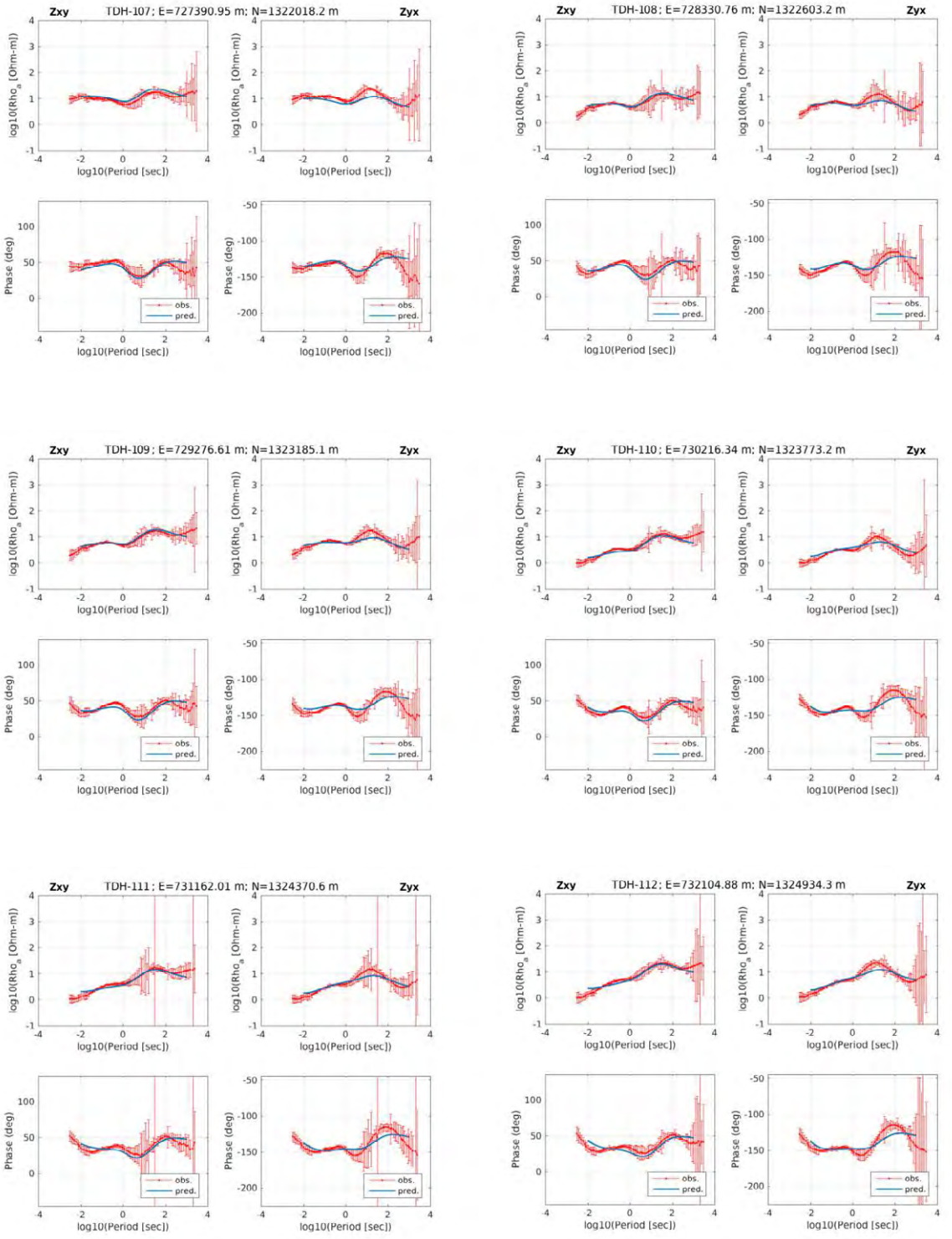


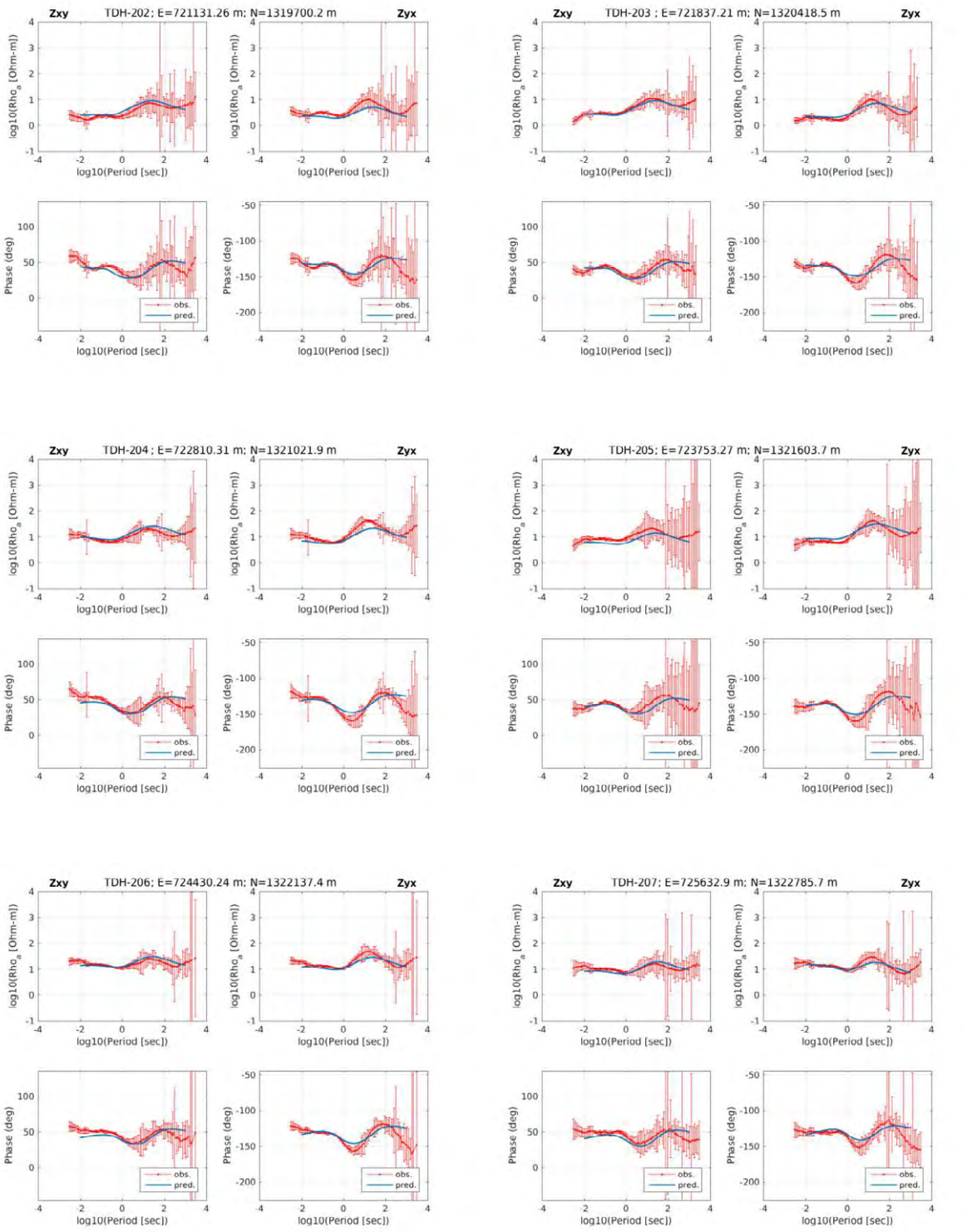
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (AYR900 3/3)



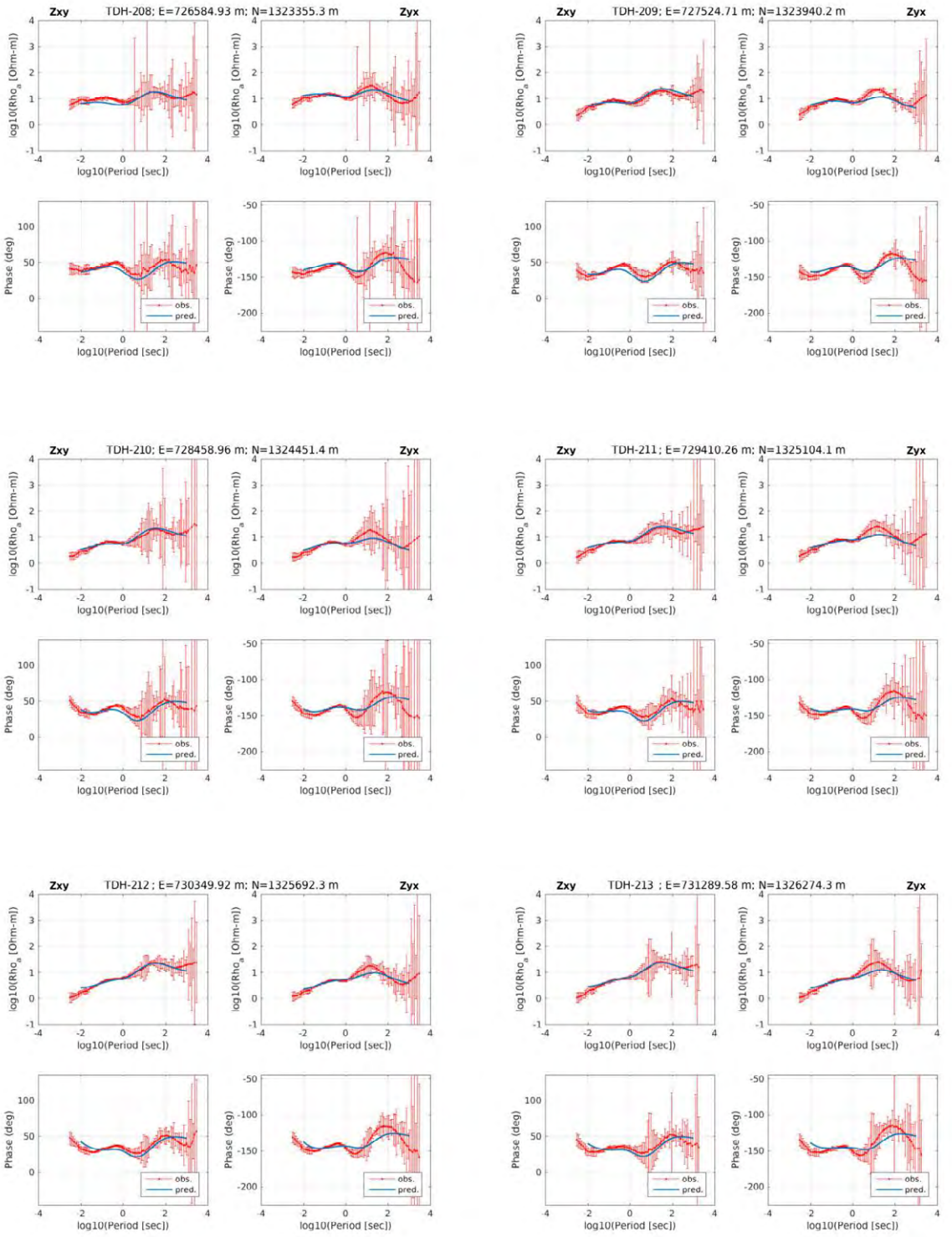
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDH100 1/2)



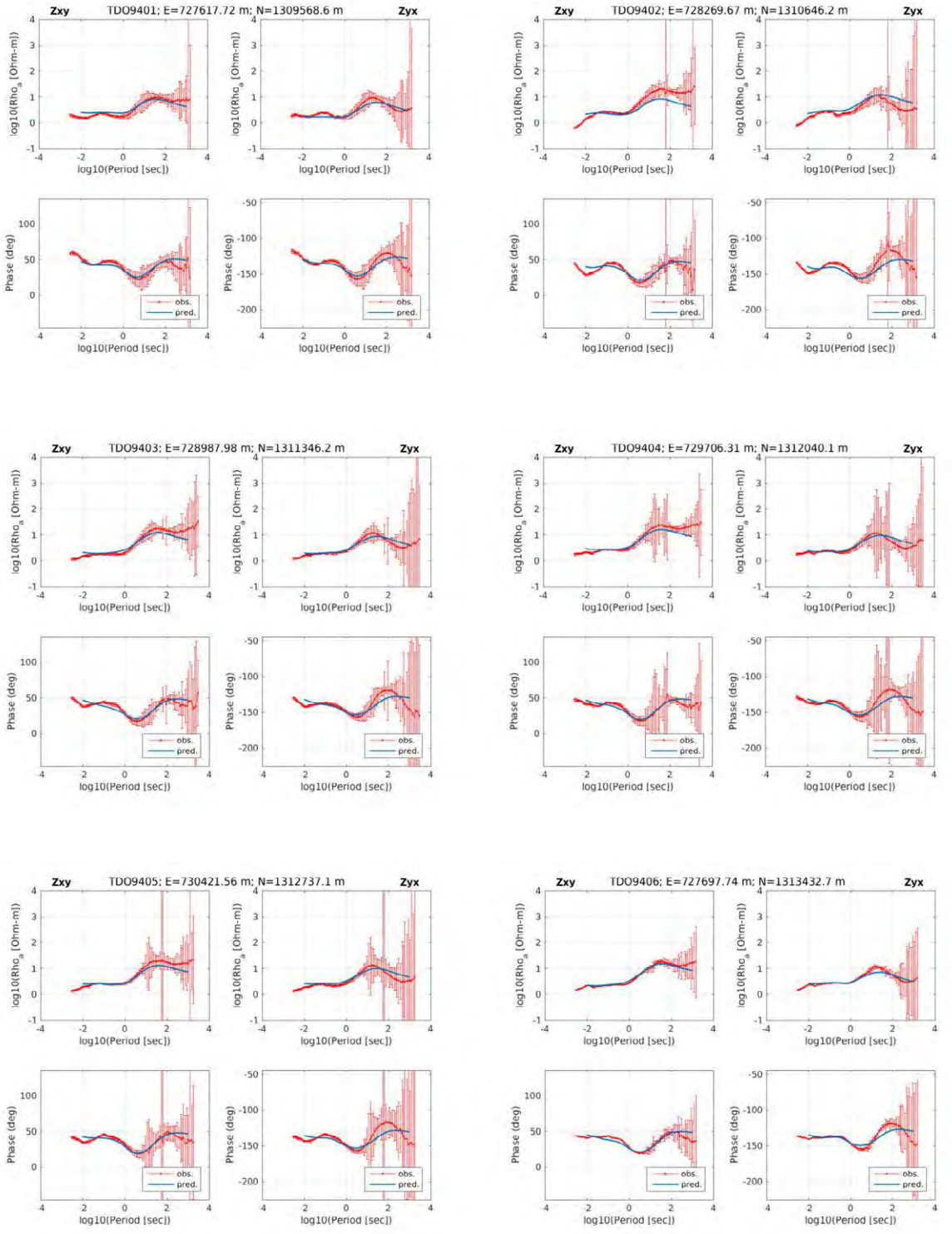
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDH100 2/2)



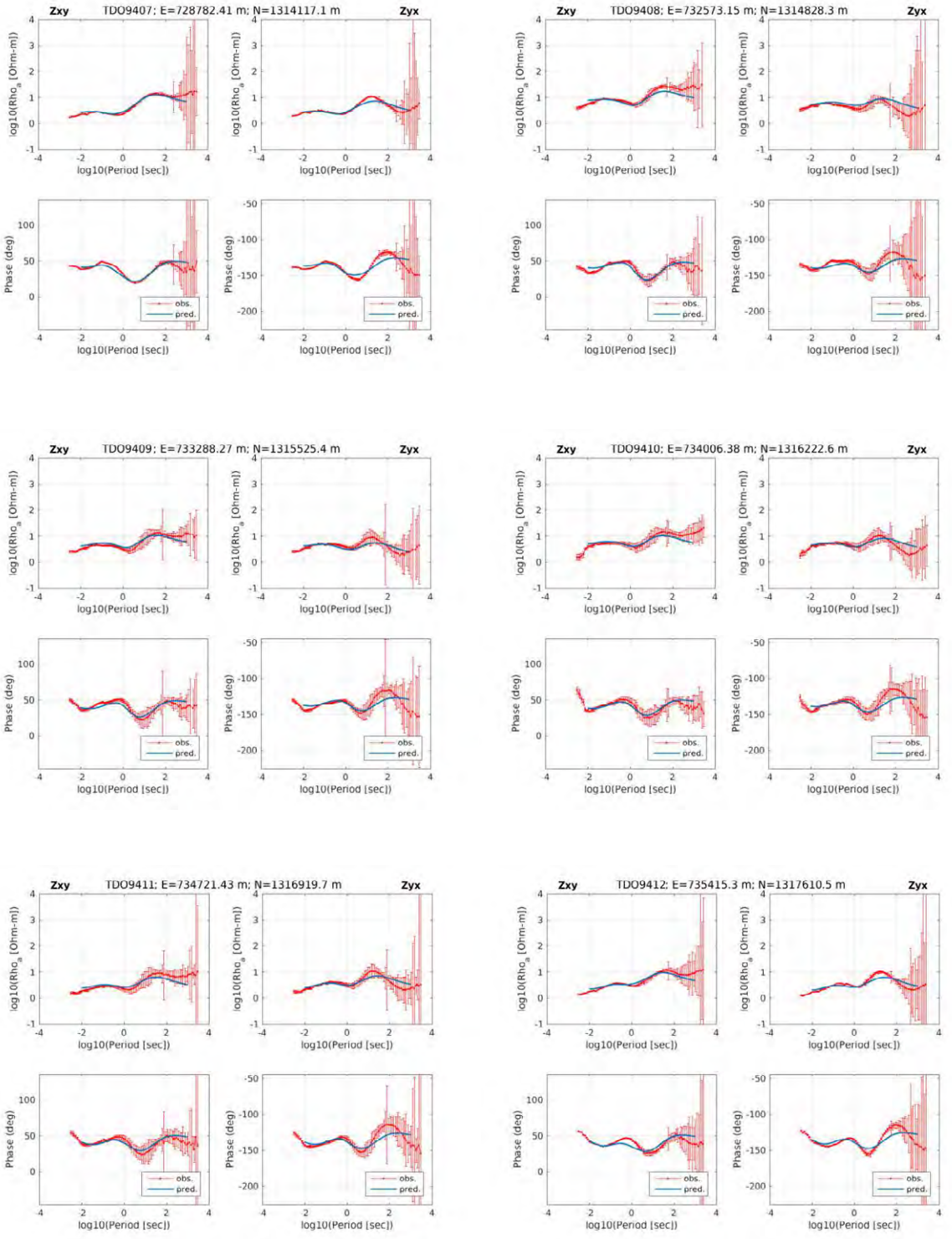
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDH200 1/2)



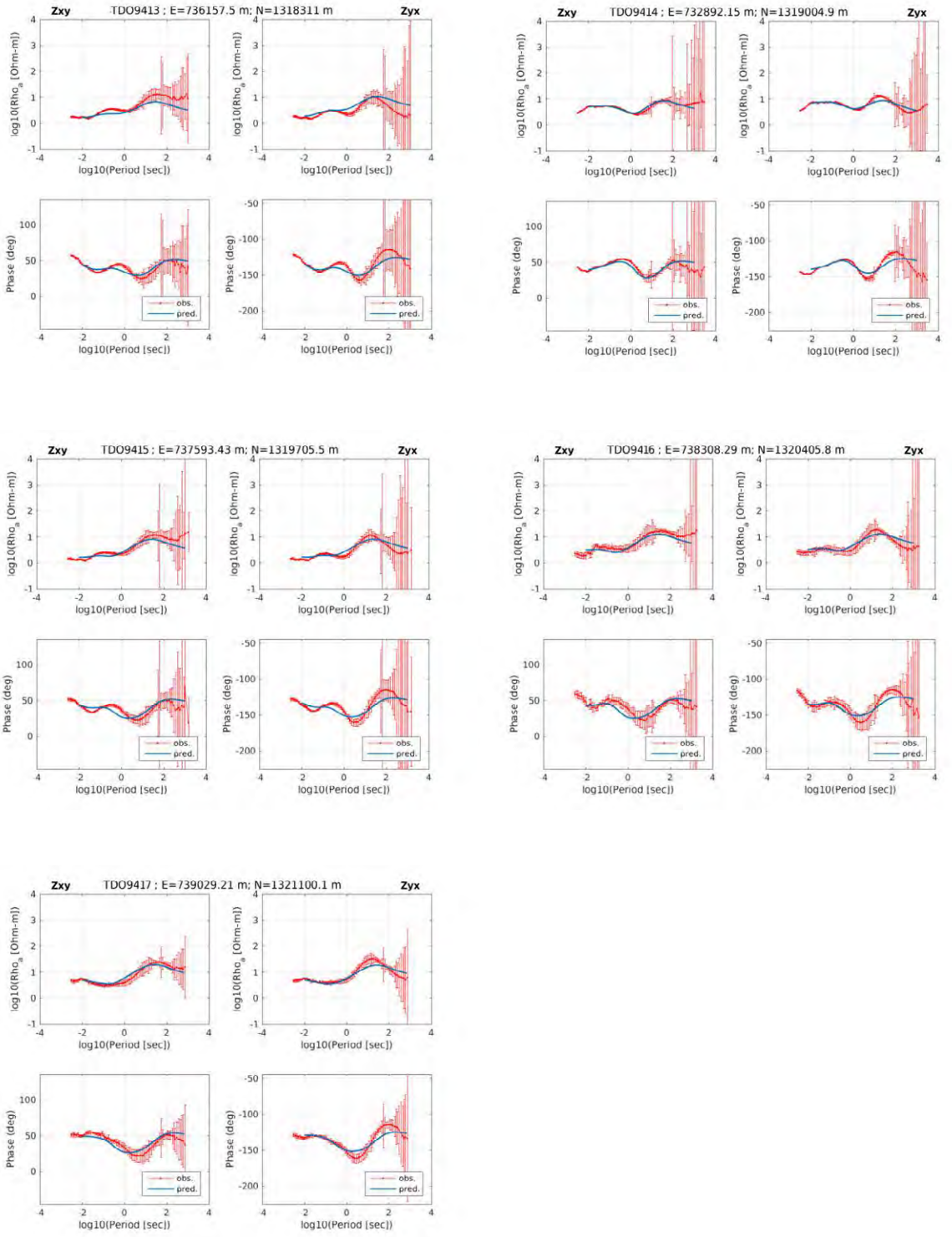
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDH200 2/2)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO94 1/3)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO94 2/3)



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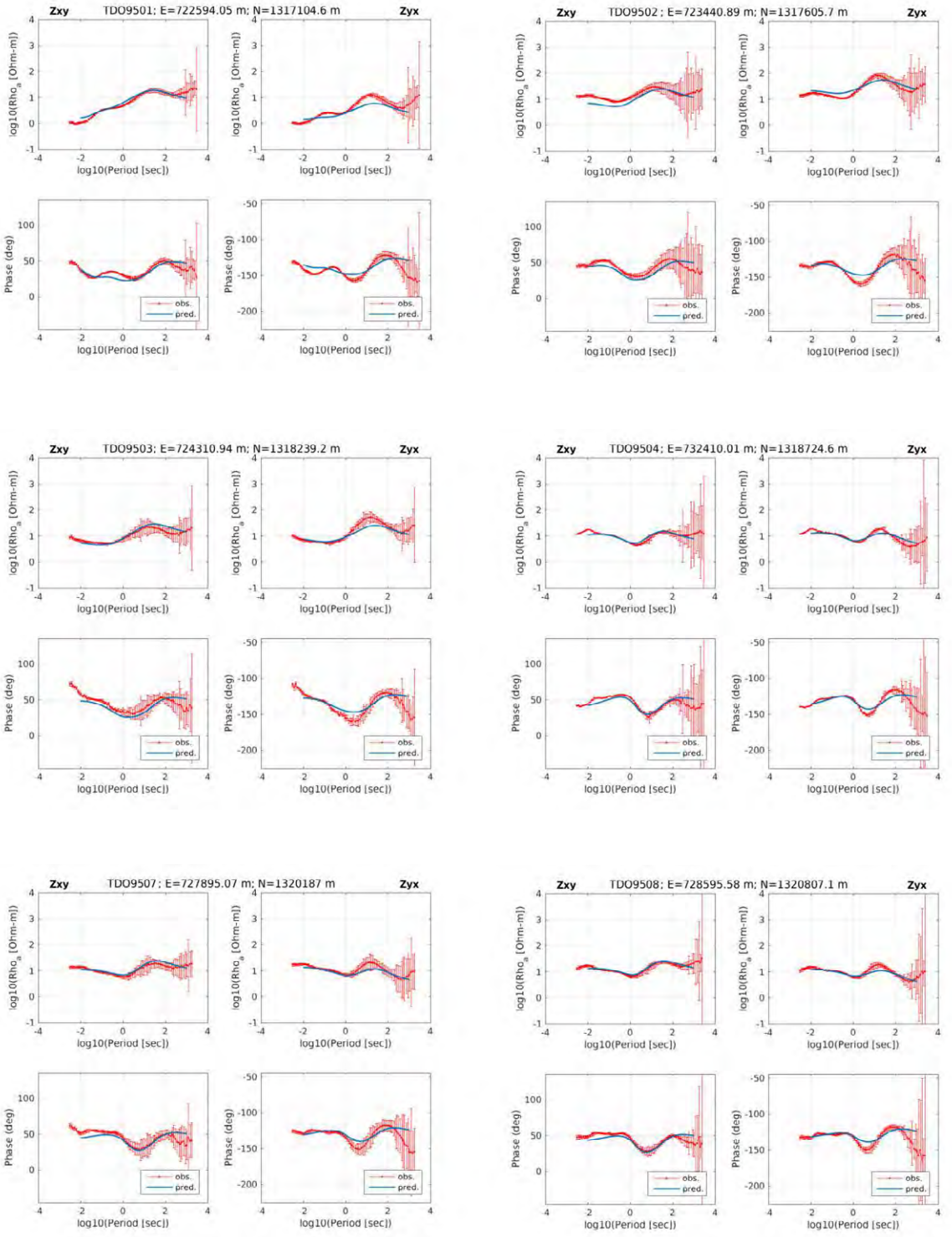
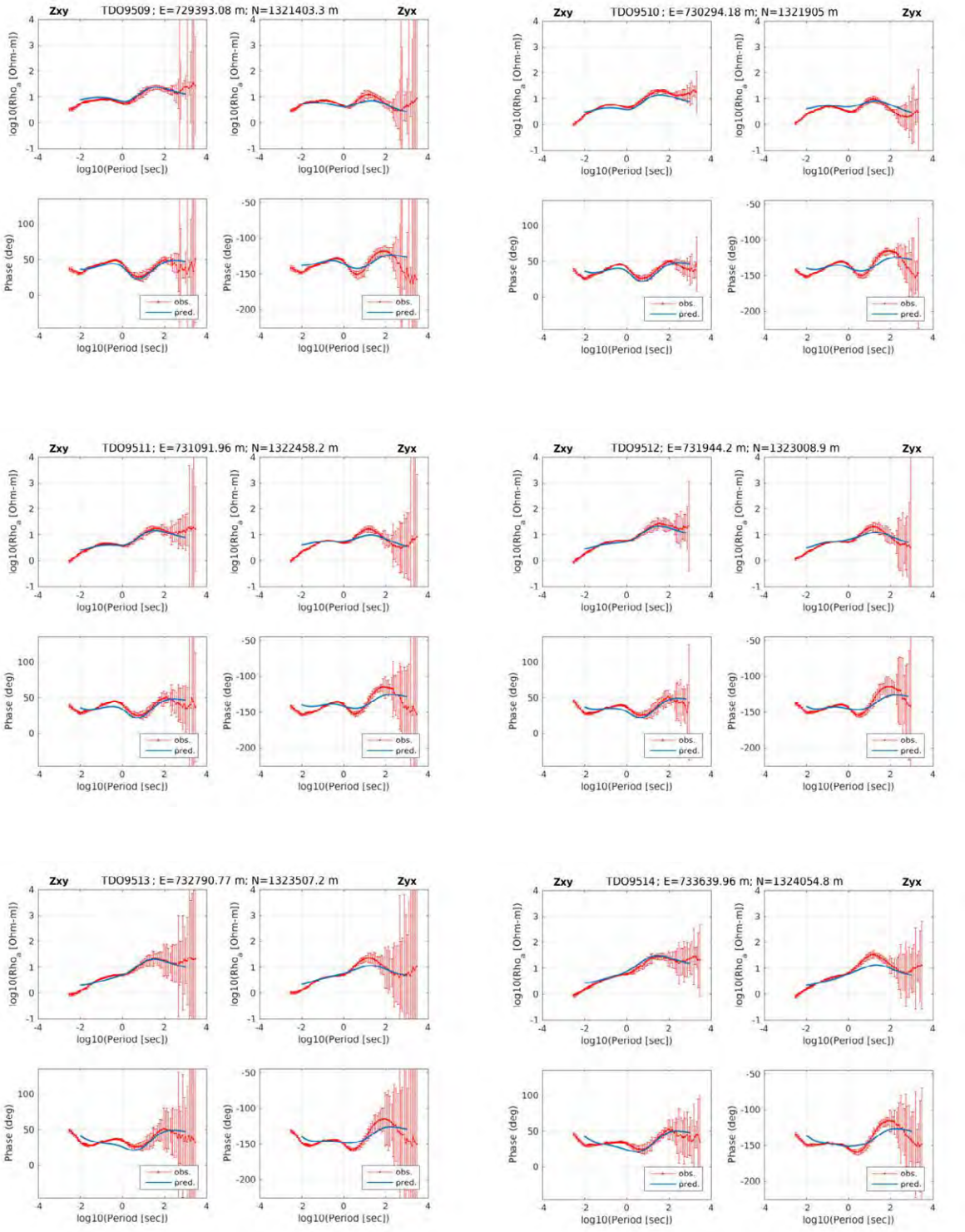
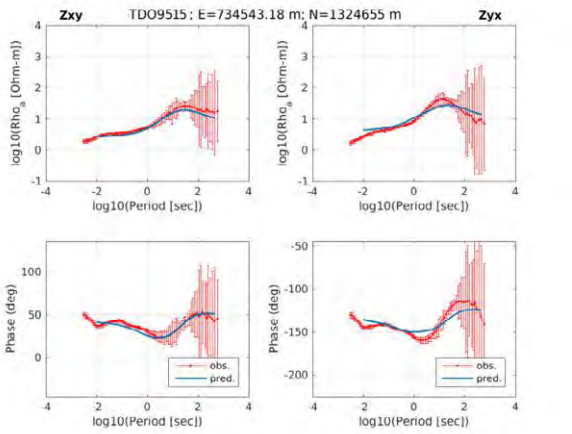


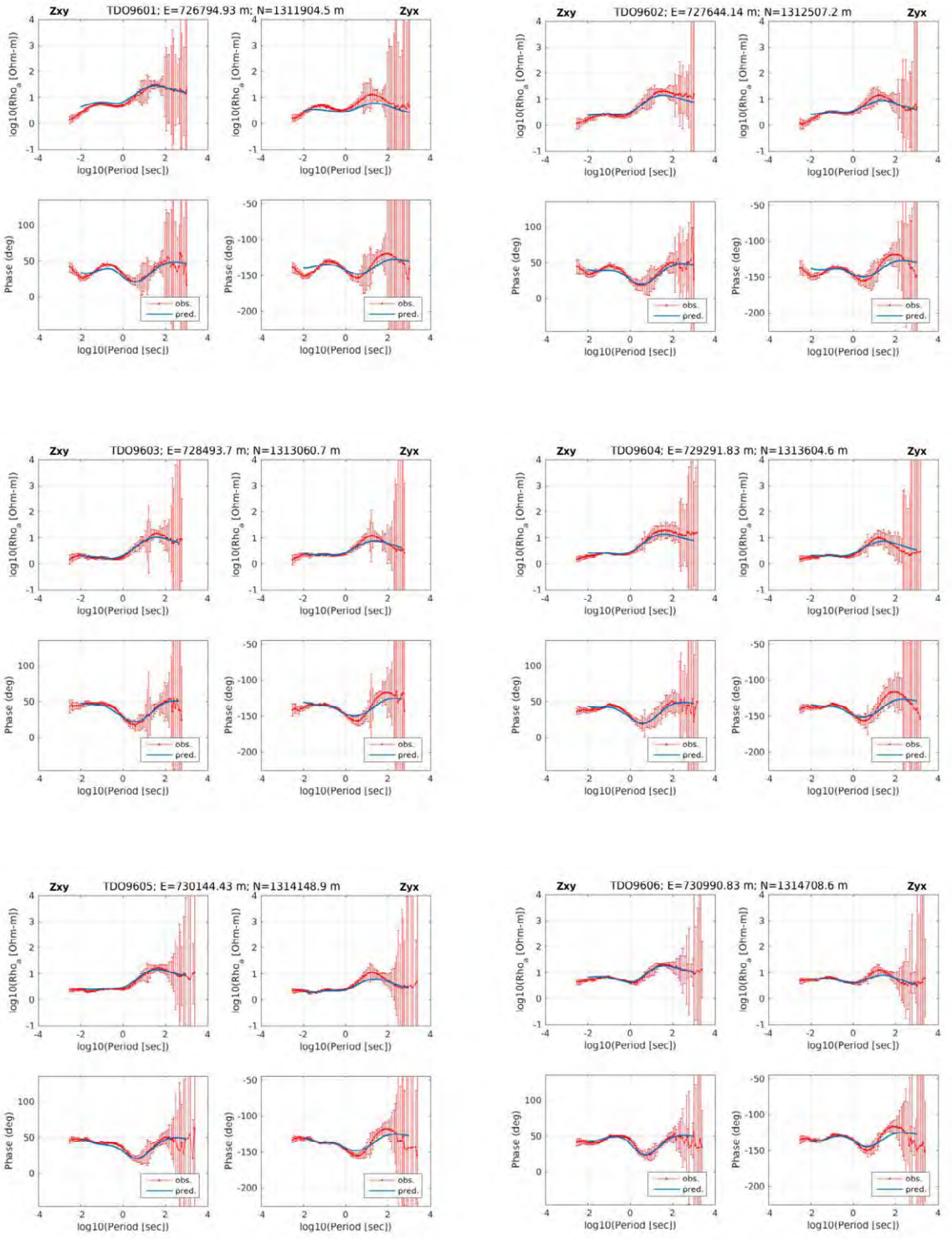
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO95 1/3)



