A resistive anomaly above 50 Ωm stretches from the surface zone around the station OB5-60 in the central part to the deep zone around the OB5-130 in the southeastern part. A conductive anomaly below 10 Ωm in the deep northwestern part is centered around the station OB0-150 intersecting the base line. A conductive overburden is distributed in the southeastern end of the section. The chargeability distribution of this section is also similar to that of the section OB3. A chargeability anomaly exceeding 5mV/V extends deeply from the station OB0-150 to the OB5-120 in the central part of the section. This chargeability anomaly rises up to the shallow part in the vicinity of the Dar ech Chebka old small working.

Two large resistive anomaly exceeding 50 Ωm is distributed between the station OB2-100 and the OB5-60 in the central part. In lower plan this anomaly is divided into two anomalies by the conductive anomaly projecting from the south to the station OB3-100. and around the station OB0-40. Conductive anomalies below 30 Ωm lie in the southwestern end of the base line OB0 and the southeastern end of the line OB2. In shallower plan small conductive anomalies line up along the base line OB0. In the deep part these conductive anomalies are combined into a large conductive anomaly extending in the NE-SW direction. The Dar ech Chebka small old working is located within a resistive anomaly in the eastern part.

In the shallower plan weak anomalies of chargeability exceeding chargeability 5 mV/V lie in the northeastern end of the baseline, in the northwestern end of the survey line OB2. In the deep plan two chargeability anomalies exceeding 5 mV/V in the northeastern end of the base line OB0 and in the vicinity of the Dar ech Chebka small old workings are combined into a large anomaly. The maximum chargeability of the large anomaly indicates beyond 7 mV/V in the northwestern side of the Dar ech Chebka small old workings.

(c) OC-OD sub-prospect (Figure 86, 87, 88 and 89)

In the section OC0 running longitudinally from the southwest to the northeast in the OC sub-prospect through the Oued Jebes and the Kef Lasfar old workings, high resistivity beyond 100 Ωm extends in the section generally. A resistive anomaly exceeding 500 Ωm lies deeply between the station OC0-140 and 170 in the northeastern part. A conductive overburden distributes from the station OC0-80 to 120 in the central part. A conductive anomaly less than 10 Ωm lies in the northeaster end of the section, where the Tertiary systems distribute. Discontinuation of resistivity around the boundary between the conductive anomaly and the resistive zone suggests fault structure. Chargeability tends to increase in the northwestern end including the Kef Lasfar old working. There is no valid chargeability anomaly around the Oued Jebes old working.

In the section OC1 running from the northwest to the southeast in the west part of the

