Chapter 7 Oued Jebes Prospect

7.1 Geology

7.1.1 Geology and Geological Structure

(1) Geology

The geology of the Oued Jebes prospects comprises Triassic, Cretaceous and Tertiary systems overlain by Quaternary system as shown in Figure 70. Its stratigraphy, lithology and other characteristics are summarized in Figure 69.

The Triassic extensively distributes in the northwestern part of the prospect and is called 'J. Mouahra diapir'. The diapir is composed of salt rocks in its core and overlying cap rocks such as slate, gypsum, dolomite and so forth.

The Cretaceous System consists of formations of three stages, namely Cenomanian (Cce), Turonian (Ct) and Santonian (Cs) in stratigraphically ascending order, with the estimated total thickness of approximately 300 m.

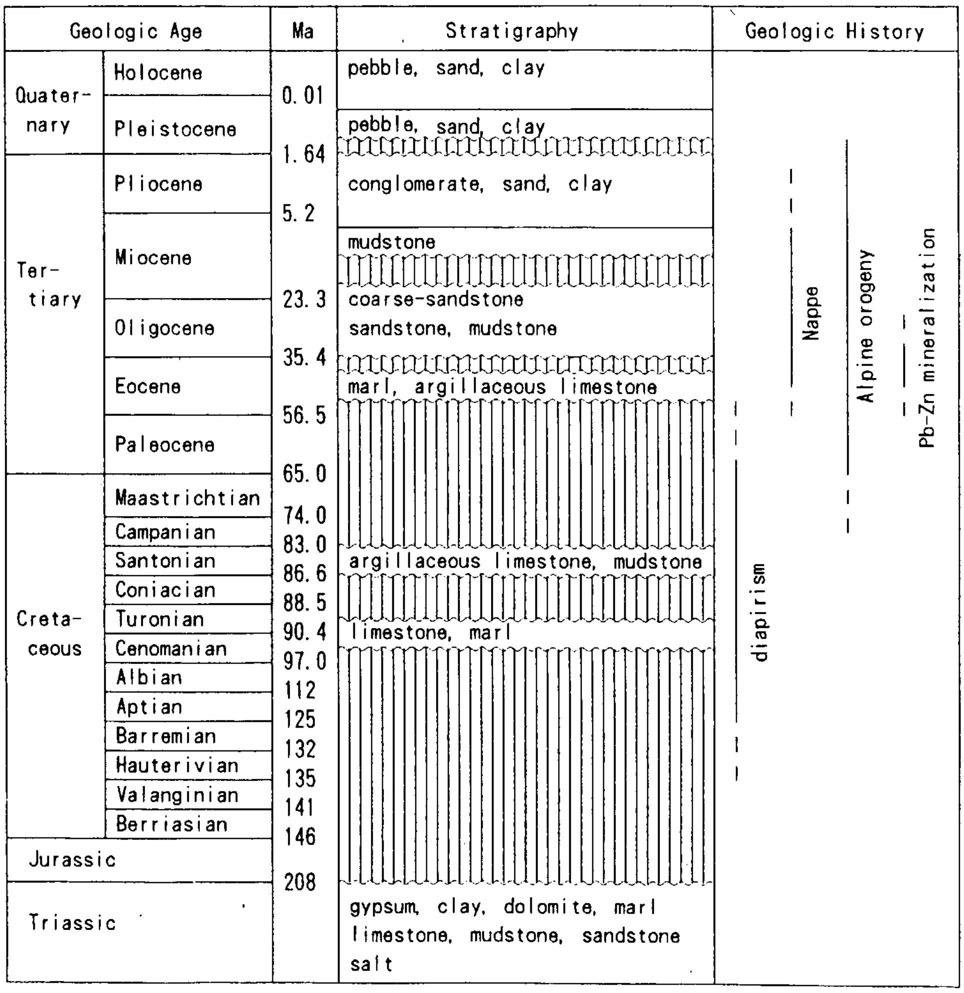


Figure 69 Schematic stratigraphic section of Oued Jebs prospect

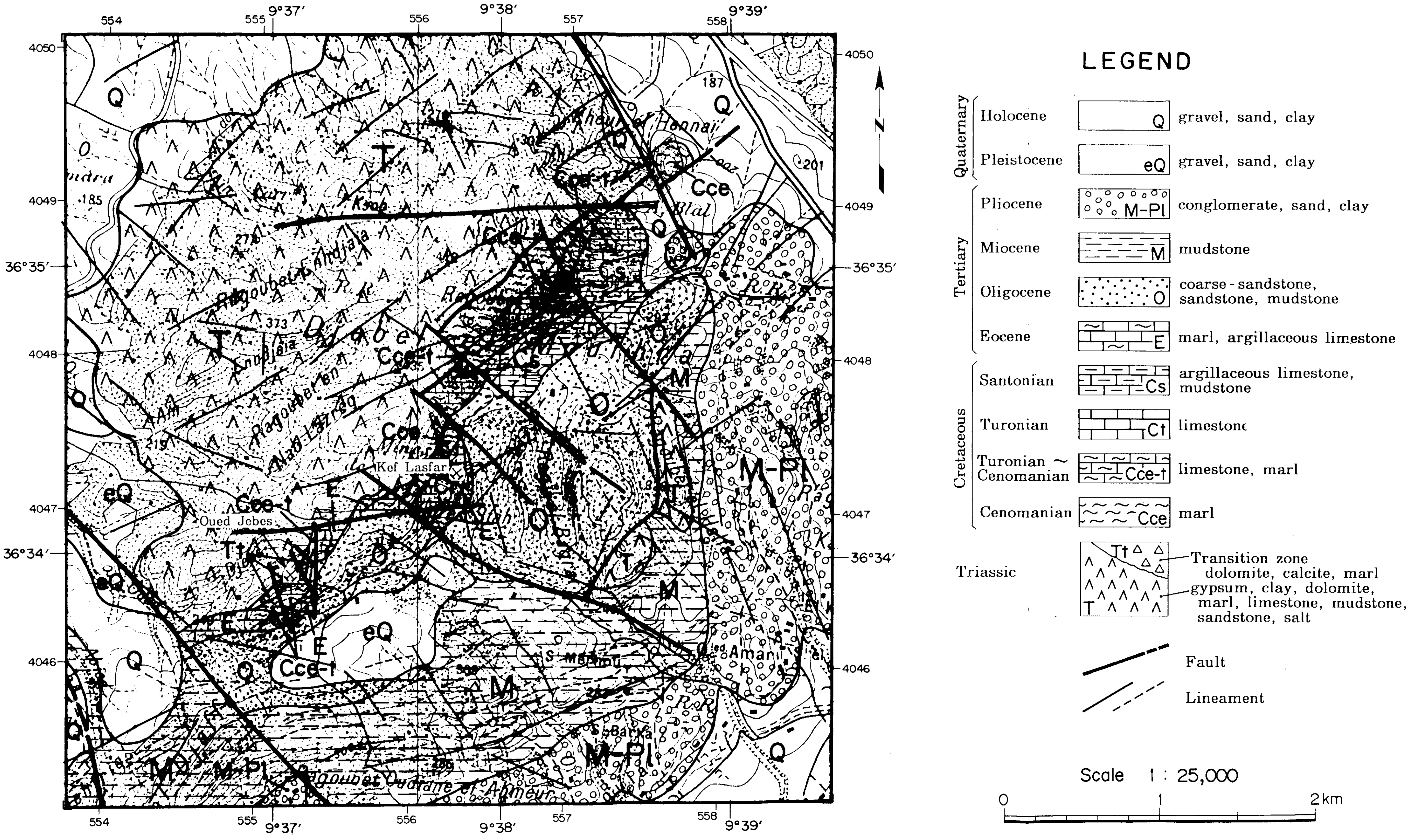


Figure 70 Geological map of Oued Jebes Prospect

The Cenomanian formation, unconformably overlying the Triassic, distributes in the northeastern to central part of the prospect and comprises the lower limestone and the upper marl members. The lower limestone member is gray-white to yellow-gray in color and massive, while the upper marl member is gray in color and interbedded with incontinuous lenses of limestone. These members steeply incline southeastward in general with the total thickness ranging from 20 to 60 m.

The Turonian formation conformably overlies the Cenomanian in principle but, in many cases, directly overlies the Triassic with unconformity where the underlying Cenomanian is lacking. The formation distributes in the northeastern to southwestern part and is divided into the lower member, mainly consisting of limestone, and the upper member, consisting of limestone and marl. The limestone of lower member, gray-white, is well stratified and indicates fair lateral continuity, which is a typical limestone facies for the lower Turonian, called 'Bahloul facies'. This member is often mineralized with sulfides and is noted as the major mineralized horizon of the stratigraphic sequence in the general area. These members steeply incline southeastwards in general, and are 10-25 m and 60 m thick for the lower and upper members respectively.

The Santonian formation unconformably overlies the Cenomanian and Turonian formations and distributes in the northeastern part. The lower Santonian is essentially composed of marl, while its middle to upper part comprises alternation of limestone and marl. Its total thickness is estimated at approximately 150 m.

The Tertiary System consists of formations of upper Eocene (E2), Oligocene (O), Oligocene-lower Miocene (O-Ma), upper Miocene (M3) and upper Miocene-Pliocene (M-Pl).

The upper Eocene, the lowermost of the Tertiary System in the general area, unconformably overlies the Triassic or Cretaceous System and distributes in the southwestern part of the prospect with a limited extension. It consists mainly of marl and argillaceous limestone, and is often interbedded with carbonate rocks in its lowermost marl bed. The argillaceous limestone is dark brown in color and contains planktonic foraminifers. The upper Eocene generally inclines southeastward, with its undetermined thickness due to fault development.

The Oligocene unconformably overlies the Cretaceous System and the upper Eocene, and distributes in the eastern to southwestern part. It mainly comprises alternation of sandstone and argillite with the lowermost limestone. The sandstone is fine to medium grained and massive in general, and shows light yellow-gray to gray white color on fresh surface or brown to light brown color on weathered surface. The mineral composition of sandstone is generally invariable, consisting mainly of quartz with subordinate plagioclase. Foraminifer fossils such as Nummulites occur in association with the sandstone-argillite alternation. The bedding steeply inclines southeastward in general. The total thickness has not been estimated, because its upper limit is not determined.

The Oligocene-lower Miocene conformably overlies the Oligocene and distributes in the southwestern part with a limited extension. It mainly consists of light brown, coarse grained sandstone containing abundant quartz, with the estimated total thickness of about 50 m.

The upper Miocene distributes in the eastern to southern part, unconformably overlying the Triassic and the Oligocene. It is mainly composed of argillite, often interbedded with sandstone, being dark brown in color, massive and relatively soft. The upper Miocene forms a syncline as a whole. Its thickness has not been estimated due to the undetermined lower limit.

The upper Miocene-Pliocene distributes in the southeast corner of the prospect, conformably overlying the upper Miocene. It consists of conglomerate, sand and clay and inclines gently to the east or southeast. The thickness is estimated at about 50 m.