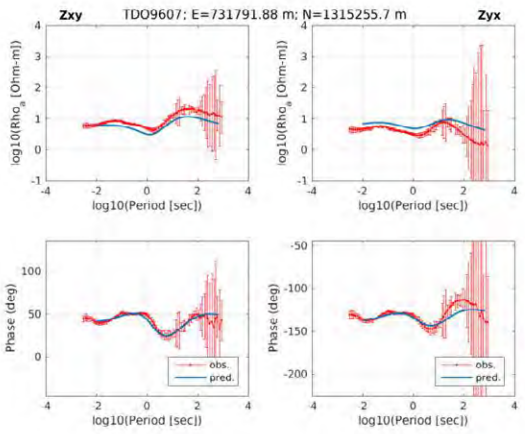
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO95 2/3)

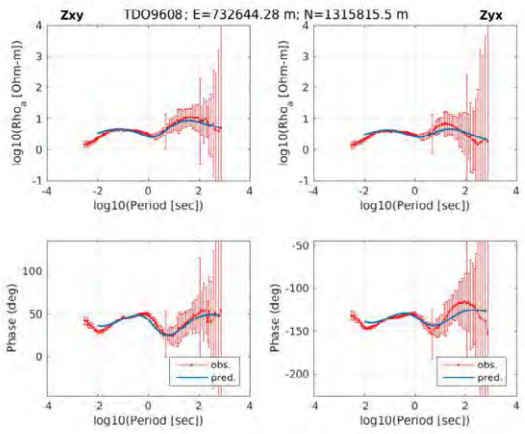


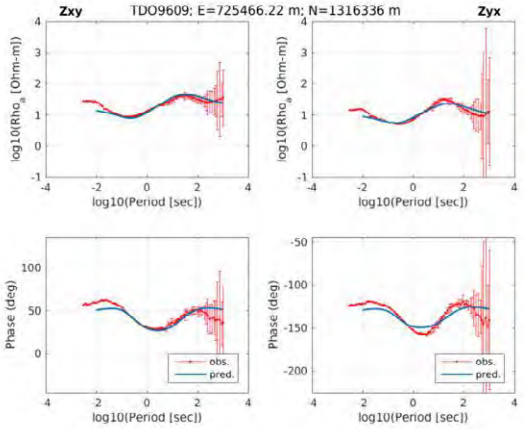
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO95 3/3)



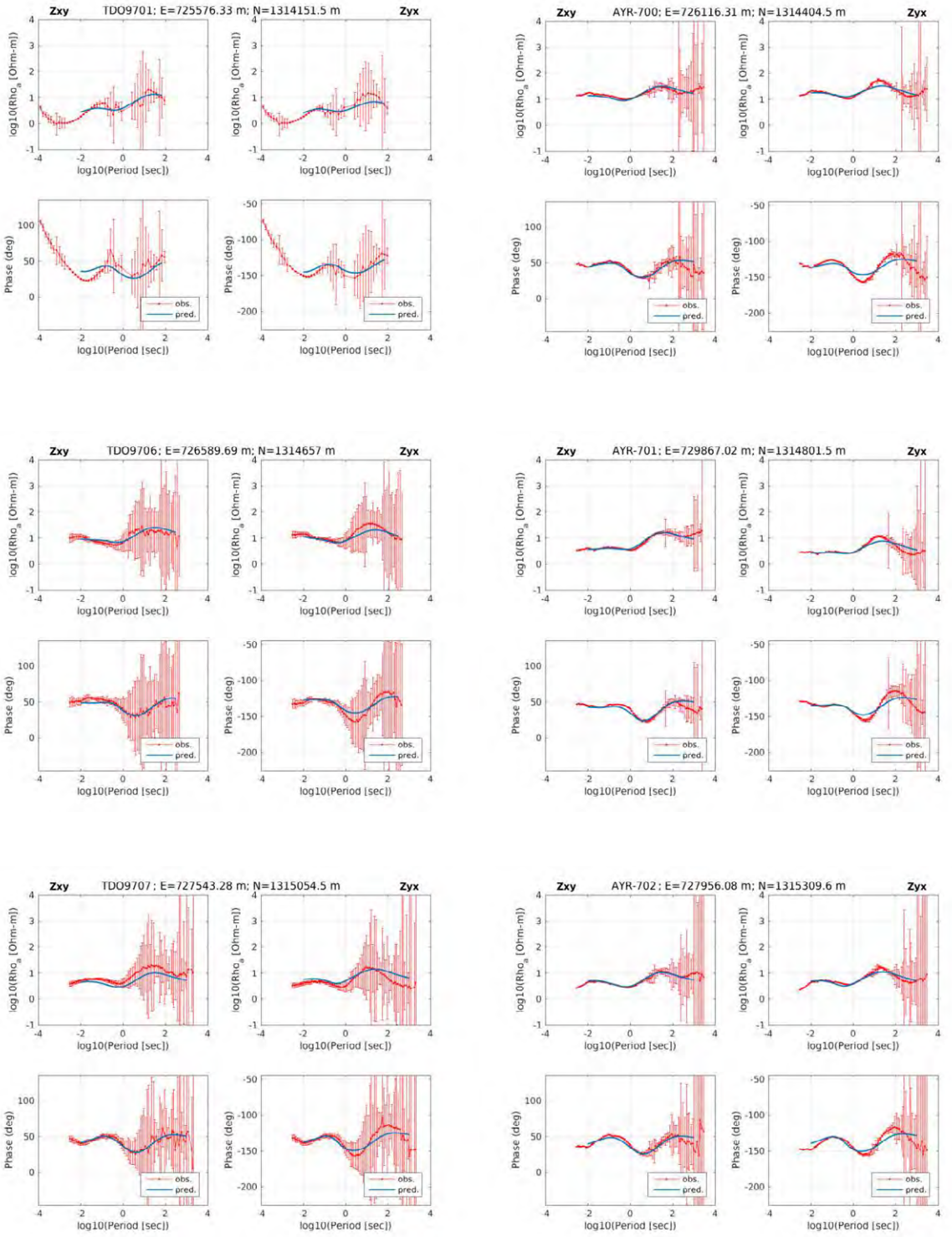
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO96 1/2)



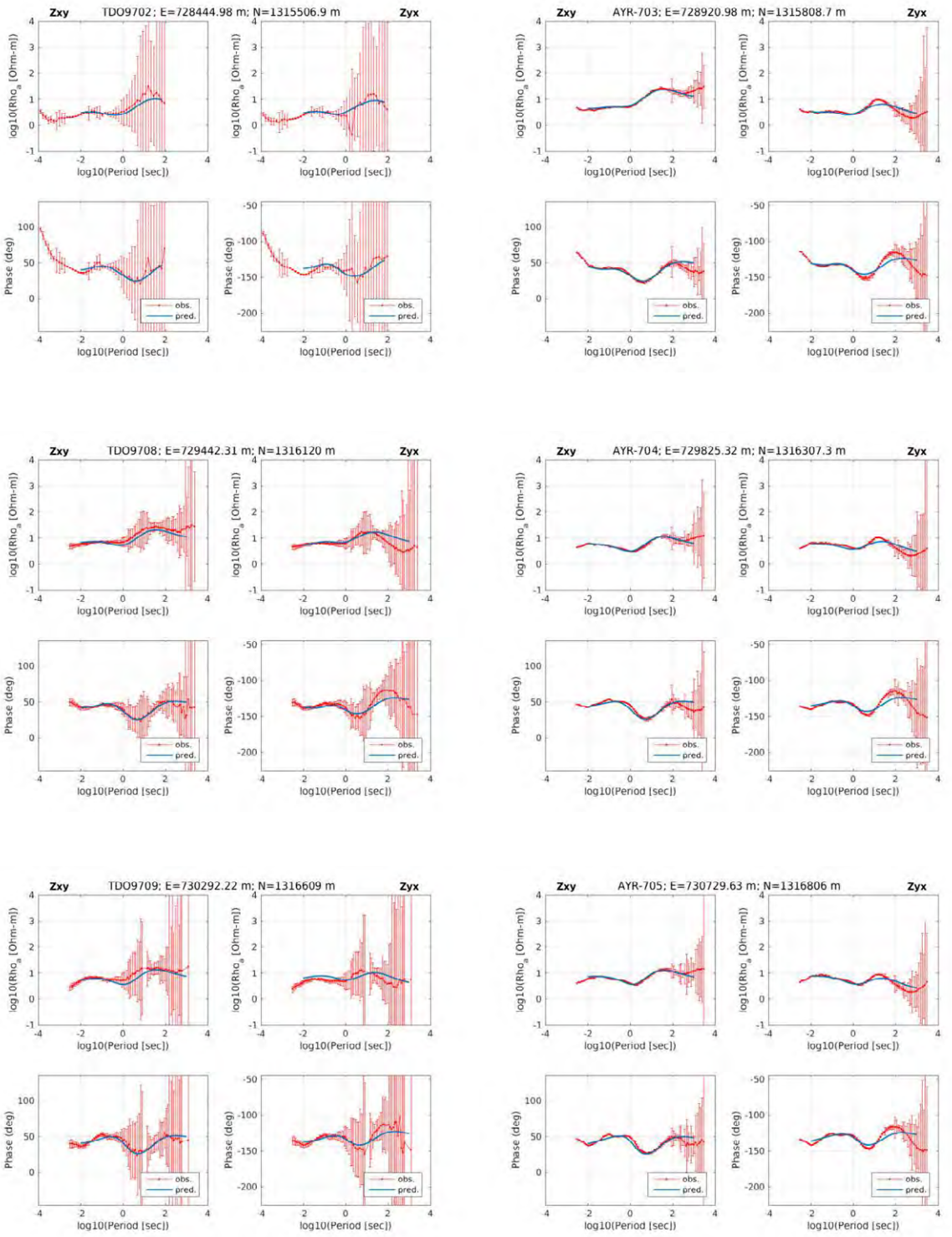




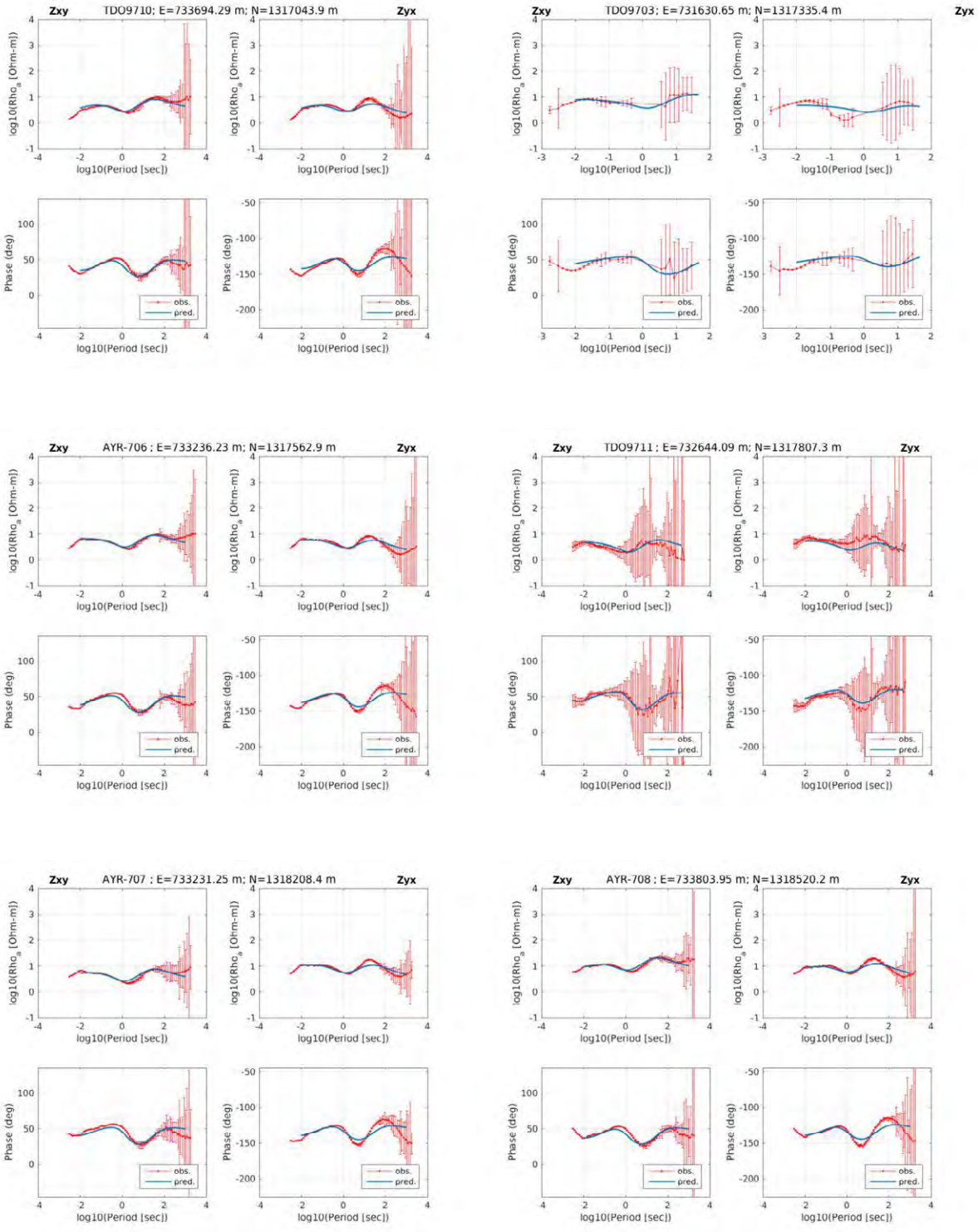
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO96 2/2)



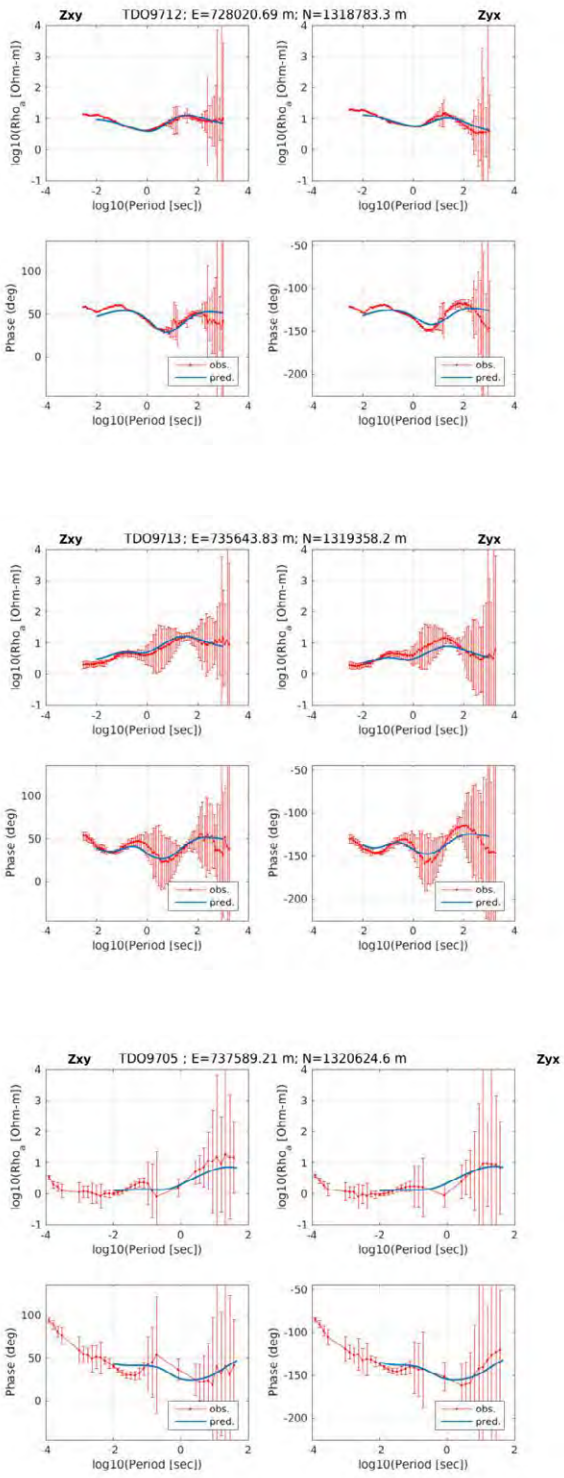
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO97 1/4)

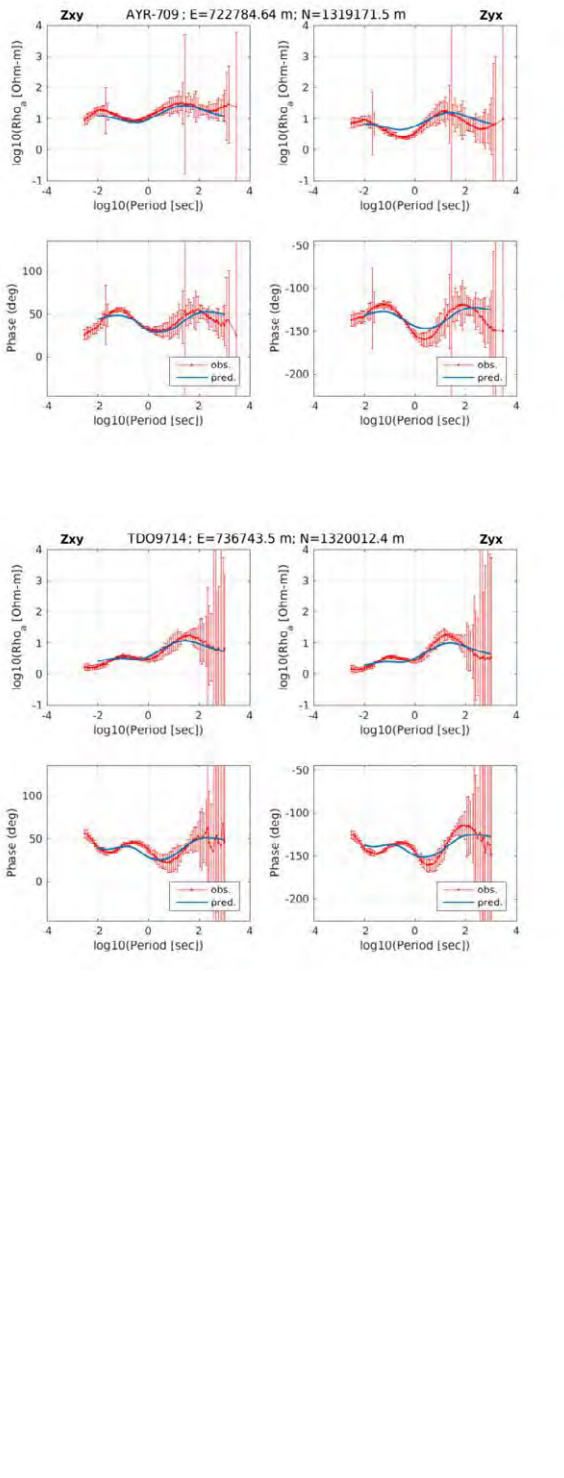


3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO97 2/4)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO97 3/4)





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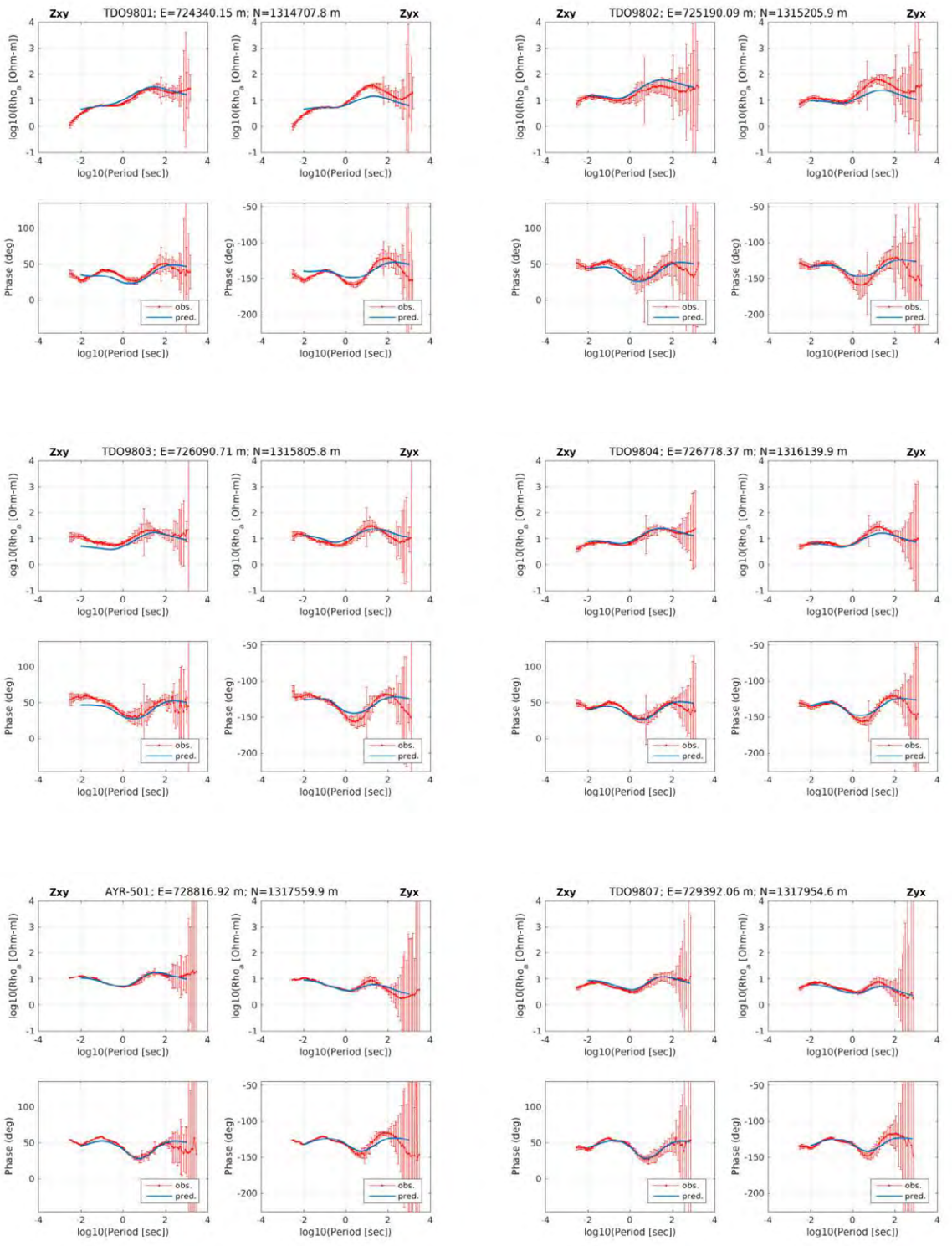
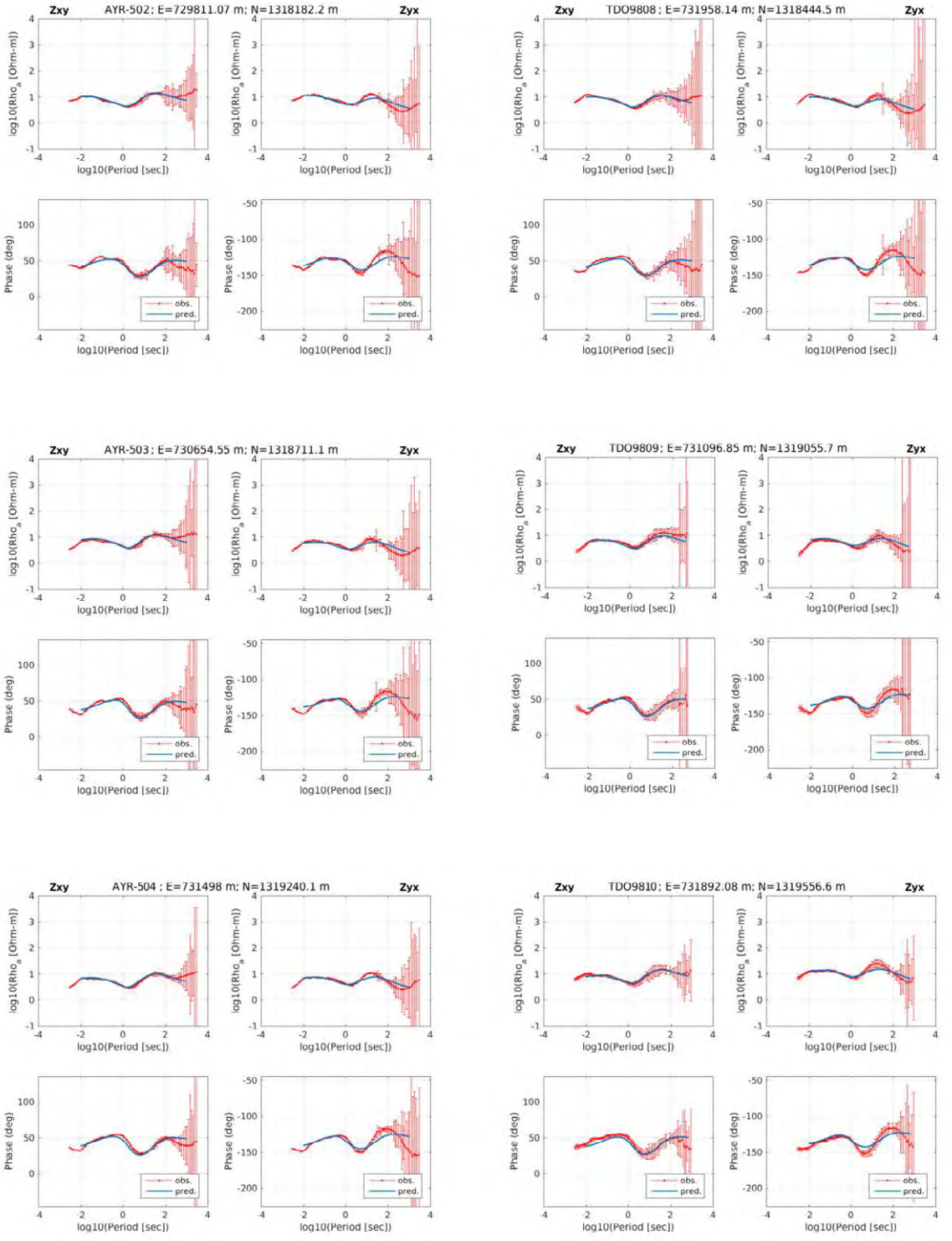
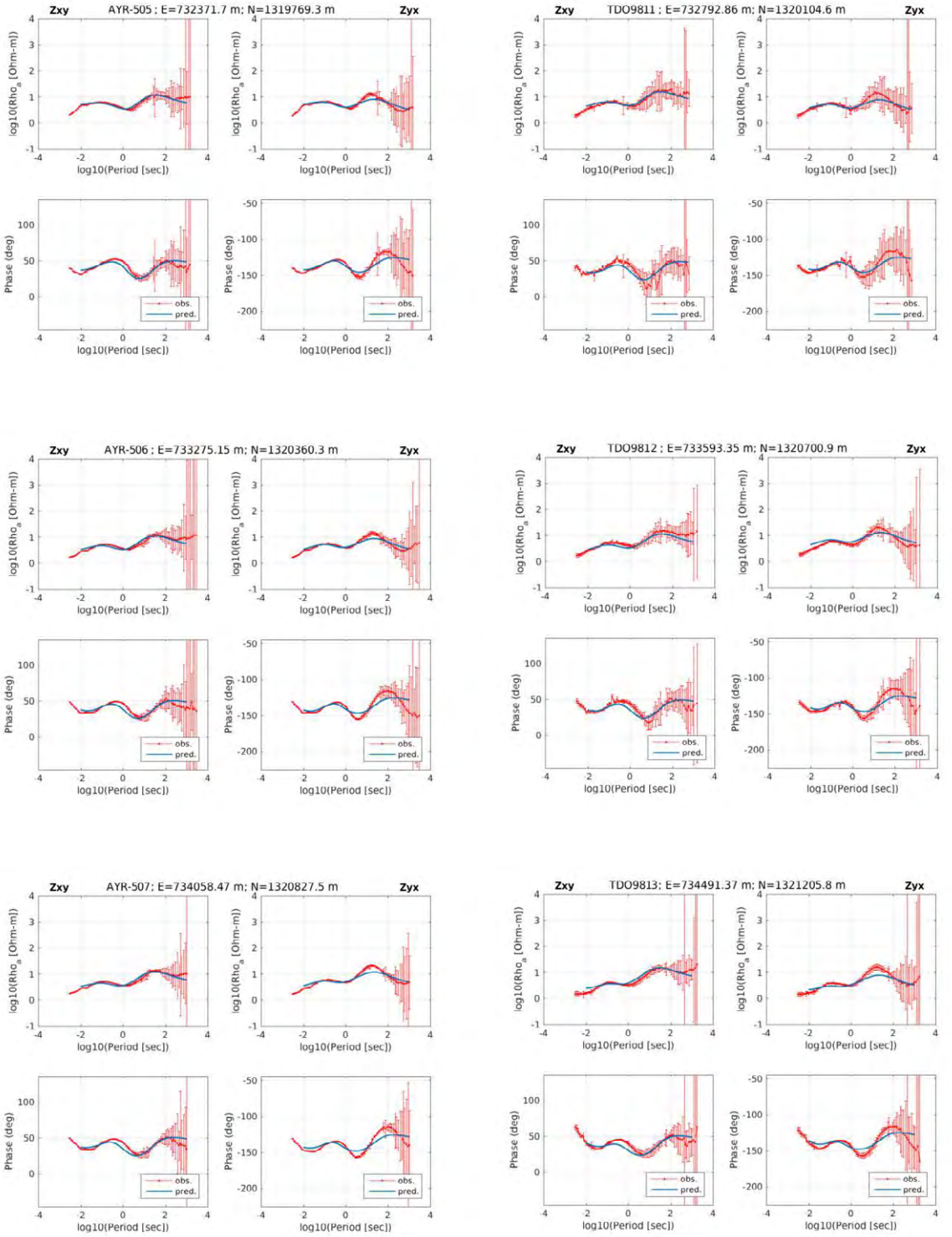


3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO98 1/4)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO98 2/4)