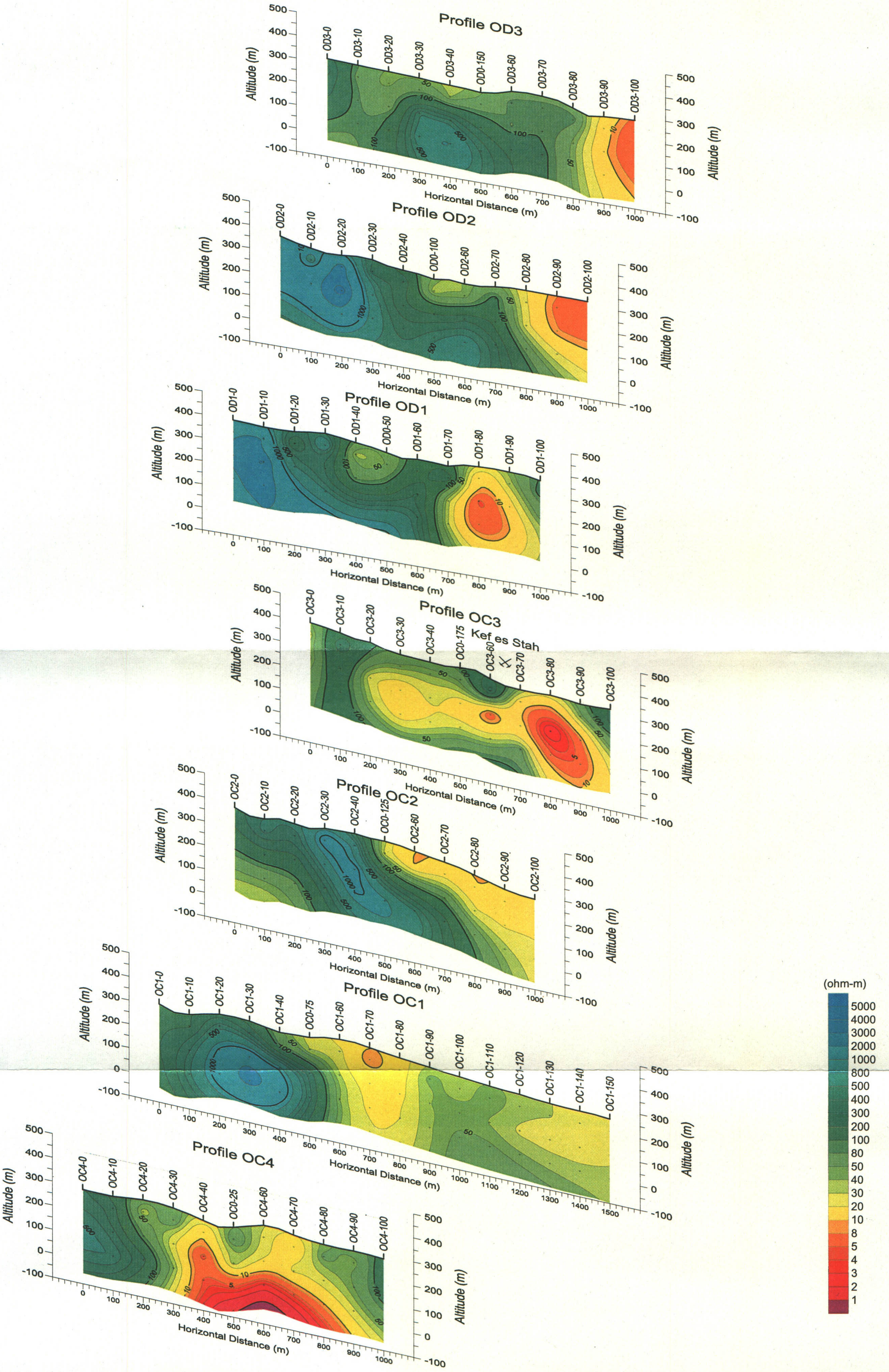

Figure 86 Panel diagram of modeled resistivity section in Oued Jebs-OC・OD prospect