The Quaternary System comprises talus deposits, colluviums and alluviums. The terrace deposits and colluviums distribute over hilly terrain or around foothills, comprising gravel, sand and clay, while alluviums, also consisting of gravel, sand and clay, develop along rivers and major streams or over low lands in their vicinity.

(2) Geological Structure

The geological structure of the general area, hence of this prospect, is characterized by extensive development of diapirs. In fact, the diapir occupies an extensive area of approximately 4 km in length and 2 km in width in the northwestern part of this prospect. It is composed of the Triassic rocks containing rock salt in its nucleus. To its southeastern side, the Cretaceous and Tertiary Systems distribute grading southeastward from the stratigraphically lower to upper sequences as a whole, although a number of faults and folds make the overall structure complicated.

The Cretaceous System, adjacent to the southeast of the diapir, indicates a monoclinal structure striking in the NE-SW direction and dipping 50 to 70° to southeast. The Tertiary System forms a gentle syncline with its axis running in the NE-SW direction. The bedding of Tertiary System strikes in the NE-SW direction, and dips 35 to 50° to the northwest and 40 ° to the southeast respectively in the southeastern and northwestern flanks of the syncline.

NW-SE trending faults are developed with intervals of 250 to 750 m within the Triassic through Tertiary Systems. These faults have been formed in association with the ascending diapir. The Cretaceous and Palaeogene formations change their thickness laterally across each of these faults. Two E-W trending faults are identified, crosscutting the NW-SE trending faults.

7.1.2 Mineral Occurrences

In this prospect, two ore deposits of the Mississippi Valley type, Oued Jebes and Kef Lasfar, are located and have ever been mined for lead and zinc. However, none of these are in operation at the present time.

(1) Oued Jebes Ore Deposits

The Oued Jebes ore deposit is situated about 9 km south of Mejez el Bab, near a peak of hill at the coordination of 36° 33' 52" N and 9° 36' 54" E. The ore deposit was exploited during the period between 1898 and 1935 by open pit and partly underground, and produced 600 tons and 300 tons of oxide ores of zinc and lead respectively. In recent years between 1992 and 1995, geological survey, geochemical rock sampling and drilling exploration were carried out by ONM-Sachtleben, attempting rejuvenation of the mine. Since then, however, the mine has been idled without any attempt of further work.

Triassic and Cretaceous systems distribute in the vicinity of the mine area.

The Triassic system consists of slate, gypsum, dolomite, rock salt and so forth, and distributes in the northwestern part of the mine area.

The Cretaceous system, distributing in the southeastern part, is divided into three stratigraphic units, upper, middle and lower according to their lithology. The lower unit consists of limestone and marl and is approximately 30 m thick. The limestone is gray-white to yellow-white in color, massive and poor in its lateral continuity. The marl is red-purple to dark brown in color, soft and rarely interbedded with sandstone. The middle unit consists of limestone of the Bahloul facies, the lower Turonian marker, and is around 15 m thick. The limestone is gray-white in color, well stratified and laterally continuous. The upper unit consists of marl and limestone, and is around 60 m thick. The marl is red in color and soft, and indicates somewhat obscure bedding. The limestone is gray-white in color and forms lenses with poor lateral continuity.

The limestone of middle unit can be correlated to the Turonian stage, based on its characteristic lithology as above mentioned. However, the Cretaceous System, as a whole, is loosely correlated to the Cenomanian-Turonian stage, because no index fossil has been identified in the upper and lower units. A geologic cross-section along the mine area is shown in Figure 71.

Pb-Zn mineralization occurs mainly in the contact zone between the Triassic and Cretaceous systems and occasionally within the Cretaceous system. The ore deposit, which was mined in the past, is formed in the contact zone composed of limestone breccia. The mineralization comprises sulfides and oxides filling matrices between angular limestone fragments and forms a single tabular ore body, striking in N 40° E and dipping about 70° to southeast. Ore minerals include sphalerite, galena, hemimorphite and so forth. Veins and vein networks of lead and zinc minerals are also observed in association with the lower Turonian limestone (the middle unit).

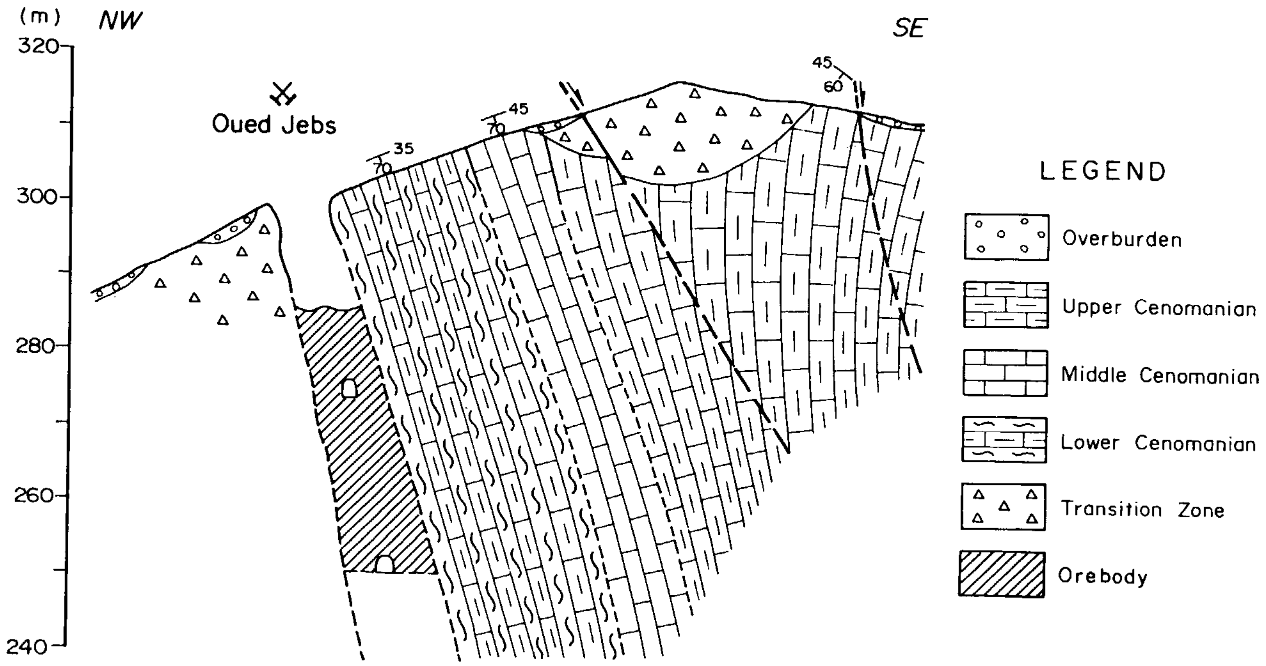


Figure 71 Geological section in Oued Jebes

(2) Kef Lasfar Ore Deposit

The Kef Lasfar ore deposit is located about 9 km south southeast of Mejez el Bab, in the upstream of Tabia. The ore deposit was ever mined for lead and zinc, with its portal of abandoned adit remaining in the upstream of Tabia, approximately at the coordination of 36° 34' 41" N and 9° 37' 41" E. No mining operation is going on at the present time. Nor record of the past production or mining activity is available either.

A geologic cross-section across the ore deposit is shown in Figure 72. As seen in Figure 72, Triassic, Cretaceous and Palaeogene systems distribute in its vicinity.

The Triassic system, distributing in the uppermost stream of Tabia, forms a diapir consisting of slate, gypsum, dolomite, rock salt and so forth, and is unconformably overlain by the Cretaceous system.

The Cretaceous system is divided into the Cenomanian and Turonian formations. The Cenomanian formation, distributing in the upstream of Tabia, unconformably overlies the Triassic system and comprises 20 m thick limestone, which is gray to yellow-gray in color, massive and compact, and is often associated with calcite networks. The Turonian formation, conformably overlying the Cenomanian, distributes also in the upstream of Tabia and can be divided into the upper and lower units. The lower unit consists of gray to gray-white limestone of the Bahloul facies with thickness of 25 m, while the upper unit is 110 m thick and composed of gray to yellow-gray limestone interbedded with marl.

The Palaeogene system, distributing in the middle stream of Tabia, is an Eocene formation which unconformably overlies the upper Turonian and comprises argillaceous limestone often interbedded with argillite. The argillaceous limestone is brown to dark brown in color and massive, containing fossils of planktonic foraminifers.

The ore deposit occurs in the upper Turonian limestone and forms a vein with thickness ranging from 0.5 to 1.5 m. The vein strikes in N 30° E and dips 80° to east, which approximately coincides with the attitude of the contact between the Triassic and Cretaceous systems as observed on an outcrop about 150 m to the northwest. Its continuity has been traced for distances of about 500m and 100 m in its strike and dip directions respectively, although its thickness considerably fluctuates from place to place. Ore minerals include galena, sphalerite, barite and so forth.

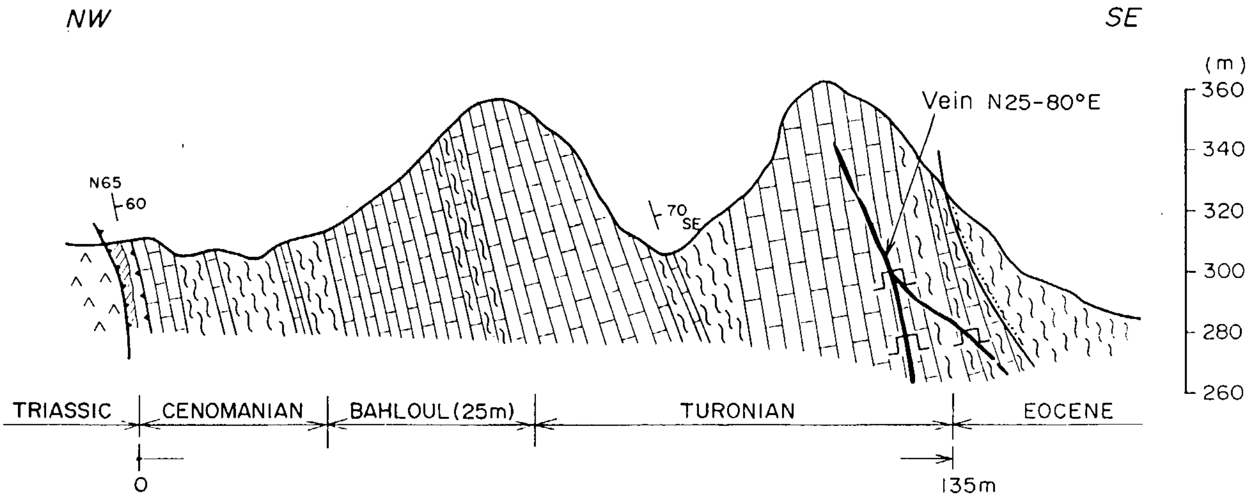


Figure 72 Geological section in Kef Lasfra

7.2 Geophysical Prospecting

In the Oued Jebes prospect, geophysical surveys using a gravity and IP methods are carried out along 22 measuring lines with a total line length of 22.5 km covering an area of 9 km^2.