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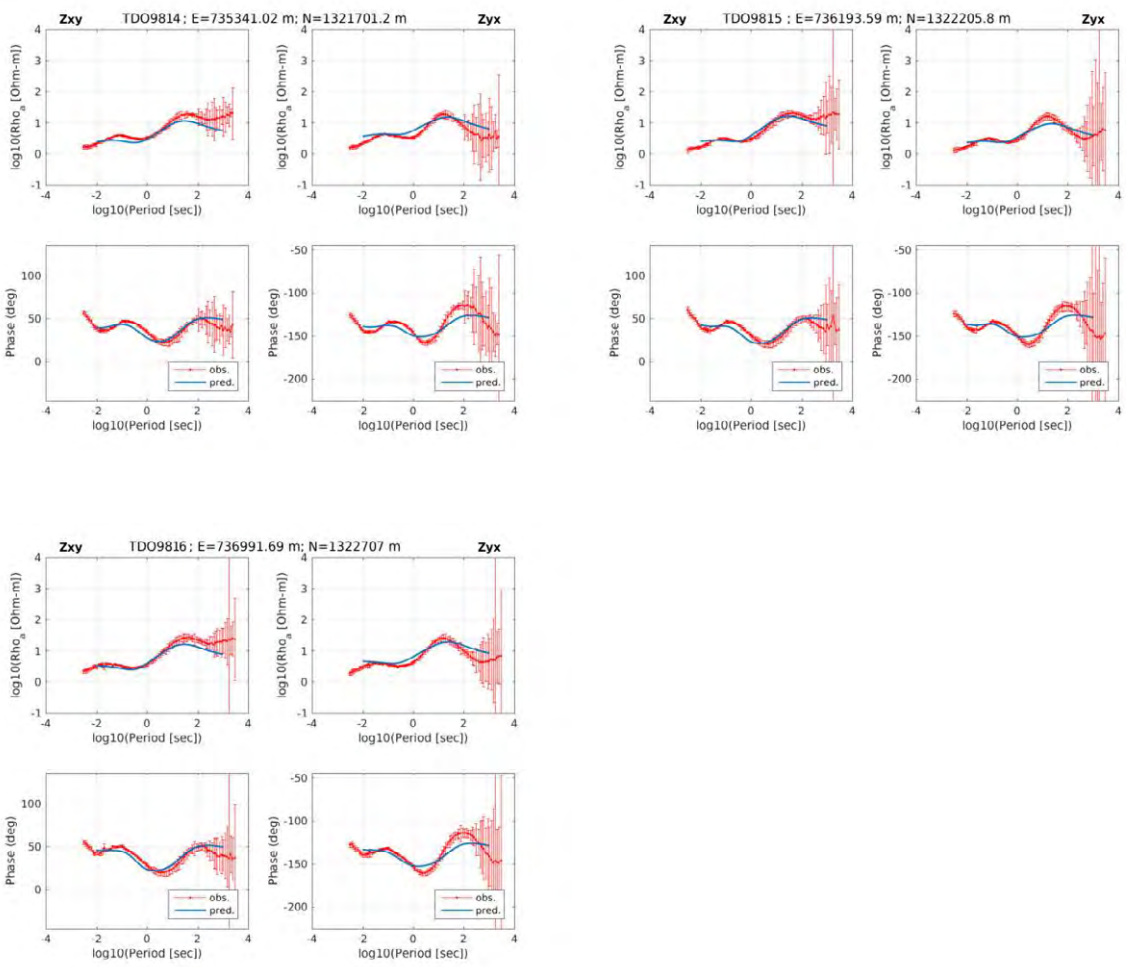
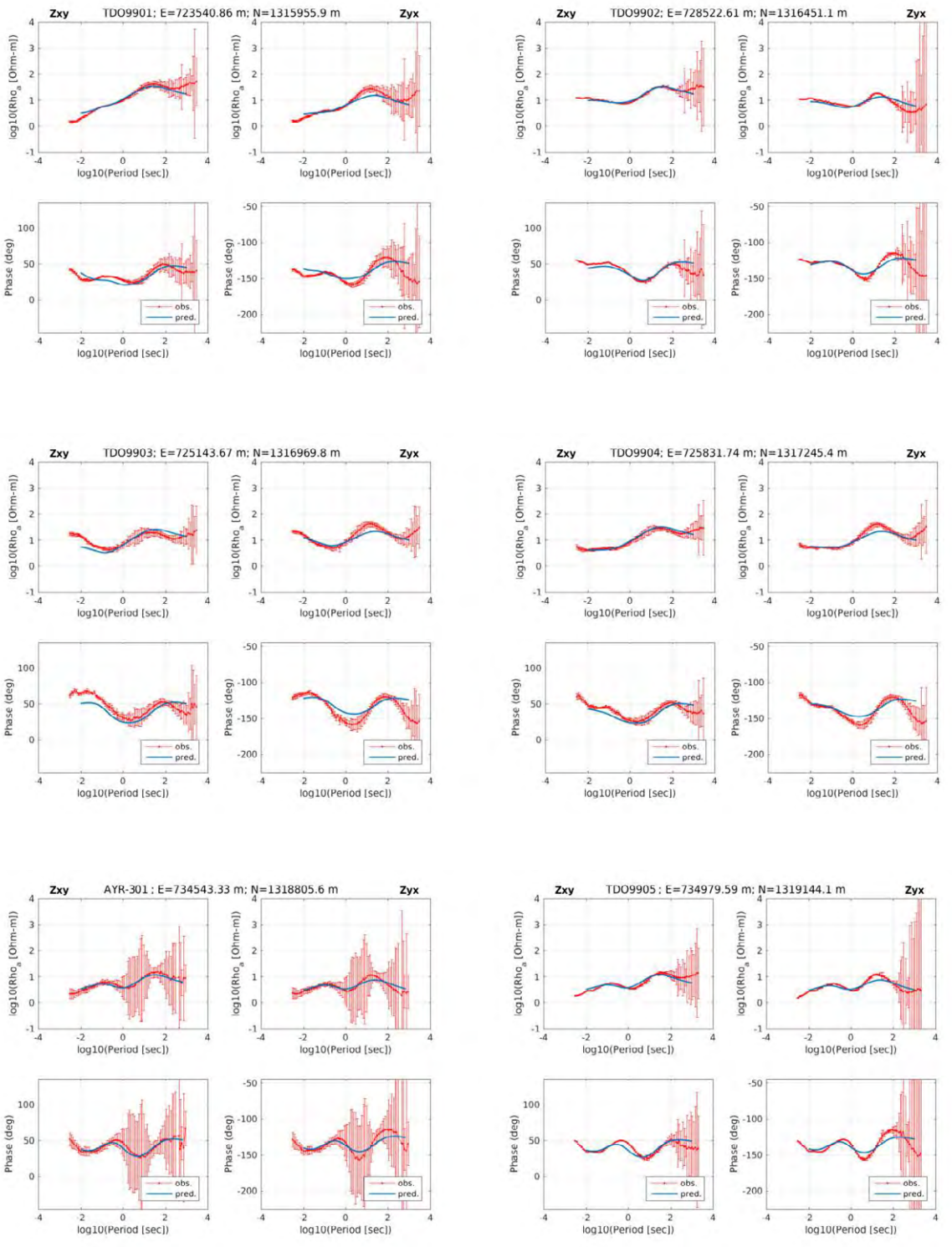
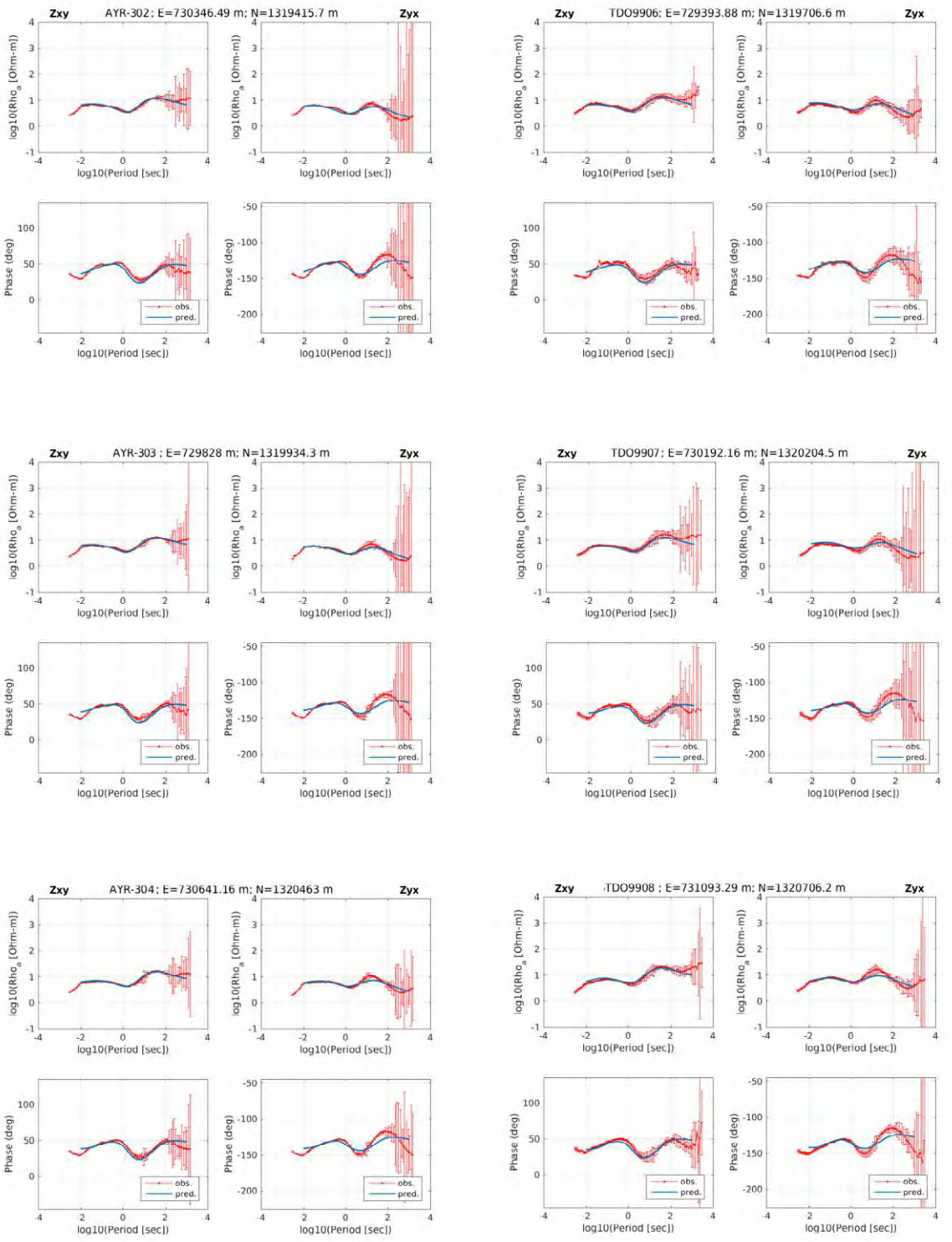


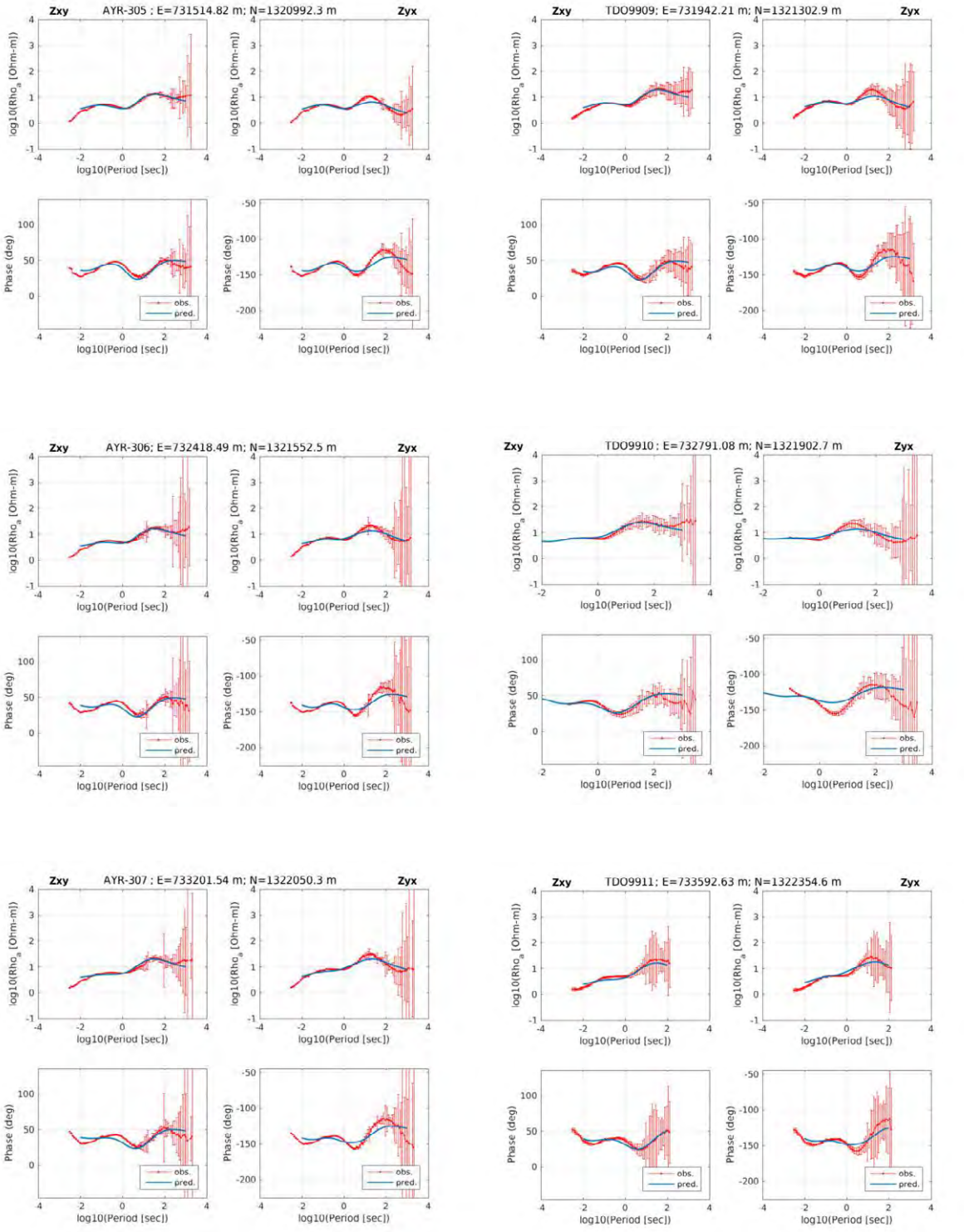
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO98 4/4)



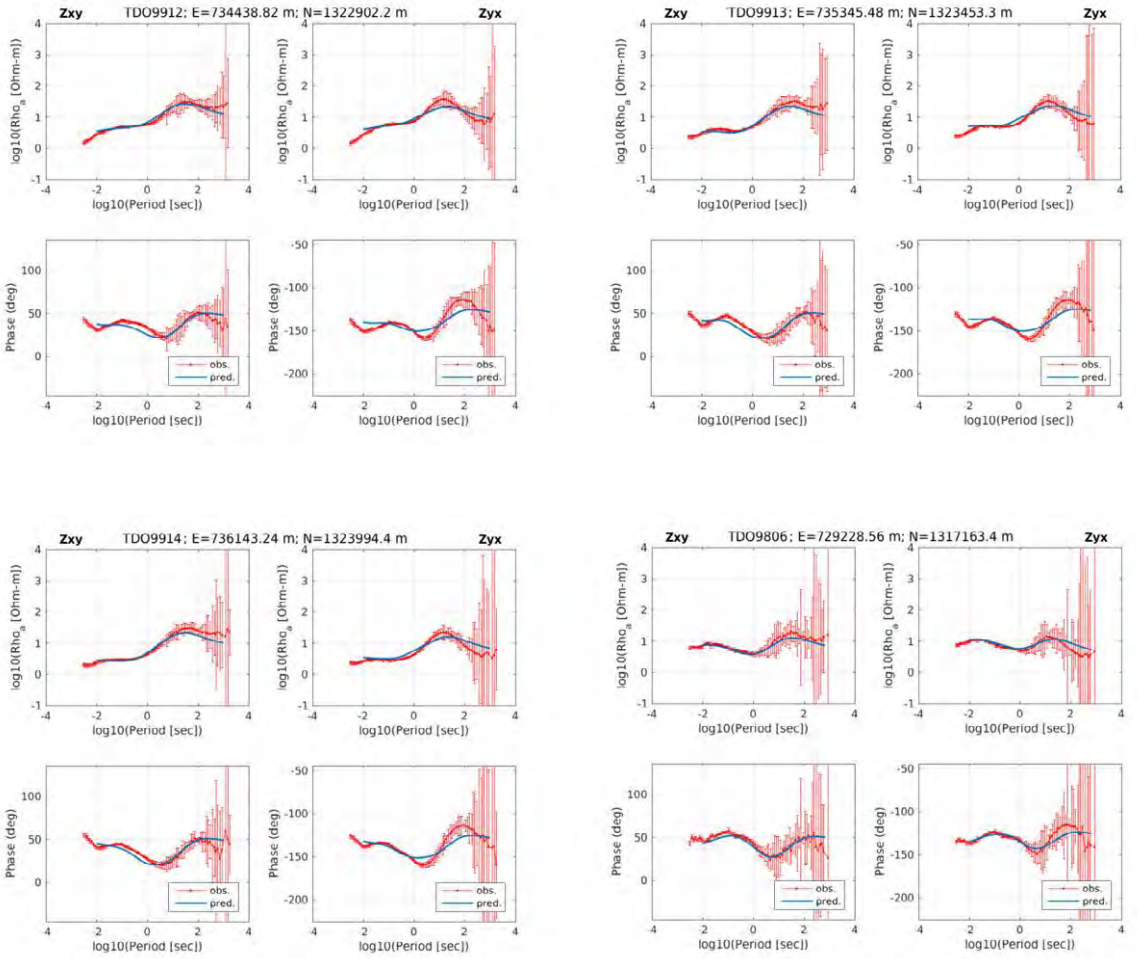
3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO99 1/4)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO99 2/4)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO99 3/4)



3D analysis results - Calculated and observed value of apparent resistivity and phase curve (TDO99 4/4)

APPENDIX 3

Gravity Survey

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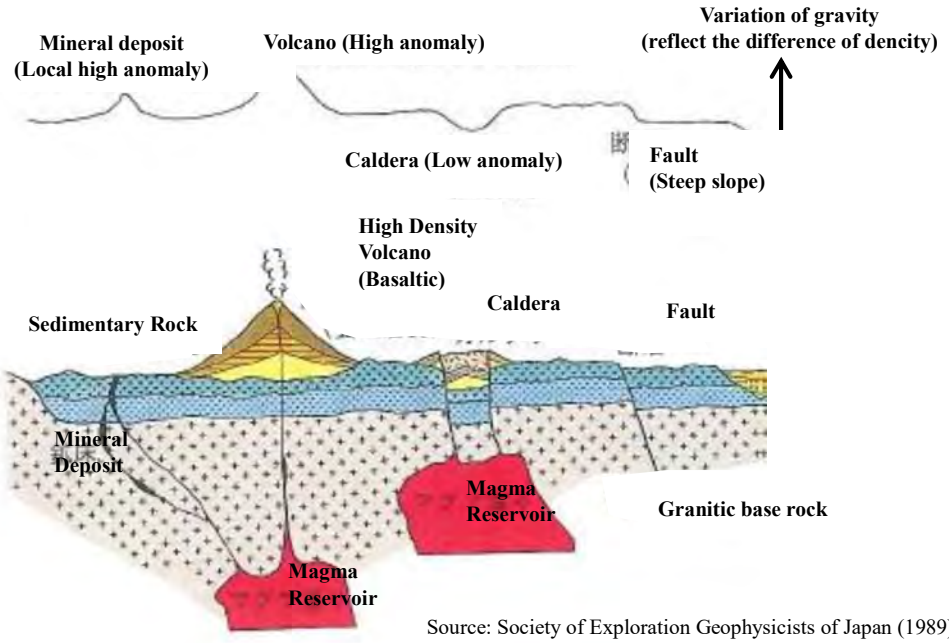
Appendix-3 Methodology and data of gravity survey

3.1 Survey Principle

Gravity survey is one of the geophysical survey that estimate subsurface structure using observed weak gravity anomaly caused by the subsurface density distribution. The high gravity anomaly which is observed on the ground is caused by the high density material exist under the ground. In contrast, if the low density material exists under the ground, the gravity anomaly observed on the ground is low. The variation of gravity anomaly is very small compare with the gravity acceleration, 9.8m/s^2 (about 10^{-4} magnifications). On this report, the unit of gravity acceleration and gravity anomaly is expressed by mGal, the unit of density is expressed by g/cm^3. Schematic image of gravity anomaly caused by the subsurface structure is shown in Figure.A3.1.1.



Source: Society of Exploration Geophysicists of Japan (1989)

Figure A3.1.1 Relationship Between the Subsurface Structure and the Gravity Anomaly Pattern

3.2 Measuring Method

Servo-driven gravimeter "CG-5" of Scintrex was used for the survey. The gravity value of each stations was measured by the relative gravity measurement in closed loop system. On each stations, the reproducibility of measured value is confirmed by repeating measurement, and then, station number, measured date, height of instrument, and topographic cross-section within 20m from the station is mentioned on the note. If the drift value exceeds 0.1mgal, re-measured again. On this survey, there were no available reference station for absolute gravity near the survey area. Therefore, absolute gravity of base station assumed to equal with standard gravity, and measured gravity of each station was calculated.

Together wit the gravity survey, leveling survey was conducted to grasp the coordination and elevation in accuracy of several cm. SF-3040 receiver of NavCom was used for the leveling. GNSS leveling was conducted by Static method. The information of gravity base station is as followings.

Boseti Gravity Base

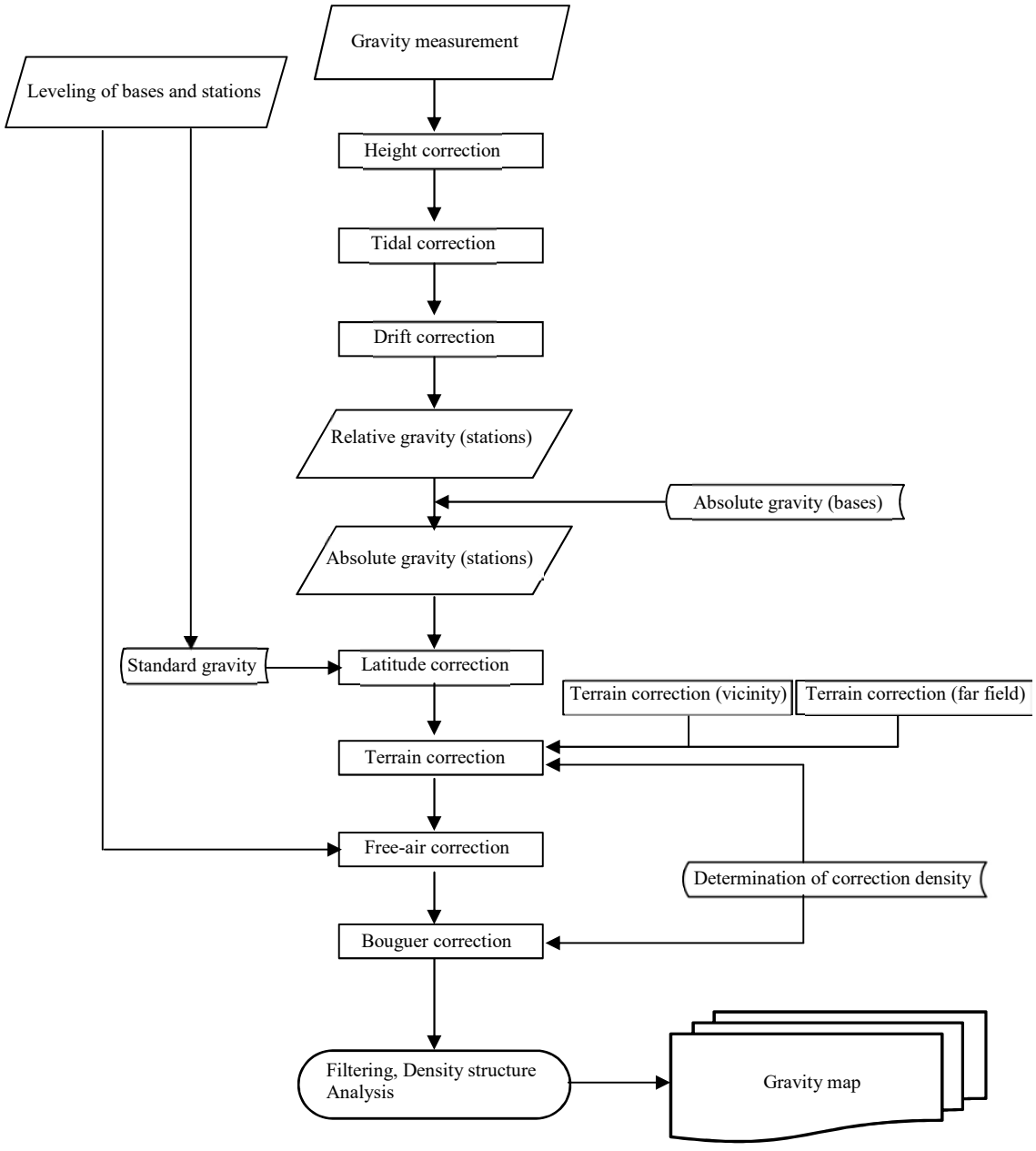
Station	9999
Latitude (degree, WGS84)	8.527474
Longitude (degree, WGS84)	39.24228
Elevation (m, ellipsoidal)	1689.93
Remarks	Established: February 17, 2016 Kereyu Hill Resort, Adama, Ethiopia

Base was setting in front of the entrance of room 318,Kereyu Hill Resort Hotel (photo)。

3.3 Data Procedure

(1) Calculation of gravity value

Data processing procedure is shown in Figure A3.3.1



Source: JICA Survey Team

Figure A3.3.1 Data processing procedure of gravity surveys

Corrected gravity value (*Gc*) is derived by the following equation, applying the correction procedure (describe in the following contents A) ~ C)) to gravity value (*Gr*).

$$Gc = Gr + Ghi + Get + Gd$$

Gr : Gravity value at station
Ghi : Instrument height correction
Get : Tidal correction
Gd : Drift correction

A) Instrument height correction

Instrument height correction (*Ghi*) is applied by measuring the length between the elevation control point and the top of gravimeter. *Ghi* was calculated by the following equation using vertical trend value of the surface of ellipsoid (0.3086mgal/m).

$$Ghi = 0.3086 \times hi$$

hi : height of gravimeter from the elevation control point (m)

B) Tidal correction

The gravity values are affected by the attraction of the moon and the sun fluctuating just like the rises and falls of ocean tides.

Tidal correction values (*Get*) are calculated by the following equation.

$$Get = \frac{kma}{\gamma^3} \left\{ 3 \left(\cos\delta \cos\phi \cos\theta + \sin\delta \sin\phi \right)^2 - 1 \right\} \times G$$

k : Gravitational constant
m : Mass of celestial body
a : Equatorial radius of the Earth
γ : Distance between the earth and celestial body
ϕ : Latitude of point
δ : Declination of celestial body
θ : Hour angle of celestial body
G : G factor (=1.20)

C) Drift correction

Measured gravity value shows specific time variations. After applying the instrument height correction and tidal correction for the gravity value on base station, Drift value is estimated in each crossed-loop. Drift correction (*Gd*) is calculated from the drift value which is assumed to be linearly proportional to time.

(2) Estimation of bouguer anomaly

Bouguer anomaly ($\triangle gb$) is estimated from the following equation. The method of each correction (A)~D)) is as follows.

$$\triangle gb = Gc - Gsd + \delta G_T + \delta G_F + \delta G_B$$

Gc : Corrected gravity value
Gsd : Latitude correction
δG_T : Terrain correction
δG_F : Free-air correction
δG_B : Bouguer correction

A) Latitude correction

Latitude correction (Gsd) is calculated from the standard gravity equation (1980).

$$Gsd = 978032.67715\ (1 + 0.0052790414 sin^2\ \phi + 0.0000232718 sin^4 \phi + 0.0000001262 sin^6 \phi + 0.0000000007 sin^8\ \phi\ )$$

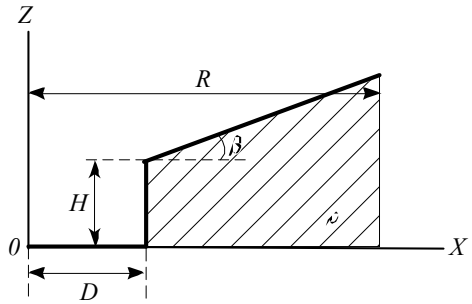
ϕ : Latitude of station

B) Terrain correction

Terrain correction (δG_T) removes the terrain irregularity of the vicinity of stations. Terrain correction was conducted two correction of "vicinity" and "far-field". Far-field terrain correction was calculated using 90m grid DEM data of SRTM. And vicinity terrain correction (δG_{t20}), in the area of 20m, was calculated by the following equation based on the topographical cross-section sketch.

$$\delta G_{t20} = 2G\rho \int_D^R \left\{ \tanh^{-1} \sqrt{\frac{R^2 - X^2}{R^2 + H_0^{\,2}}} - \tanh^{-1} \sqrt{\frac{R^2 - X^2}{R^2 + (X\tan\beta + H - H_0 - D\tan\beta)^2}} \right\} dX$$

G : Gravitational constant
ρ : Density
D : Distance between the point and cliff
H : Height of cliff
β : Slope angle of cliff
R : Correction area (20m)
H_0 : Height of spindle of gravimeter (0.15m)



C) Free-air correction

Free-air correction (δG_F) removes the gravity difference caused by the difference of elevation. δG_F is calculated by the following equation.

$$\delta G_F = 0.3086h$$

h : Elevation of station (m)

D) Bouguer correction

Bouguer anomaly (δG_B) is estimated from the following equation. Gravity value measured at the

different elevation varies by the attractive force of rocks which exist in that section.

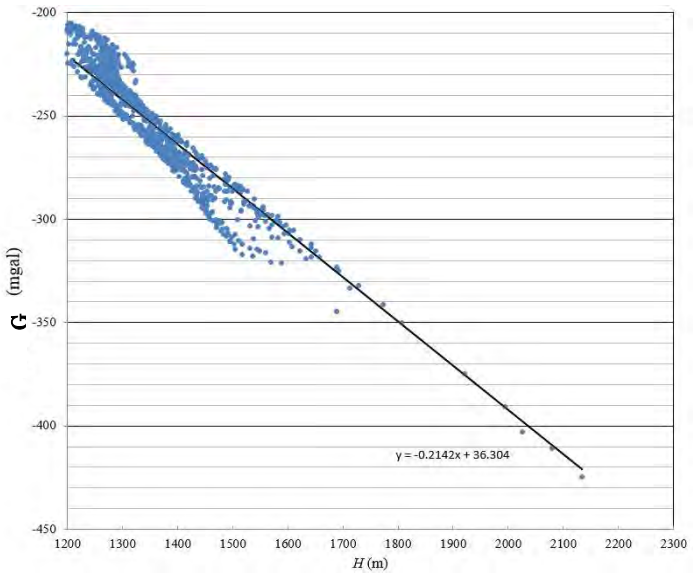
$$\delta G_B = -0.04192\gamma h$$

γ : Correction density (g/cm^3)
h : elevation of station (m)

(3) Optimum correction density

Optimum correction density was investigated by G-H correlation diagram (Figure A3.3.2) and comparison of bouguer anomaly map applying several correction densities (Figure A3.3.3), in order to create bouguer anomaly map. G-H correlation diagram plots G (see following equation, mGal) against elevation (H) and draw the best fitting linear line in a least squares.

$$G = g_{abs} - g_{nor} + g_{terrain}(\rho)$$



Source: JICA Survey Team

Figure A3.3.2 G-H correlation diagram

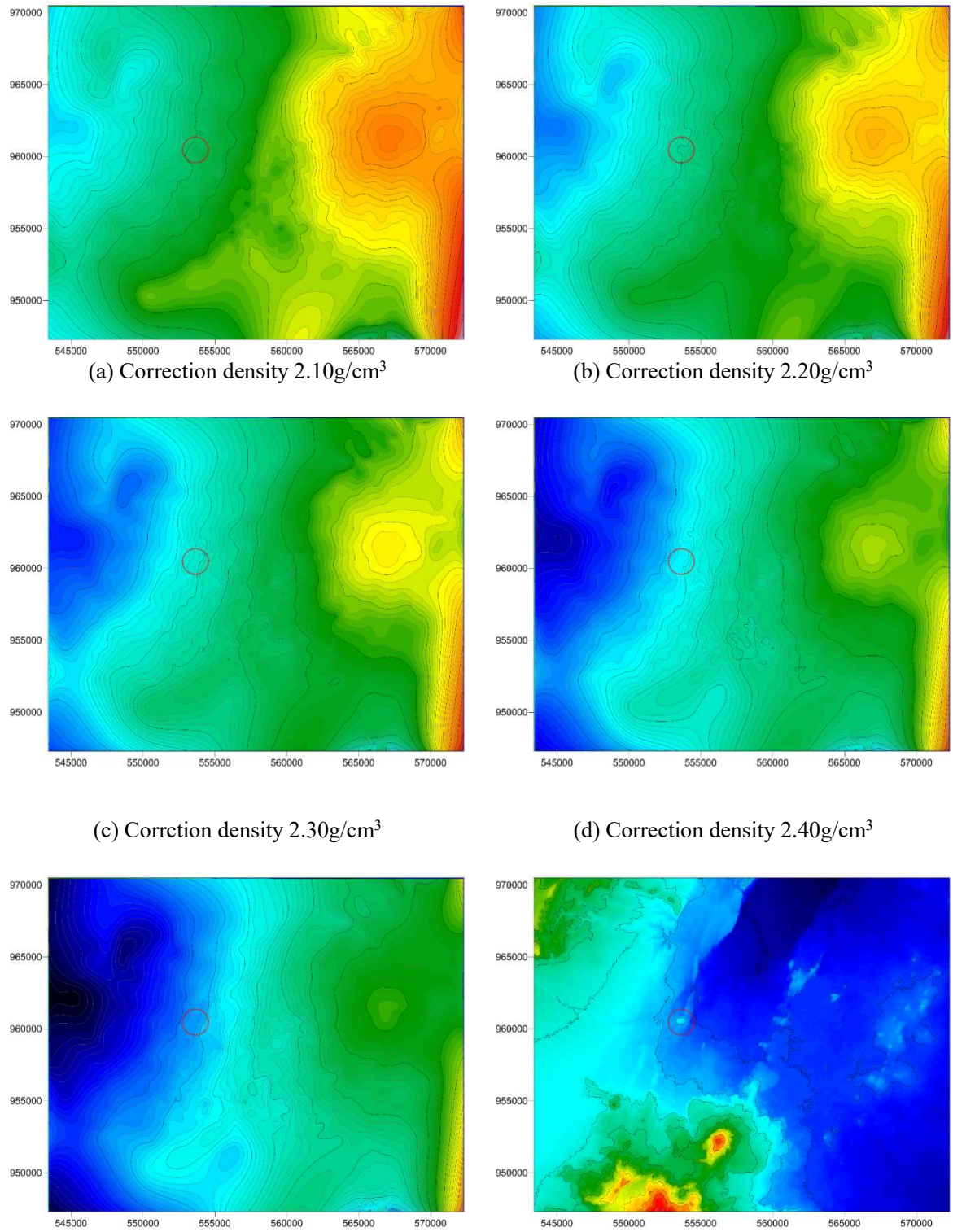
The trend of fitting line (m) is -0.2142. From this value, correction density is estimated about 2.25 g/cm^3.

$$\rho = \frac{m + 0.3086}{2\pi K}$$

Where K is gravitational constant, π is the circular constant.