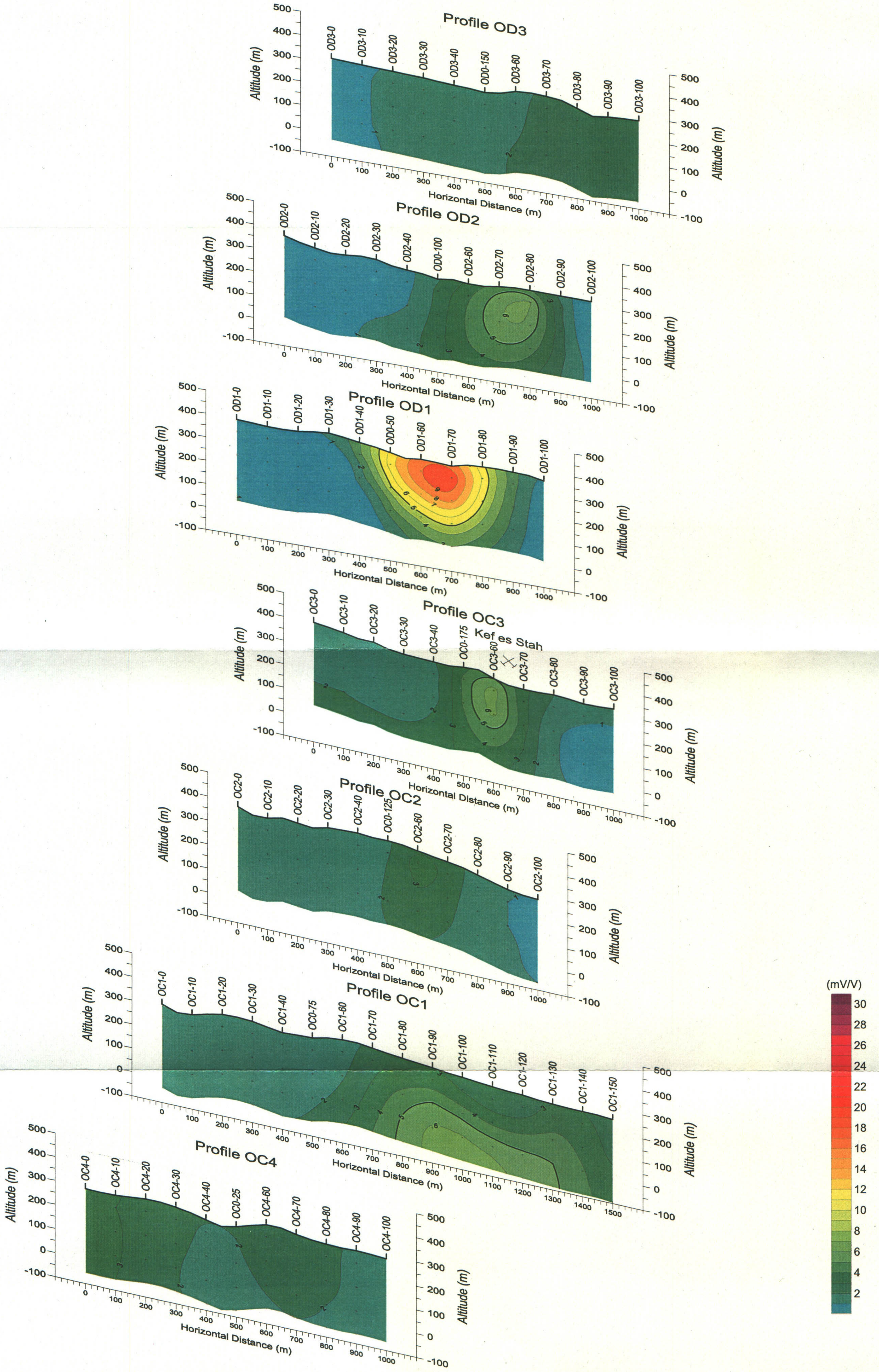

Figure 87 Panel diagram of modeled chargeability section in Oued Jebs-OC·OD prospect