7.2.1 Methodology

(1) Layout of Measuring Lines

Within four sub-prospects, namely the OA, OB, OC and OD sub-prospect, the baseline is set along the boundary of the triassic diapir with cretaceous system. The measuring lines for the gravity and IP surcey are laid out perpendicularly to the baseline at an interval of 500 m in principal.

(2) Gravity Survey

The gravity measurement is conducted on the base line and all measuring lines in the prospect using the gravity meter donated to Tunisia in the current project. The same methodrogy of the measurements and analyses in the Bou K'hil prospect, which is described on the 3.2.1, is applied to this prospect.

(3) IP survey

The IP survey is carried out for the 18 measuring lines including the four baselines and selected 14 lines. The same measurement equipment described on the 5.2.1 was used in this prospect. The same methodrogy of the measurements and analyses in the Bou K'hil prospect, which is described on the 3.2.1, is applied to this prospect.

(4) Laboratory Test

Density, resistivity and chargeability are measured in laboratory for 21 samples collected from outcrops within and around the prospect. Water , immersing the samples, indicated conductivity of 2,200 μS/cm, equivalent to around 5 Ωm, at a temperature of 22 °C at the time of measurement.

7.2.2 Gravity survey

(1) Gravity Distribution of the Prospect (Figure 73)

The OA sub-prospect lies in the west marginal area of the extensive gravity high in the central part of the regional gravity map. The low gravity cut from the great gravity low of the west side into the gravity high in the vicinity of the sub-prospect. The low gravity runs from the north to the south around the Bou Mouss old working.

The OB sub-prospect lies in the southwest margin of the high gravity anomaly exceeding 18 mgal in the north side of the center of the extensive gravity high. The low gravity runs from the south to the north in the vicinity of the Dar ech Chebka small old working.

The OC sub-prospect lies in the southwest marginal part of the extensive gravity high. The gravity high juts up around the Oued Jebes old working. The Kef Lasfar small old working is located in the jutted part of the narrow gravity high stretching from the northwest to the southeast along the survey line OC3. This narrow gravity high seems to the part lying between two small low gravity anomalies.

The OD sub-prospect lies around the small high gravity anomaly beyond 18 mgal in the southwestern part of the extensive gravity high. The low gravity anomaly cut into the small high gravity anomaly of the north side in the vicinity of the Rag el Bagrat mineral indication.

These features suggest that the mineral occurrences in the Oued Jebes prospect are located around the low gravity anomalies within the extensive gravity high.

(2) Residual Gravity Anomaly (Figure 73)

The residual gravity distribution in the OA sub-prospect is characterized the low anomaly below -0.2 mgal running from the southwest to northeast in the northwestern side of the base line OA0. The fact that this low residual gravity anomaly corresponds to the area of the Triassic system suggests that a low-density diapir shows the anomaly.

The residual gravity distribution in the OB sub-prospect is characterized the low anomaly running from the southeast to the northwest along the survey line OB0. Within this the low residual anomaly the tertiary systems distribute wider than the Triassic systems. However, it is possibly guessed that the low residual gravity anomaly is generated by geological structures such as fractures related to rise of Triassic diapir because of the location of the Triassic system in the northwestern end of the low anomaly and the presumption of the Triassic rising northwestwards from the geological structures.

The residual gravity distribution in the OC sub-prospect is characterized the high anomaly above 0.4 mgal extended in the northwestern side of the base line OC0. The fact that this high residual gravity anomaly corresponds to the Triassic systems suggests that this is related to Triassic dolomite estimated high-density in the laboratory test. The Oued Jebes old working in the southwest part of the sub-prospect and the Kef Lasfar old woking around the boundary with the OD sub-prospect are located in the south edge part of the high anomaly. The low residual gravity anomaly below 0 mgal stretches the northeastwards from the southwest end of the sub-prospect to the OC0-100 in the vicinity of the boundary with the OD sub-prospect. The low anomaly corresponds to the distribution of the tertiary systems, the Kef Lasfar old working is located in the northeastern end of it.

The residual gravity distribution in the OD sub-prospect is characterized the low anomaly below 0 mgal extended from the boundary with the OC sub-prospect to the southeast end of the survey line OC2 in the southwestern part of the sub-prospect. The low anomaly corresponds to the distribution of the cretaceous and tertiary systems, the Rag el Bagrat mineral indication is located within it. In both sides of this low residual gravity anomaly steep gravity gradients run in the NW-SE direction. It is supposed that the low residual gravity corresponds to the fall down part by faults. The high residual gravity anomaly exceeding 0.8 mgal related to the Triassic dolomite lies in the northwest side of the low anomaly such as the OC sub-prospect. It is inferred that the possible fault in the boundary with the OC sub-prospect thrust the high anomaly northwestwards.

(3) First Vertical Derivative Gravity (Figure 73)

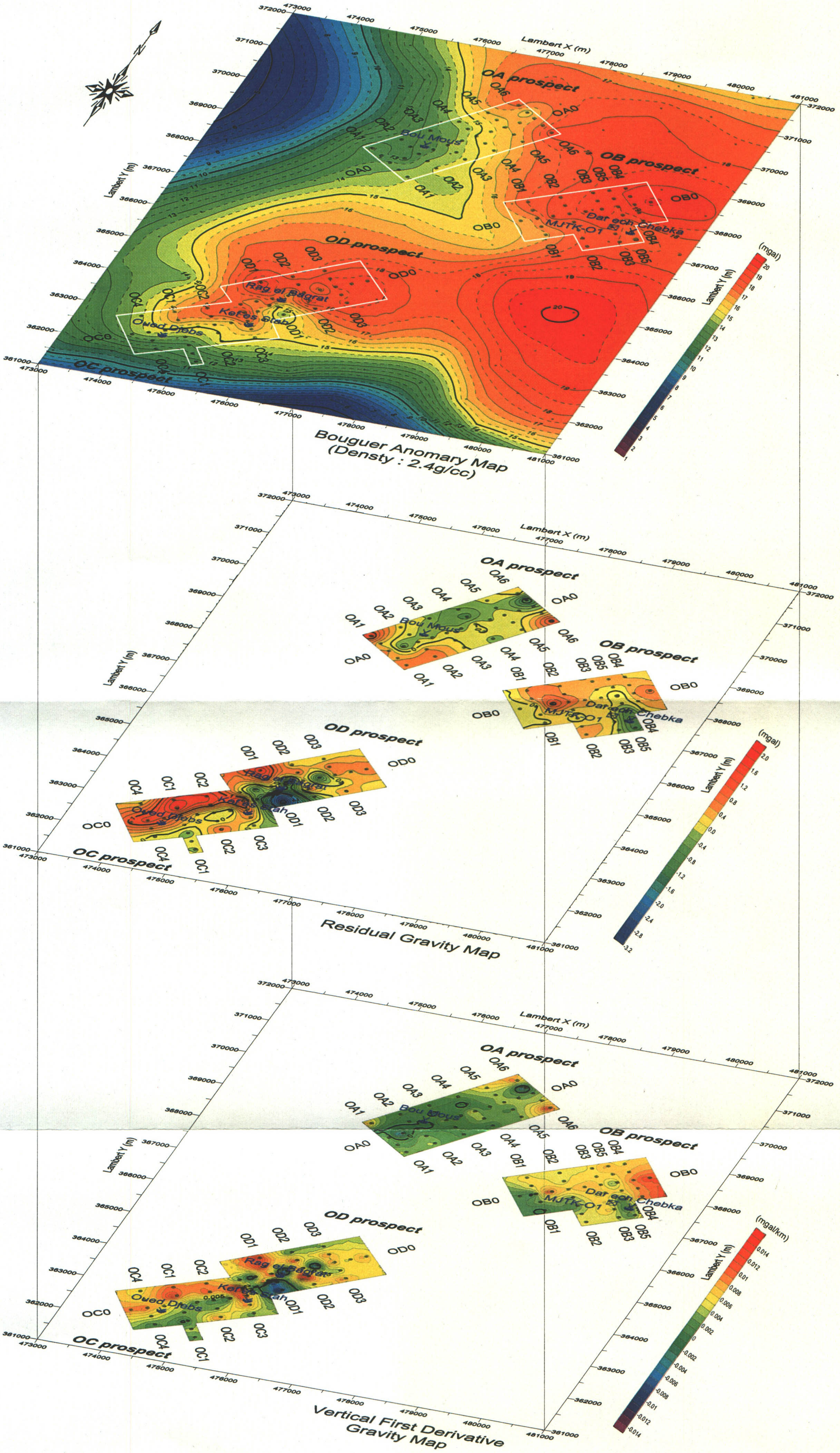


Figure 73 Panel diagram of gravity survey plan map in Oued Jebs prospect

In all sub-prospects anomalies of first vertical derivative gravity approximately correspond to those of residual gravity. The contours of 0 mgal/km indicating faults and boundaries of geological units are running inside the low residual gravity anomalies.

(4) Cross Section Analysis

(a) OA sub-prospect (Figure 74)

In the cross section analysis of the Oued Jebes prospect, the tertiary system is suppose a gravity basement with density difference of 0.00 g/cm^3. It is assumed that the Cretaceous systems, the Tertiary systems and the Quaternary systems overly above the gravity basement and their density difference for the Triassic systems are decided.

The result of each profile is describes below.

In the section OA0 crosscutting longitudinally the OA sub-prospect from the southwest to the northeast, the high-density layer with density difference of 0.05 g/cm^3, which may reflect Cretaceous systems, extends almost all the section. Within this high-density layer four low-density layers rise from the deep to the shallow part such as veins around the stations OA0-30, OA-70, OA0-120 and OA0-180. Their outlines suggest that these low-density layers may reflect fractured zones intersecting the base line. The Bou Mouss old working lies between two low-density layers around the station OA0-60. The density differences of two surface layers from OA0-100 through OA0-160 and between OA0-190 and OA0-250 are 0.00 g/cm^3. The former may reflect the Tertiary system, and the latter may be the Triassic systems.

In the section OA2 traversing from the northwest to the southeast in the southwest part of the Bou Mouss hills, the high-density layer with density difference of 0.05 g/cm^3, which may reflect Cretaceous system, extends almost all the section. The gravity basement with density difference of 0.00 g/cm^3, which may reflect the Triassic system, lies in the northwest end of the section.

(b) OB sub-prospect (Figure 75)

In the section crosscutting in the center of the OB sub-prospect parallel to the section OB2, the gravity basement occupies many parts of the section. The high-density layer extending in the shallow part of the northwestern side of the station OB3-30 is corresponded to the Cretaceous systems. The high-density surface layer in the central part of the section is corresponded to the Triassic systems. The low-density layer lying in the southeastern side of the high-density surface layer is corresponded to the Tertiary systems. The densities of these layers are not so much different from one of the gravity basement.