Then, comparing bouguer anomaly map creating by the several correction density between 2.20 g/cm^3 to 2.67g/cm^3 (a~e) with topography map (f). When extracting the base structure, the best density is estimated from that there are no correlation between the pattern of topography and bouguer anomaly map created by that density. From Figure.a3.4, the case of correction density 2.3g/cm^3 shows quite small correlation with topographical patterm.

From these results, correction density 2.30 g/cm^3 was adopted for analysis.



(a) Correction density 2.10g/cm^3

(b) Correction density 2.20g/cm^3

(c) Corrction density 2.30g/cm^3

(d) Correction density 2.40g/cm^3

(e) Correction density 2.50g/cm^3

(f) Topographic map

Source: JICA Survey Team

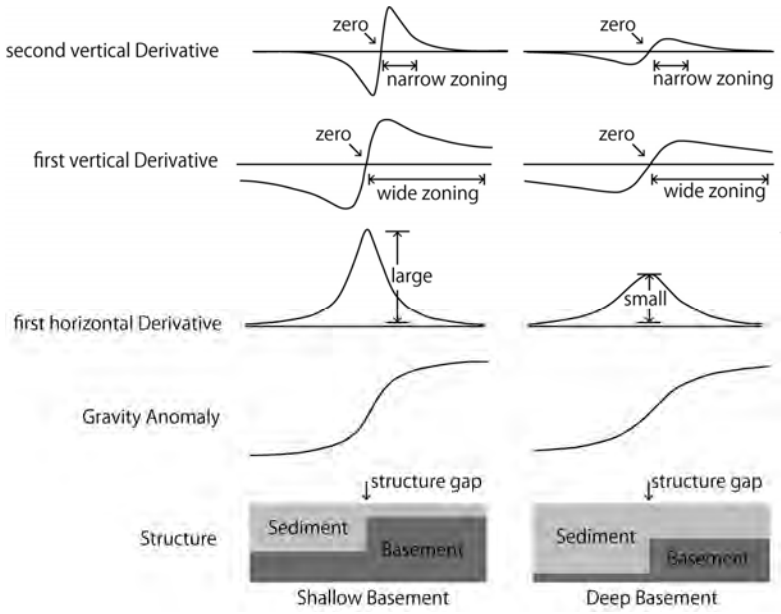
Figure A3.3.3 The comparison of bouguer anomaly map and topographic map

3.4 Analysis Method

(1) Filtering analysis

The filtering analysis was conducted in order to extract several information from Bouguer anomaly distribution. In this survey, filtering analysis was conducted from the 100m grid data made by bouguer anomaly distribution. When considering bouguer anomaly distribution as a kind of wave, short-wavelength anomalies correlating to the gravity anomaly (density information) of the shallow subsurface structure. In this survey, first vertical derivative was adopted in order to extract the subsurface structure shallower than several thousand meter. First vertical derivative distribution could irritably capture the density anomaly structure (Figure A3.4.1). And then, since first vertical derivative value Gzz shows 0 right above the fault, fault line could estimate from this derivative distribution.

In addition to the first vertical derivative, filtering analysis of horizontal gradient was conducted. Horizontal gradient is prior to extract the zone which shows significant changes of bouguer anomaly like faults (Figure A3.4.1).



Source: Society of Exploration Geophysicists of Japan (1998)

Figure A3.4.1 The comparison of first vertical derivative and first horizontal derivative for fault structure

(2) Trend analysis

Bouguer anomaly distribution includes long-wavelength component. In general, long-wavelength component is approximated by high-order polynomial, called trend curve. The difference between bouguer anomaly and trend gravity value on the same point is called residual gravity, it is a kind of low-pass filter. In this survey, trend gravity value (gtrend (x, y)) are approximated from bouguer anomaly using least squares method (Figure.a3.6), and trend residual gravity value (residual (x, y)) is calculated from the difference between bouguer anomaly value and trend gravity value. 3D density structure analysis, describes in the following contents, was calculated from this trend residual gravity.

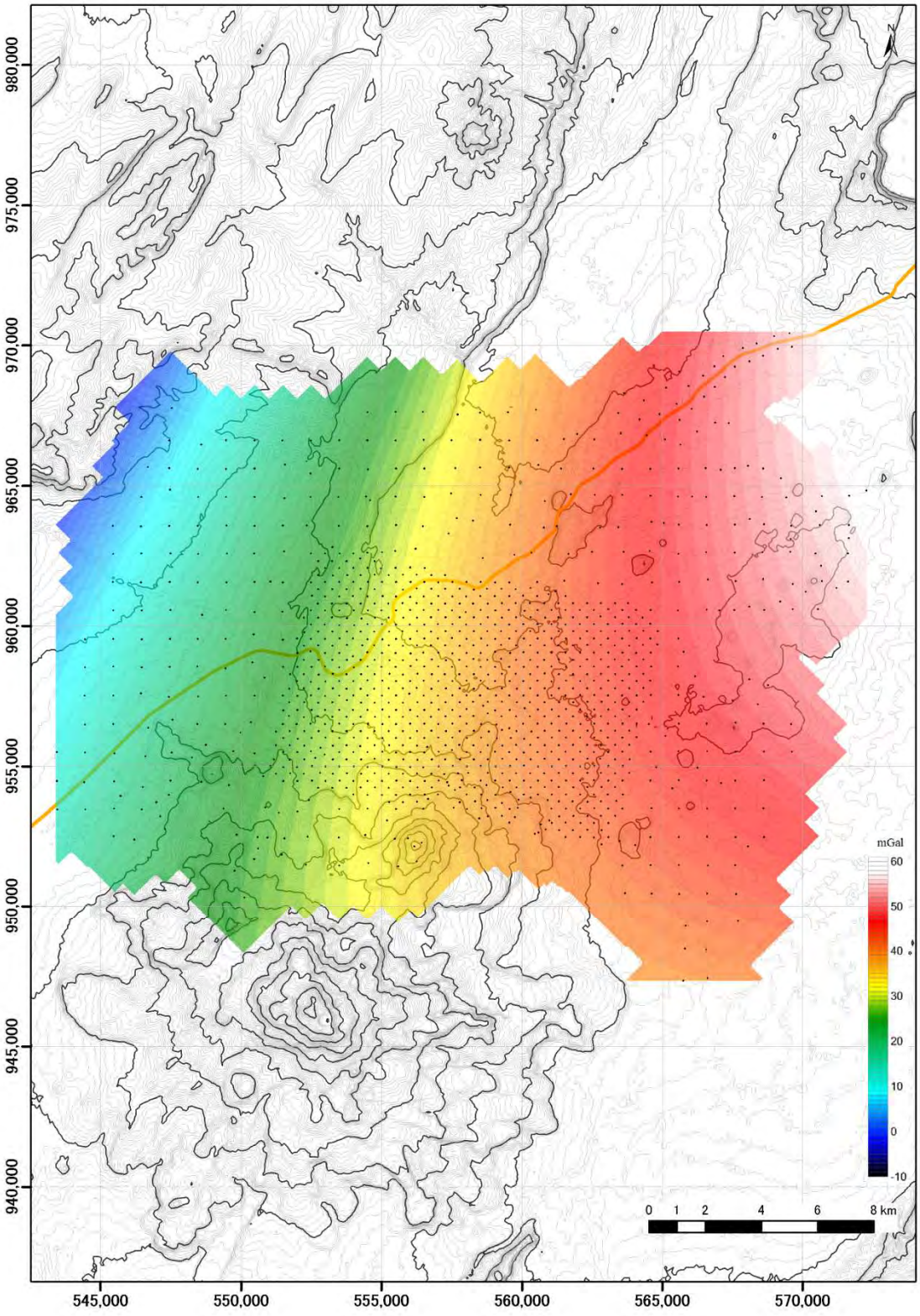
(3) 3D density structure analysis

Gravity value get an influence of attractive force not only below the survey point but also all the surrounding area. But second dimensional inversion is assumed that there is no density change in the vertical direction of cross-section, and differ with actual subsurface structure certainly. Therefore, 3-Dimensional inversion is the best approach to estimate the realistic density structure. In this survey, third dimensional inversion was conducted using VOXIE Earth modeling, which is the gravity analysis module of Oasis montaj (Geosoft).

Input data is terrain data and trend residual gravity data of analysis area.

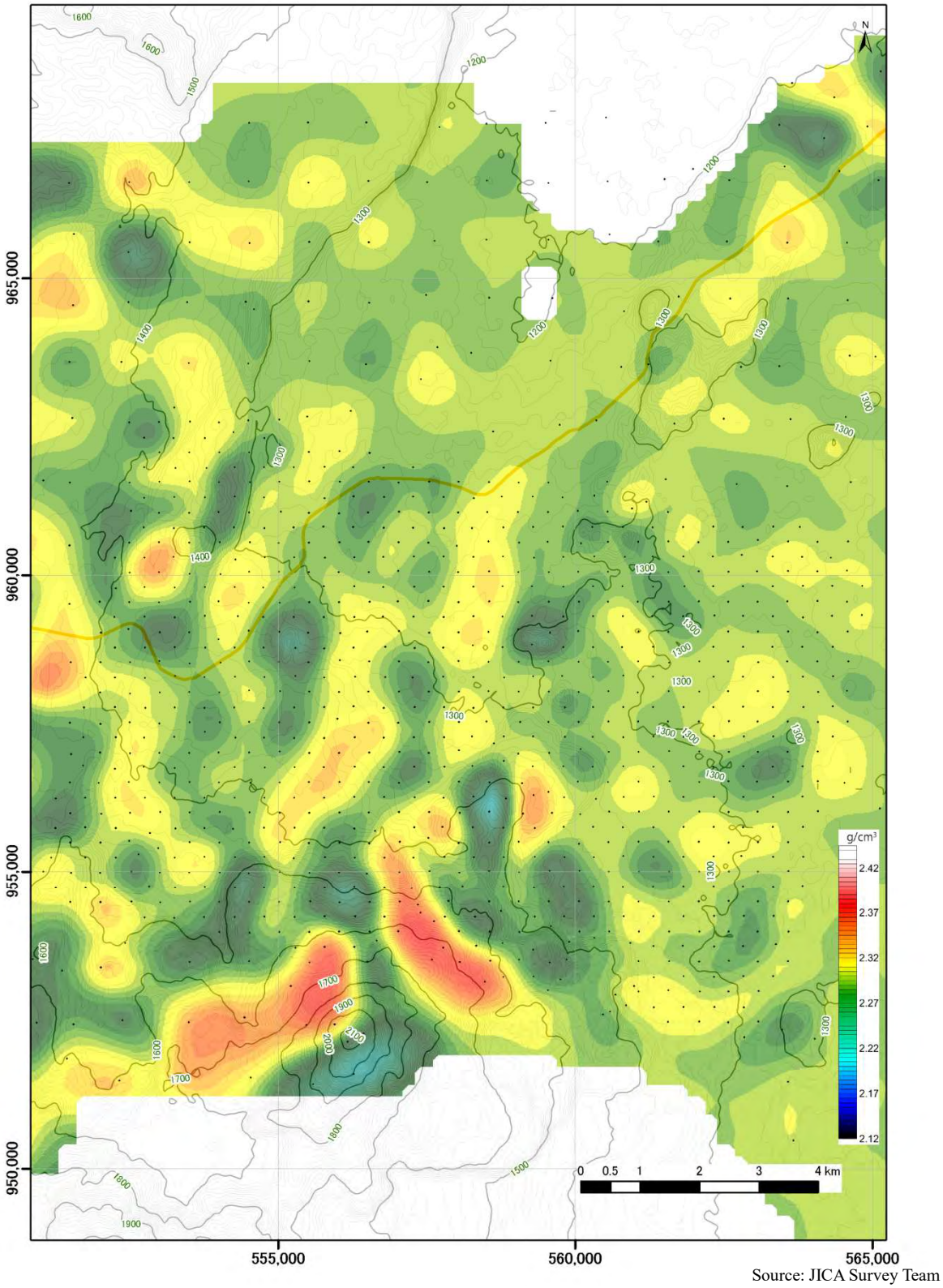
3.5 Analysis Method

Results of gravity survey carried out in this project are shown as below.



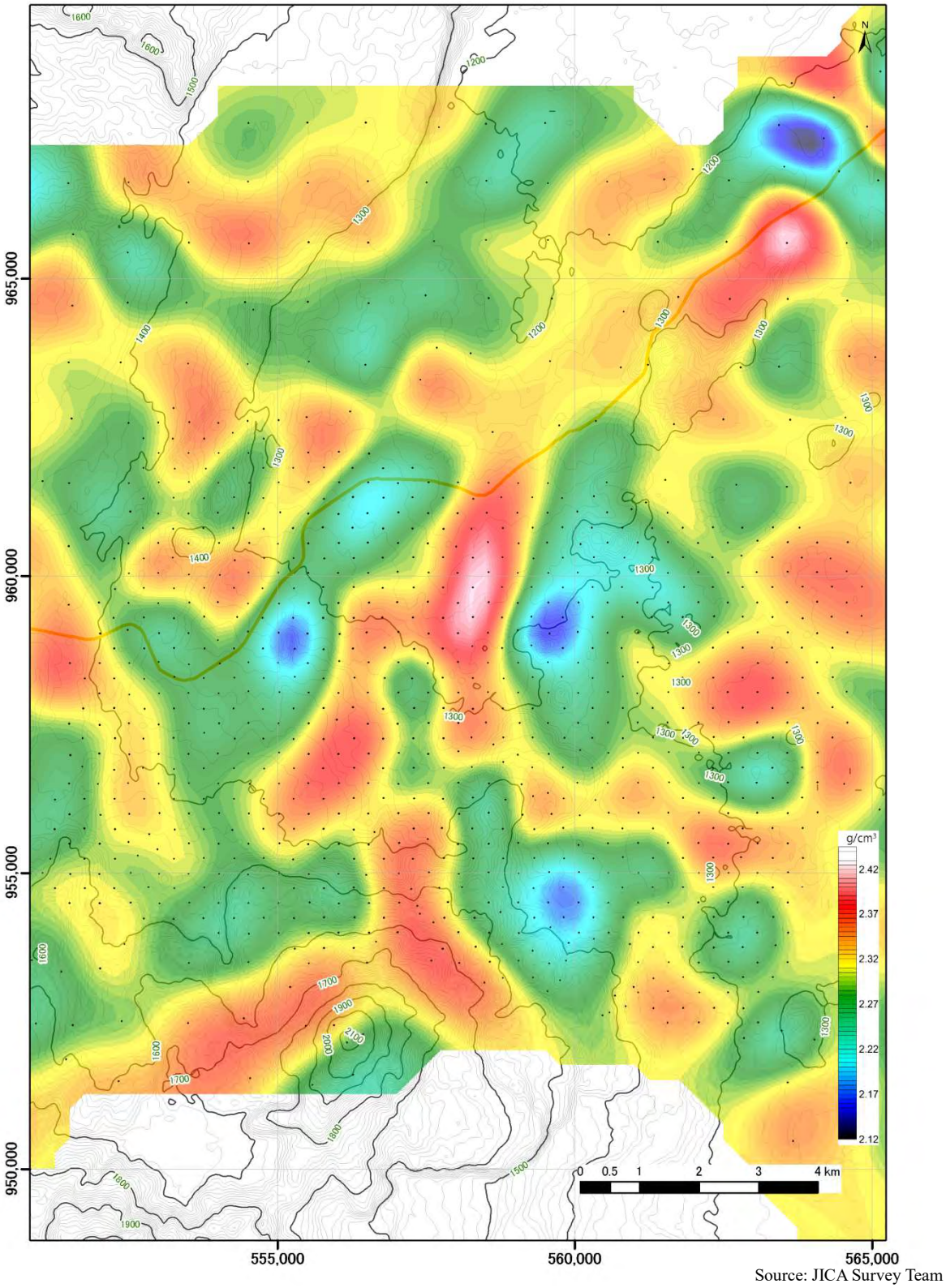
Source: JICA Survey Team

Secondary trend map



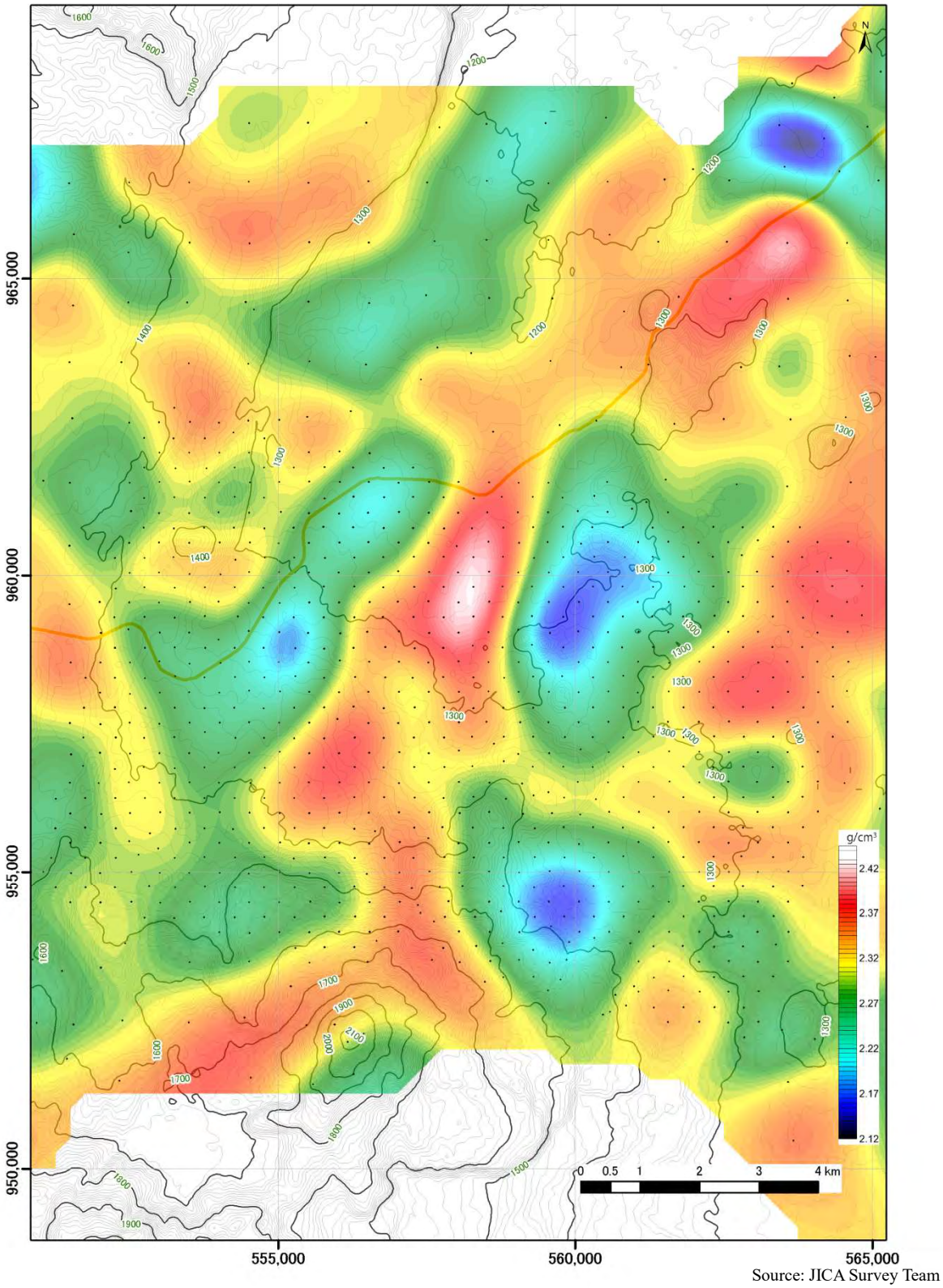
Source: JICA Survey Team

Density structure map of 3D analysis (1200 m a.s.l)



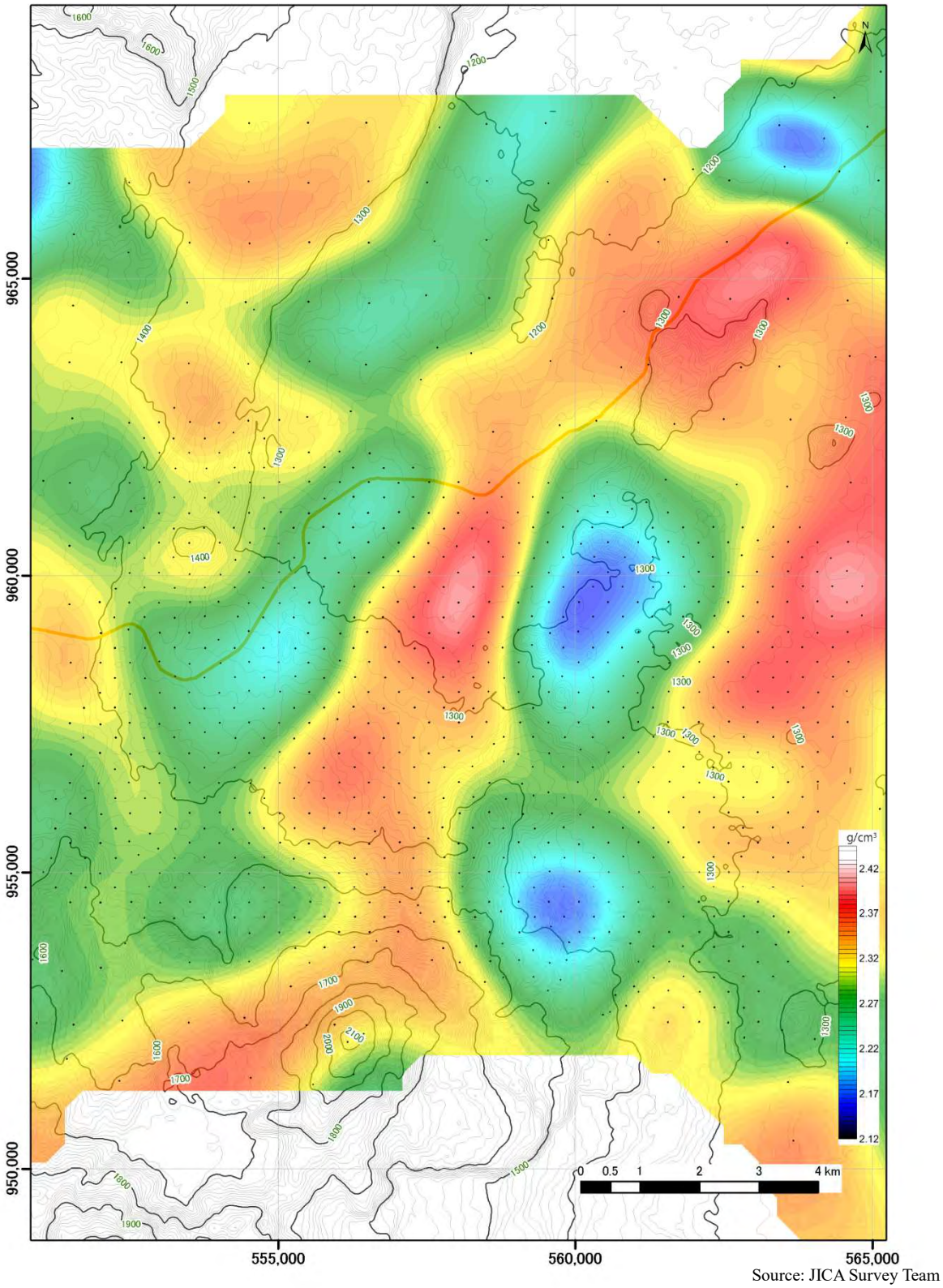
Source: JICA Survey Team

Density structure map of 3D analysis (500 m a.s.l)



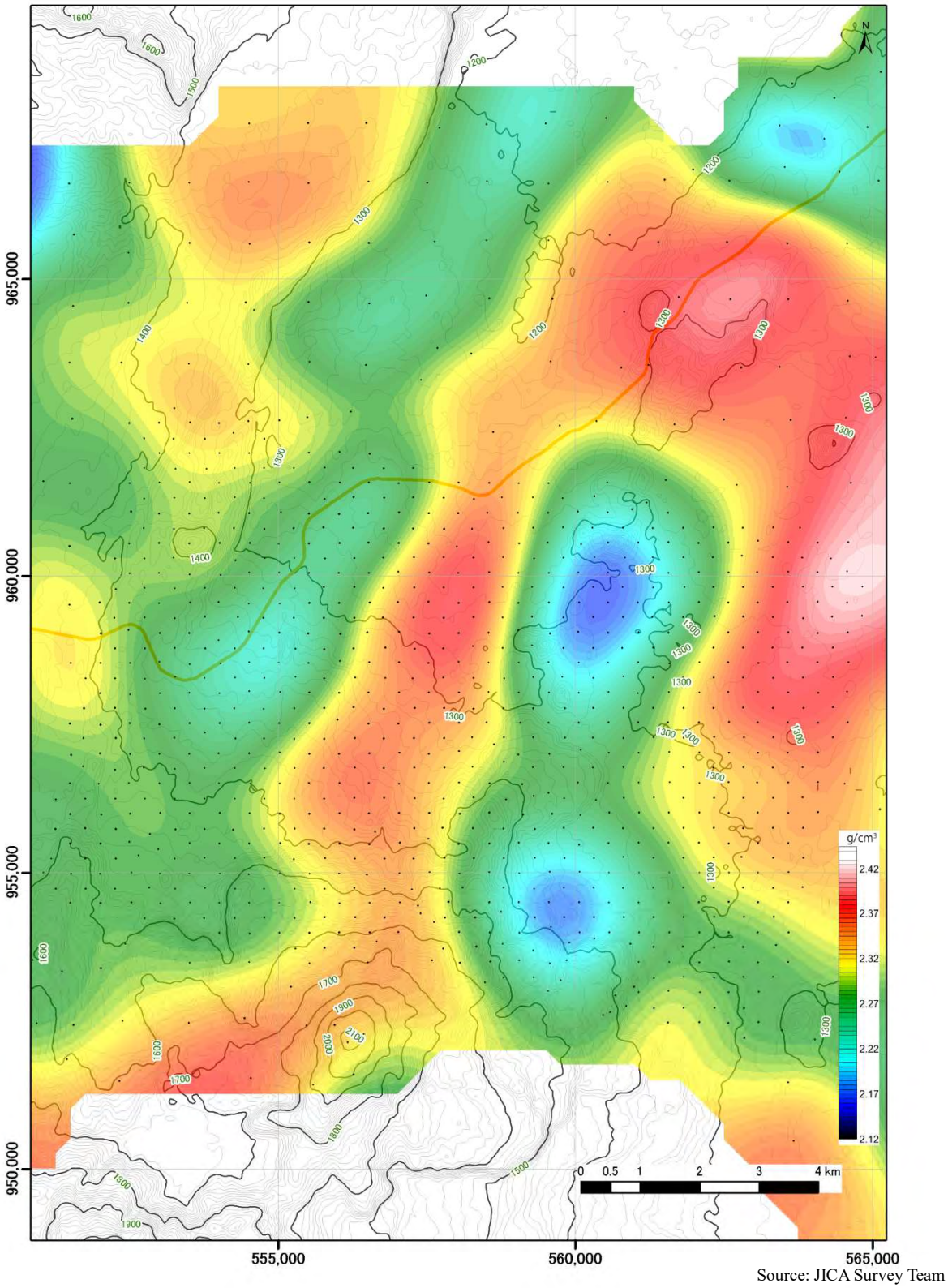
Source: JICA Survey Team

Density structure map of 3D analysis (0 m a.s.l)



Source: JICA Survey Team

Density structure map of 3D analysis (-500 m a.s.l)



Source: JICA Survey Team

Density structure map of 3D analysis (-1000 m a.s.l)

List of Bouguer Anomaly (1/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
12	12032016	8.7547	39.4321	1537.7	977840.273	978152.298	2.263	474.538	148.311	16.465
19	06042016	8.7533	39.4956	1368.4	977883.585	978152.261	1.580	422.281	131.979	23.206
20	06042016	8.7534	39.5046	1364.4	977887.113	978152.263	1.542	421.062	131.598	25.856
21	06042016	8.7534	39.5135	1367.9	977888.594	978152.263	1.599	422.146	131.937	28.139
22	10032016	8.7526	39.5248	1192.7	977926.153	978152.242	3.963	368.059	115.033	30.900
23	10032016	8.7532	39.5319	1186.8	977927.420	978152.257	2.234	366.236	114.463	29.170
24	10032016	8.7533	39.5410	1181.7	977932.778	978152.260	1.923	364.670	113.973	33.138
25	10032016	8.7540	39.5502	1172.7	977938.471	978152.280	1.816	361.909	113.111	36.806
26	12032016	8.7443	39.4313	1589.1	977829.160	978152.016	1.378	490.405	153.270	15.657
27	12032016	8.7429	39.4417	1531.4	977836.234	978151.977	1.370	472.599	147.705	10.521
28	12032016	8.7443	39.4498	1510.8	977840.188	978152.017	1.313	466.242	145.719	10.008
29	12032016	8.7443	39.4590	1490.0	977845.731	978152.016	1.327	459.820	143.711	11.151
30	06042016	8.7442	39.4680	1463.8	977853.963	978152.013	1.364	451.739	141.186	13.867
31	06042016	8.7443	39.4772	1392.2	977873.889	978152.016	1.769	429.618	134.272	18.988
32	06042016	8.7443	39.4865	1370.3	977881.075	978152.016	1.604	422.871	132.163	21.371
33	06042016	8.7444	39.4955	1362.9	977885.073	978152.019	1.499	420.587	131.450	23.691
34	06042016	8.7442	39.5047	1363.9	977888.330	978152.014	1.499	420.898	131.547	27.166
35	06042016	8.7444	39.5138	1359.1	977890.439	978152.019	2.018	419.431	131.088	28.780
36	10032016	8.7442	39.5228	1201.6	977924.955	978152.015	2.579	370.814	115.894	30.440
37	10032016	8.7445	39.5320	1195.6	977928.207	978152.021	1.938	368.956	115.313	31.767
38	10032016	8.7441	39.5414	1182.3	977935.112	978152.011	1.831	364.853	114.030	35.755
39	10032016	8.7443	39.5505	1175.8	977940.271	978152.016	1.833	362.845	113.403	39.529
40	29032016	8.7447	39.5592	1173.0	977943.452	978152.026	1.824	361.978	113.132	42.096
41	29032016	8.7445	39.5691	1215.7	977935.199	978152.021	1.536	375.162	117.252	42.623
42	29032016	8.7465	39.5775	1213.8	977937.177	978152.077	1.448	374.583	117.071	44.060
43	11032016	8.7458	39.5860	1219.2	977938.416	978152.058	1.334	376.258	117.595	46.355
44	12032016	8.7356	39.4245	1570.9	977829.320	978151.782	1.498	484.790	151.515	12.310
45	12032016	8.7354	39.4313	1560.3	977834.216	978151.777	1.370	481.512	150.491	14.830
46	12032016	8.7351	39.4406	1517.0	977838.179	978151.768	1.421	468.142	146.312	9.662
47	12032016	8.7352	39.4498	1492.1	977843.363	978151.769	1.348	460.475	143.916	9.502
48	12032016	8.7352	39.4590	1475.8	977849.515	978151.770	1.340	455.430	142.339	12.176
49	06042016	8.7364	39.4687	1443.8	977859.491	978151.803	1.604	445.554	139.253	15.593
50	06042016	8.7336	39.4771	1428.8	977864.339	978151.727	1.343	440.929	137.807	17.077
51	03042016	8.7352	39.4865	1377.5	977879.941	978151.769	1.518	425.105	132.862	21.934
52	03042016	8.7350	39.4957	1344.9	977890.263	978151.765	1.569	415.029	129.712	25.383
53	06042016	8.7352	39.5047	1332.0	977894.057	978151.770	1.819	411.066	128.474	26.698
54	10032016	8.7351	39.5139	1219.4	977920.475	978151.768	2.369	376.311	117.612	29.776
55	10032016	8.7353	39.5240	1207.0	977925.052	978151.772	1.937	372.485	116.416	31.286
56	10032016	8.7355	39.5319	1198.3	977929.826	978151.777	1.788	369.790	115.574	34.053
57	10032016	8.7354	39.5414	1186.3	977935.651	978151.776	1.786	366.088	114.416	37.332
58	10032016	8.7362	39.5508	1179.2	977940.757	978151.798	1.879	363.897	113.732	41.003
59	29032016	8.7352	39.5582	1193.5	977939.219	978151.769	2.019	368.316	115.113	42.672
60	29032016	8.7352	39.5687	1242.7	977931.999	978151.769	1.408	383.507	119.861	45.284
61	11032016	8.7350	39.5779	1234.0	977938.337	978151.764	1.370	380.826	119.023	49.746
62	17032016	8.7349	39.5871	1224.4	977939.267	978151.763	1.341	377.856	118.095	48.607
63	17032016	8.7351	39.5962	1230.7	977939.618	978151.766	1.217	379.796	118.701	50.164
64	17032016	8.7352	39.6049	1228.2	977940.352	978151.771	1.301	379.031	118.462	50.451
65	17032016	8.7352	39.6144	1222.9	977943.310	978151.770	1.302	377.381	117.946	52.277
66	17032016	8.7351	39.6236	1228.9	977942.678	978151.766	1.284	379.225	118.522	52.899
67	17032016	8.7318	39.6294	1242.3	977939.319	978151.677	1.211	383.363	119.816	52.401
68	10032016	8.7261	39.4223	1544.1	977835.475	978151.523	1.481	476.496	148.923	13.006
69	11032016	8.7284	39.4316	1549.1	977834.821	978151.587	1.311	478.064	149.413	13.196
70	12032016	8.7260	39.4408	1499.1	977841.185	978151.521	1.361	462.635	144.591	9.069
71	12032016	8.7260	39.4498	1480.6	977848.360	978151.520	1.314	456.925	142.807	12.272
72	12032016	8.7260	39.4589	1464.3	977853.734	978151.521	1.298	451.896	141.235	14.172
73	13032016	8.7256	39.4686	1436.8	977862.347	978151.510	1.618	443.399	138.579	17.275
74	13032016	8.7260	39.4771	1423.9	977866.860	978151.522	1.382	439.411	137.333	18.798
75	03042016	8.7260	39.4861	1373.1	977882.780	978151.522	1.489	423.731	132.432	24.046
76	03042016	8.7261	39.4950	1335.0	977892.444	978151.523	1.884	411.990	128.763	26.033
77	10032016	8.7261	39.5046	1255.8	977910.014	978151.524	2.045	387.524	121.116	26.943
78	10032016	8.7259	39.5139	1226.9	977918.105	978151.518	1.875	378.613	118.331	28.744
79	11032016	8.7271	39.5227	1212.1	977923.593	978151.551	1.823	374.062	116.909	31.018
80	11032016	8.7266	39.5323	1195.5	977930.982	978151.539	1.790	368.940	115.308	34.865
81	11032016	8.7266	39.5420	1184.3	977937.077	978151.537	1.970	365.486	114.228	38.767
82	11032016	8.7245	39.5529	1225.3	977932.958	978151.481	1.858	378.133	118.181	43.287
83	11032016	8.7268	39.5613	1265.6	977926.895	978151.542	1.575	390.574	122.069	45.432
84	11032016	8.7265	39.5691	1251.6	977933.136	978151.534	1.493	386.242	120.715	48.621
85	11032016	8.7265	39.5780	1231.3	977937.992	978151.533	1.513	379.984	118.759	49.196