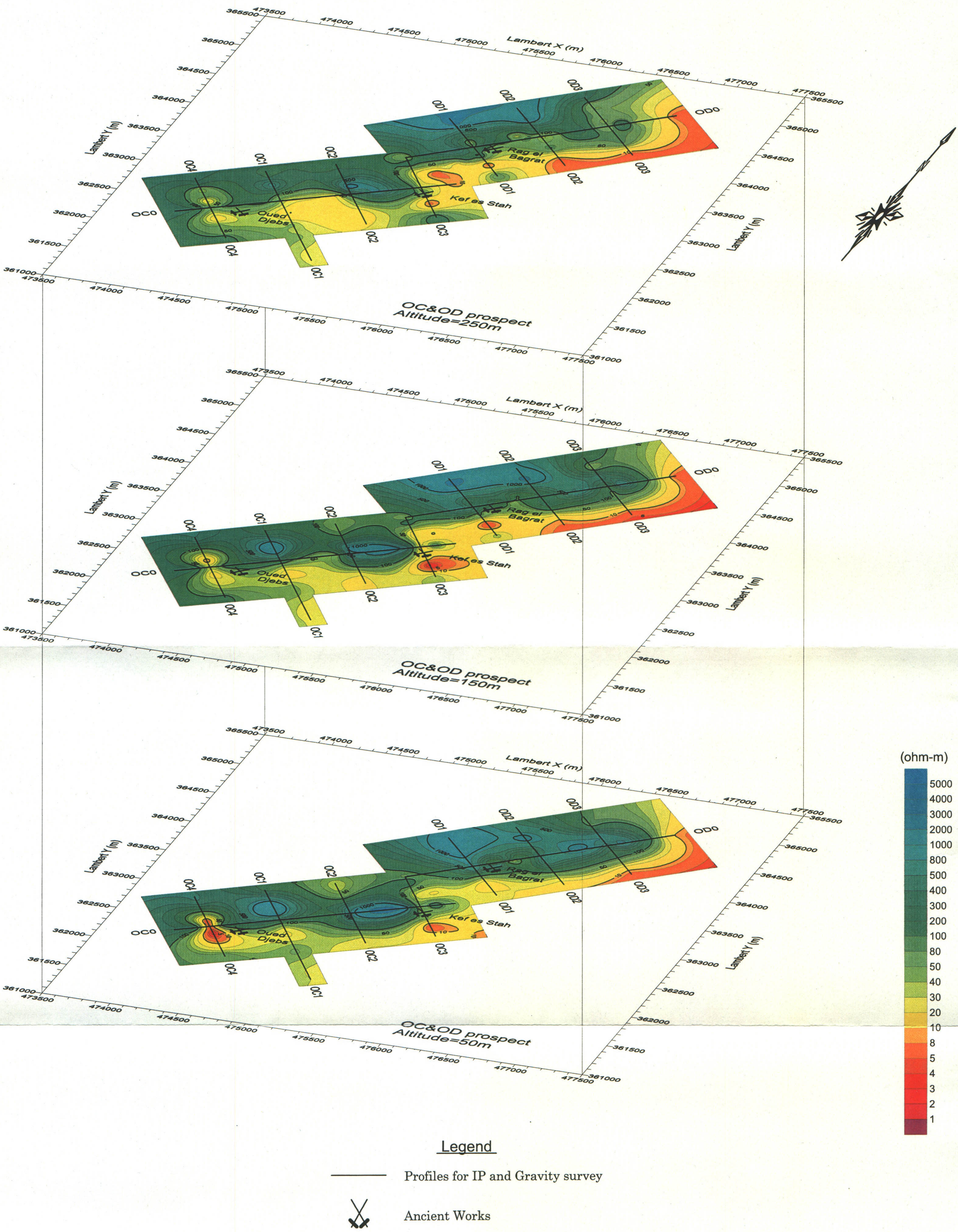

Figure 88　Panel diagram of modeled resistivity plan map in Oued Jebs-OC･OD prospect