In the section OB5 crosscutting the northeastern part of the OB sub-prospect from the northwest to the southeast through the Dar ech Chebka old small working, the high-density overburden with density difference of 0.05 g/cm^3 in the northwest side of the station OB5-40 reflects the Cretaceous systems. This overburden overlies the

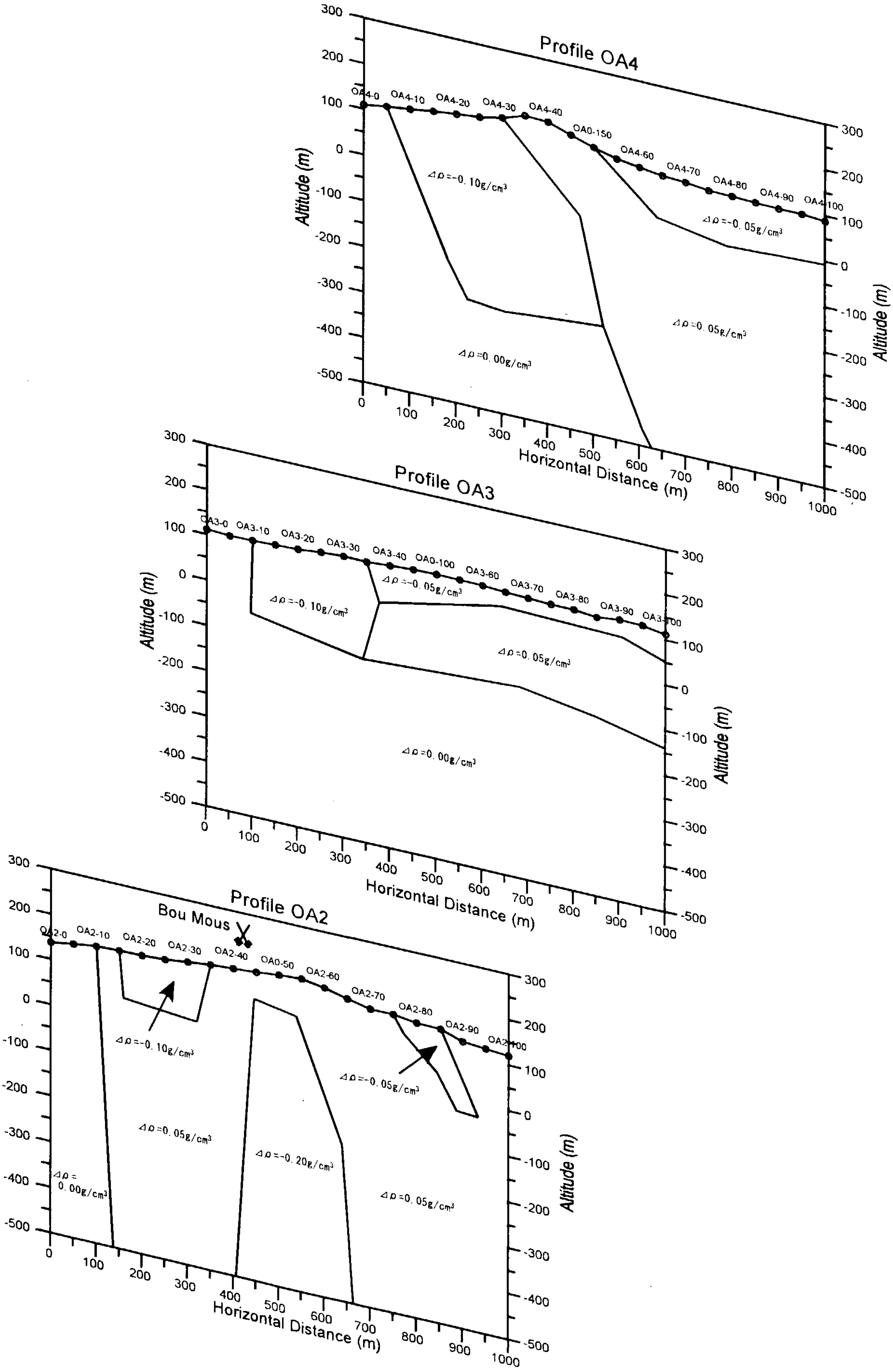


Figure 74 Panel diagram of 2-D gravimetric analysis section in Oued Jebs-OA prospect

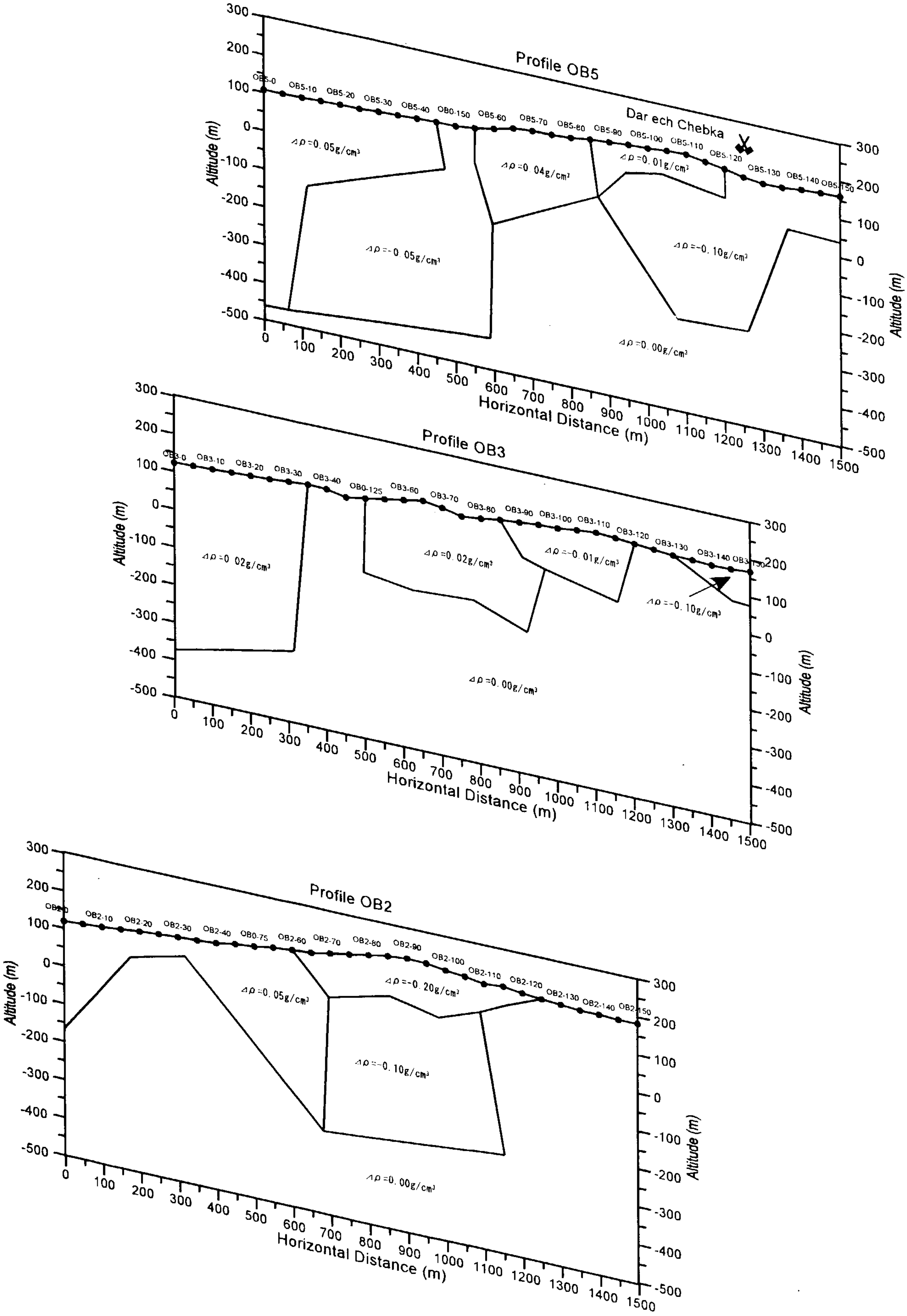


Figure 75 Panel diagram of 2-D gravimetric analysis section in Oued Jebs-OB prospect

low-density layer with density difference of -0.05 g/cm^3. The gravity basement is distributed in the deep part of the southeastern side of the station OB5-60. It is guessed that the high-density overburden with density difference of 0.04 g/cm^3 lying between the station OB5-60 and 80 may be corresponded to the Triassic dolomites or the celestites of the transition zones. The low-density layer with density difference of -0.10 g/cm^3, which is corresponded to the Tertiary systems, is distributed thick. The gravity basement underlying this low-density layer is rising up in the vicinity of the Dar ech Chebka small old working.

(c) OC sub-prospect (Figure 76)

In the section running longitudinally from the southwest to the northeast in the OC sub-prospect through the Oued Jebes and the Kef Lasfar old workings, the gravity basement corresponded to the Triassic system rises to the shallow part almost section except for the overburden in the central part through the northeast part. It is outcropped in the southeastern side of the station OC0-60 including the Oued Jebes old working. It is supposed that the low-density layers with density difference of -0.05 g/cm^3 distributed in the shallowness between the station OC0-70 and 160 in the central part of the section and around the station OC0-200 in the vicinity of the northeast end are corresponded to the Tertiary systems. The high-density layer with density difference of 0.10 g/cm^3 lying from the station OC0-160 to 190 may reflect the Cretaceous systems. The Kef Lasfar old working is located within this high-density layer.

In the section OC1 running from the northwest to the southeast in the west part of the Djebel el Mauhra hills, the gravity basement rises up to the ground surface in the area between the station OC1-40 and 90 in the central part and from the station OC1-100 to 140 in the southeastern part of the section. The high-density layer with density difference of 0.15 g/cm^3 is distributed in the northwest side of the station OC1-140. This high-density layer may reflect the Triassic dolomite. The low-density layer with density difference of -0.07 g/cm^3 stretches from the shallow to the deep part in the area between the station OC1-90 and 110. This low-density layer may reflect a fractured zone of a fault intersecting the section. The low-density layer with density difference of -0.07 g/cm^3 is distributed in the southeast end of the section, too.

In the section crosscutting the OC sub-prospect from the northwest to the southeast through the Kef Lasfar old working in the central part of the Djebe el Maurhra hills, the high-density layer with density difference of 0.10 g/cm^3 extends deeply in the central part, it is exposed on the ground surface between the station OC3-10 and 30. The low-density layers below 0.00 g/cm^3 are overlying the high-density layer. The high-density overburden with density difference of 0.10 g/cm^3 near the Kef Lasfar old working is corresponded to the Cretaceous systems.