List of Bouguer Anomaly (2/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bougue rAnomaly (mgal) (Correction Density 2.3g/cm^3)
86	17032016	8.7262	39.5872	1242.7	977937.377	978151.527	1.298	383.489	119.855	50.781
87	17032016	8.7260	39.5960	1241.3	977938.772	978151.521	1.216	383.073	119.725	51.815
88	17032016	8.7259	39.6052	1246.4	977938.585	978151.518	1.186	384.651	120.218	52.686
89	17032016	8.7260	39.6143	1247.7	977939.180	978151.522	1.166	385.042	120.340	53.525
90	17032016	8.7258	39.6233	1256.4	977935.333	978151.515	1.118	387.717	121.176	51.477
91	17032016	8.7257	39.6311	1259.2	977936.307	978151.512	1.216	388.603	121.453	53.160
92	16032016	8.7260	39.6426	1257.6	977936.553	978151.521	1.171	388.089	121.293	52.999
93	16032016	8.7261	39.6514	1244.7	977939.568	978151.523	1.318	384.106	120.048	53.421
94	10032016	8.7168	39.4131	1536.6	977831.884	978151.273	1.454	474.198	148.205	8.057
95	10032016	8.7167	39.4222	1517.7	977837.823	978151.270	1.400	468.376	146.385	9.943
96	11032016	8.7168	39.4313	1505.1	977842.388	978151.272	1.312	464.469	145.164	11.733
97	11032016	8.7169	39.4406	1488.8	977845.341	978151.274	1.300	459.446	143.595	11.219
98	11032016	8.7169	39.4499	1470.2	977849.400	978151.274	1.268	453.711	141.802	11.304
99	12032016	8.7168	39.4590	1454.0	977856.341	978151.273	1.260	448.718	140.242	14.804
100	13032016	8.7169	39.4681	1434.3	977862.460	978151.276	1.309	442.610	138.333	16.770
101	13032016	8.7169	39.4760	1413.7	977869.655	978151.275	1.478	436.265	136.350	19.774
102	03042016	8.7167	39.4863	1372.2	977882.017	978151.271	1.443	423.449	132.344	23.294
103	03042016	8.7166	39.4954	1350.5	977887.929	978151.268	1.763	416.767	130.256	24.936
104	10032016	8.7170	39.5048	1247.2	977912.171	978151.278	1.867	384.899	120.296	27.363
105	10032016	8.7165	39.5134	1226.0	977918.011	978151.265	1.837	378.346	118.248	28.682
106	11032016	8.7191	39.5244	1208.9	977926.261	978151.335	1.823	373.056	116.594	33.211
107	11032016	8.7183	39.5296	1200.1	977929.630	978151.312	1.890	370.343	115.746	34.804
108	11032016	8.7170	39.5417	1202.3	977934.187	978151.279	1.857	371.033	115.962	39.836
109	11032016	8.7161	39.5525	1234.0	977931.440	978151.254	1.749	380.806	119.017	43.725
110	11032016	8.7164	39.5567	1260.4	977924.760	978151.263	3.028	388.972	121.569	43.928
111	18032016	8.7160	39.5708	1288.7	977925.237	978151.252	1.369	397.707	124.299	48.763
112	11032016	8.7162	39.5767	1264.8	977931.067	978151.255	1.378	390.307	121.986	49.511
113	24032016	8.7177	39.5874	1257.0	977936.234	978151.298	1.290	387.896	121.232	52.890
114	24032016	8.7169	39.5963	1257.7	977937.381	978151.276	1.160	388.132	121.306	54.090
115	24032016	8.7169	39.6054	1253.2	977938.748	978151.275	1.203	386.740	120.871	54.545
116	24032016	8.7170	39.6144	1268.8	977935.569	978151.277	1.111	391.554	122.376	54.582
117	24032016	8.7171	39.6238	1283.0	977932.345	978151.280	1.090	395.928	123.743	54.340
118	24032016	8.7166	39.6327	1283.6	977932.058	978151.267	1.120	396.128	123.805	54.234
119	16032016	8.7167	39.6420	1283.3	977931.968	978151.270	1.190	396.017	123.771	54.135
120	16032016	8.7167	39.6512	1276.2	977932.127	978151.271	1.333	393.826	123.086	52.930
121	28022016	8.7100	39.4841	1380.5	977879.472	978151.088	1.441	426.033	133.152	22.707
122	10032016	8.7077	39.4133	1517.5	977832.472	978151.028	1.339	468.286	146.357	4.712
123	10032016	8.7079	39.4223	1503.5	977837.622	978151.031	1.303	463.970	145.008	6.856
124	11032016	8.7078	39.4317	1492.0	977842.757	978151.030	1.270	460.434	143.903	9.528
125	10032016	8.7077	39.4407	1479.0	977847.644	978151.028	1.250	456.424	142.650	11.640
126	11032016	8.7078	39.4501	1462.3	977852.752	978151.030	1.240	451.251	141.033	13.180
127	12032016	8.7078	39.4588	1442.2	977859.164	978151.029	1.270	445.048	139.094	15.358
128	13032016	8.7084	39.4685	1421.1	977866.088	978151.046	1.310	438.553	137.065	17.841
129	28022016	8.7077	39.4772	1397.6	977873.227	978151.028	1.371	431.285	134.793	20.062
130	28022016	8.7078	39.4818	1390.9	977876.071	978151.029	1.374	429.217	134.147	21.486
131	28022016	8.7078	39.4865	1364.8	977883.127	978151.030	1.701	421.180	131.635	23.344
132	02032016	8.7077	39.4910	1300.1	977898.545	978151.027	1.884	401.214	125.395	25.221
133	02032016	8.7080	39.4954	1314.8	977895.634	978151.035	1.906	405.757	126.815	25.448
134	10032016	8.7086	39.5044	1242.5	977913.995	978151.051	1.961	383.421	119.834	28.492
135	11032016	8.7094	39.5111	1232.6	977917.851	978151.073	1.933	380.382	118.884	30.209
136	11032016	8.7142	39.5218	1210.6	977925.761	978151.202	2.034	373.602	116.765	33.430
137	30032016	8.7062	39.5329	1228.1	977926.065	978150.987	1.594	379.006	118.454	37.223
138	11032016	8.7073	39.5431	1228.8	977929.045	978151.015	1.536	379.222	118.521	40.267
139	11032016	8.7079	39.5487	1228.6	977930.062	978151.034	1.645	379.135	118.494	41.314
140	18032016	8.7075	39.5606	1289.9	977920.999	978151.020	2.199	398.049	124.406	45.821
141	18032016	8.7081	39.5682	1272.1	977928.540	978151.039	1.357	392.560	122.690	48.728
142	18032016	8.7081	39.5784	1272.8	977931.127	978151.038	1.243	392.791	122.762	51.361
143	19032016	8.7084	39.5869	1263.3	977934.421	978151.045	1.462	389.865	121.848	52.855
144	19032016	8.7074	39.5961	1252.7	977938.969	978151.020	1.338	386.568	120.817	55.038
145	24032016	8.7079	39.6052	1266.6	977937.154	978151.033	1.149	390.879	122.165	55.985
146	24032016	8.7079	39.6144	1269.4	977936.491	978151.032	1.213	391.748	122.436	55.984
147	24032016	8.7079	39.6234	1284.3	977932.689	978151.033	1.208	396.321	123.866	55.319
148	24032016	8.7080	39.6324	1293.6	977929.636	978151.036	1.082	399.193	124.763	54.112
149	16032016	8.7075	39.6405	1313.8	977924.012	978151.022	1.458	405.451	126.719	53.180
150	16032016	8.7075	39.6510	1286.6	977929.574	978151.023	1.100	397.055	124.095	52.611
151	28022016	8.7054	39.4795	1390.1	977875.039	978150.965	1.395	428.978	134.072	20.375
152	28022016	8.7053	39.4840	1379.1	977879.339	978150.962	1.589	425.602	133.017	22.551
153	02032016	8.7053	39.4887	1301.7	977897.084	978150.962	2.165	401.714	125.551	24.449

List of Bouguer Anomaly (3/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
154	02032016	8.7062	39.4931	1292.0	977900.075	978150.986	2.211	398.720	124.615	25.405
155	01042016	8.7053	39.4979	1290.1	977901.807	978150.963	1.646	398.127	124.430	26.187
156	28022016	8.7031	39.4818	1391.8	977875.875	978150.903	1.429	429.494	134.233	21.662
157	03042016	8.7031	39.4864	1323.7	977892.117	978150.903	1.876	408.487	127.668	23.909
158	02032016	8.7031	39.4910	1294.1	977898.903	978150.904	2.313	399.351	124.813	24.851
159	29022016	8.7031	39.4955	1287.6	977901.090	978150.904	2.083	397.342	124.185	25.427
160	29022016	8.7029	39.4999	1291.6	977901.395	978150.899	1.707	398.574	124.569	26.207
161	02032016	8.7032	39.5046	1245.5	977913.633	978150.905	1.923	384.353	120.125	28.879
162	02032016	8.7033	39.5094	1244.8	977915.132	978150.908	1.811	384.144	120.060	30.119
163	25022016	8.7030	39.5139	1254.7	977913.621	978150.901	1.638	387.207	121.017	30.547
164	27022016	8.7008	39.4795	1383.8	977877.315	978150.842	1.435	427.040	133.466	21.482
165	28022016	8.7007	39.4843	1349.8	977885.982	978150.839	1.691	416.563	130.192	23.206
166	02032016	8.7007	39.4890	1301.2	977897.094	978150.839	2.158	401.552	125.500	24.465
167	29022016	8.7008	39.4933	1321.9	977893.070	978150.841	1.673	407.942	127.497	24.347
168	29022016	8.7009	39.4978	1267.4	977906.386	978150.843	2.246	391.116	122.239	26.667
169	29022016	8.7008	39.5024	1249.8	977911.837	978150.842	1.949	385.688	120.542	28.090
170	02032016	8.7009	39.5070	1250.2	977912.978	978150.844	1.719	385.818	120.583	29.089
171	25022016	8.7008	39.5115	1261.2	977911.586	978150.842	1.604	389.200	121.640	29.908
172	25022016	8.7008	39.5161	1261.6	977912.719	978150.840	1.511	389.318	121.677	31.031
173	06032016	8.7008	39.5206	1250.9	977916.459	978150.841	1.576	386.024	120.647	32.570
174	10032016	8.6987	39.4132	1505.4	977834.833	978150.785	1.249	464.579	145.199	4.677
175	10032016	8.6987	39.4222	1495.5	977838.548	978150.783	1.228	461.523	144.244	6.272
176	10032016	8.6987	39.4314	1481.5	977844.480	978150.783	1.233	457.205	142.894	9.241
177	10032016	8.6986	39.4406	1467.8	977848.722	978150.782	1.214	452.958	141.567	10.546
178	11032016	8.6986	39.4499	1447.0	977855.275	978150.782	1.258	446.540	139.561	12.731
179	12032016	8.6986	39.4589	1435.2	977860.788	978150.782	1.250	442.916	138.428	15.744
180	13032016	8.6985	39.4681	1402.5	977869.859	978150.780	1.326	432.825	135.274	17.956
181	27022016	8.6985	39.4773	1384.5	977876.191	978150.780	1.387	427.244	133.530	20.512
182	28022016	8.6987	39.4818	1353.5	977884.560	978150.783	1.653	417.677	130.540	22.567
183	28022016	8.6987	39.4864	1334.1	977889.339	978150.784	1.737	411.713	128.676	23.329
184	29022016	8.6986	39.4909	1353.8	977885.432	978150.781	1.742	417.788	130.575	23.607
185	06032016	8.6986	39.4956	1292.1	977900.108	978150.781	2.125	398.751	124.625	25.578
186	29022016	8.6986	39.5001	1255.4	977909.589	978150.782	2.005	387.412	121.081	27.143
187	29022016	8.6987	39.5047	1245.8	977913.506	978150.784	1.989	384.444	120.153	29.001
188	25022016	8.6986	39.5094	1260.8	977910.794	978150.783	1.699	389.072	121.600	29.183
189	25022016	8.6986	39.5138	1263.3	977911.463	978150.782	1.537	389.839	121.840	30.217
190	06032016	8.6985	39.5184	1260.2	977913.339	978150.779	1.512	388.892	121.544	31.420
191	07032016	8.6986	39.5231	1256.4	977915.244	978150.782	1.448	387.739	121.183	32.466
192	24022016	8.6986	39.5276	1238.4	977922.023	978150.781	1.709	382.165	119.441	35.675
193	30032016	8.6985	39.5322	1252.6	977920.958	978150.780	1.456	386.563	120.816	37.381
194	03042016	8.6985	39.5368	1253.0	977922.564	978150.778	1.453	386.672	120.850	39.061
195	03042016	8.6984	39.5414	1250.0	977923.143	978150.777	1.481	385.751	120.562	39.036
196	28032016	8.6985	39.5503	1278.7	977916.870	978150.780	1.406	394.617	123.333	38.781
197	18032016	8.6989	39.5593	1269.1	977924.960	978150.791	1.351	391.633	122.400	44.752
198	19032016	8.6982	39.5702	1274.9	977926.848	978150.770	1.233	393.440	122.965	47.786
199	19032016	8.6978	39.5779	1273.9	977930.126	978150.761	1.230	393.130	122.868	50.858
200	26032016	8.6984	39.5876	1264.5	977935.389	978150.777	1.307	390.219	121.958	54.179
201	26032016	8.6985	39.5964	1258.8	977938.117	978150.780	1.214	388.451	121.406	55.596
202	26032016	8.6993	39.6057	1273.4	977936.384	978150.802	1.130	392.979	122.821	56.870
203	26032016	8.6988	39.6146	1290.7	977932.782	978150.786	1.073	398.323	124.491	56.900
204	26032016	8.6994	39.6235	1307.4	977928.210	978150.802	1.066	403.454	126.095	55.833
205	26032016	8.6978	39.6332	1318.1	977923.807	978150.760	1.169	406.780	127.134	53.862
206	16032016	8.6987	39.6427	1318.5	977921.350	978150.784	1.723	406.881	127.166	52.004
207	16032016	8.6985	39.6510	1253.3	977936.068	978150.779	1.319	386.771	120.881	52.498
208	27022016	8.6962	39.4795	1381.0	977877.805	978150.717	1.357	426.170	133.194	21.420
209	28022016	8.6963	39.4841	1343.3	977886.546	978150.720	1.572	414.548	129.562	22.384
210	28022016	8.6962	39.4887	1321.7	977893.141	978150.718	1.994	407.870	127.475	24.812
211	06032016	8.6964	39.4933	1332.0	977890.957	978150.722	1.779	411.051	128.469	24.596
212	06032016	8.6962	39.4978	1260.2	977908.350	978150.718	2.195	388.887	121.542	27.172
214	25022016	8.6961	39.5070	1269.0	977908.796	978150.714	1.595	391.608	122.393	28.892
215	25022016	8.6964	39.5115	1268.7	977909.261	978150.723	1.526	391.516	122.364	29.216
216	06032016	8.6963	39.5162	1262.2	977911.768	978150.719	1.557	389.505	121.735	30.376
217	07032016	8.6963	39.5206	1254.7	977915.898	978150.720	1.557	387.204	121.016	32.924
218	24022016	8.6963	39.5253	1243.1	977919.890	978150.719	1.604	383.618	119.895	34.498
219	30032016	8.6961	39.5299	1251.5	977920.522	978150.713	1.539	386.220	120.709	36.859
220	03042016	8.6963	39.5342	1254.2	977921.496	978150.720	1.453	387.039	120.965	38.304
221	03042016	8.6963	39.5390	1250.3	977922.438	978150.720	1.546	385.839	120.590	38.514
222	28032016	8.6962	39.5435	1249.6	977923.634	978150.716	1.540	385.616	120.520	39.554

List of Bouguer Anomaly (4/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
223	28032016	8.6965	39.5483	1267.6	977918.162	978150.725	1.372	391.192	122.262	37.738
224	27022016	8.6943	39.4774	1375.2	977878.097	978150.665	1.412	424.383	132.636	20.591
225	27022016	8.6940	39.4818	1346.9	977885.109	978150.657	1.667	415.643	129.904	21.858
226	28022016	8.6939	39.4864	1337.2	977889.057	978150.656	1.969	412.651	128.969	24.052
227	06032016	8.6940	39.4908	1359.3	977884.714	978150.658	1.599	419.472	131.101	24.026
228	06032016	8.6939	39.4955	1274.9	977904.303	978150.656	2.423	393.435	122.963	26.541
229	06032016	8.6941	39.5004	1269.5	977906.610	978150.661	1.805	391.767	122.442	27.079
230	29022016	8.6939	39.5047	1268.1	977908.131	978150.654	1.772	391.321	122.303	28.267
231	25022016	8.6939	39.5092	1271.5	977908.822	978150.654	1.560	392.374	122.632	29.470
232	06032016	8.6939	39.5137	1262.1	977911.001	978150.656	1.653	389.474	121.725	29.746
233	07032016	8.6941	39.5184	1263.2	977913.404	978150.660	1.493	389.813	121.832	32.219
234	24022016	8.6939	39.5230	1248.4	977917.044	978150.656	1.593	385.249	120.405	32.825
235	30032016	8.6940	39.5275	1237.8	977922.565	978150.656	1.783	381.977	119.382	36.286
236	03042016	8.6940	39.5320	1253.4	977921.260	978150.657	1.535	386.786	120.885	38.039
237	03042016	8.6940	39.5367	1250.6	977922.632	978150.658	1.550	385.932	120.618	38.837
238	28032016	8.6940	39.5413	1252.4	977922.134	978150.656	1.533	386.479	120.789	38.700
239	28032016	8.6941	39.5458	1256.1	977921.871	978150.662	1.654	387.638	121.152	39.349
240	28032016	8.6940	39.5504	1262.9	977921.890	978150.658	1.607	389.720	121.803	40.757
241	23032016	8.6955	39.5563	1289.8	977919.030	978150.697	1.238	398.018	124.396	43.193
242	18032016	8.6939	39.5596	1270.5	977923.297	978150.656	1.357	392.069	122.537	43.530
243	27022016	8.6917	39.4794	1361.7	977881.716	978150.596	1.621	420.232	131.339	21.634
244	27022016	8.6916	39.4840	1375.4	977880.647	978150.594	1.574	424.444	132.655	23.416
245	27022016	8.6917	39.4887	1399.6	977875.839	978150.596	1.986	431.905	134.987	24.147
246	06032016	8.6917	39.4932	1321.4	977893.378	978150.597	1.848	407.790	127.450	24.969
247	06032016	8.6916	39.4979	1270.9	977905.493	978150.593	1.919	392.212	122.581	26.449
248	06032016	8.6917	39.5023	1277.3	977905.957	978150.595	1.671	394.160	123.190	28.002
249	25022016	8.6918	39.5069	1276.7	977907.023	978150.599	1.573	394.004	123.141	28.859
250	06032016	8.6917	39.5114	1268.3	977909.109	978150.596	1.610	391.409	122.330	29.201
251	07032016	8.6916	39.5161	1267.1	977911.986	978150.594	1.545	391.029	122.212	31.755
252	24022016	8.6916	39.5206	1257.5	977915.951	978150.594	1.573	388.075	121.288	33.717
253	30032016	8.6916	39.5253	1241.1	977921.204	978150.592	1.712	382.997	119.701	35.620
254	03042016	8.6916	39.5297	1256.3	977919.889	978150.592	1.479	387.697	121.170	37.303
255	03042016	8.6917	39.5344	1258.9	977920.391	978150.595	1.443	388.507	121.423	38.323
256	28032016	8.6917	39.5390	1255.6	977921.000	978150.596	1.500	387.472	121.100	38.276
257	28032016	8.6917	39.5435	1261.4	977920.288	978150.597	1.521	389.255	121.657	38.810
258	28032016	8.6917	39.5480	1299.6	977911.975	978150.596	1.900	401.062	125.347	38.994
259	23032016	8.6917	39.5527	1283.9	977916.630	978150.596	2.073	396.213	123.832	40.489
260	23032016	8.6916	39.5573	1279.5	977920.154	978150.594	1.418	394.869	123.412	42.435
261	22032016	8.6917	39.5619	1275.0	977924.030	978150.595	1.280	393.469	122.974	45.210
262	22032016	8.6917	39.5665	1274.4	977925.448	978150.596	1.308	393.270	122.912	46.518
263	21032016	8.6917	39.5710	1273.8	977927.000	978150.595	1.253	393.096	122.858	47.896
264	21032016	8.6917	39.5757	1272.5	977929.278	978150.597	1.272	392.695	122.732	49.916
265	19032016	8.6917	39.5798	1271.1	977931.382	978150.595	1.213	392.250	122.593	51.657
266	10032016	8.6894	39.4132	1494.8	977838.239	978150.535	1.265	461.299	144.174	6.095
267	10032016	8.6895	39.4224	1484.0	977841.603	978150.537	1.236	457.960	143.130	7.132
268	10032016	8.6896	39.4317	1472.2	977847.150	978150.540	1.201	454.328	141.995	10.143
269	13032016	8.6882	39.4420	1445.3	977854.465	978150.501	1.444	446.020	139.398	12.030
270	12032016	8.6895	39.4498	1433.6	977859.386	978150.537	1.311	442.410	138.270	14.300
271	12032016	8.6889	39.4589	1413.8	977866.481	978150.520	1.381	436.295	136.359	17.278
272	13032016	8.6890	39.4680	1395.6	977872.262	978150.523	1.332	430.686	134.606	19.151
273	27022016	8.6894	39.4772	1375.3	977878.239	978150.534	1.449	424.414	132.646	20.922
274	29022016	8.6894	39.4818	1367.3	977882.153	978150.535	1.491	421.935	131.871	23.173
275	06032016	8.6894	39.4863	1441.9	977866.789	978150.534	2.135	444.973	139.071	24.292
276	06032016	8.6895	39.4911	1367.0	977883.142	978150.535	2.122	421.853	131.845	24.737
277	06032016	8.6894	39.4956	1271.7	977905.332	978150.535	2.381	392.450	122.656	26.973
278	06032016	8.6893	39.5000	1280.6	977904.842	978150.531	1.721	395.202	123.516	27.718
279	06032016	8.6894	39.5047	1276.6	977906.027	978150.533	1.706	393.960	123.128	28.032
280	06032016	8.6894	39.5093	1276.9	977907.568	978150.535	1.552	394.050	123.156	29.479
281	07032016	8.6895	39.5138	1271.2	977909.948	978150.536	1.534	392.282	122.603	30.625
282	25032016	8.6894	39.5184	1267.0	977913.191	978150.535	1.499	390.990	122.199	32.945
283	30032016	8.6894	39.5229	1258.2	977916.425	978150.533	1.560	388.291	121.356	34.387
284	03042016	8.6889	39.5273	1246.9	977920.860	978150.520	1.680	384.781	120.259	36.542
285	03042016	8.6895	39.5322	1259.8	977920.077	978150.537	1.456	388.783	121.509	38.270
286	28032016	8.6894	39.5369	1262.9	977918.909	978150.533	1.392	389.745	121.810	37.703
287	28032016	8.6894	39.5412	1263.2	977919.714	978150.534	1.433	389.809	121.830	38.592
288	28032016	8.6892	39.5463	1299.9	977911.805	978150.528	1.527	401.143	125.373	38.575
289	23032016	8.6894	39.5505	1323.8	977908.815	978150.535	1.622	408.524	127.679	40.747
290	23032016	8.6894	39.5551	1298.3	977914.272	978150.534	1.448	400.646	125.217	40.615

List of Bouguer Anomaly (5/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
291	22032016	8.6895	39.5597	1279.3	977921.676	978150.535	1.300	394.796	123.389	43.848
292	22032016	8.6894	39.5643	1268.1	977925.508	978150.533	1.481	391.340	122.309	45.487
293	21032016	8.6894	39.5688	1276.1	977925.568	978150.535	1.260	393.816	123.082	47.026
294	21032016	8.6897	39.5733	1275.8	977927.559	978150.541	1.171	393.699	123.046	48.842
295	19032016	8.6894	39.5780	1270.8	977930.877	978150.535	1.197	392.161	122.565	51.135
296	19032016	8.6894	39.5824	1267.9	977932.719	978150.534	1.222	391.283	122.291	52.400
297	09032016	8.6894	39.5871	1268.1	977934.089	978150.535	1.192	391.333	122.306	53.772
298	26032016	8.6892	39.5960	1262.0	977936.434	978150.528	1.206	389.453	121.719	54.846
299	26032016	8.6894	39.6053	1268.5	977936.751	978150.535	1.221	391.460	122.346	56.551
300	26032016	8.6894	39.6142	1304.8	977928.828	978150.533	1.164	402.659	125.846	56.271
301	26032016	8.6894	39.6239	1321.2	977924.002	978150.533	1.250	407.737	127.433	55.022
302	26032016	8.6896	39.6331	1312.4	977924.747	978150.538	1.102	404.995	126.577	53.730
303	26032016	8.6896	39.6412	1276.0	977931.409	978150.540	1.349	393.761	123.065	52.913
304	27022016	8.6871	39.4750	1398.5	977873.137	978150.472	1.240	431.580	134.885	20.599
305	27022016	8.6871	39.4795	1365.8	977882.232	978150.471	1.473	421.483	131.729	22.987
306	06032016	8.6872	39.4840	1371.5	977882.044	978150.475	1.618	423.240	132.279	24.148
307	06032016	8.6869	39.4887	1374.5	977881.699	978150.467	1.799	424.169	132.569	24.631
308	05032016	8.6868	39.4935	1306.6	977898.022	978150.465	1.927	403.203	126.017	26.671
309	06032016	8.6871	39.4979	1291.3	977901.722	978150.473	1.703	398.483	124.541	26.894
310	29022016	8.6871	39.5024	1284.3	977903.790	978150.472	1.646	396.320	123.865	27.419
311	06032016	8.6871	39.5071	1280.8	977906.352	978150.471	1.603	395.263	123.535	29.212
312	07032016	8.6871	39.5116	1275.9	977908.127	978150.472	1.560	393.749	123.062	29.903
313	25032016	8.6872	39.5160	1268.6	977912.288	978150.473	1.578	391.481	122.353	32.522
314	30032016	8.6872	39.5207	1259.6	977915.586	978150.475	1.616	388.713	121.488	33.952
315	03042016	8.6872	39.5253	1256.2	977917.894	978150.475	1.613	387.675	121.163	35.544
316	03042016	8.6871	39.5298	1256.7	977920.181	978150.473	1.621	387.815	121.207	37.937
317	28032016	8.6872	39.5344	1260.7	977920.184	978150.473	1.481	389.038	121.589	38.641
318	28032016	8.6870	39.5391	1262.7	977918.883	978150.470	1.561	389.680	121.790	37.864
319	28032016	8.6871	39.5436	1267.5	977918.091	978150.473	1.516	391.146	122.248	38.032
320	23032016	8.6872	39.5484	1314.5	977909.254	978150.474	1.375	405.660	126.784	39.031
321	23032016	8.6871	39.5530	1302.5	977913.100	978150.471	1.664	401.941	125.622	40.612
322	22032016	8.6871	39.5573	1289.9	977917.778	978150.473	1.242	398.075	124.414	42.208
323	22032016	8.6872	39.5619	1279.5	977922.211	978150.473	1.226	394.840	123.402	44.401
324	21032016	8.6872	39.5665	1263.6	977926.890	978150.474	1.563	389.934	121.869	46.044
325	21032016	8.6874	39.5709	1272.4	977927.449	978150.480	1.278	392.663	122.722	48.188
326	19032016	8.6871	39.5756	1272.7	977929.746	978150.472	1.188	392.760	122.752	50.469
327	19032016	8.6871	39.5801	1265.7	977932.714	978150.471	1.344	390.605	122.079	52.113
328	09032016	8.6869	39.5846	1268.3	977933.357	978150.467	1.199	391.400	122.328	53.161
329	27022016	8.6848	39.4772	1367.1	977881.388	978150.410	1.583	421.882	131.854	22.589
330	06032016	8.6849	39.4817	1359.3	977884.363	978150.412	1.522	419.487	131.106	23.854
331	06032016	8.6846	39.4864	1375.5	977880.983	978150.406	1.458	424.471	132.663	23.842
332	05032016	8.6846	39.4912	1306.7	977896.756	978150.404	2.328	403.261	126.034	25.906
333	05032016	8.6849	39.4955	1300.0	977899.655	978150.413	1.690	401.186	125.386	26.731
334	28022016	8.6849	39.5001	1292.3	977902.298	978150.413	1.635	398.809	124.643	27.686
335	06032016	8.6849	39.5046	1288.4	977903.658	978150.412	1.593	397.599	124.265	28.173
336	07032016	8.6848	39.5092	1279.1	977907.369	978150.411	1.623	394.739	123.371	29.949
337	25032016	8.6848	39.5138	1271.6	977910.487	978150.411	1.597	392.427	122.649	31.451
338	30032016	8.6850	39.5183	1267.6	977913.269	978150.415	1.544	391.192	122.263	33.327
339	03042016	8.6849	39.5230	1259.4	977916.019	978150.412	1.653	388.655	121.470	34.446
340	03042016	8.6848	39.5275	1266.0	977917.501	978150.410	1.428	390.685	122.104	37.100
341	28032016	8.6849	39.5322	1262.7	977919.623	978150.413	1.469	389.655	121.782	38.552
342	26032016	8.6848	39.5367	1267.2	977917.841	978150.410	1.464	391.047	122.217	37.725
343	28032016	8.6848	39.5414	1265.8	977918.142	978150.410	1.469	390.619	122.083	37.736
344	23032016	8.6848	39.5459	1270.0	977918.514	978150.411	1.529	391.910	122.487	39.055
345	23032016	8.6849	39.5505	1284.5	977916.156	978150.411	1.439	396.393	123.888	39.690
346	22032016	8.6849	39.5550	1287.4	977916.867	978150.412	1.324	397.278	124.164	40.893
347	22032016	8.6848	39.5597	1279.2	977920.006	978150.410	1.316	394.748	123.374	42.286
348	21032016	8.6848	39.5643	1275.7	977923.424	978150.411	1.256	393.694	123.044	44.918
349	21032016	8.6848	39.5688	1272.8	977926.227	978150.410	1.236	392.772	122.756	47.069
350	19032016	8.6849	39.5732	1273.0	977928.319	978150.412	1.213	392.848	122.780	49.188
351	19032016	8.6849	39.5780	1265.1	977931.824	978150.414	1.339	390.413	122.019	51.144
352	09032016	8.6848	39.5824	1261.6	977934.024	978150.410	1.308	389.317	121.676	52.563
353	09032016	8.6850	39.5870	1272.1	977933.279	978150.415	1.128	392.564	122.691	53.865
354	27022016	8.6824	39.4751	1379.6	977877.126	978150.347	1.484	425.739	133.060	20.942
355	06032016	8.6826	39.4795	1364.3	977882.347	978150.351	1.494	421.008	131.581	22.917
356	06032016	8.6825	39.4841	1359.9	977884.545	978150.349	1.484	419.664	131.161	24.183
357	29022016	8.6826	39.4887	1334.0	977890.335	978150.350	1.659	411.681	128.666	24.659
358	02032016	8.6826	39.4933	1305.7	977898.434	978150.351	1.741	402.937	125.933	26.828