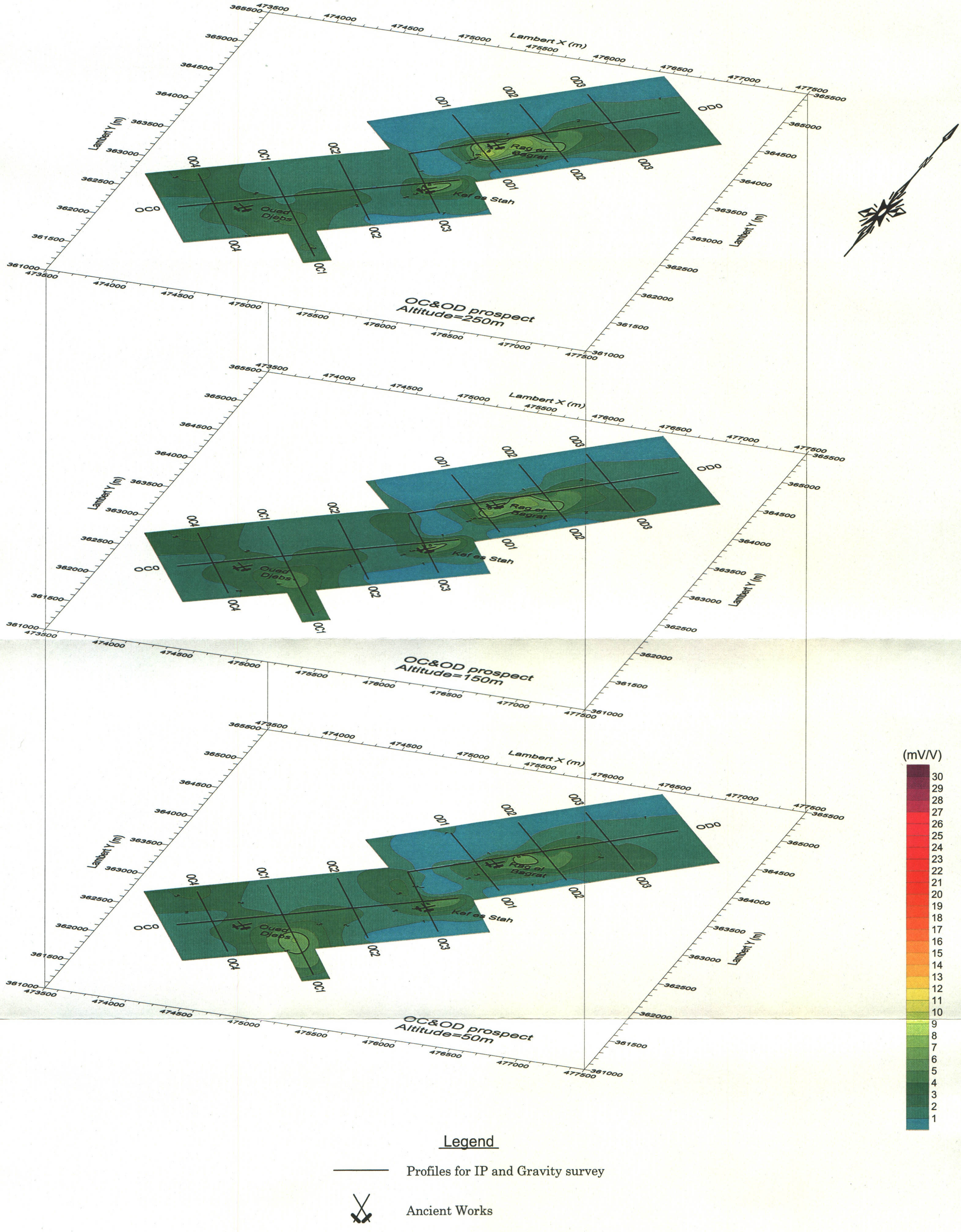

Figure 89 Panel diagram of modeled chargeability plan map in Oued Jebs-OC·OD prospect

Djebel el Mauhra hills, resistive zone exceeding 100 Ωm extends in the northwestern side of the station OC1-40. A conductive anomaly less than 20 Ωm is stretching from the shallow to the deep between the station OC1-60 and 80 in the central part. The weak chargeability anomaly exceeding 5mV/V is recognized in the deep between the station OC1-80 and 130 in the southeastern part of the section.

In the section OD0 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. Resistive zone beyond 100 Ωm extends in the section except for a conductive anomaly below 20 Ωm in the northeastern end. The resistive zone is divided into two by the relative low anomaly of resistivity below 100 Ωm around the station OD0-80 in the central part of the section. The weak chargeability anomaly above 4 mV/V extends in from the station OD0-50 to 110 in the vicinity of the Rag el Bagrat mineral indication.