(d) OD sub-prospect (Figure 77)

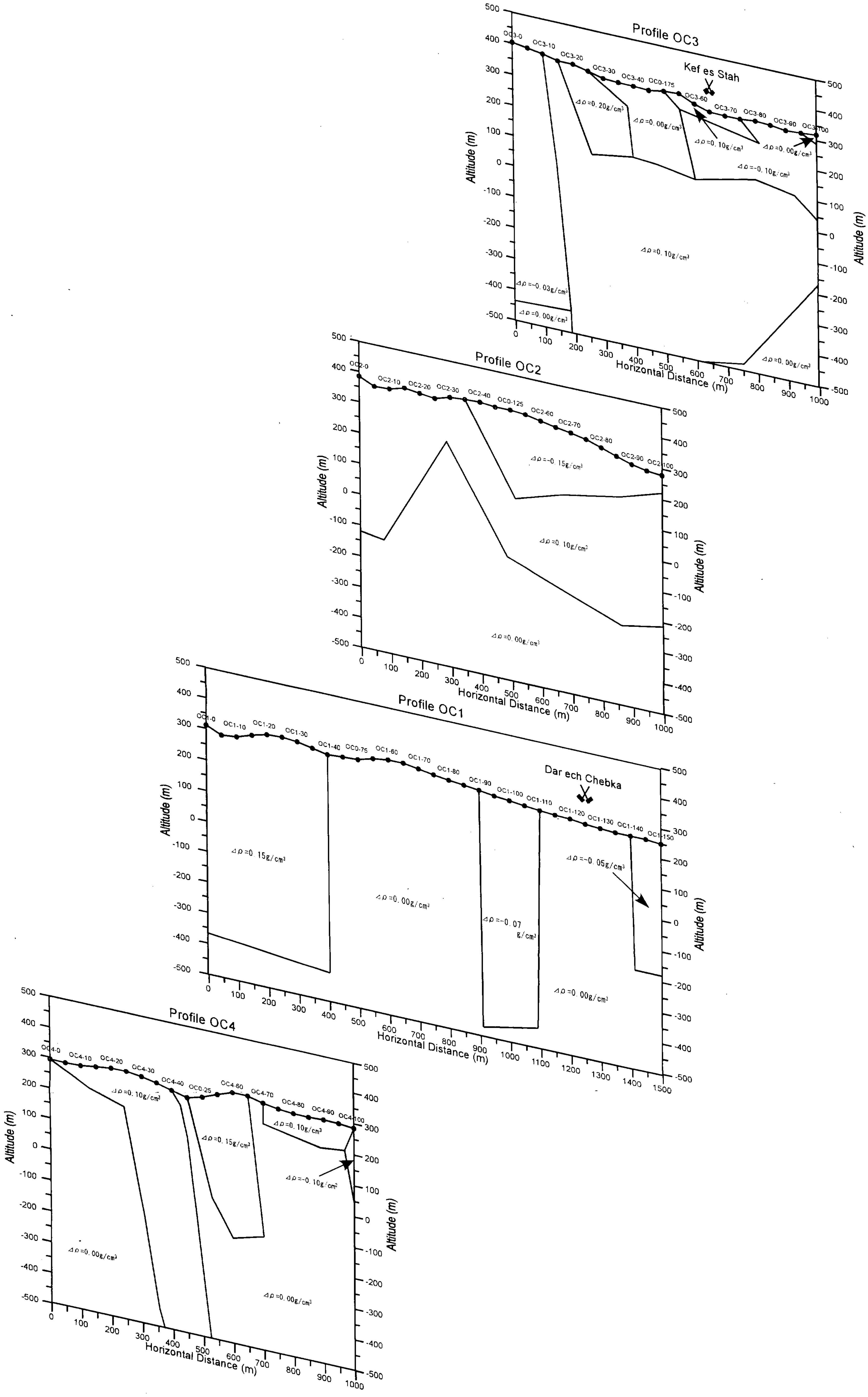


Figure 76 Panel diagram of 2-D gravimetric analysis section in Oued Jebs-OC prospect

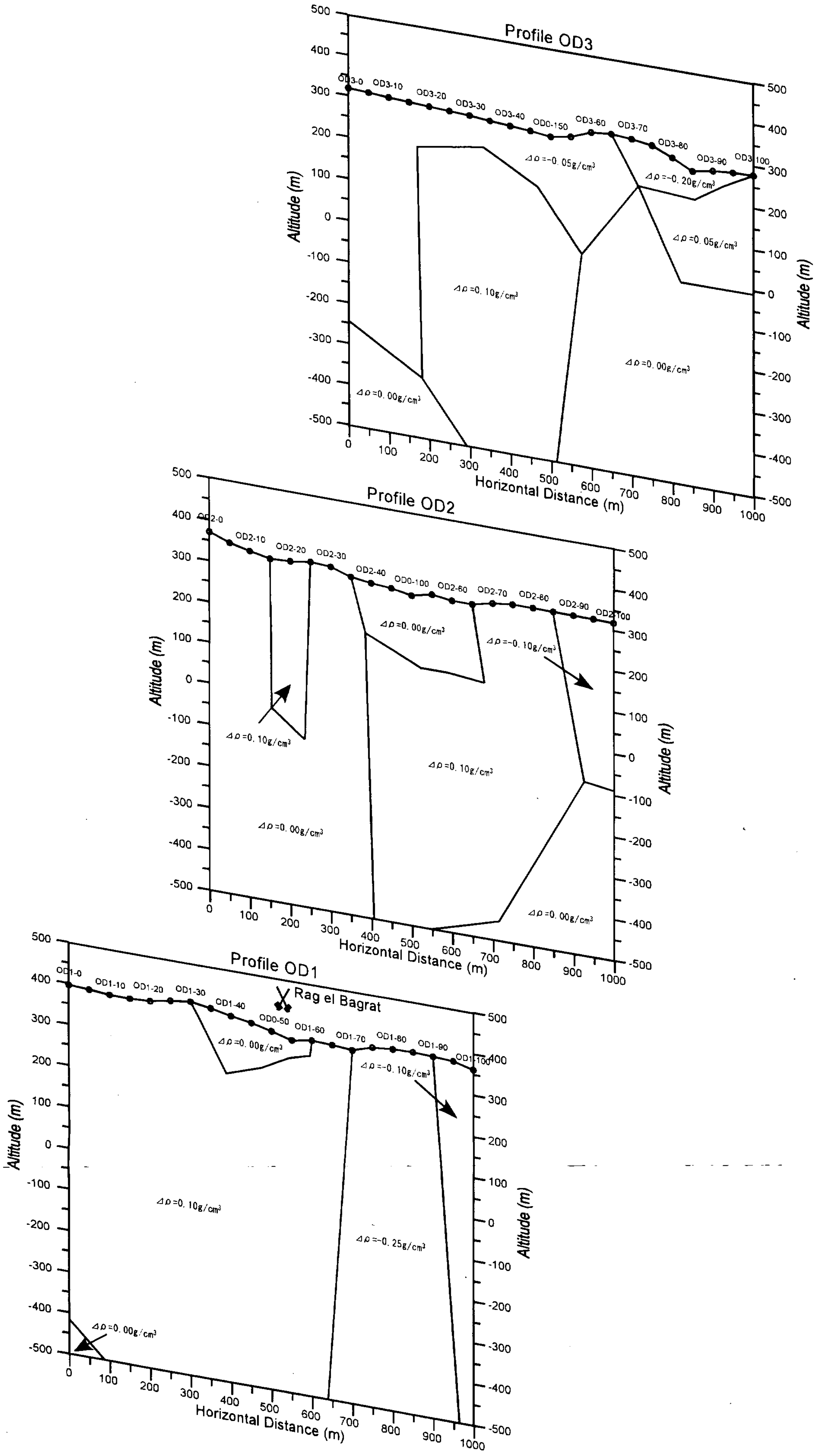


Figure 77 Panel diagram of 2-D gravimetric analysis section in Oued Jebs-OD prospect

In the section crosscutting longitudinally the OD sub-prospect from the southwest to the northeast through the Rag el Bagrat mineral indication in the northeastern part of the Djebel el Maurha hills, the high-density layer with density difference of 0.10 g/cm^3 that is corresponded the Cretaceous systems covers almost section. The low-density layers with density difference ranging between -0.25 and -0.10 g/cm^3 overlie this high density between the station OD0-10 and 40, the station OD0-65 and 90, the station OD0-110 and 140, and in the northeastern side of the station OD0-160. The low-density layer stretching deeply in the vicinity of the the Rag el Bagrat mineral indication may reflect a fractured zone.

In the section traversing the OD sub-prospect from the northwest to the southeast through the Rag el Bagrat mineral indication in the northeastern part of the Djebel el Maurha hills, the high-density layer with density difference of 0.10 g/cm^3 lies in the northwest side of the station OD1-30, the low-density layer ranging from -0.25 to -0.10 g/cm^3 is distributed in the opposite side. It is supposed that the high-density layer comprises the Triassic dolomite distributed in the northwestern part of the section and the Cretaceous systems in the central part. Their boundary position supposed around the station OD1-30 is not recognized so much clearly. The low-density is corresponded to the Tertiary systems. The low-density layers between the station OD1-70 and 90 going down deeply such as a vein may reflect a fractured zone.

7.2.3 IP survey

(1) Cross Section of Modeled Resistivity and Chargeability

(a) OA sub-prospect (Figure 78, 79, 80 and 81)

In the section OA0 crosscutting the OA sub-prospect along the axis of the Bou Mouss hills from the southwest to the northeast, resistivity high above 50Ωm extends broadly. The large high anomalies of modeled resistivity exceeding 100Ωm lie in the shallow from the station OA0-0 to 50 in the southwest part of the section, in the deep between the station OA0-80 and 110 in the central part, from the deep around the station OA0-140 to the shallow around the OA0-180 and in the deep between the station OA0-200 and 220 in the northeastern part. The low resistivity below 30Ωm is distributed deeply in the southeastern end of the section. The conductive anomalies less than 30Ωm descend from the shallowness to the depth around the station OA0-50 in the vicinity of the Bou Mouss old working and between the OA0-170 and 180 in the central part of the section. The weak anomaly of chargeability above 5 mV/V extends from the station OA0-40 to 80 in the vicinity of the Bou Mouss old working. The maximum chargeability in the deep part around the station OA0-60 indicates exceeding 10 mV/V highest of the current investigation.