List of Bouguer Anomaly (6/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
359	28022016	8.6825	39.4977	1299.3	977900.368	978150.349	1.648	400.968	125.318	27.317
360	06032016	8.6825	39.5025	1297.0	977901.149	978150.349	1.562	400.253	125.094	27.521
361	07032016	8.6827	39.5069	1286.0	977905.465	978150.353	1.586	396.868	124.036	29.530
362	25032016	8.6827	39.5116	1275.4	977909.072	978150.354	1.647	393.578	123.008	30.935
363	30032016	8.6825	39.5160	1271.8	977911.492	978150.349	1.565	392.480	122.665	32.523
364	03042016	8.6826	39.5208	1260.1	977915.246	978150.352	1.743	388.857	121.533	33.961
365	03042016	8.6826	39.5253	1251.8	977919.288	978150.350	1.804	386.296	120.732	36.306
366	01042016	8.6826	39.5298	1260.7	977919.443	978150.351	1.544	389.064	121.597	38.102
367	26032016	8.6827	39.5343	1263.5	977919.503	978150.353	1.499	389.902	121.859	38.692
368	26032016	8.6827	39.5388	1263.6	977918.049	978150.353	1.650	389.946	121.873	37.419
369	23032016	8.6826	39.5436	1268.2	977917.825	978150.351	1.493	391.367	122.317	38.017
370	23032016	8.6826	39.5481	1289.0	977913.361	978150.351	1.372	397.772	124.319	37.835
371	22032016	8.6826	39.5527	1289.4	977916.146	978150.352	1.305	397.907	124.361	40.645
372	22032016	8.6826	39.5573	1288.3	977917.177	978150.350	1.260	397.580	124.259	41.408
373	21032016	8.6826	39.5621	1276.5	977922.009	978150.351	1.349	393.933	123.119	43.821
374	21032016	8.6826	39.5665	1272.0	977925.284	978150.351	1.300	392.550	122.687	46.096
375	19032016	8.6826	39.5710	1271.9	977927.102	978150.351	1.244	392.495	122.670	47.821
376	19032016	8.6826	39.5756	1270.9	977929.264	978150.351	1.223	392.214	122.582	49.768
377	09032016	8.6827	39.5802	1264.4	977932.596	978150.353	1.296	390.198	121.952	51.785
378	09032016	8.6826	39.5848	1258.6	977934.921	978150.352	1.341	388.417	121.395	52.932
379	22032016	8.6826	39.5893	1257.9	977936.119	978150.351	1.318	388.182	121.322	53.946
380	10032016	8.6803	39.4041	1488.6	977840.779	978150.289	1.257	459.387	143.576	7.558
381	10032016	8.6803	39.4132	1479.8	977843.290	978150.290	1.242	456.661	142.724	8.179
382	11032016	8.6803	39.4223	1471.4	977844.925	978150.289	1.207	454.084	141.919	8.008
383	10032016	8.6804	39.4315	1458.4	977851.545	978150.291	1.226	450.056	140.660	11.877
384	13032016	8.6803	39.4406	1450.5	977853.643	978150.290	1.198	447.634	139.903	12.282
385	12032016	8.6803	39.4496	1435.6	977859.230	978150.290	1.232	443.034	138.465	14.740
386	13032016	8.6818	39.4586	1417.1	977865.459	978150.330	1.274	437.321	136.679	17.045
387	13032016	8.6801	39.4680	1399.4	977872.814	978150.283	1.298	431.844	134.968	20.706
388	27022016	8.6804	39.4726	1393.3	977874.454	978150.291	1.336	429.958	134.378	21.079
389	06032016	8.6803	39.4772	1368.4	977881.086	978150.290	1.453	422.295	131.983	22.560
390	06032016	8.6803	39.4818	1360.3	977883.521	978150.289	1.449	419.789	131.200	23.270
391	29022016	8.6804	39.4865	1349.2	977886.480	978150.292	1.575	416.377	130.134	24.006
392	02032016	8.6804	39.4908	1311.0	977896.688	978150.293	1.845	404.578	126.446	26.372
393	05032016	8.6802	39.4955	1311.9	977896.749	978150.286	1.572	404.855	126.533	26.357
394	06032016	8.6802	39.5002	1301.9	977899.671	978150.285	1.582	401.754	125.563	27.158
395	07032016	8.6803	39.5047	1292.0	977902.814	978150.289	1.616	398.725	124.617	28.249
396	25032016	8.6803	39.5092	1280.9	977907.421	978150.289	1.701	395.297	123.545	30.585
397	30032016	8.6804	39.5139	1277.3	977909.921	978150.290	1.575	394.165	123.192	32.179
398	31032016	8.6804	39.5182	1263.6	977914.603	978150.292	1.773	389.958	121.877	34.165
399	03042016	8.6805	39.5229	1264.6	977915.744	978150.293	1.616	390.258	121.971	35.355
400	01042016	8.6803	39.5275	1264.8	977917.786	978150.288	1.538	390.307	121.986	37.357
401	26032016	8.6804	39.5322	1267.2	977918.456	978150.292	1.500	391.049	122.218	38.495
402	26032016	8.6803	39.5367	1274.0	977915.812	978150.288	1.426	393.142	122.872	37.220
403	23032016	8.6803	39.5414	1267.4	977917.084	978150.289	1.562	391.130	122.243	37.244
404	23032016	8.6803	39.5460	1303.4	977909.302	978150.288	1.317	402.227	125.711	36.847
405	22032016	8.6803	39.5504	1290.9	977914.821	978150.289	1.267	398.359	124.503	39.656
406	22032016	8.6803	39.5550	1289.7	977915.835	978150.288	1.281	397.986	124.386	40.428
407	21032016	8.6803	39.5597	1286.5	977918.693	978150.289	1.225	397.013	124.082	42.560
408	21032016	8.6803	39.5643	1278.8	977922.321	978150.290	1.278	394.632	123.338	44.604
409	19032016	8.6803	39.5688	1272.7	977925.744	978150.288	1.322	392.762	122.753	46.787
410	19032016	8.6802	39.5733	1275.9	977926.810	978150.288	1.189	393.728	123.055	48.383
411	09032016	8.6803	39.5778	1273.0	977929.265	978150.289	1.210	392.844	122.779	50.251
412	09032016	8.6804	39.5825	1266.7	977932.217	978150.291	1.208	390.911	122.175	51.871
413	22032016	8.6802	39.5870	1260.5	977934.720	978150.288	1.225	388.980	121.571	53.066
414	08042016	8.6802	39.5961	1262.6	977935.861	978150.287	1.232	389.641	121.778	54.670
420	29022016	8.6781	39.4749	1373.6	977879.096	978150.228	1.453	423.896	132.484	21.733
421	06032016	8.6781	39.4795	1364.6	977881.734	978150.230	1.451	421.101	131.610	22.445
422	29022016	8.6780	39.4841	1362.5	977883.234	978150.227	1.386	420.483	131.417	23.459
423	29022016	8.6782	39.4887	1323.5	977892.617	978150.234	1.775	408.429	127.650	24.937
424	02032016	8.6782	39.4938	1323.9	977894.130	978150.232	1.512	408.563	127.692	26.281
425	06032016	8.6781	39.4977	1307.2	977897.809	978150.229	1.656	403.408	126.080	26.564
426	07032016	8.6781	39.5024	1296.1	977900.592	978150.229	1.789	399.978	125.008	27.121
427	25032016	8.6780	39.5069	1294.4	977902.888	978150.227	1.655	399.451	124.844	28.923
428	30032016	8.6781	39.5116	1281.3	977908.782	978150.229	1.757	395.421	123.584	32.147
429	31032016	8.6781	39.5160	1283.3	977909.952	978150.229	1.626	396.014	123.770	33.593
430	31032016	8.6781	39.5206	1272.2	977913.604	978150.229	1.623	392.604	122.704	34.898
431	01042016	8.6780	39.5252	1268.2	977916.144	978150.227	1.539	391.382	122.322	36.516

List of Bouguer Anomaly (7/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
432	26032016	8.6781	39.5298	1273.2	977916.649	978150.231	1.489	392.910	122.800	38.018
433	26032016	8.6781	39.5343	1270.5	977917.226	978150.229	1.586	392.087	122.542	38.128
434	23032016	8.6782	39.5388	1270.3	977915.461	978150.232	1.705	392.014	122.519	36.428
435	23032016	8.6781	39.5436	1274.3	977915.305	978150.229	1.770	393.244	122.904	37.186
436	22032016	8.6781	39.5482	1291.8	977913.889	978150.230	1.336	398.656	124.595	39.056
437	22032016	8.6781	39.5527	1291.9	977915.795	978150.230	1.275	398.667	124.599	40.908
438	21032016	8.6781	39.5572	1287.1	977917.459	978150.229	1.259	397.210	124.143	41.556
439	21032016	8.6781	39.5619	1286.3	977919.233	978150.230	1.233	396.941	124.059	43.118
440	19032016	8.6782	39.5667	1278.0	977923.545	978150.232	1.321	394.389	123.262	45.761
441	19032016	8.6782	39.5711	1275.3	977925.843	978150.231	1.247	393.560	123.003	47.417
442	09032016	8.6781	39.5756	1277.4	977927.435	978150.228	1.183	394.196	123.201	49.385
443	09032016	8.6779	39.5802	1270.3	977930.630	978150.224	1.273	392.010	122.518	51.171
444	22032016	8.6781	39.5847	1259.0	977934.146	978150.229	1.366	388.538	121.433	52.387
445	22032016	8.6782	39.5893	1263.3	977934.353	978150.233	1.254	389.866	121.848	53.392
446	27022016	8.6757	39.4728	1389.8	977875.992	978150.165	1.333	428.879	134.041	21.998
447	08032016	8.6763	39.4770	1369.8	977880.685	978150.180	1.432	422.722	132.117	22.542
448	29022016	8.6757	39.4818	1357.3	977883.476	978150.166	1.483	418.853	130.908	22.739
449	29022016	8.6757	39.4863	1344.5	977887.617	978150.166	1.484	414.915	129.677	24.173
450	29022016	8.6746	39.4908	1333.6	977891.272	978150.137	1.518	411.555	128.627	25.581
451	06032016	8.6760	39.4955	1319.8	977895.086	978150.172	1.577	407.282	127.291	26.482
452	07032016	8.6757	39.5001	1305.9	977897.360	978150.167	1.951	402.992	125.950	26.186
453	25032016	8.6757	39.5045	1307.6	977899.045	978150.165	1.593	403.529	126.118	27.884
454	30032016	8.6756	39.5095	1297.0	977904.467	978150.163	1.633	400.254	125.095	31.096
455	31032016	8.6758	39.5135	1302.8	977905.153	978150.168	1.461	402.032	125.650	32.827
456	31032016	8.6759	39.5184	1284.4	977910.568	978150.170	1.710	396.365	123.879	34.594
457	01042016	8.6756	39.5230	1276.2	977913.891	978150.163	1.576	393.841	123.090	36.054
458	26032016	8.6757	39.5275	1274.9	977915.549	978150.165	1.519	393.420	122.959	37.364
459	26032016	8.6757	39.5321	1271.9	977917.263	978150.165	1.545	392.499	122.671	38.472
460	23032016	8.6761	39.5367	1280.7	977912.461	978150.176	1.987	395.228	123.524	35.976
461	23032016	8.6756	39.5415	1301.9	977908.318	978150.163	1.739	401.753	125.563	36.084
462	22032016	8.6759	39.5459	1303.8	977910.270	978150.170	1.300	402.347	125.749	37.997
463	22032016	8.6757	39.5505	1293.4	977913.931	978150.166	1.268	399.144	124.748	39.429
464	21032016	8.6757	39.5551	1287.9	977917.416	978150.166	1.291	397.444	124.217	41.769
465	21032016	8.6757	39.5597	1285.9	977918.444	978150.165	1.270	396.821	124.022	42.348
466	19032016	8.6757	39.5643	1285.7	977920.597	978150.166	1.235	396.756	124.001	44.421
467	19032016	8.6757	39.5688	1280.8	977924.090	978150.166	1.200	395.252	123.532	46.844
468	09032016	8.6757	39.5733	1278.4	977926.097	978150.166	1.214	394.520	123.303	48.363
469	09032016	8.6757	39.5780	1276.2	977927.874	978150.166	1.213	393.845	123.092	49.675
470	22032016	8.6756	39.5824	1265.0	977931.775	978150.162	1.283	390.380	122.009	51.267
471	22032016	8.6757	39.5871	1262.6	977933.495	978150.166	1.267	389.629	121.774	52.451
472	09032016	8.6734	39.4749	1369.0	977880.511	978150.103	1.498	422.477	132.040	22.343
473	08032016	8.6734	39.4796	1357.5	977883.512	978150.104	1.625	418.929	130.931	23.030
474	08032016	8.6734	39.4841	1350.3	977885.731	978150.105	1.493	416.716	130.240	23.594
475	29022016	8.6734	39.4888	1338.1	977889.850	978150.104	1.518	412.923	129.054	25.133
476	06032016	8.6734	39.4933	1333.5	977892.081	978150.104	1.504	411.505	128.611	26.375
477	07032016	8.6734	39.4977	1321.0	977894.597	978150.103	1.649	407.668	127.412	26.399
478	25032016	8.6733	39.5026	1316.8	977894.369	978150.101	2.397	406.372	127.007	26.031
479	30032016	8.6733	39.5070	1318.5	977898.550	978150.100	1.538	406.889	127.168	29.708
480	31032016	8.6734	39.5114	1303.9	977904.116	978150.103	1.546	402.380	125.759	32.180
481	31032016	8.6735	39.5163	1301.1	977906.341	978150.106	1.502	401.514	125.488	33.762
482	01042016	8.6733	39.5208	1288.9	977909.945	978150.101	1.532	397.753	124.313	34.816
483	26032016	8.6734	39.5252	1277.1	977914.235	978150.102	1.586	394.103	123.172	36.650
484	26032016	8.6737	39.5297	1275.2	977915.967	978150.110	1.601	393.530	122.993	37.995
485	23032016	8.6734	39.5343	1283.1	977913.510	978150.103	1.431	395.978	123.758	37.058
486	23032016	8.6738	39.5388	1316.7	977903.329	978150.113	1.830	406.320	126.991	34.375
487	22032016	8.6734	39.5436	1306.8	977908.721	978150.104	1.394	403.275	126.039	37.248
488	22032016	8.6734	39.5481	1298.3	977912.162	978150.103	1.292	400.649	125.218	38.782
489	21032016	8.6734	39.5526	1291.4	977915.579	978150.103	1.278	398.512	124.550	40.715
490	21032016	8.6734	39.5573	1287.3	977918.218	978150.104	1.274	397.267	124.161	42.494
491	19032016	8.6734	39.5619	1286.1	977919.795	978150.104	1.244	396.877	124.039	43.773
492	19032016	8.6734	39.5665	1282.2	977922.760	978150.105	1.261	395.699	123.671	45.945
493	09032016	8.6734	39.5710	1280.8	977924.861	978150.104	1.221	395.242	123.528	47.692
494	09032016	8.6734	39.5756	1278.1	977927.195	978150.103	1.195	394.416	123.270	49.433
495	22032016	8.6734	39.5801	1274.3	977928.468	978150.103	1.225	393.248	122.905	49.933
496	22032016	8.6734	39.5848	1261.8	977932.453	978150.104	1.355	389.389	121.699	51.394
497	10032016	8.6712	39.4041	1471.2	977845.458	978150.044	1.284	454.001	141.893	8.807
498	11032016	8.6714	39.4133	1464.1	977848.155	978150.048	1.248	451.818	141.210	9.962
499	11032016	8.6711	39.4224	1457.8	977850.156	978150.042	1.222	449.863	140.599	10.600

List of Bouguer Anomaly (8/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
500	10032016	8.6712	39.4314	1453.0	977852.042	978150.045	1.209	448.408	140.145	11.469
501	13032016	8.6713	39.4404	1438.5	977857.164	978150.048	1.239	443.933	138.746	13.542
502	13032016	8.6709	39.4496	1426.2	977862.113	978150.036	1.302	440.127	137.556	15.950
503	13032016	8.6727	39.4582	1412.0	977867.336	978150.086	1.320	435.729	136.182	18.117
504	09032016	8.6712	39.4682	1399.7	977873.722	978150.044	1.413	431.953	135.002	22.042
505	09032016	8.6712	39.4727	1371.2	977879.579	978150.043	1.726	423.167	132.256	22.174
506	09032016	8.6711	39.4773	1373.3	977880.125	978150.043	1.378	423.790	132.451	22.799
507	08032016	8.6714	39.4818	1353.3	977884.836	978150.049	1.507	417.626	130.524	23.396
508	29022016	8.6710	39.4864	1346.8	977887.385	978150.038	1.478	415.626	129.899	24.553
509	06032016	8.6711	39.4911	1339.7	977890.000	978150.041	1.502	413.430	129.213	25.678
510	04032016	8.6713	39.4955	1334.6	977891.380	978150.046	1.554	411.861	128.722	26.026
511	25032016	8.6712	39.5000	1329.4	977893.914	978150.045	1.851	410.261	128.222	27.759
512	30032016	8.6711	39.5046	1335.7	977893.824	978150.042	1.523	412.188	128.825	28.669
513	30032016	8.6714	39.5093	1305.7	977903.032	978150.050	1.845	402.930	125.931	31.826
514	31032016	8.6712	39.5138	1305.7	977904.538	978150.045	1.554	402.949	125.937	33.059
515	01042016	8.6712	39.5184	1299.7	977906.398	978150.044	1.488	401.092	125.357	33.577
516	26032016	8.6711	39.5229	1290.0	977910.248	978150.042	1.515	398.098	124.421	35.398
517	26032016	8.6713	39.5275	1277.8	977914.283	978150.047	1.555	394.328	123.242	36.876
518	23032016	8.6712	39.5321	1279.2	977914.456	978150.043	1.611	394.756	123.376	37.404
519	23032016	8.6711	39.5368	1269.2	977915.854	978150.043	1.828	391.666	122.411	36.895
520	22032016	8.6712	39.5413	1295.0	977910.871	978150.043	1.589	399.632	124.900	37.149
521	22032016	8.6711	39.5460	1300.3	977911.125	978150.043	1.330	401.257	125.408	38.261
522	21032016	8.6711	39.5504	1291.7	977913.941	978150.042	1.336	398.613	124.582	39.266
523	21032016	8.6712	39.5550	1289.2	977917.102	978150.044	1.281	397.862	124.347	41.853
524	29032016	8.6710	39.5598	1286.3	977918.922	978150.039	1.286	396.948	124.061	43.056
525	19032016	8.6712	39.5644	1285.1	977921.187	978150.044	1.257	396.586	123.948	45.038
526	09032016	8.6711	39.5688	1282.7	977923.619	978150.043	1.221	395.831	123.712	46.916
527	09032016	8.6710	39.5734	1274.2	977926.959	978150.040	1.342	393.231	122.900	48.592
528	22032016	8.6712	39.5778	1276.6	977927.422	978150.043	1.217	393.959	123.127	49.428
529	22032016	8.6711	39.5825	1273.6	977928.992	978150.043	1.194	393.027	122.836	50.334
530	22032016	8.6711	39.5872	1264.7	977931.711	978150.042	1.260	390.279	121.977	51.231
531	08042016	8.6712	39.5959	1272.6	977931.284	978150.044	1.267	392.732	122.744	52.495
537	09032016	8.6689	39.4704	1397.1	977874.432	978149.981	1.623	431.149	134.751	22.472
538	09032016	8.6688	39.4749	1368.6	977881.468	978149.981	1.583	422.355	132.002	23.423
539	09032016	8.6688	39.4796	1356.4	977884.698	978149.979	1.648	418.583	130.823	24.127
540	08032016	8.6691	39.4842	1351.0	977886.505	978149.987	1.563	416.926	130.305	24.702
541	06032016	8.6689	39.4887	1342.2	977888.898	978149.982	1.560	414.200	129.453	25.222
542	04032016	8.6689	39.4934	1342.5	977890.282	978149.983	1.496	414.296	129.483	26.608
543	25032016	8.6689	39.4978	1338.5	977891.874	978149.981	1.555	413.055	129.095	27.408
544	30032016	8.6691	39.5026	1346.0	977891.116	978149.987	1.499	415.390	129.825	28.193
545	31032016	8.6688	39.5069	1349.0	977893.000	978149.979	1.381	416.304	130.111	30.595
546	31032016	8.6689	39.5117	1320.0	977900.838	978149.983	1.588	407.347	127.312	32.479
547	01042016	8.6688	39.5163	1305.8	977905.038	978149.981	1.557	402.976	125.945	33.645
548	26032016	8.6688	39.5205	1299.2	977906.753	978149.980	1.562	400.922	125.303	33.954
549	26032016	8.6689	39.5252	1283.6	977912.042	978149.982	1.629	396.128	123.805	36.011
550	23032016	8.6688	39.5298	1284.3	977912.846	978149.981	1.536	396.345	123.873	36.872
551	23032016	8.6687	39.5345	1271.9	977915.723	978149.978	1.736	392.511	122.675	37.317
552	08032016	8.6689	39.5390	1281.3	977914.164	978149.983	1.603	395.421	123.584	37.621
553	22032016	8.6690	39.5434	1298.3	977911.148	978149.985	1.535	400.654	125.220	38.132
554	21032016	8.6688	39.5481	1294.6	977912.438	978149.979	1.378	399.502	124.860	38.479
555	21032016	8.6691	39.5528	1291.0	977915.248	978149.987	1.286	398.409	124.518	40.438
556	29032016	8.6688	39.5573	1283.7	977918.542	978149.981	1.345	396.150	123.812	42.245
557	29032016	8.6688	39.5619	1286.1	977919.872	978149.981	1.264	396.895	124.045	44.006
558	08032016	8.6688	39.5665	1278.0	977923.333	978149.980	1.313	394.384	123.260	45.790
559	09032016	8.6688	39.5710	1278.7	977925.071	978149.981	1.234	394.597	123.327	47.594
560	16032016	8.6688	39.5757	1276.1	977927.369	978149.979	1.212	393.798	123.077	49.324
561	22032016	8.6688	39.5802	1271.7	977928.787	978149.980	1.260	392.455	122.657	49.865
562	22032016	8.6689	39.5848	1265.7	977930.659	978149.982	1.286	390.598	122.077	50.484
563	09032016	8.6666	39.4726	1384.7	977877.433	978149.920	1.533	427.305	133.549	22.802
564	09032016	8.6664	39.4773	1365.3	977882.574	978149.914	1.599	421.324	131.680	23.903
565	09032016	8.6666	39.4818	1363.2	977883.483	978149.920	1.458	420.690	131.482	24.230
566	06032016	8.6666	39.4864	1354.1	977885.984	978149.920	1.558	417.863	130.598	24.887
567	04032016	8.6666	39.4910	1345.7	977888.721	978149.920	1.574	415.292	129.795	25.872
568	25032016	8.6668	39.4955	1345.9	977890.350	978149.927	1.515	415.332	129.807	27.463
569	30032016	8.6667	39.5002	1358.0	977888.642	978149.923	1.383	419.083	130.980	28.206
570	31032016	8.6666	39.5046	1354.8	977890.842	978149.922	1.532	418.090	130.669	29.873
571	31032016	8.6666	39.5092	1340.3	977896.025	978149.920	1.527	413.626	129.274	31.984
572	01042016	8.6667	39.5137	1314.3	977902.850	978149.922	1.641	405.582	126.760	33.391

List of Bouguer Anomaly (9/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
573	24022016	8.6666	39.5184	1298.6	977906.724	978149.922	1.708	400.756	125.252	34.015
574	24022016	8.6666	39.5229	1288.7	977909.381	978149.920	1.659	397.689	124.293	34.516
575	26032016	8.6666	39.5275	1284.0	977912.764	978149.922	1.622	396.228	123.836	36.855
576	23032016	8.6667	39.5321	1286.7	977912.393	978149.923	1.525	397.065	124.098	36.962
577	08032016	8.6666	39.5368	1271.6	977916.076	978149.920	1.840	392.407	122.642	37.760
578	22032016	8.6666	39.5414	1291.4	977912.099	978149.921	1.768	398.536	124.558	37.924
579	08032016	8.6665	39.5459	1306.0	977910.214	978149.919	1.341	403.018	125.958	38.696
580	21032016	8.6666	39.5505	1289.8	977914.797	978149.922	1.365	398.025	124.398	39.867
581	29032016	8.6664	39.5550	1288.5	977916.765	978149.916	1.321	397.646	124.279	41.536
582	29032016	8.6666	39.5597	1284.9	977919.034	978149.922	1.297	396.521	123.928	43.002
583	08032016	8.6666	39.5644	1280.6	977922.006	978149.920	1.321	395.186	123.511	45.083
584	08032016	8.6666	39.5688	1277.5	977924.255	978149.921	1.247	394.250	123.218	46.613
585	16032016	8.6666	39.5733	1270.0	977927.714	978149.921	1.348	391.937	122.495	48.583
586	16032016	8.6666	39.5779	1274.8	977927.264	978149.920	1.226	393.396	122.951	49.015
587	22032016	8.6665	39.5825	1271.4	977928.932	978149.917	1.239	392.363	122.629	49.989
588	22032016	8.6666	39.5870	1267.7	977929.573	978149.922	1.232	391.209	122.268	49.824
589	09032016	8.6643	39.4702	1404.5	977872.966	978149.858	1.543	433.416	135.459	22.608
590	09032016	8.6644	39.4750	1377.8	977879.288	978149.861	1.644	425.187	132.887	23.371
591	09032016	8.6642	39.4796	1366.0	977883.121	978149.857	1.506	421.534	131.745	24.558
592	06032016	8.6643	39.4841	1362.9	977884.711	978149.859	1.480	420.591	131.451	25.472
593	04032016	8.6642	39.4886	1357.2	977886.007	978149.856	1.494	418.844	130.905	25.584
594	25032016	8.6643	39.4932	1349.9	977888.946	978149.858	1.536	416.570	130.194	27.001
595	02032016	8.6641	39.4977	1352.4	977889.811	978149.854	1.510	417.335	130.433	28.369
596	31032016	8.6643	39.5024	1362.8	977888.611	978149.858	1.429	420.549	131.438	29.293
597	31032016	8.6643	39.5069	1357.1	977892.048	978149.860	1.436	418.792	130.889	31.527
598	01042016	8.6644	39.5114	1344.5	977895.776	978149.862	1.405	414.925	129.680	32.564
599	03032016	8.6642	39.5161	1311.4	977904.270	978149.856	1.712	404.694	126.482	34.338
600	26032016	8.6643	39.5208	1303.6	977905.782	978149.860	1.599	402.297	125.733	34.085
601	26032016	8.6643	39.5253	1289.7	977910.838	978149.859	1.666	398.000	124.390	36.255
602	08032016	8.6641	39.5298	1288.0	977912.290	978149.854	1.601	397.475	124.226	37.286
603	08032016	8.6642	39.5344	1285.7	977912.490	978149.857	1.766	396.772	124.006	37.165
604	08032016	8.6642	39.5390	1288.0	977912.626	978149.857	1.921	397.463	124.222	37.931
605	08032016	8.6642	39.5438	1313.1	977906.920	978149.856	1.629	405.215	126.645	37.262
606	08032016	8.6642	39.5481	1290.4	977913.471	978149.857	1.501	398.204	124.454	38.865
607	29032016	8.6643	39.5528	1291.4	977915.038	978149.858	1.307	398.534	124.557	40.463
608	29032016	8.6642	39.5573	1284.8	977918.115	978149.857	1.338	396.490	123.918	42.168
609	08032016	8.6643	39.5619	1281.1	977920.519	978149.858	1.336	395.345	123.560	43.782
610	08032016	8.6643	39.5665	1277.8	977922.966	978149.858	1.321	394.344	123.247	45.525
611	08032016	8.6643	39.5710	1269.5	977926.475	978149.858	1.360	391.764	122.441	47.300
612	15032016	8.6642	39.5756	1275.7	977926.540	978149.857	1.205	393.694	123.044	48.537
613	16032016	8.6642	39.5802	1273.7	977927.524	978149.856	1.224	393.070	122.850	49.113
614	22032016	8.6643	39.5848	1269.4	977929.027	978149.859	1.255	391.745	122.435	49.733
615	10032016	8.6620	39.4040	1458.4	977848.411	978149.797	1.284	450.075	140.666	9.307
616	11032016	8.6620	39.4132	1451.9	977851.436	978149.798	1.268	448.070	140.039	10.938
617	13032016	8.6628	39.4221	1449.0	977854.158	978149.819	1.246	447.147	139.751	12.981
618	13032016	8.6616	39.4311	1444.2	977855.982	978149.787	1.273	445.675	139.291	13.853
619	13032016	8.6618	39.4407	1432.7	977860.705	978149.791	1.276	442.137	138.185	16.143
620	13032016	8.6620	39.4497	1426.7	977864.088	978149.797	1.315	440.280	137.604	18.282
621	13032016	8.6620	39.4589	1420.3	977867.066	978149.797	1.350	438.300	136.985	19.933
622	09032016	8.6620	39.4680	1405.7	977872.250	978149.797	1.365	433.806	135.581	22.044
623	09032016	8.6618	39.4727	1406.1	977873.459	978149.791	1.352	433.932	135.620	23.331
624	09032016	8.6620	39.4772	1380.7	977879.681	978149.798	1.494	426.096	133.171	24.302
625	06032016	8.6619	39.4817	1368.2	977882.837	978149.793	1.477	422.226	131.962	24.785
626	04032016	8.6620	39.4864	1362.7	977884.429	978149.797	1.499	420.519	131.428	25.222
627	25032016	8.6620	39.4910	1358.9	977886.319	978149.797	1.493	419.365	131.068	26.312
628	02032016	8.6621	39.4955	1352.4	977889.190	978149.799	1.755	417.359	130.441	28.065
629	02032016	8.6620	39.5001	1356.4	977888.972	978149.796	1.619	418.570	130.819	28.546
630	31032016	8.6620	39.5046	1364.0	977889.474	978149.797	1.445	420.918	131.553	30.487
631	01042016	8.6625	39.5090	1344.1	977895.826	978149.811	1.604	414.801	129.641	32.779
632	03032016	8.6619	39.5137	1327.6	977900.786	978149.795	1.860	409.706	128.049	34.508
633	03032016	8.6619	39.5183	1318.3	977903.158	978149.795	1.587	406.838	127.152	34.636
634	05032016	8.6620	39.5230	1294.2	977908.912	978149.797	1.864	399.387	124.824	35.543
635	08032016	8.6620	39.5275	1291.0	977910.835	978149.797	1.672	398.395	124.514	36.592
636	25032016	8.6620	39.5318	1289.6	977911.738	978149.798	1.779	397.959	124.377	37.301
637	08032016	8.6620	39.5369	1327.0	977904.040	978149.798	1.537	409.505	127.986	37.298
638	08032016	8.6620	39.5413	1293.4	977911.565	978149.797	1.912	399.157	124.752	38.085
639	08032016	8.6620	39.5459	1295.8	977911.925	978149.797	1.526	399.894	124.982	38.565
640	08032016	8.6620	39.5505	1291.5	977914.594	978149.798	1.399	398.569	124.568	40.196