In the section OD1 traverses 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. A conductive anomaly below 10 Ωm lies between the station OD1-80 and 90 in the southeastern part of the section. Except for this conductive anomaly high resistivity beyond 100 Ωm extends in the section generally. The chargeability anomaly beyond 5 mV/V extends between the OD1-50 and 80 in the central part of the section. The maximum chargeability of this anomaly exceeds 9 mV/V in the shallow zone around the station OD1-70.

High resistivity exceeding 100 Ωm extends widely in the northwestern side of the base line OC0, the survey line OC3 and the base line OD0, where the Triassic systems distribute. A conductive anomaly below 10 Ωm is ranging from the northeastern end of the base line OD0 through the line OD3 to the southwestern end of the base line OD2. In the southwestern side of this conductive anomaly other conductive anomalies below 30 Ωm lined up fitfully along the southern edge of the resistive zone through the station OC4-70. Three mineral indications of the Oued Jebes, the Kef Lasfar and the Rag el Bagrat are located in the boundary part between the resisitive and the conductive zone. In the deeper part resistivity of the resistive area in the northwestern side of the both base lines become higher, and the area extends the southeastwards. Another conductive anomaly extending along the survey line OC4 in the NW-SE direction appears around the cross point between the base line OC0 and the survey line OC4 in the southwestern part of the sub-prospect.

In the vicinity of the Rag el Bagrat mineral indication in the central part of the sub-prospects a chargeability anomaly above 5 mV/V extends from the station OD1-60 to the OD2-70 in the NE-SW directions. A small chargeability anomaly above 5 mV/V lies in the boundary parts between the OC and OD sub-prospects around the Kef Lasfar old working. There is no valid chargeability anomaly in the vicinity of the Oued Jebes old working. In the deeper plan the chargeability anomaly beyond 5 mV/V around the Rag el Bagrat mineral indication becomes smaller, and the other anomaly around the Kef Lasfar old working disappears. Another chargeability anomaly above 5 mV/V appears between the station OC1-80 and 100 in the southern part in the OC sub-prospect.

(2) Interpretation

The interpreted IP map composed of the valid anomalies of residual gravity, chargeability and resistivity on the geological map is shown in Figure 90 through 92.

(a) OA sub-prospect (Figure 90)

The distribution of resistivity high in the northwestern side of the base line OA0 corresponded to the Triassic systems. The results of the laboratory test lead the supposition that many dolomitic rocks are involved in the Triassic layers. Around the faults in the WNW-ESE and the E-W trending correspondence between resistivity high and the Triassic system is not so much well, and low resistivity anomalies cut into resistive zone along faults. The fact suggests that fractured zones were generated near faults.

Low zone of residual gravity below -0.05 mgal are approximately corresponded to the Triassic systems agreed with high resistivity. This low residual gravity extends southeastwards between the survey line OA3 and OA5 in the central part of the sub-prospect. Faults with the WNW-ESE trending line up in this extended low residual gravity zone. The fact supports the previous described idea that fractured zones were generated near faults.

A valid chargeability anomaly is recognized only in the vicinity of the Bou Mouss old working in the southwestern part of the OA sub-prospect. Though the Cretaceous system distribute around this anomaly, the low residual gravity anomaly, which may reflect the Triassic system, is extending from the north. The layouts of contours of the residual gravity and resistivity around the anomaly are strongly affected by two faults with the E-W and the NNE-SSW trending through the cross point between the base line OA0 and the line OA2. The weak chargeability anomaly above 4 mV/V is recognized around the OA0-120 in the plan map of the altitude of -150 m, where a fault with the E-W trending intersects the base line. These facts suggest the idea that chargeability anomalies in the OA sub-prospect are related to faults with the E-W trending.