In the section OA2 traversing from the northwest to the southeast in the southwest

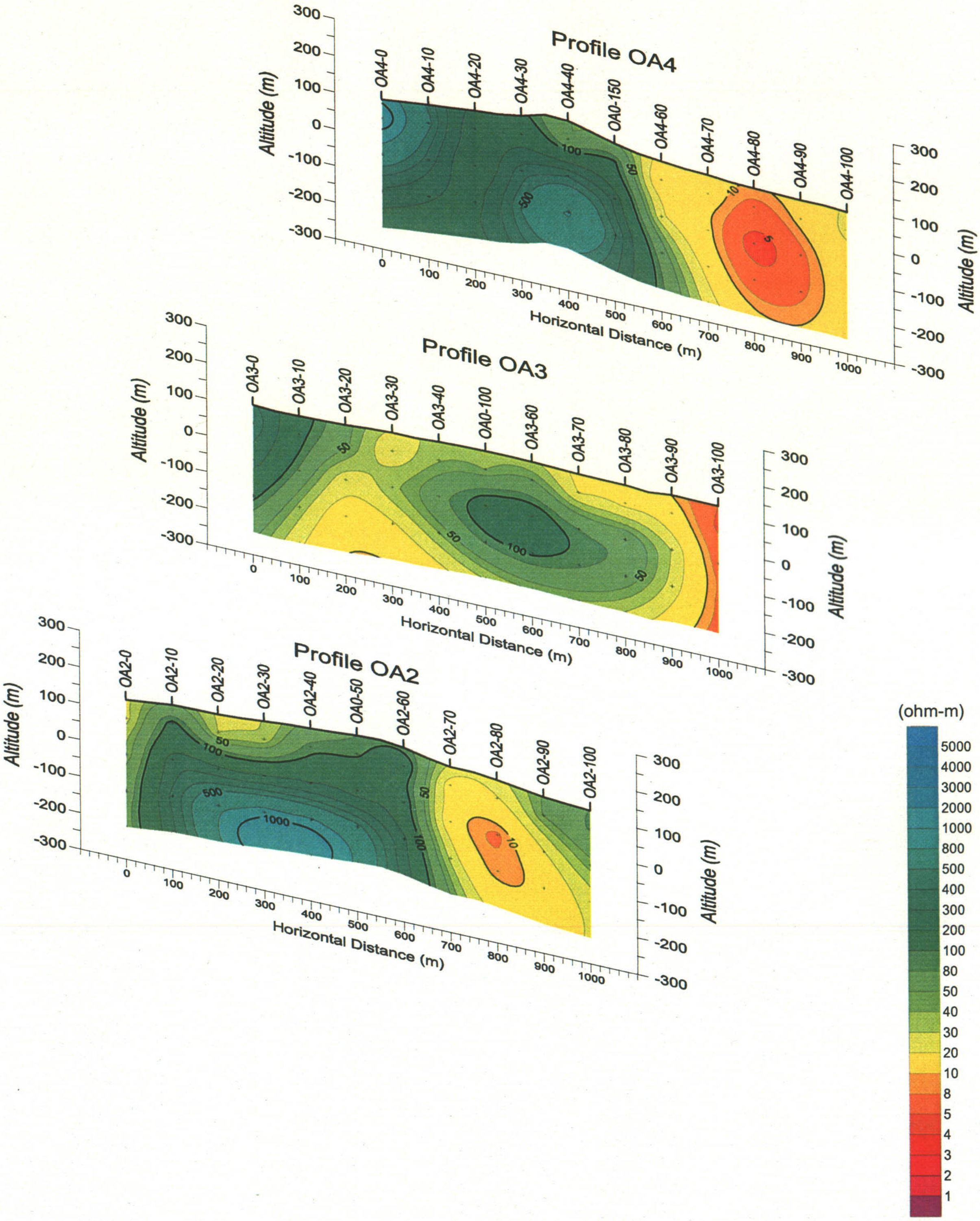


Figure 78 Panel diagram of modeled resistivity section in Oued Jebs-OA prospect

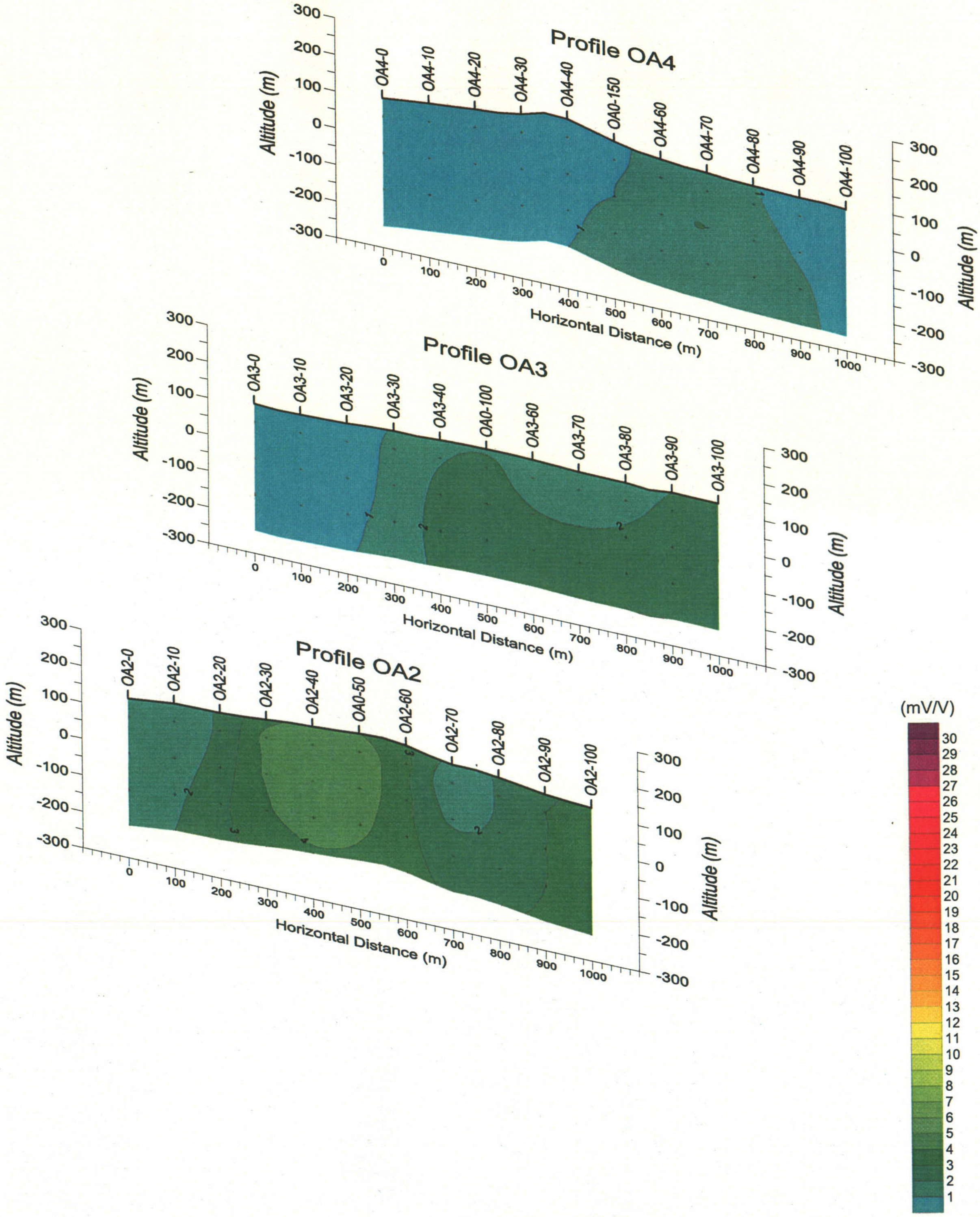


Figure 79 Panel diagram of modeled chargeability section in Oued Jebs-OA prospect

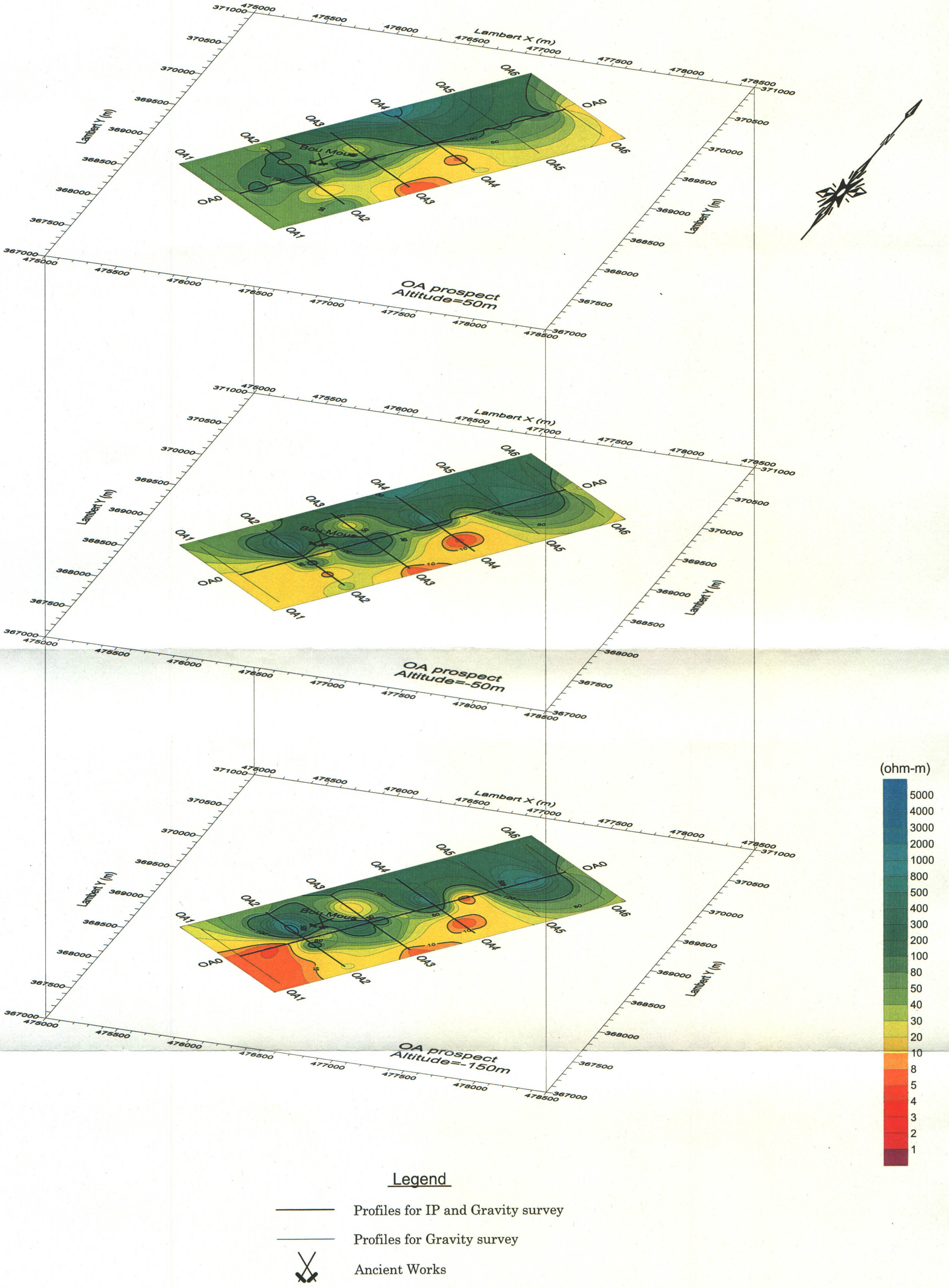
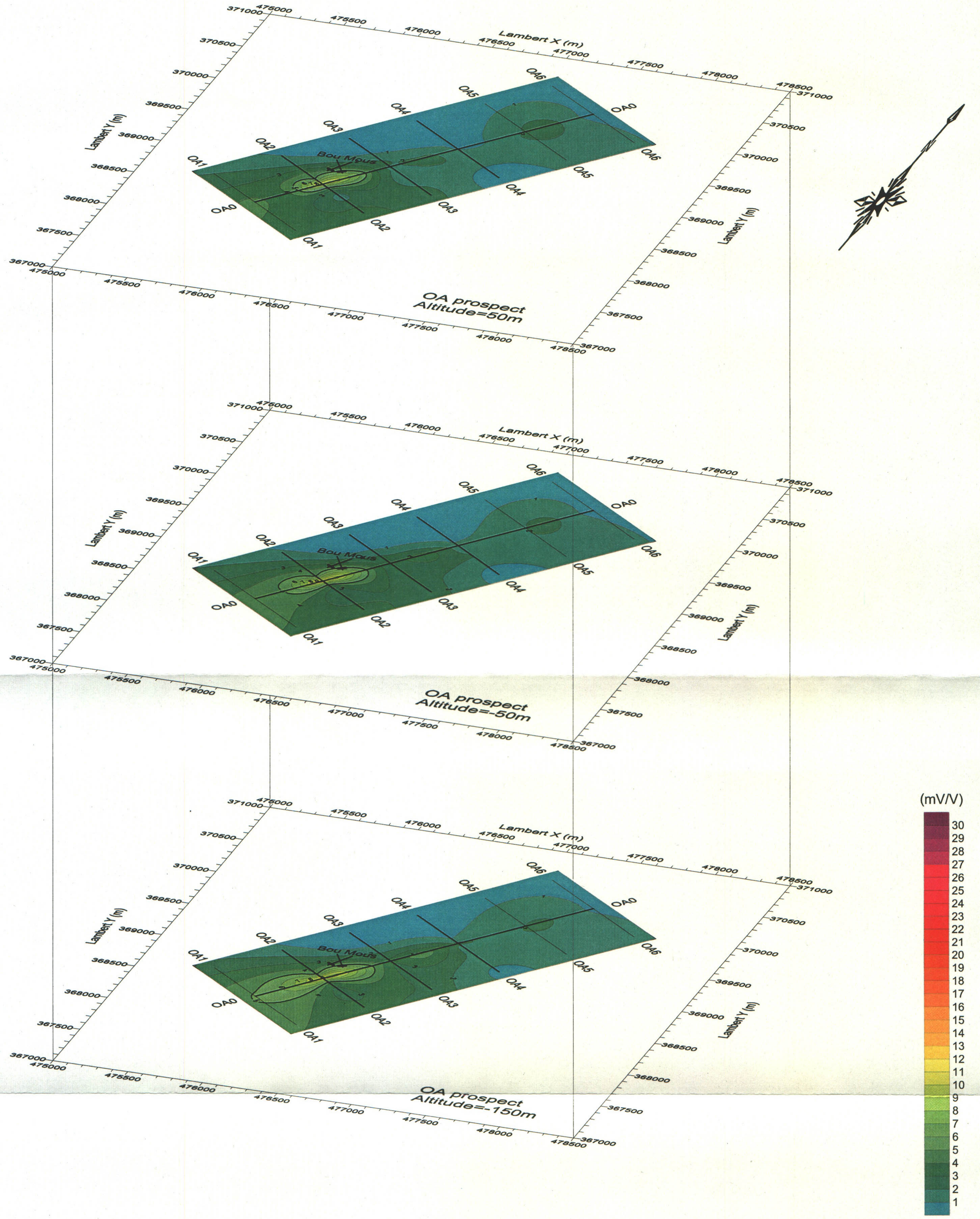