List of Bouguer Anomaly (10/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
641	29032016	8.6620	39.5550	1286.6	977916.721	978149.798	1.353	397.052	124.094	41.234
642	08032016	8.6620	39.5596	1285.3	977918.358	978149.798	1.340	396.653	123.969	42.583
643	08032016	8.6620	39.5643	1288.1	977919.848	978149.798	1.230	397.512	124.238	44.555
644	16032016	8.6621	39.5689	1272.2	977924.772	978149.799	1.435	392.613	122.707	46.315
645	15032016	8.6620	39.5733	1276.4	977925.012	978149.797	1.264	393.899	123.108	47.269
646	15032016	8.6620	39.5779	1282.4	977924.487	978149.797	1.186	395.761	123.690	47.946
647	16032016	8.6620	39.5825	1273.9	977927.910	978149.796	1.211	393.139	122.871	49.593
648	02042016	8.6620	39.5871	1270.7	977928.613	978149.797	1.280	392.133	122.556	49.673
649	02042016	8.6620	39.5961	1282.3	977926.216	978149.797	1.188	395.725	123.679	49.653
650	08042016	8.6613	39.6041	1279.1	977927.567	978149.780	1.258	394.736	123.370	50.411
651	08042016	8.6601	39.6136	1282.4	977926.354	978149.747	1.454	395.764	123.691	50.134
652	08042016	8.6650	39.6251	1280.7	977928.961	978149.879	1.308	395.220	123.521	52.089
654	09032016	8.6598	39.4701	1407.5	977872.536	978149.738	1.460	434.348	135.750	22.856
655	09032016	8.6597	39.4750	1392.1	977876.928	978149.737	1.611	429.612	134.270	24.144
656	06032016	8.6597	39.4794	1372.9	977882.351	978149.735	1.530	423.677	132.415	25.408
657	04032016	8.6598	39.4840	1368.9	977883.637	978149.738	1.504	422.450	132.032	25.820
658	25032016	8.6605	39.4887	1363.9	977885.034	978149.757	1.503	420.901	131.548	26.134
659	02032016	8.6597	39.4934	1357.5	977887.680	978149.735	1.758	418.937	130.934	27.706
660	01042016	8.6597	39.4978	1366.6	977886.980	978149.735	1.498	421.735	131.808	28.669
661	02032016	8.6596	39.5024	1368.5	977888.124	978149.733	1.484	422.309	131.988	30.196
662	08032016	8.6596	39.5070	1352.4	977893.390	978149.733	1.834	417.339	130.434	32.395
663	03032016	8.6597	39.5116	1337.8	977898.136	978149.736	1.589	412.844	129.030	33.803
664	03032016	8.6596	39.5161	1324.8	977901.819	978149.734	1.705	408.842	127.779	34.853
665	05032016	8.6597	39.5207	1314.7	977903.941	978149.736	1.629	405.711	126.800	34.745
666	05032016	8.6597	39.5253	1294.9	977909.403	978149.735	1.782	399.592	124.888	36.153
667	25032016	8.6598	39.5296	1291.0	977911.511	978149.738	1.834	398.405	124.517	37.495
668	25032016	8.6598	39.5344	1330.8	977902.421	978149.738	2.298	410.687	128.355	37.313
669	08032016	8.6598	39.5389	1341.2	977901.358	978149.738	1.522	413.906	129.362	37.687
670	08032016	8.6597	39.5438	1295.8	977911.332	978149.737	1.906	399.873	124.976	38.398
671	08032016	8.6597	39.5481	1299.3	977912.067	978149.736	1.440	400.968	125.318	39.421
672	08032016	8.6597	39.5527	1289.3	977915.548	978149.734	1.442	397.879	124.352	40.782
673	08032016	8.6597	39.5574	1287.6	977916.737	978149.737	1.389	397.356	124.189	41.556
674	08032016	8.6597	39.5620	1287.8	977918.728	978149.735	1.283	397.427	124.211	43.492
675	16032016	8.6598	39.5666	1286.5	977920.803	978149.739	1.301	396.998	124.077	45.286
676	15032016	8.6597	39.5711	1275.8	977923.900	978149.736	1.354	393.726	123.054	46.190
677	15032016	8.6597	39.5756	1274.1	977925.269	978149.736	1.306	393.193	122.888	47.144
678	16032016	8.6596	39.5803	1276.4	977924.889	978149.734	1.508	393.903	123.110	47.457
679	02042016	8.6597	39.5848	1273.6	977927.706	978149.736	1.268	393.027	122.836	49.429
680	09032016	8.6572	39.4682	1409.1	977871.901	978149.669	1.418	434.853	135.908	22.595
681	09032016	8.6574	39.4727	1413.0	977871.857	978149.675	1.462	436.036	136.278	23.403
682	06032016	8.6573	39.4773	1381.5	977880.401	978149.672	1.644	426.327	133.244	25.456
683	04032016	8.6574	39.4817	1377.6	977881.432	978149.673	1.533	425.135	132.871	25.555
684	25032016	8.6574	39.4863	1370.1	977883.632	978149.673	1.564	422.813	132.145	26.191
685	02032016	8.6574	39.4908	1366.1	977885.651	978149.674	1.570	421.591	131.763	27.375
686	07032016	8.6574	39.4955	1371.2	977886.017	978149.674	1.668	423.153	132.251	28.912
687	01042016	8.6575	39.5001	1372.9	977886.734	978149.677	1.506	423.669	132.413	29.819
688	02032016	8.6574	39.5047	1372.3	977888.914	978149.673	1.495	423.487	132.356	31.867
689	03032016	8.6573	39.5092	1343.2	977896.631	978149.672	1.832	414.505	129.549	33.747
690	03032016	8.6574	39.5138	1330.9	977900.057	978149.673	1.706	410.712	128.363	34.439
691	05032016	8.6574	39.5185	1316.9	977903.175	978149.674	1.764	406.402	127.016	34.651
692	05032016	8.6573	39.5229	1307.0	977905.736	978149.671	1.729	403.331	126.056	35.069
693	25032016	8.6576	39.5276	1303.1	977908.037	978149.680	1.906	402.123	125.679	36.707
694	25032016	8.6587	39.5329	1335.9	977901.342	978149.709	2.043	412.246	128.843	37.079
695	25032016	8.6572	39.5367	1356.6	977897.649	978149.668	1.823	418.645	130.843	37.607
696	08032016	8.6573	39.5414	1346.4	977900.567	978149.671	1.471	415.491	129.857	38.001
697	08032016	8.6578	39.5462	1307.1	977908.946	978149.685	2.094	403.382	126.072	38.665
698	08032016	8.6574	39.5505	1296.7	977912.823	978149.673	1.471	400.164	125.067	39.719
699	08032016	8.6574	39.5551	1291.8	977915.514	978149.674	1.393	398.644	124.591	41.285
700	08032016	8.6575	39.5598	1289.9	977916.894	978149.676	1.356	398.063	124.410	42.227
701	16032016	8.6574	39.5644	1288.2	977918.827	978149.674	1.304	397.532	124.244	43.745
702	15032016	8.6574	39.5689	1284.1	977920.862	978149.673	1.305	396.287	123.855	44.926
703	15032016	8.6574	39.5733	1274.5	977923.851	978149.673	1.347	393.315	122.926	45.914
704	16032016	8.6574	39.5779	1275.9	977924.404	978149.673	1.309	393.733	123.057	46.717
705	17032016	8.6574	39.5825	1277.2	977926.194	978149.673	1.247	394.141	123.184	48.726
706	09032016	8.6554	39.4701	1410.5	977871.769	978149.621	1.710	435.294	136.046	23.106
707	06032016	8.6549	39.4749	1396.5	977876.459	978149.607	1.678	430.953	134.689	24.793
708	04032016	8.6552	39.4794	1390.9	977878.777	978149.615	1.463	429.226	134.150	25.701
709	25032016	8.6550	39.4841	1384.9	977880.739	978149.610	1.494	427.382	133.573	26.431

List of Bouguer Anomaly (11/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
710	02032016	8.6551	39.4887	1370.1	977884.727	978149.613	1.597	422.801	132.142	27.371
711	07032016	8.6551	39.4933	1382.1	977883.185	978149.613	1.498	426.512	133.301	28.281
712	02032016	8.6551	39.4979	1382.5	977884.475	978149.612	1.471	426.638	133.341	29.631
713	02032016	8.6551	39.5025	1374.2	977887.778	978149.612	1.585	424.075	132.540	31.286
714	03032016	8.6551	39.5069	1371.1	977890.064	978149.613	1.630	423.115	132.240	32.957
715	03032016	8.6552	39.5116	1351.0	977895.337	978149.614	1.776	416.928	130.306	34.121
716	05032016	8.6551	39.5160	1322.4	977901.839	978149.612	1.943	408.082	127.541	34.711
717	05032016	8.6551	39.5207	1309.3	977903.813	978149.613	1.903	404.058	126.283	33.877
718	05032016	8.6551	39.5254	1308.5	977906.466	978149.613	1.865	403.811	126.206	36.323
719	25032016	8.6553	39.5296	1304.8	977906.842	978149.617	2.403	402.658	125.846	36.440
720	25032016	8.6560	39.5344	1357.2	977896.753	978149.637	2.073	418.817	130.896	37.109
721	25032016	8.6552	39.5389	1362.2	977897.109	978149.614	1.474	420.383	131.386	37.966
722	08032016	8.6552	39.5435	1342.8	977901.442	978149.614	1.504	414.403	129.517	38.219
723	08032016	8.6551	39.5481	1328.3	977905.011	978149.613	1.492	409.915	128.114	38.690
724	05032016	8.6552	39.5527	1293.5	977914.325	978149.614	1.446	399.187	124.761	40.583
725	08032016	8.6551	39.5574	1293.5	977915.747	978149.613	1.360	399.176	124.758	41.912
726	16032016	8.6552	39.5619	1290.1	977917.389	978149.614	1.338	398.112	124.425	42.799
727	15032016	8.6551	39.5665	1288.9	977918.638	978149.612	1.287	397.759	124.315	43.757
728	15032016	8.6551	39.5711	1278.4	977921.628	978149.613	1.372	394.505	123.298	44.593
729	16032016	8.6551	39.5756	1279.7	977921.555	978149.611	1.255	394.919	123.427	44.691
730	17032016	8.6551	39.5802	1277.1	977924.942	978149.614	1.253	394.123	123.179	47.526
731	10032016	8.6528	39.4041	1452.3	977850.891	978149.551	1.296	448.180	140.073	10.742
732	11032016	8.6528	39.4131	1448.3	977853.432	978149.552	1.272	446.936	139.684	12.403
733	13032016	8.6517	39.4245	1448.7	977855.440	978149.521	1.398	447.081	139.730	14.668
734	13032016	8.6542	39.4324	1447.2	977857.990	978149.589	1.390	446.616	139.585	16.823
735	13032016	8.6528	39.4404	1435.5	977862.023	978149.551	1.410	442.986	138.450	18.418
736	13032016	8.6528	39.4495	1435.0	977864.080	978149.551	1.371	442.848	138.407	20.341
737	14032016	8.6534	39.4576	1441.4	977864.190	978149.567	1.279	444.821	139.024	21.699
738	09032016	8.6529	39.4680	1413.5	977871.101	978149.552	1.535	436.219	136.335	22.968
739	06032016	8.6528	39.4725	1401.4	977874.582	978149.550	2.100	432.464	135.162	24.435
740	04032016	8.6529	39.4771	1390.2	977878.707	978149.554	1.616	429.014	134.083	25.700
741	25032016	8.6528	39.4818	1393.3	977878.500	978149.551	1.502	429.971	134.382	26.040
742	02032016	8.6529	39.4864	1376.7	977882.628	978149.553	1.651	424.843	132.780	26.789
743	07032016	8.6528	39.4909	1380.7	977883.343	978149.551	1.695	426.078	133.166	28.399
744	02032016	8.6527	39.4957	1386.7	977883.250	978149.549	1.537	427.931	133.745	29.424
745	02032016	8.6528	39.5001	1381.9	977885.650	978149.551	1.582	426.460	133.285	30.856
746	03032016	8.6528	39.5046	1378.7	977888.080	978149.552	1.563	425.451	132.970	32.572
747	03032016	8.6529	39.5092	1368.8	977891.318	978149.553	1.648	422.423	132.023	33.813
748	05032016	8.6528	39.5138	1340.0	977897.652	978149.552	1.862	413.534	129.245	34.251
749	05032016	8.6527	39.5184	1333.2	977899.036	978149.548	1.922	411.410	128.581	34.239
750	05032016	8.6528	39.5230	1312.8	977904.372	978149.552	2.004	405.135	126.620	35.339
751	05032016	8.6529	39.5276	1350.7	977896.955	978149.554	1.818	416.818	130.272	35.766
752	25032016	8.6528	39.5323	1379.5	977889.156	978149.549	2.972	425.702	133.048	35.233
753	25032016	8.6526	39.5372	1379.2	977892.924	978149.546	2.242	425.634	133.027	38.228
754	25032016	8.6513	39.5413	1362.0	977896.860	978149.512	2.086	420.304	131.361	38.376
755	08032016	8.6529	39.5458	1337.8	977902.889	978149.553	1.747	412.840	129.028	38.894
756	05032016	8.6528	39.5504	1295.2	977913.116	978149.551	1.676	399.697	124.920	40.017
757	05032016	8.6529	39.5550	1295.8	977914.983	978149.552	1.408	399.896	124.983	41.752
758	16032016	8.6529	39.5598	1293.1	977916.083	978149.553	1.385	399.043	124.716	42.242
759	15032016	8.6528	39.5644	1290.5	977917.514	978149.550	1.313	398.262	124.472	43.068
760	15032016	8.6529	39.5688	1281.8	977920.214	978149.552	1.414	395.560	123.628	44.008
761	16032016	8.6528	39.5732	1277.6	977921.697	978149.550	1.346	394.265	123.223	44.536
762	17032016	8.6528	39.5779	1277.6	977923.206	978149.552	1.299	394.257	123.220	45.989
763	17032016	8.6529	39.5825	1287.2	977923.139	978149.552	1.149	397.217	124.145	47.807
764	02042016	8.6526	39.5866	1284.6	977924.094	978149.546	1.210	396.414	123.894	48.277
765	02042016	8.6528	39.5962	1288.1	977922.949	978149.551	1.188	397.497	124.233	47.850
766	05042016	8.6528	39.6052	1326.1	977915.021	978149.552	1.373	409.245	127.905	48.182
767	05042016	8.6530	39.6145	1324.0	977913.683	978149.555	1.745	408.572	127.694	46.750
768	05042016	8.6528	39.6235	1298.9	977921.339	978149.551	1.389	400.850	125.281	48.746
769	05042016	8.6525	39.6326	1294.0	977923.675	978149.544	1.263	399.331	124.806	49.918
770	09032016	8.6504	39.4659	1417.9	977870.147	978149.486	1.522	437.566	136.756	22.993
771	06032016	8.6505	39.4704	1434.4	977867.816	978149.489	1.400	442.642	138.343	24.027
772	04032016	8.6505	39.4750	1396.3	977877.293	978149.489	1.655	430.886	134.668	25.677
773	25032016	8.6505	39.4796	1399.4	977877.575	978149.489	1.522	431.846	134.968	26.485
774	02032016	8.6505	39.4841	1387.2	977880.928	978149.489	1.661	428.087	133.794	27.394
775	07032016	8.6505	39.4886	1384.9	977881.887	978149.488	1.685	427.393	133.577	27.901
776	07032016	8.6505	39.4933	1390.8	977881.994	978149.488	1.568	429.209	134.144	29.139
777	02032016	8.6505	39.4978	1386.4	977884.071	978149.489	1.644	427.841	133.717	30.350

List of Bouguer Anomaly (12/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
778	02032016	8.6505	39.5024	1380.1	977887.200	978149.488	1.680	425.884	133.105	32.170
779	03032016	8.6504	39.5069	1377.9	977888.803	978149.487	1.655	425.220	132.898	33.294
780	05032016	8.6506	39.5115	1359.4	977893.191	978149.490	1.892	419.503	131.111	33.985
781	05032016	8.6506	39.5161	1341.1	977897.718	978149.491	1.909	413.868	129.350	34.655
782	05032016	8.6505	39.5208	1321.3	977902.599	978149.489	2.162	407.753	127.438	35.587
783	05032016	8.6505	39.5252	1327.5	977901.180	978149.488	2.612	409.673	128.039	35.939
784	31032016	8.6506	39.5298	1356.9	977895.286	978149.492	2.403	418.737	130.871	36.062
785	25032016	8.6503	39.5347	1416.7	977883.840	978149.483	1.660	437.191	136.639	36.569
786	25032016	8.6508	39.5390	1370.2	977894.938	978149.498	2.057	422.838	132.153	38.182
787	25032016	8.6505	39.5437	1353.3	977898.918	978149.489	1.816	417.641	130.529	38.357
788	05032016	8.6503	39.5486	1299.1	977911.205	978149.482	2.040	400.912	125.300	39.375
789	05032016	8.6505	39.5528	1295.8	977914.030	978149.490	1.481	399.897	124.983	40.934
790	16032016	8.6506	39.5574	1295.4	977915.087	978149.491	1.385	399.754	124.939	41.797
791	15032016	8.6505	39.5619	1293.1	977916.260	978149.489	1.343	399.036	124.714	42.435
792	15032016	8.6505	39.5666	1290.4	977918.384	978149.489	1.303	398.213	124.457	43.954
793	16032016	8.6505	39.5711	1278.8	977921.097	978149.489	1.361	394.652	123.344	44.277
794	17032016	8.6505	39.5756	1281.1	977922.076	978149.489	1.287	395.362	123.566	45.671
795	17032016	8.6505	39.5801	1281.9	977922.639	978149.490	1.272	395.585	123.635	46.371
796	06032016	8.6482	39.4681	1429.2	977868.374	978149.428	1.507	441.054	137.846	23.661
797	04032016	8.6480	39.4728	1403.3	977874.989	978149.423	1.745	433.065	135.349	25.027
798	25032016	8.6482	39.4772	1405.0	977876.264	978149.428	1.559	433.569	135.507	26.457
799	02032016	8.6483	39.4819	1399.2	977878.181	978149.431	1.625	431.800	134.954	27.221
800	07032016	8.6483	39.4864	1393.4	977880.005	978149.430	1.648	430.011	134.395	27.839
801	07032016	8.6483	39.4910	1393.8	977880.675	978149.431	1.633	430.116	134.428	28.566
802	07032016	8.6483	39.4955	1391.0	977882.215	978149.429	1.690	429.269	134.163	29.582
803	02032016	8.6482	39.5002	1386.9	977885.029	978149.428	1.753	427.987	133.762	31.579
804	02032016	8.6482	39.5047	1382.7	977887.046	978149.428	1.769	426.703	133.361	32.729
805	03032016	8.6483	39.5092	1372.0	977890.001	978149.429	1.881	423.407	132.331	33.530
806	05032016	8.6482	39.5138	1346.3	977895.772	978149.428	2.174	415.456	129.846	34.128
807	05032016	8.6483	39.5184	1336.6	977898.938	978149.430	2.218	412.474	128.914	35.286
808	05032016	8.6483	39.5230	1326.5	977901.799	978149.431	2.556	409.367	127.943	36.348
809	05032016	8.6482	39.5277	1402.1	977885.717	978149.427	1.881	432.688	135.232	35.627
810	31032016	8.6483	39.5322	1452.7	977873.691	978149.431	2.011	448.318	140.117	34.472
811	25032016	8.6480	39.5374	1387.6	977890.583	978149.423	2.492	428.211	133.832	38.030
812	25032016	8.6482	39.5418	1343.4	977900.262	978149.427	2.168	414.584	129.573	38.014
813	05032016	8.6479	39.5461	1303.7	977909.338	978149.419	2.281	402.309	125.737	38.772
814	05032016	8.6483	39.5506	1297.1	977912.120	978149.430	1.618	400.297	125.108	39.497
815	16032016	8.6483	39.5551	1295.0	977914.148	978149.430	1.455	399.634	124.901	40.906
816	15032016	8.6483	39.5597	1295.2	977915.139	978149.430	1.376	399.697	124.920	41.861
817	15032016	8.6483	39.5643	1291.4	977917.418	978149.429	1.354	398.518	124.552	43.309
818	16032016	8.6483	39.5688	1283.5	977919.548	978149.429	1.426	396.103	123.797	43.851
819	17032016	8.6483	39.5733	1280.1	977921.413	978149.429	1.374	395.053	123.469	44.942
820	17032016	8.6482	39.5779	1285.6	977921.726	978149.428	1.205	396.740	123.996	46.246
821	17032016	8.6483	39.5824	1280.2	977923.304	978149.430	1.275	395.079	123.477	46.751
822	06032016	8.6460	39.4658	1427.6	977867.592	978149.367	1.972	440.557	137.691	23.062
823	04032016	8.6460	39.4703	1432.2	977868.072	978149.369	2.021	441.969	138.132	24.560
824	25032016	8.6459	39.4750	1412.4	977874.119	978149.366	1.626	435.852	136.220	26.011
825	27032016	8.6451	39.4803	1408.8	977876.133	978149.345	1.772	434.764	135.880	27.443
826	02032016	8.6459	39.4842	1400.5	977878.163	978149.364	1.665	432.183	135.074	27.573
827	07032016	8.6459	39.4886	1397.3	977879.384	978149.366	1.696	431.216	134.772	28.159
828	07032016	8.6458	39.4930	1395.9	977880.673	978149.362	1.778	430.776	134.634	29.231
829	07032016	8.6459	39.4978	1390.8	977883.358	978149.367	1.894	429.197	134.141	30.942
830	02032016	8.6460	39.5024	1384.6	977885.889	978149.367	1.982	427.284	133.543	32.246
831	03032016	8.6460	39.5069	1379.2	977887.485	978149.367	2.001	425.608	133.019	32.709
832	03032016	8.6458	39.5115	1367.2	977890.767	978149.363	2.236	421.905	131.861	33.684
833	30032016	8.6454	39.5148	1353.6	977893.640	978149.353	3.156	417.727	130.556	34.614
834	05032016	8.6460	39.5207	1350.1	977896.533	978149.368	2.292	416.656	130.221	35.892
835	05032016	8.6460	39.5250	1364.6	977894.291	978149.369	2.304	421.117	131.615	36.728
836	31032016	8.6460	39.5297	1408.4	977885.063	978149.367	1.752	434.635	135.840	36.243
837	31032016	8.6459	39.5344	1434.3	977879.109	978149.366	1.873	442.625	138.337	35.903
838	25032016	8.6458	39.5392	1354.7	977897.422	978149.363	1.971	418.072	130.663	37.438
839	05032016	8.6460	39.5436	1308.2	977907.709	978149.368	2.084	403.711	126.175	37.961
840	05032016	8.6460	39.5481	1305.3	977909.531	978149.368	1.630	402.810	125.893	38.710
841	16032016	8.6459	39.5527	1298.9	977911.992	978149.367	1.588	400.850	125.281	39.782
842	15032016	8.6459	39.5573	1293.7	977914.596	978149.367	1.444	399.229	124.774	41.128
843	15032016	8.6460	39.5619	1294.0	977915.774	978149.367	1.371	399.319	124.803	42.295
844	16032016	8.6460	39.5665	1290.2	977918.052	978149.367	1.390	398.159	124.440	43.794
845	17032016	8.6459	39.5710	1287.8	977919.377	978149.366	1.304	397.416	124.208	44.523

List of Bouguer Anomaly (13/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
846	17032016	8.6459	39.5756	1276.8	977922.569	978149.367	1.374	394.031	123.150	45.458
847	17032016	8.6459	39.5802	1279.6	977922.466	978149.366	1.316	394.885	123.417	45.885
848	10032016	8.6438	39.3949	1452.7	977852.679	978149.309	1.414	448.292	140.108	12.967
849	13032016	8.6437	39.4041	1449.5	977852.568	978149.307	1.269	447.305	139.800	12.035
850	13032016	8.6434	39.4137	1445.3	977855.468	978149.299	1.307	446.034	139.403	14.108
851	15032016	8.6425	39.4236	1446.7	977858.392	978149.274	1.594	446.445	139.531	17.625
852	14032016	8.6436	39.4320	1509.6	977847.640	978149.303	1.248	465.872	145.603	19.855
853	14032016	8.6462	39.4431	1458.8	977858.859	978149.374	1.727	450.197	140.704	20.706
854	14032016	8.6440	39.4520	1453.8	977860.750	978149.314	1.830	448.645	140.219	21.692
855	14032016	8.6433	39.4589	1447.2	977863.169	978149.295	1.596	446.591	139.577	22.484
856	04032016	8.6437	39.4681	1489.3	977856.728	978149.306	1.697	459.590	143.639	25.070
857	25032016	8.6437	39.4727	1413.6	977872.865	978149.307	2.451	436.246	136.343	25.911
858	27032016	8.6439	39.4771	1415.4	977873.723	978149.312	1.729	436.790	136.514	26.417
859	27032016	8.6429	39.4816	1412.6	977875.614	978149.284	1.747	435.916	136.241	27.753
860	02032016	8.6437	39.4864	1400.2	977878.876	978149.307	1.841	432.113	135.052	28.471
861	07032016	8.6437	39.4909	1400.6	977879.420	978149.305	1.849	432.233	135.089	29.108
862	07032016	8.6437	39.4955	1395.7	977881.230	978149.306	2.159	430.713	134.614	30.182
863	02032016	8.6438	39.5002	1390.6	977883.781	978149.308	2.535	429.141	134.123	32.027
864	03032016	8.6436	39.5046	1420.0	977877.440	978149.304	2.893	438.209	136.957	32.280
865	21022016	8.6437	39.5093	1397.2	977883.438	978149.306	2.222	431.171	134.758	32.768
866	30032016	8.6435	39.5138	1391.7	977886.285	978149.303	2.181	429.476	134.228	34.412
867	05032016	8.6438	39.5185	1376.5	977890.862	978149.308	2.367	424.793	132.764	35.950
868	05032016	8.6443	39.5228	1342.8	977897.612	978149.323	3.523	414.385	129.511	36.686
869	31032016	8.6436	39.5275	1374.8	977890.919	978149.304	2.576	424.266	132.599	35.857
870	31032016	8.6436	39.5321	1442.0	977876.820	978149.305	1.737	444.986	139.075	35.163
871	31032016	8.6437	39.5367	1344.7	977898.868	978149.308	2.582	414.970	129.694	37.418
872	05032016	8.6437	39.5413	1322.7	977903.979	978149.306	1.915	408.192	127.576	37.204
873	05032016	8.6435	39.5460	1307.6	977907.919	978149.300	1.742	403.540	126.122	37.779
874	05032016	8.6437	39.5505	1306.4	977909.698	978149.306	1.521	403.160	126.003	39.070
875	16032016	8.6437	39.5550	1294.6	977913.172	978149.307	1.528	399.505	124.861	40.037
876	15032016	8.6437	39.5596	1293.5	977914.969	978149.307	1.445	399.168	124.755	41.520
877	16032016	8.6437	39.5642	1290.6	977917.325	978149.306	1.420	398.277	124.477	43.239
878	17032016	8.6436	39.5688	1289.0	977918.349	978149.304	1.357	397.780	124.321	43.861
879	17032016	8.6436	39.5733	1287.8	977919.660	978149.305	1.282	397.400	124.203	44.834
880	17032016	8.6436	39.5779	1280.3	977921.662	978149.305	1.334	395.101	123.484	45.308
881	02042016	8.6437	39.5871	1278.4	977922.822	978149.306	1.266	394.521	123.303	46.000
882	02042016	8.6438	39.5960	1283.4	977922.204	978149.308	1.279	396.044	123.779	46.441
883	05042016	8.6438	39.6054	1272.5	977925.635	978149.309	1.346	392.682	122.728	47.626
884	05042016	8.6437	39.6145	1283.8	977922.038	978149.306	1.387	396.174	123.819	46.473
885	05042016	8.6437	39.6236	1263.9	977926.699	978149.306	1.300	390.024	121.897	46.820
886	05042016	8.6436	39.6328	1261.7	977929.430	978149.303	1.365	389.363	121.691	49.165
887	04032016	8.6414	39.4652	1456.9	977862.869	978149.245	2.304	449.597	140.516	25.008
888	25032016	8.6414	39.4703	1498.4	977855.111	978149.244	1.755	462.395	144.516	25.501
889	17022016	8.6414	39.4750	1424.3	977872.094	978149.244	1.821	439.534	137.371	26.834
890	27032016	8.6418	39.4786	1424.4	977872.149	978149.257	1.602	439.558	137.379	26.673
891	02032016	8.6414	39.4841	1408.6	977876.902	978149.245	1.892	434.688	135.857	28.380
892	19022016	8.6415	39.4886	1405.3	977878.818	978149.246	1.922	433.677	135.541	29.631
893	02032016	8.6414	39.4933	1402.5	977878.768	978149.245	2.613	432.821	135.273	29.684
894	02032016	8.6415	39.4978	1413.2	977876.882	978149.248	3.591	436.111	136.301	31.034
895	03032016	8.6413	39.5023	1465.5	977867.767	978149.243	2.420	452.240	141.342	31.842
896	03032016	8.6414	39.5070	1414.9	977878.787	978149.245	3.341	436.630	136.464	33.050
897	30032016	8.6413	39.5116	1396.5	977884.463	978149.243	2.808	430.973	134.695	34.305
898	30032016	8.6413	39.5162	1404.3	977884.808	978149.243	2.318	433.369	135.445	35.808
899	27022016	8.6413	39.5206	1456.9	977872.465	978149.244	2.460	449.595	140.516	34.761
900	31032016	8.6414	39.5253	1392.3	977887.211	978149.245	2.752	429.667	134.287	36.098
901	31032016	8.6414	39.5298	1421.2	977878.861	978149.244	1.957	438.577	137.072	33.079
902	31032016	8.6414	39.5344	1394.9	977887.449	978149.245	2.040	430.463	134.536	36.171
903	03032016	8.6414	39.5392	1332.5	977900.890	978149.246	2.108	411.208	128.518	36.442
904	05032016	8.6414	39.5437	1315.5	977904.867	978149.244	1.848	405.959	126.878	36.553
905	24032016	8.6414	39.5482	1307.1	977908.423	978149.244	1.703	403.379	126.071	38.190
906	24032016	8.6415	39.5527	1300.7	977910.922	978149.248	1.601	401.397	125.452	39.219
907	21032016	8.6414	39.5573	1293.1	977912.719	978149.244	1.521	399.063	124.723	39.337
908	16032016	8.6413	39.5619	1291.2	977915.822	978149.244	1.460	398.450	124.531	41.957
909	14032016	8.6414	39.5665	1289.7	977917.644	978149.245	1.420	397.995	124.389	43.425
910	14032016	8.6415	39.5708	1287.0	977918.705	978149.248	1.347	397.173	124.132	43.845
911	17032016	8.6414	39.5756	1280.2	977921.111	978149.244	1.322	395.067	123.474	44.782
912	17032016	8.6413	39.5802	1265.1	977924.474	978149.243	1.733	390.411	122.018	45.357
913	04032016	8.6393	39.4640	1469.5	977860.374	978149.188	2.027	453.501	141.736	24.977

List of Bouguer Anomaly (14/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
914	25032016	8.6390	39.4682	1516.4	977851.323	978149.182	1.583	467.974	146.260	25.438
915	17022016	8.6391	39.4726	1466.4	977862.754	978149.183	1.817	452.541	141.436	26.493
916	17022016	8.6392	39.4774	1427.5	977871.209	978149.187	1.802	440.540	137.686	26.679
917	27032016	8.6391	39.4818	1423.6	977873.504	978149.183	1.923	439.326	137.306	28.264
918	02032016	8.6391	39.4863	1417.2	977875.897	978149.183	1.878	437.346	136.687	29.251
919	02032016	8.6391	39.4910	1410.1	977877.168	978149.183	2.517	435.155	136.002	29.655
920	03032016	8.6390	39.4954	1520.7	977853.835	978149.180	2.576	469.294	146.672	29.852
921	03032016	8.6391	39.5001	1501.0	977859.325	978149.184	3.287	463.196	144.766	31.857
922	03032016	8.6390	39.5047	1487.8	977863.766	978149.181	2.207	459.135	143.497	32.429
923	29032016	8.6390	39.5092	1454.1	977871.552	978149.182	2.364	448.735	140.247	33.222
924	30032016	8.6389	39.5135	1435.9	977876.462	978149.178	2.597	443.116	138.491	34.506
925	30032016	8.6391	39.5184	1398.5	977885.783	978149.183	3.481	431.563	134.880	36.764
926	01042016	8.6392	39.5230	1460.7	977872.899	978149.186	2.238	450.767	140.882	35.836
927	31032016	8.6391	39.5276	1417.3	977882.034	978149.182	2.626	437.375	136.696	36.156
928	31032016	8.6392	39.5322	1436.5	977877.871	978149.187	2.001	443.296	138.547	35.434
929	03032016	8.6391	39.5368	1360.8	977894.302	978149.183	2.191	419.950	131.251	36.009
930	05032016	8.6392	39.5415	1325.7	977899.792	978149.187	2.132	409.122	127.866	33.992
931	24032016	8.6393	39.5460	1311.9	977905.987	978149.188	1.812	404.859	126.534	36.936
932	24032016	8.6391	39.5505	1304.6	977909.169	978149.184	1.659	402.598	125.827	38.415
933	21032016	8.6391	39.5551	1295.3	977911.206	978149.183	1.633	399.717	124.927	38.446
934	21032016	8.6391	39.5597	1292.8	977913.042	978149.184	1.566	398.962	124.691	39.696
935	20032016	8.6391	39.5643	1290.4	977916.203	978149.183	1.432	398.217	124.458	42.211
936	19032016	8.6391	39.5688	1289.6	977917.349	978149.184	1.367	397.973	124.382	43.123
937	14032016	8.6391	39.5733	1276.7	977920.754	978149.184	1.459	393.984	123.135	43.878
938	14032016	8.6392	39.5780	1273.7	977922.052	978149.185	1.447	393.064	122.848	44.531
939	25032016	8.6368	39.4658	1516.7	977851.360	978149.122	2.129	468.051	146.284	26.134
940	17022016	8.6368	39.4704	1497.7	977855.997	978149.122	1.701	462.199	144.455	26.320
941	17022016	8.6368	39.4749	1431.5	977870.365	978149.122	2.261	441.774	138.071	27.206
942	27032016	8.6370	39.4801	1427.6	977872.296	978149.127	2.008	440.564	137.693	28.048
943	19022016	8.6368	39.4841	1421.9	977874.266	978149.122	2.041	438.790	137.139	28.836
944	02032016	8.6369	39.4887	1417.4	977875.681	978149.124	2.292	437.415	136.709	29.555
945	03032016	8.6368	39.4933	1548.7	977846.197	978149.121	3.677	477.926	149.370	29.309
946	03032016	8.6368	39.4978	1521.4	977855.698	978149.122	1.961	469.514	146.741	31.310
947	03032016	8.6368	39.5024	1526.2	977855.619	978149.121	2.134	470.979	147.199	32.412
948	29032016	8.6368	39.5070	1495.7	977862.418	978149.121	2.325	461.579	144.261	32.940
949	29032016	8.6368	39.5115	1489.2	977863.512	978149.123	2.345	459.553	143.628	32.659
950	30032016	8.6367	39.5161	1486.5	977865.927	978149.120	2.578	458.727	143.370	34.742
951	30032016	8.6366	39.5203	1443.8	977876.074	978149.116	3.454	445.567	139.257	36.722
952	01042016	8.6368	39.5246	1492.5	977865.786	978149.122	2.187	460.579	143.949	35.482
953	31032016	8.6369	39.5281	1432.5	977878.603	978149.125	3.193	442.065	138.162	36.574
954	03032016	8.6369	39.5344	1402.5	977885.128	978149.125	2.287	432.825	135.274	35.841
955	03032016	8.6367	39.5391	1346.4	977896.779	978149.120	2.231	415.510	129.863	35.537
956	24032016	8.6368	39.5436	1317.8	977903.296	978149.123	2.041	406.658	127.096	35.776
957	24032016	8.6368	39.5482	1305.2	977907.343	978149.123	1.841	402.774	125.882	36.953
958	21032016	8.6368	39.5526	1301.1	977910.408	978149.122	1.684	401.504	125.485	38.989
959	21032016	8.6368	39.5573	1298.1	977911.661	978149.123	1.534	400.603	125.204	39.471
960	20032016	8.6368	39.5619	1290.4	977914.759	978149.123	1.518	398.230	124.462	40.922
961	19032016	8.6368	39.5665	1289.2	977916.176	978149.123	1.420	397.860	124.346	41.986
962	19032016	8.6368	39.5710	1282.4	977918.500	978149.123	1.451	395.763	123.691	42.900
963	14032016	8.6368	39.5756	1275.9	977920.387	978149.121	1.403	393.736	123.058	43.347
964	14032016	8.6369	39.5801	1272.7	977922.279	978149.125	1.405	392.741	122.747	44.553
965	10032016	8.6345	39.3949	1452.2	977854.558	978149.061	1.272	448.154	140.065	14.858
966	13032016	8.6341	39.4038	1446.7	977855.390	978149.051	1.299	446.453	139.534	14.557
967	13032016	8.6344	39.4134	1445.4	977857.402	978149.058	1.328	446.064	139.412	16.324
968	13032016	8.6325	39.4227	1446.6	977859.751	978149.007	1.417	446.424	139.525	19.060
969	15032016	8.6346	39.4316	1449.1	977859.943	978149.064	1.594	447.193	139.765	19.902
970	14032016	8.6343	39.4416	1496.0	977851.596	978149.055	3.066	461.667	144.288	22.985
971	14032016	8.6332	39.4507	1546.5	977843.654	978149.025	1.516	477.265	149.164	24.247
972	14032016	8.6359	39.4616	1496.5	977854.636	978149.099	2.085	461.821	144.337	25.107
973	17022016	8.6345	39.4681	1542.0	977846.532	978149.061	1.828	475.871	148.728	26.442
974	17022016	8.6345	39.4727	1474.9	977862.208	978149.060	1.883	455.160	142.255	27.936
975	18022016	8.6346	39.4774	1446.9	977867.792	978149.063	2.296	446.525	139.556	27.994
976	18022016	8.6345	39.4819	1435.7	977871.047	978149.060	2.125	443.051	138.470	28.693
977	18022016	8.6346	39.4864	1424.2	977873.759	978149.062	2.282	439.495	137.359	29.114
978	18022016	8.6345	39.4909	1429.0	977872.556	978149.060	3.619	440.985	137.825	30.276
979	03032016	8.6345	39.4955	1530.8	977853.268	978149.059	1.999	472.405	147.645	30.968
980	03032016	8.6345	39.5000	1535.1	977853.665	978149.059	2.044	473.727	148.058	32.319
981	29032016	8.6346	39.5048	1538.6	977853.043	978149.063	2.180	474.821	148.400	32.581

List of Bouguer Anomaly (15/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
982	29032016	8.6344	39.5093	1504.3	977860.773	978149.058	2.514	464.213	145.084	33.358
983	30032016	8.6345	39.5139	1509.2	977861.132	978149.059	2.596	465.739	145.561	34.847
984	30032016	8.6345	39.5185	1518.4	977860.082	978149.061	2.825	468.580	146.449	35.977
985	01042016	8.6340	39.5212	1508.7	977862.388	978149.048	2.809	465.589	145.514	36.223
986	01042016	8.6346	39.5259	1512.0	977861.419	978149.064	2.282	466.597	145.830	35.405
987	03032016	8.6346	39.5321	1465.9	977871.509	978149.062	2.275	452.385	141.388	35.719
988	03032016	8.6345	39.5367	1368.2	977892.454	978149.061	2.743	422.241	131.967	36.411
989	24032016	8.6346	39.5413	1334.3	977899.397	978149.062	2.466	411.756	128.690	35.867
990	24032016	8.6345	39.5459	1308.9	977904.605	978149.061	2.178	403.932	126.244	35.410
991	21032016	8.6345	39.5505	1304.2	977908.314	978149.061	1.884	402.480	125.791	37.827
992	21032016	8.6345	39.5550	1303.6	977910.306	978149.060	1.674	402.277	125.727	39.470
993	20032016	8.6345	39.5597	1296.6	977912.747	978149.060	1.573	400.143	125.060	40.343
994	20032016	8.6345	39.5643	1289.5	977915.504	978149.061	1.489	397.927	124.367	41.492
995	19032016	8.6346	39.5688	1288.0	977916.197	978149.063	1.420	397.465	124.223	41.796
996	19032016	8.6345	39.5733	1280.7	977918.046	978149.061	1.396	395.232	123.525	42.088
997	19032016	8.6345	39.5779	1278.4	977920.539	978149.061	1.441	394.518	123.302	44.134
998	14032016	8.6345	39.5869	1268.3	977923.504	978149.060	1.316	391.394	122.326	44.829
999	02042016	8.6345	39.5962	1262.0	977926.253	978149.061	1.345	389.452	121.719	46.270
1000	02042016	8.6345	39.6053	1258.0	977926.751	978149.059	1.372	388.204	121.329	45.939
1001	02042016	8.6344	39.6143	1240.0	977930.983	978149.058	1.455	382.673	119.600	46.453
1002	02042016	8.6345	39.6236	1231.8	977933.144	978149.060	1.441	380.125	118.804	46.846
1003	18022016	8.6322	39.4795	1458.7	977865.809	978148.999	2.698	450.164	140.694	28.979
1004	18022016	8.6321	39.4840	1433.3	977870.547	978148.997	3.848	442.331	138.245	29.483
1005	18022016	8.6322	39.4886	1430.5	977872.630	978148.999	2.738	441.449	137.970	29.848
1006	03032016	8.6322	39.4932	1546.9	977848.380	978149.000	2.309	477.375	149.198	29.866
1007	03032016	8.6323	39.4978	1539.0	977852.383	978149.000	2.079	474.944	148.438	31.967
1008	29032016	8.6322	39.5024	1558.9	977848.495	978148.999	2.018	481.086	150.358	32.242
1009	29032016	8.6323	39.5069	1550.7	977850.913	978149.002	2.449	478.544	149.563	33.340
1010	30032016	8.6323	39.5116	1514.1	977858.217	978149.002	3.369	467.248	146.033	33.799
1011	30032016	8.6322	39.5162	1572.3	977848.093	978149.000	2.781	485.217	151.649	35.443
1012	01042016	8.6329	39.5217	1519.4	977860.627	978149.017	2.640	468.879	146.543	36.586
1013	01042016	8.6322	39.5254	1517.0	977861.210	978149.000	2.363	468.139	146.311	36.400
1014	03032016	8.6322	39.5300	1504.6	977863.173	978148.999	2.427	464.314	145.116	35.799
1015	03032016	8.6331	39.5340	1441.3	977876.718	978149.022	2.429	444.782	139.012	35.896
1016	24032016	8.6322	39.5392	1382.9	977888.924	978148.999	2.339	426.752	133.376	35.640
1017	24032016	8.6323	39.5437	1328.2	977900.314	978149.000	2.420	409.874	128.101	35.507
1018	21032016	8.6323	39.5482	1311.7	977905.369	978149.001	2.073	404.783	126.510	36.714
1019	21032016	8.6323	39.5528	1314.5	977906.985	978149.001	1.703	405.650	126.781	38.556
1020	20032016	8.6323	39.5573	1307.7	977909.883	978149.001	1.581	403.557	126.127	39.893
1021	20032016	8.6323	39.5619	1298.8	977912.762	978149.001	1.509	400.806	125.267	40.809
1022	19032016	8.6323	39.5665	1285.9	977916.139	978149.001	1.510	396.815	124.020	41.443
1023	19032016	8.6323	39.5711	1284.0	977916.871	978149.002	1.395	396.235	123.838	41.660
1024	19032016	8.6323	39.5756	1274.7	977920.092	978149.001	1.443	393.382	122.947	42.970
1025	07042016	8.6300	39.4909	1444.5	977869.420	978148.940	3.563	445.759	139.317	30.484
1026	03032016	8.6299	39.4955	1542.8	977851.360	978148.936	2.354	476.112	148.803	32.087
1027	29032016	8.6299	39.5001	1552.1	977850.155	978148.938	2.187	478.977	149.699	32.682
1028	29032016	8.6299	39.5046	1563.7	977848.328	978148.938	2.617	482.549	150.815	33.741
1029	29032016	8.6300	39.5092	1579.3	977845.440	978148.940	2.934	487.361	152.319	34.476
1030	30032016	8.6300	39.5139	1585.7	977843.947	978148.940	3.212	489.359	152.944	34.635
1031	30032016	8.6300	39.5182	1597.9	977842.828	978148.941	3.324	493.119	154.119	36.212
1032	01042016	8.6315	39.5237	1514.3	977861.937	978148.980	2.980	467.322	146.056	37.203
1033	03032016	8.6300	39.5275	1555.6	977852.143	978148.940	2.667	480.057	150.036	35.891
1034	03032016	8.6299	39.5322	1504.1	977862.788	978148.939	2.646	464.162	145.068	35.588
1035	24032016	8.6299	39.5368	1390.2	977886.686	978148.937	3.219	429.010	134.082	35.897
1036	24032016	8.6307	39.5416	1353.4	977894.209	978148.960	3.583	417.660	130.535	35.957
1037	21032016	8.6299	39.5460	1320.8	977902.391	978148.939	2.630	407.613	127.395	36.300
1038	21032016	8.6299	39.5505	1319.0	977904.546	978148.938	2.263	407.043	127.217	37.698
1039	06042016	8.6299	39.5551	1310.0	977908.662	978148.938	1.794	404.276	126.352	39.442
1040	20032016	8.6299	39.5597	1302.5	977910.804	978148.938	1.620	401.937	125.621	39.802
1041	20032016	8.6299	39.5643	1297.0	977913.121	978148.939	1.493	400.267	125.099	40.843
1042	19032016	8.6299	39.5688	1285.0	977916.407	978148.938	1.465	396.549	123.937	41.546
1043	19032016	8.6299	39.5732	1272.5	977918.808	978148.938	1.542	392.708	122.736	41.384
1044	19032016	8.6299	39.5779	1284.8	977918.241	978148.938	1.269	396.484	123.917	43.140
1045	29032016	8.6276	39.5025	1602.1	977839.391	978148.875	2.540	494.422	154.526	32.952
1046	29032016	8.6277	39.5069	1605.6	977840.386	978148.877	2.776	495.501	154.863	34.923
1047	30032016	8.6277	39.5115	1650.7	977830.014	978148.878	3.472	509.420	159.213	34.815
1048	30032016	8.6286	39.5150	1603.7	977839.461	978148.902	4.078	494.896	154.674	34.858
1050	03032016	8.6275	39.5251	1612.0	977840.477	978148.873	3.072	497.471	155.479	36.668

List of Bouguer Anomaly (16/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
1051	03032016	8.6279	39.5302	1539.8	977855.990	978148.883	2.564	475.197	148.517	36.351
1052	24032016	8.6282	39.5342	1449.8	977874.596	978148.892	2.755	447.406	139.832	36.034
1053	24032016	8.6272	39.5389	1443.2	977876.643	978148.866	2.432	445.362	139.193	36.378
1054	21032016	8.6284	39.5444	1327.2	977899.550	978148.896	4.373	409.571	128.007	36.592
1055	21032016	8.6290	39.5483	1321.2	977902.325	978148.913	3.240	407.733	127.432	36.953
1056	06042016	8.6281	39.5537	1315.6	977906.160	978148.890	2.476	405.990	126.887	38.848
1057	06042016	8.6277	39.5573	1310.0	977908.882	978148.879	1.714	404.253	126.344	39.625
1058	20032016	8.6278	39.5617	1293.6	977912.915	978148.882	1.740	399.212	124.769	40.216
1059	20032016	8.6277	39.5665	1273.0	977917.686	978148.878	1.914	392.860	122.784	40.797
1060	19032016	8.6277	39.5710	1269.4	977918.408	978148.879	1.623	391.733	122.432	40.454
1061	19032016	8.6280	39.5760	1271.4	977919.816	978148.885	1.531	392.358	122.627	42.193
1062	12032016	8.6253	39.3950	1448.2	977856.453	978148.815	1.325	446.920	139.680	16.204
1063	13032016	8.6253	39.4042	1446.1	977858.535	978148.814	1.338	446.281	139.480	17.860
1064	13032016	8.6255	39.4134	1447.9	977857.526	978148.820	1.368	446.836	139.653	17.256
1065	13032016	8.6253	39.4223	1454.7	977857.667	978148.814	1.451	448.908	140.301	18.911
1066	13032016	8.6231	39.4284	1469.0	977857.028	978148.756	1.673	453.348	141.689	21.604
1068	14032016	8.6255	39.4488	1571.9	977838.464	978148.820	1.454	485.098	151.612	24.584
1069	14032016	8.6259	39.4623	1582.3	977838.183	978148.829	1.457	488.292	152.610	26.493
1070	14032016	8.6241	39.4668	1567.5	977842.515	978148.782	1.514	483.723	151.182	27.788
1071	15032016	8.6282	39.4765	1486.7	977859.798	978148.893	2.456	458.782	143.387	28.756
1072	07042016	8.6254	39.4863	1571.4	977843.881	978148.816	2.013	484.942	151.563	30.457
1073	07042016	8.6255	39.4954	1556.4	977848.619	978148.820	2.193	480.297	150.111	32.178
1074	29032016	8.6253	39.5047	1623.3	977836.070	978148.815	2.818	500.948	156.565	34.456
1075	30032016	8.6254	39.5135	1693.1	977819.409	978148.817	4.280	522.492	163.299	34.065
1077	03032016	8.6257	39.5234	1643.9	977833.574	978148.825	3.172	507.312	158.554	36.679
1078	03032016	8.6253	39.5277	1583.5	977847.389	978148.814	2.738	488.671	152.728	37.256
1079	24032016	8.6255	39.5323	1493.5	977865.884	978148.820	2.997	460.891	144.046	36.906
1080	24032016	8.6257	39.5367	1470.8	977870.602	978148.824	2.241	453.878	141.854	36.043
1081	21032016	8.6253	39.5414	1450.6	977874.819	978148.813	2.159	447.643	139.906	35.902
1082	21032016	8.6257	39.5440	1380.8	977888.741	978148.824	3.518	426.107	133.175	36.367
1084	06042016	8.6254	39.5550	1316.7	977906.269	978148.817	2.096	406.344	126.998	38.893
1085	06042016	8.6254	39.5597	1305.6	977909.903	978148.818	1.713	402.920	125.928	39.790
1086	20032016	8.6254	39.5643	1281.1	977915.935	978148.816	1.806	395.343	123.560	40.708
1087	20032016	8.6254	39.5688	1270.0	977918.319	978148.818	1.708	391.935	122.495	40.649
1088	19032016	8.6253	39.5733	1269.7	977919.346	978148.816	1.578	391.828	122.461	41.475
1089	19032016	8.6254	39.5779	1272.8	977919.835	978148.816	1.442	392.792	122.762	42.490
1090	14032016	8.6255	39.5873	1263.9	977922.425	978148.820	1.476	390.028	121.899	43.210
1091	14032016	8.6253	39.5961	1254.9	977925.290	978148.814	1.424	387.258	121.033	44.125
1092	02042016	8.6254	39.6053	1249.0	977927.054	978148.816	1.357	385.430	120.462	44.564
1093	02042016	8.6255	39.6144	1246.0	977927.647	978148.819	1.355	384.500	120.171	44.512
1094	02042016	8.6254	39.6235	1238.7	977930.502	978148.816	1.298	382.252	119.468	45.767
1095	24032016	8.6223	39.5315	1527.9	977858.524	978148.735	3.555	471.512	147.365	37.490
1096	24032016	8.6230	39.5344	1487.1	977867.840	978148.754	2.586	458.919	143.430	37.161
1097	21032016	8.6231	39.5390	1469.6	977871.265	978148.756	1.918	453.515	141.741	36.201
1098	21032016	8.6227	39.5431	1406.6	977883.964	978148.745	3.086	434.086	135.668	36.723
1100	06042016	8.6217	39.5543	1323.1	977904.813	978148.717	2.634	408.307	127.612	39.426
1101	06042016	8.6230	39.5573	1316.8	977907.311	978148.752	1.795	406.354	127.001	39.707
1102	23032016	8.6231	39.5620	1305.3	977910.624	978148.757	1.594	402.818	125.896	40.383
1103	20032016	8.6230	39.5665	1294.8	977912.767	978148.754	1.621	399.578	124.883	40.328
1104	20032016	8.6231	39.5711	1271.3	977918.466	978148.755	1.715	392.328	122.617	41.137
1105	19032016	8.6231	39.5756	1269.6	977919.832	978148.755	1.585	391.789	122.449	42.002
1106	21032016	8.6210	39.5412	1428.0	977879.861	978148.699	3.019	440.668	137.725	37.124
1108	06042016	8.6203	39.5515	1361.1	977895.440	978148.681	3.039	420.036	131.277	38.557
1109	06042016	8.6208	39.5551	1328.2	977904.334	978148.694	2.007	409.897	128.108	39.435
1110	23032016	8.6210	39.5596	1306.9	977910.020	978148.699	1.899	403.302	126.047	40.475
1111	23032016	8.6208	39.5644	1306.8	977910.227	978148.693	1.614	403.277	126.039	40.385
1112	20032016	8.6208	39.5687	1286.7	977914.773	978148.694	1.778	397.073	124.100	40.829
1113	20032016	8.6208	39.5733	1270.9	977918.874	978148.695	1.630	392.199	122.577	41.431
1114	06042016	8.6173	39.5496	1418.1	977883.751	978148.601	1.935	437.623	136.774	37.934
1115	06042016	8.6187	39.5531	1333.8	977902.127	978148.639	2.884	411.611	128.644	39.338
1116	06042016	8.6184	39.5574	1319.1	977906.880	978148.630	1.923	407.088	127.231	40.031
1117	23032016	8.6185	39.5619	1319.6	977907.462	978148.631	1.604	407.227	127.274	40.389
1118	23032016	8.6185	39.5666	1301.2	977911.866	978148.632	1.742	401.556	125.502	41.031
1119	20032016	8.6184	39.5711	1272.0	977918.049	978148.630	1.923	392.531	122.681	41.192
1120	12032016	8.6168	39.4133	1456.0	977855.991	978148.586	1.426	449.327	140.432	17.726
1121	12032016	8.6156	39.4199	1465.8	977856.286	978148.555	1.512	452.331	141.371	20.203
1122	15032016	8.6190	39.4298	1486.6	977855.220	978148.646	1.738	458.749	143.377	23.684
1124	14032016	8.6173	39.4530	1633.5	977827.543	978148.600	1.983	504.102	157.551	27.477

List of Bouguer Anomaly (17/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
1125	15032016	8.6164	39.4599	1608.4	977833.654	978148.576	1.554	496.354	155.130	27.856
1126	14032016	8.6160	39.4685	1560.3	977845.622	978148.565	1.808	481.510	150.490	29.884
1127	15032016	8.6165	39.4760	1545.2	977849.691	978148.580	1.973	476.859	149.037	30.906
1128	07042016	8.6162	39.4862	1658.2	977828.219	978148.572	1.967	511.712	159.930	33.397
1129	07042016	8.6170	39.4947	1555.9	977848.649	978148.592	4.312	480.148	150.065	34.452
1130	05042016	8.6158	39.5042	1773.6	977800.190	978148.560	6.770	547.338	171.064	34.674
1131	05042016	8.6145	39.5130	2080.8	977723.040	978148.526	14.251	642.135	200.692	30.208
1135	06042016	8.6177	39.5507	1402.4	977887.235	978148.612	2.047	432.783	135.261	38.192
1136	06042016	8.6162	39.5595	1325.2	977905.920	978148.572	1.742	408.954	127.814	40.231
1137	23032016	8.6163	39.5642	1314.9	977908.794	978148.573	1.648	405.781	126.822	40.828
1138	23032016	8.6162	39.5687	1299.3	977912.079	978148.570	1.663	400.957	125.315	40.815
1139	20032016	8.6162	39.5733	1268.7	977918.361	978148.572	1.728	391.527	122.367	40.677
1140	23032016	8.6149	39.5770	1283.3	977914.006	978148.537	2.130	396.017	123.770	39.845
1141	23032016	8.6162	39.5869	1264.6	977920.790	978148.572	1.514	390.244	121.966	42.010
1142	14032016	8.6162	39.5962	1242.9	977924.635	978148.571	1.467	383.574	119.881	41.223
1143	02042016	8.6163	39.6053	1232.3	977927.710	978148.573	1.477	380.292	118.856	42.050
1144	02042016	8.6162	39.6145	1230.0	977928.716	978148.570	1.466	379.588	118.636	42.564
1145	02042016	8.6162	39.6236	1225.9	977930.539	978148.571	1.438	378.316	118.238	43.483
1146	23032016	8.6139	39.5711	1273.9	977916.577	978148.510	1.822	393.120	122.865	40.144
1147	14032016	8.6055	39.4523	1713.8	977812.675	978148.287	2.304	528.879	165.295	30.276
1148	15032016	8.6093	39.4587	1643.4	977828.099	978148.387	1.826	507.165	158.508	30.195
1149	14032016	8.6108	39.4675	1594.2	977839.577	978148.426	1.891	491.970	153.759	31.253
1150	14032016	8.6074	39.4755	1590.8	977842.359	978148.335	2.220	490.909	153.428	33.725
1151	05042016	8.6072	39.4863	1689.2	977822.851	978148.330	1.864	521.283	162.921	34.747
1152	05042016	8.6079	39.4957	1728.7	977813.893	978148.349	2.165	533.475	166.731	34.453
1153	05042016	8.6068	39.5052	1921.2	977766.540	978148.320	6.701	592.882	185.298	32.505
1154	05042016	8.6084	39.5114	1995.2	977747.336	978148.362	10.104	615.718	192.435	32.361
1161	04042016	8.6070	39.5778	1264.1	977919.402	978148.326	1.767	390.090	121.918	41.014
1162	04042016	8.6071	39.5870	1249.6	977922.795	978148.327	1.663	385.630	120.524	41.236
1163	04042016	8.6071	39.5962	1234.1	977925.420	978148.329	1.557	380.842	119.028	40.462
1164	14032016	8.6070	39.6056	1231.4	977925.940	978148.326	1.518	379.998	118.764	40.367
1165	02042016	8.6071	39.6144	1224.2	977928.203	978148.328	1.416	377.791	118.074	41.007
1176	04042016	8.5981	39.5787	1258.2	977920.410	978148.090	1.798	388.273	121.350	41.040
1177	04042016	8.5979	39.5873	1242.9	977921.405	978148.084	1.787	383.561	119.877	38.792
1178	04042016	8.5979	39.5963	1237.7	977923.216	978148.082	1.562	381.941	119.371	39.265
1179	04042016	8.5979	39.6053	1230.8	977924.554	978148.084	1.540	379.814	118.707	39.118
1180	14032016	8.5978	39.6145	1222.4	977926.645	978148.080	1.537	377.247	117.904	39.445
1189	12032016	8.5874	39.5983	1233.7	977923.037	978147.805	1.658	380.732	118.993	38.629
1190	04042016	8.5887	39.6053	1231.2	977923.935	978147.839	1.542	379.943	118.747	38.834
1191	14032016	8.5888	39.6152	1220.6	977925.734	978147.841	1.552	376.673	117.725	38.393
1196	12032016	8.5800	39.5979	1244.9	977919.352	978147.608	1.531	384.189	120.074	37.390
1197	04042016	8.5796	39.6050	1226.3	977922.425	978147.595	1.623	378.435	118.275	36.612
1199	12032016	8.5697	39.5974	1231.5	977918.975	978147.332	1.731	380.036	118.776	34.634
1200	04042016	8.5705	39.6054	1222.7	977920.180	978147.355	1.685	377.319	117.927	33.903
2041	29032016	8.7462	39.5635	1171.7	977943.980	978152.067	1.922	361.598	113.013	42.420
2064	17032016	8.7346	39.6098	1228.2	977941.910	978151.754	1.242	379.008	118.454	51.952
2066	17032016	8.7358	39.6188	1227.2	977942.418	978151.787	1.269	378.725	118.366	52.259
2076	03042016	8.7249	39.4963	1368.9	977883.884	978151.492	1.699	422.442	132.029	24.504
2087	17032016	8.7259	39.6007	1246.7	977938.391	978151.519	1.154	384.727	120.242	52.511
2092	16032016	8.7213	39.6406	1267.9	977933.919	978151.393	1.218	391.277	122.289	52.732
2093	16032016	8.7278	39.6569	1245.2	977941.130	978151.571	1.228	384.263	120.097	54.953
2114	24032016	8.7175	39.5914	1252.3	977937.807	978151.292	1.292	386.471	120.787	53.491
2117	24032016	8.7187	39.6192	1267.2	977935.663	978151.324	1.201	391.045	122.216	54.369
2148	24032016	8.7122	39.6325	1285.4	977931.660	978151.148	1.182	396.682	123.978	54.397
2149	16032016	8.7037	39.6423	1321.4	977921.285	978150.918	1.347	407.772	127.444	52.042
2150	16032016	8.7124	39.6513	1276.8	977932.552	978151.154	1.185	394.027	123.149	53.462
2155	01042016	8.7081	39.5002	1281.5	977904.569	978151.038	1.724	395.470	123.599	27.125
2206	16032016	8.6964	39.6474	1259.2	977934.969	978150.722	1.365	388.588	121.449	52.751
2241	23032016	8.6945	39.5541	1268.2	977923.118	978150.671	1.757	391.356	122.314	43.246
2299	26032016	8.6892	39.6093	1283.1	977933.730	978150.528	1.189	395.979	123.759	56.612
2300	26032016	8.6904	39.6190	1319.1	977925.056	978150.561	1.118	407.078	127.227	55.464
2301	26032016	8.6922	39.6291	1311.4	977926.514	978150.608	1.141	404.684	126.479	55.252
2303	26032016	8.6952	39.6374	1310.9	977922.940	978150.691	1.498	404.537	126.433	51.851
2414	08042016	8.6759	39.5978	1268.9	977933.106	978150.171	1.218	391.583	122.385	53.351
2503	13032016	8.6678	39.4621	1418.7	977868.358	978149.952	1.965	437.817	136.834	21.353
2531	08042016	8.6681	39.6015	1279.3	977928.759	978149.961	1.208	394.789	123.387	51.408
2652	08042016	8.6669	39.6190	1292.1	977926.108	978149.930	1.377	398.746	124.624	51.678
2737	14032016	8.6500	39.4545	1444.6	977863.112	978149.476	1.377	445.810	139.333	21.490

List of Bouguer Anomaly (18/18)

No.	Date DDMMYYYY	Latitude DD.DDDD	Longitude DD.DDDD	Elevation (m)	Absolute Gravity (mgal)	Standard Gravity (mgal)	Terrain Correction (mgal)	Free air Correction (mgal)	Bouguer Correction (mgal)	Bouguer Anomaly (mgal) (Correction Density 2.3g/cm^3)
2768	08042016	8.6589	39.6218	1293.660	977923.093	978149.715	1.288	399.223	124.773	49.117
2853	14032016	8.6420	39.4386	1532.538	977844.212	978149.260	1.528	472.941	147.812	21.609
2969	15032016	8.6299	39.4310	1461.519	977858.729	978148.938	1.620	451.025	140.962	21.474
3001	02042016	8.6336	39.6098	1255.134	977926.943	978149.037	1.345	387.334	121.057	45.529
3071	15032016	8.6246	39.4728	1490.808	977859.460	978148.796	2.943	460.063	143.787	29.883
3074	05042016	8.6217	39.5018	1643.017	977831.705	978148.719	3.064	507.035	158.468	34.617
3125	15032016	8.6127	39.4601	1622.429	977831.529	978148.477	1.640	500.682	156.482	28.891
3126	14032016	8.6162	39.4630	1603.402	977835.551	978148.572	1.552	494.810	154.647	28.693
3130	05042016	8.6159	39.5085	2025.818	977732.270	978148.564	13.207	625.167	195.389	26.692
3148	15032016	8.5968	39.4555	1806.417	977794.754	978148.053	3.146	557.460	174.228	33.080
3165	02042016	8.6131	39.6184	1234.329	977927.538	978148.490	1.366	380.914	119.050	42.278
4180	13032016	8.6988	39.4640	1410.487	977866.937	978150.788	1.377	435.276	136.040	16.762
4764	02042016	8.6488	39.5920	1283.836	977923.367	978149.442	1.208	396.192	123.825	47.499
4881	02042016	8.6389	39.5888	1269.064	977924.063	978149.177	1.452	391.633	122.400	45.571
4883	05042016	8.6385	39.6023	1274.784	977923.990	978149.169	1.290	393.398	122.952	46.557
4974	27032016	8.6345	39.4727	1475.850	977862.004	978149.061	1.923	455.447	142.345	27.969
4999	05042016	8.6319	39.5940	1257.872	977926.128	978148.990	1.386	388.179	121.321	45.382
5064	13032016	8.6298	39.4155	1445.481	977858.390	978148.933	1.376	446.075	139.416	17.493
5141	23032016	8.6136	39.5820	1292.669	977913.172	978148.501	1.574	398.918	124.677	40.486
6001	07042016	8.7509	39.5836	1206.066	977940.063	978152.195	1.512	372.192	116.324	45.247
6002	07042016	8.7529	39.5768	1210.333	977935.512	978152.249	1.446	373.509	116.736	41.482
6003	07042016	8.7593	39.5787	1186.197	977940.438	978152.423	1.410	366.060	114.408	41.078
6004	07042016	8.7570	39.5851	1197.104	977940.737	978152.362	1.549	369.426	115.460	43.891
6005	07042016	8.7526	39.5902	1203.243	977941.182	978152.242	1.460	371.321	116.052	45.669
6006	07042016	8.7507	39.5966	1202.879	977942.240	978152.189	1.420	371.208	116.017	46.663
6007	07042016	8.7470	39.6023	1208.599	977942.586	978152.089	1.408	372.974	116.569	48.310
6008	07042016	8.7427	39.5969	1220.398	977940.617	978151.973	1.364	376.615	117.707	48.916
6009	07042016	8.7444	39.5919	1218.369	977940.086	978152.020	1.276	375.989	117.511	47.820
6010	07042016	8.7559	39.5957	1196.360	977942.738	978152.329	1.314	369.197	115.388	45.532
6011	07042016	8.7611	39.5922	1190.009	977942.151	978152.471	1.392	367.237	114.776	43.534
6012	07042016	8.7663	39.5966	1182.651	977944.008	978152.612	1.451	364.966	114.066	43.748
6013	07042016	8.7615	39.5995	1190.940	977943.692	978152.484	1.581	367.524	114.865	45.448
6014	08042016	8.7543	39.6005	1202.904	977942.054	978152.287	1.510	371.216	116.019	46.474
6015	08042016	8.7582	39.6044	1202.382	977942.489	978152.393	1.309	371.055	115.969	46.491
6016	08042016	8.7613	39.6080	1201.067	977943.360	978152.477	1.339	370.649	115.842	47.030
6017	08042016	8.7649	39.6043	1198.742	977942.431	978152.574	1.364	369.932	115.618	45.535
6018	08042016	8.7680	39.6078	1200.545	977942.190	978152.659	1.348	370.488	115.792	45.575
6019	08042016	8.7713	39.6108	1198.984	977943.011	978152.747	1.355	370.006	115.641	45.984
6020	08042016	8.7679	39.6144	1207.279	977942.500	978152.655	1.372	372.566	116.441	47.342
6021	08042016	8.7645	39.6113	1202.545	977943.044	978152.564	1.269	371.105	115.985	46.870
6022	08042016	8.7696	39.6191	1201.039	977944.994	978152.703	1.375	370.641	115.839	48.467
6023	08042016	8.7713	39.6236	1204.888	977946.019	978152.748	1.368	371.828	116.211	50.257
6024	08042016	8.7753	39.6217	1194.822	977946.236	978152.859	1.335	368.722	115.240	48.194
6025	08042016	8.7740	39.6172	1194.856	977945.160	978152.821	1.409	368.733	115.243	47.237
6026	08042016	8.7737	39.6285	1207.426	977946.176	978152.813	1.420	372.612	116.455	50.939
6027	08042016	8.7742	39.6331	1216.111	977944.698	978152.828	1.459	375.292	117.293	51.328
6028	08042016	8.7786	39.6323	1222.206	977943.252	978152.947	1.309	377.173	117.881	50.905
6029	08042016	8.7777	39.6272	1215.977	977942.800	978152.922	1.343	375.251	117.280	49.192
6030	08042016	8.7497	39.6080	1210.380	977942.606	978152.164	1.254	373.523	116.740	48.479
6031	08042016	8.7497	39.6125	1208.189	977943.348	978152.163	1.292	372.847	116.529	48.795
9999	–	8.5275	39.2423	1689.930	977800.000	978146.214	1.338	521.512	162.993	13.644
7777777	05042016	8.6133	39.5105	2134.522	977706.508	978148.493	16.941	658.713	205.873	27.796