Figure 80 Panel diagram of modeled resistivity plan map in Oued Jebs-OA prospect



Legend

Profiles for IP and Gravity survey

Profiles for Gravity survey

Ancient Works

Figure 81 Panel diagram of modeled chargeability plan map in Oued Jebs-OA prospect part of the Bou Mouss hills, high resistivity exceeding 100 Ωm is distributed from the station OA2-20 in the northwestern part to the OA2-60 in the central part of the section. It is supposed that this high resistivity is corresponded to the Triassic dolomite and the Cretaceous limestone. The overburden as conductive as 30 Ωm between the station OA2-20 and 30 may reflect the Triassic mud The conductive anomaly below 30 Ωm, which may be corresponded to the Triassic systems, lies from the station OA2-70 to 90. In the boundary between this conductive anomaly and the high resistivity described previously resistivity is discontinued. The very weak anomaly of chargeability above 4mV/V extends between the station OA2-30 and 50 in the vicinity of the Bou Mouss old working.

High resistivity exceeding 50 Ωm is distributed in the northwestern side of the base line OA0, low resistivity less than 30 Ωm extends in the opposite southeastern side. On the survey line OA2 and OA3 the high resistivity area extends southeastwards beyond the base line. Resistivity in deeper plan becomes lower in general. The Bou Mouss old working is located in the southern marginal zone of a resistive anomaly trending in the E-W direction.

A chargeability anomaly exceeding 5 mV/V extends in the NE-SW direction along the base line in the vicinity of the Bou Mouss old workings in the southeastern part of the sub-prospect. In the deeper plan the chargeability anomaly exceeding 5 mV/V including the Bou Mouss old working extends broader to the southwestern end of the base line OA0.

(b) OB sub-prospect (Figure 82, 83, 84 and 85)

In the section OB3 crosscutting in the center of the OB sub-prospect, a resistive anomaly exceeding 100 Ωm extends from the surface zone around the station OB3-60 to the deep zone around the OB3-100 in the central part of the section. This resistive anomaly is supposed to be corresponded with the Triassic systems. A resistive anomaly above 50 Ωm lies in the deep zone between the station OB3-120 and 140 in the southeastern part of the section, and a small anomaly of resistivity beyond 100 Ωm is located around the station OB3-30 in the northwestern part. Such as the cross section OB2 a conductive anomaly below 10 Ωm is distributed between the station OB3-30 and 60 intersecting the base line, and a conductive overburden less than 10 Ωm extends from the station OB3-90 to 140 in the southeastern part. The chargeability anomaly exceeding 5mV/V extends deeply from the station OB3-90 to 120 in the central part of the section.

In the section OB5 crosscutting the northeastern part of the OB sub-prospect from the northwest to the southeast through the Dar ech Chebka old small working, the features of resistivity distribution in this section are almost same as that in the cross section OB3, resistivity of this section tends to be lower than that of the section OB3 in general.

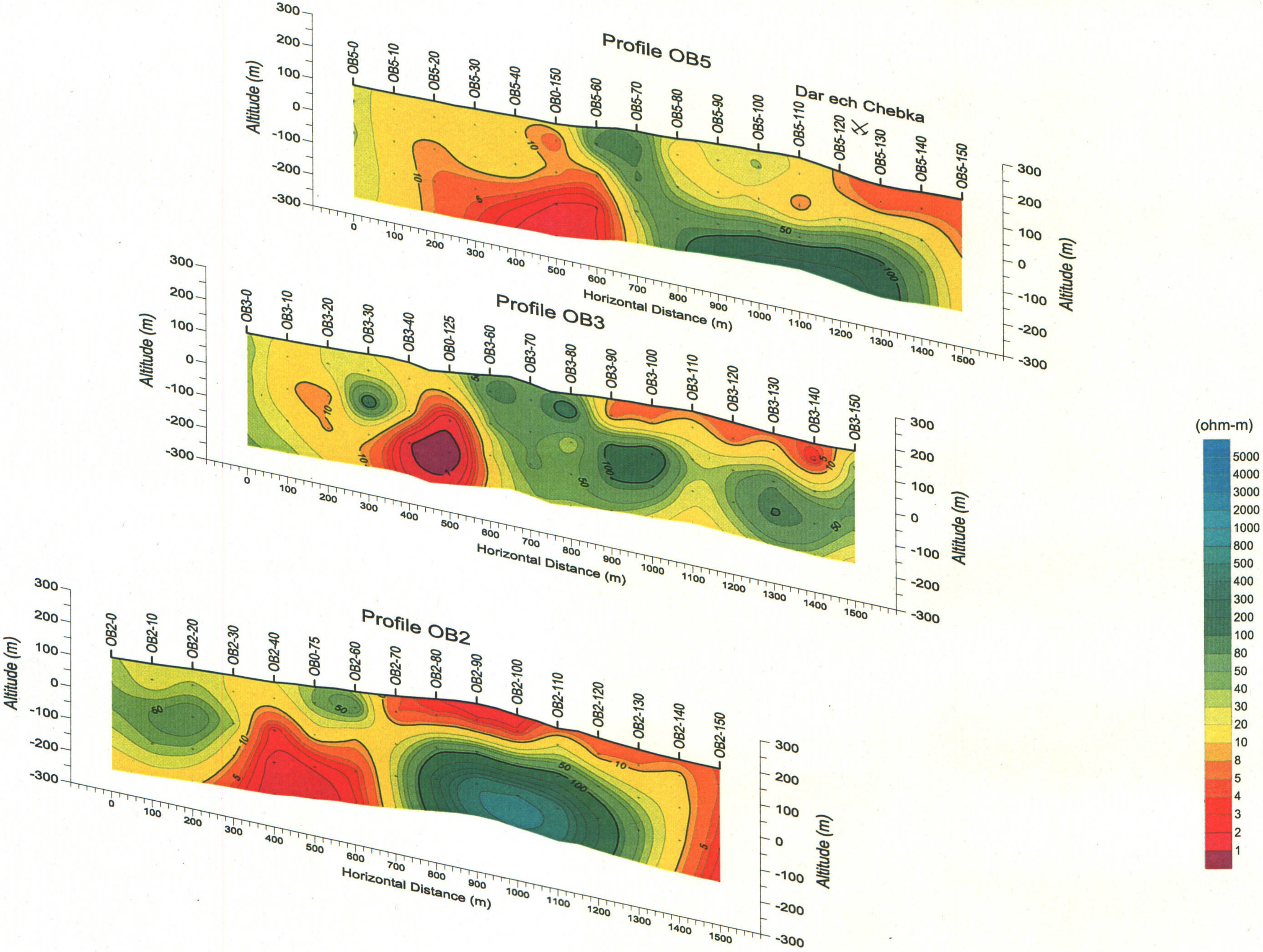


Figure 82 Panel diagram of modeled resistivity section in Oued Jebs-OB prospect

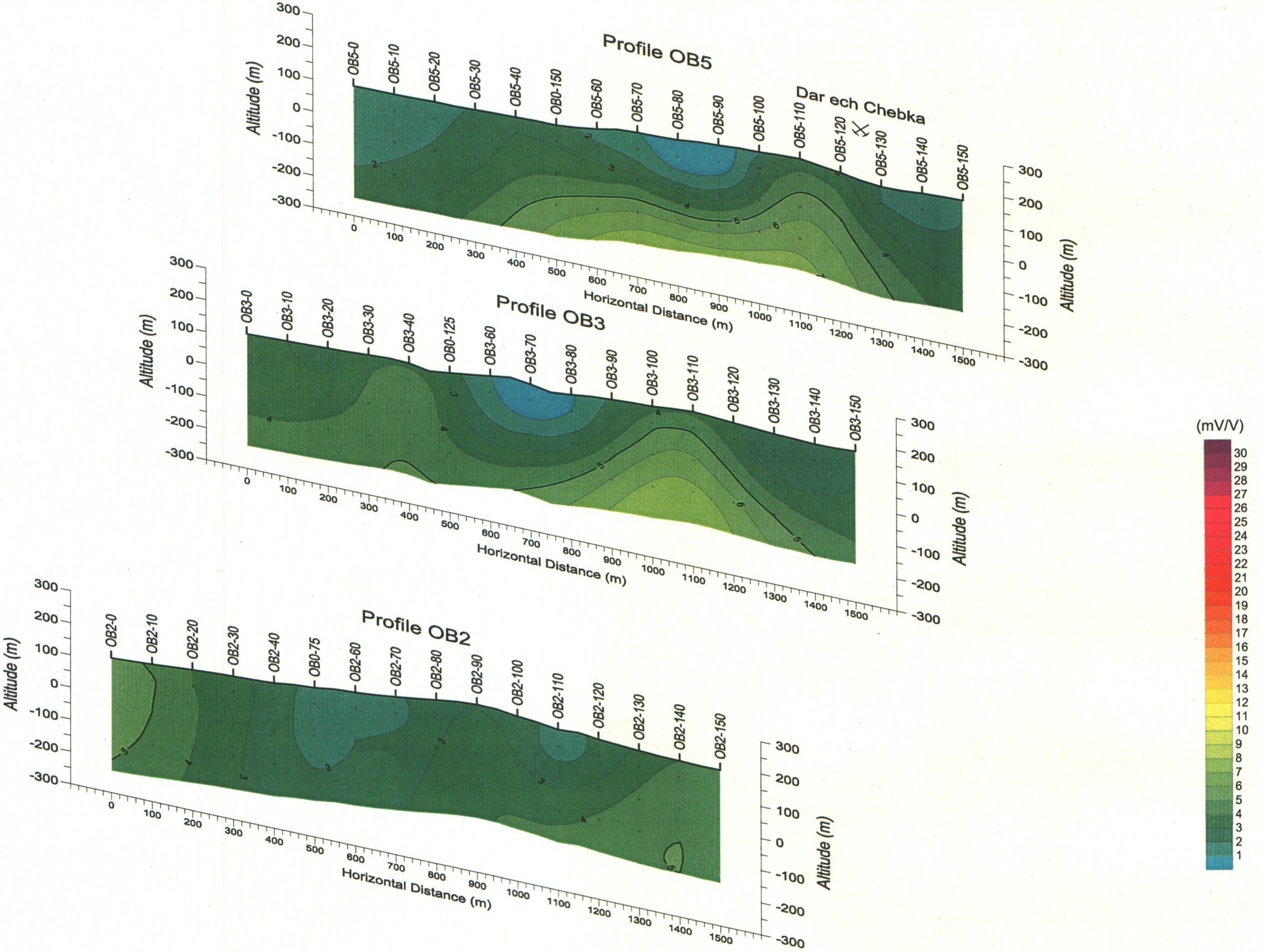


Figure 83 Panel diagram of modeled chargeability section in Oued Jebs-OB prospect

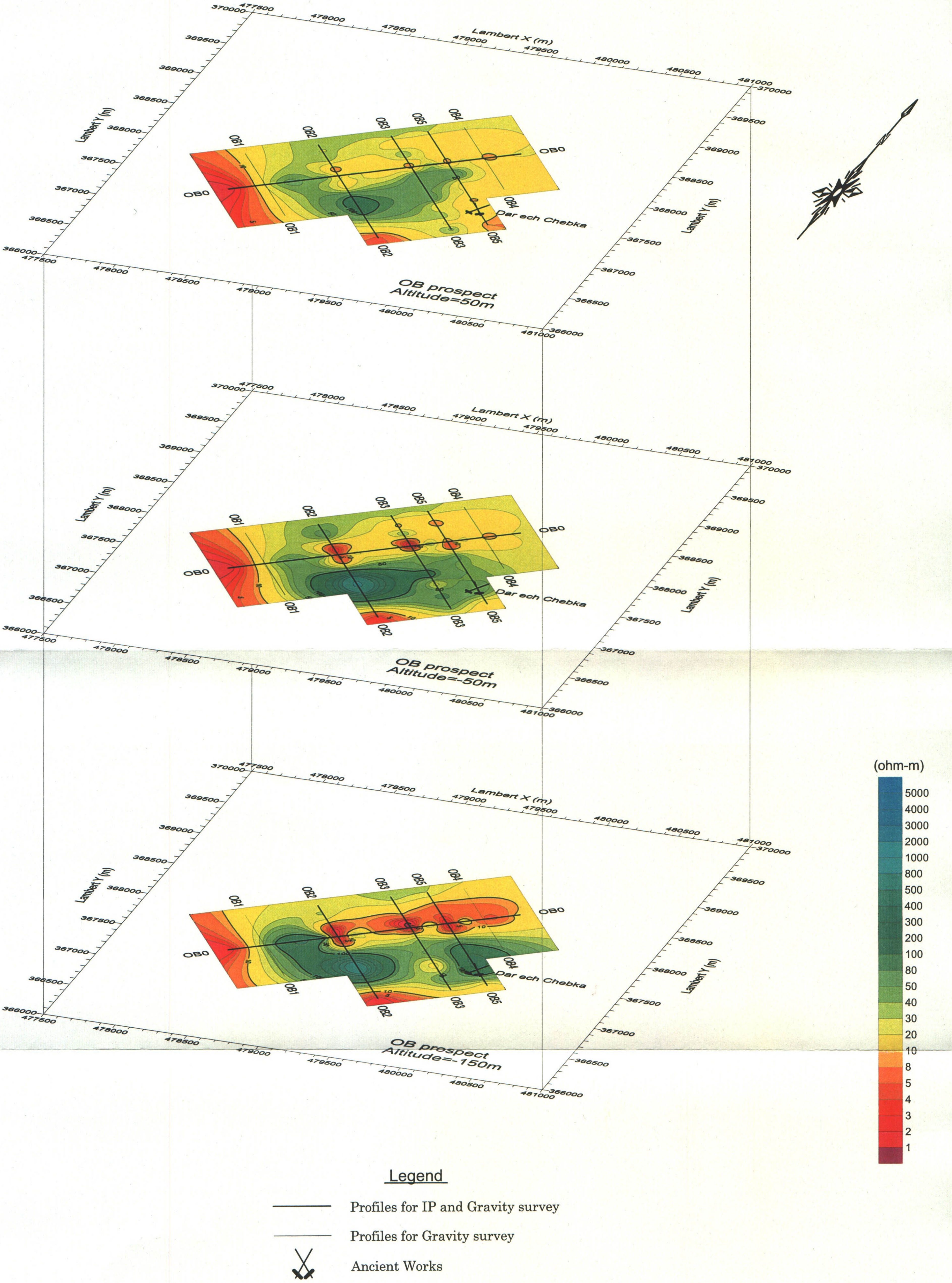
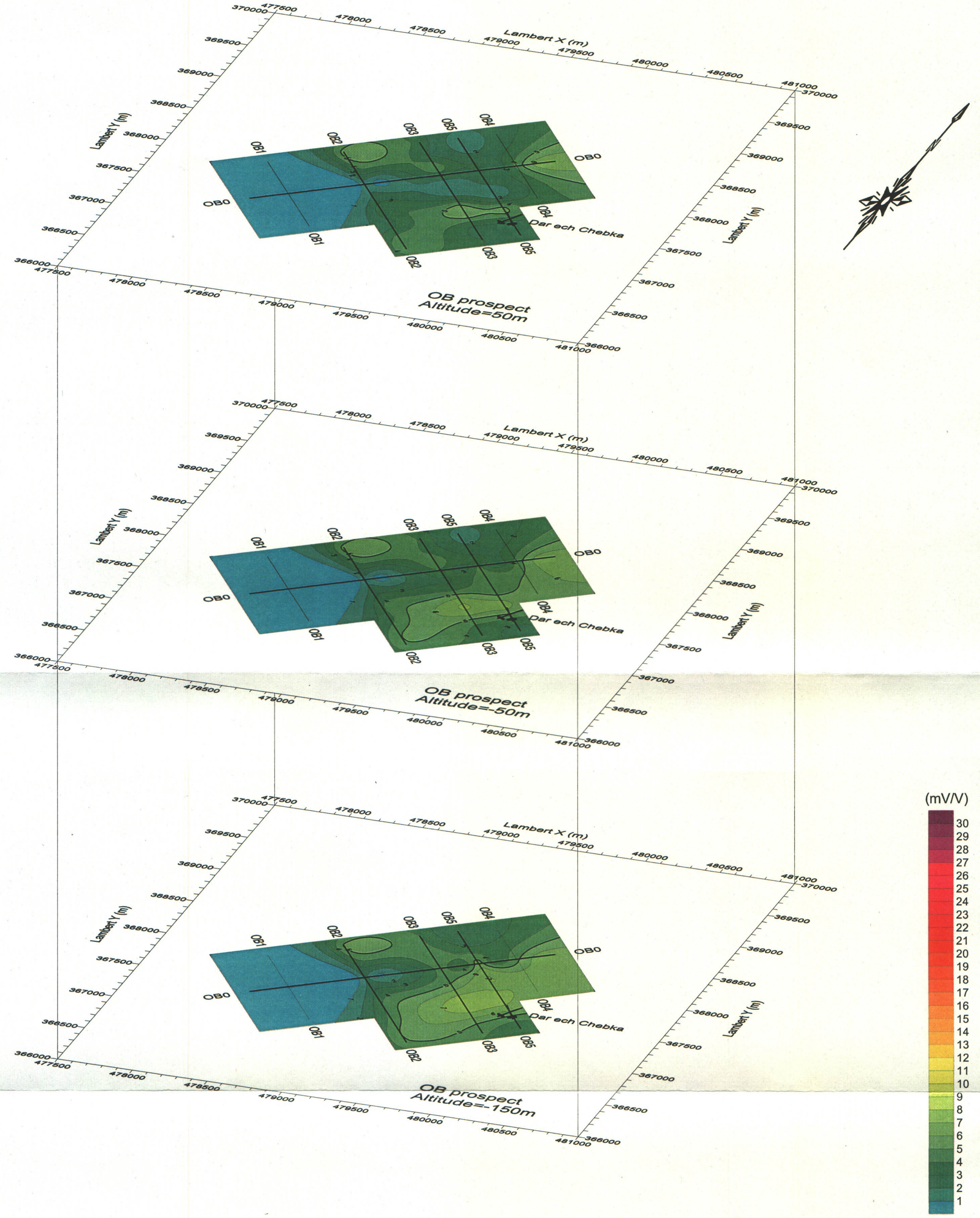


Figure 84 Panel diagram of modeled resistivity plan map in Oued Jebs-OB prospect



Legend

━━ Profiles for IP and Gravity survey

── Profiles for Gravity survey

⚒ Ancient Works

Figure 85 Panel diagram of modeled chargeability plan map in Oued Jebs-OB prospect