(b) OB sub-prospect (Figure 91)

The southeastern edge of the conductive anomaly less than 10 Ωm extending in the NE-SW direction in the northwestern side of the base line is well corresponded to the contact zone between the Triassic systems and the Cretaceous systems. It is supposed that this conductive anomaly has same natures as those of contact zones between the

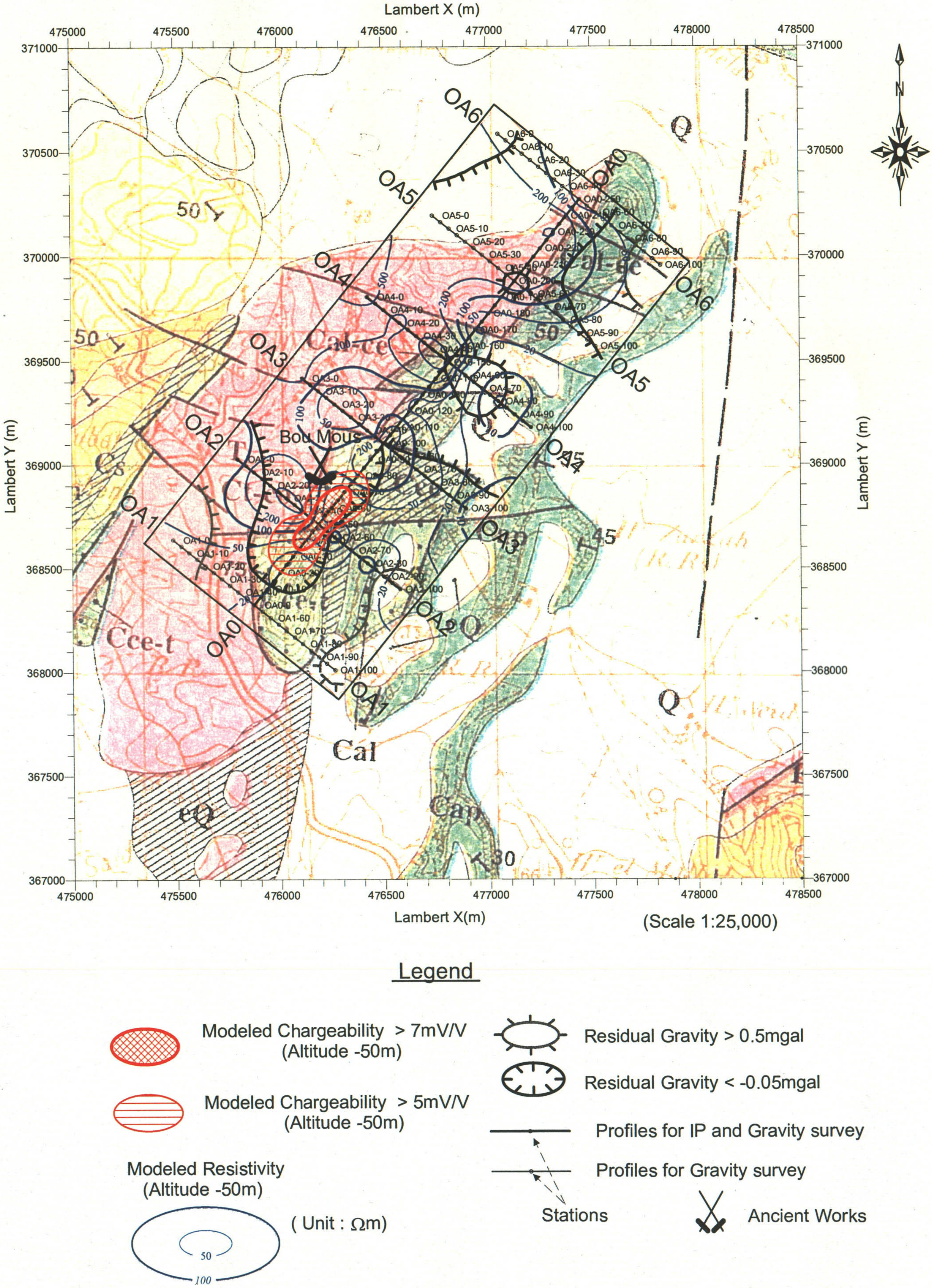

Figure 90 Interpreted geophysical survey map in Oued Jebs-OA prospect

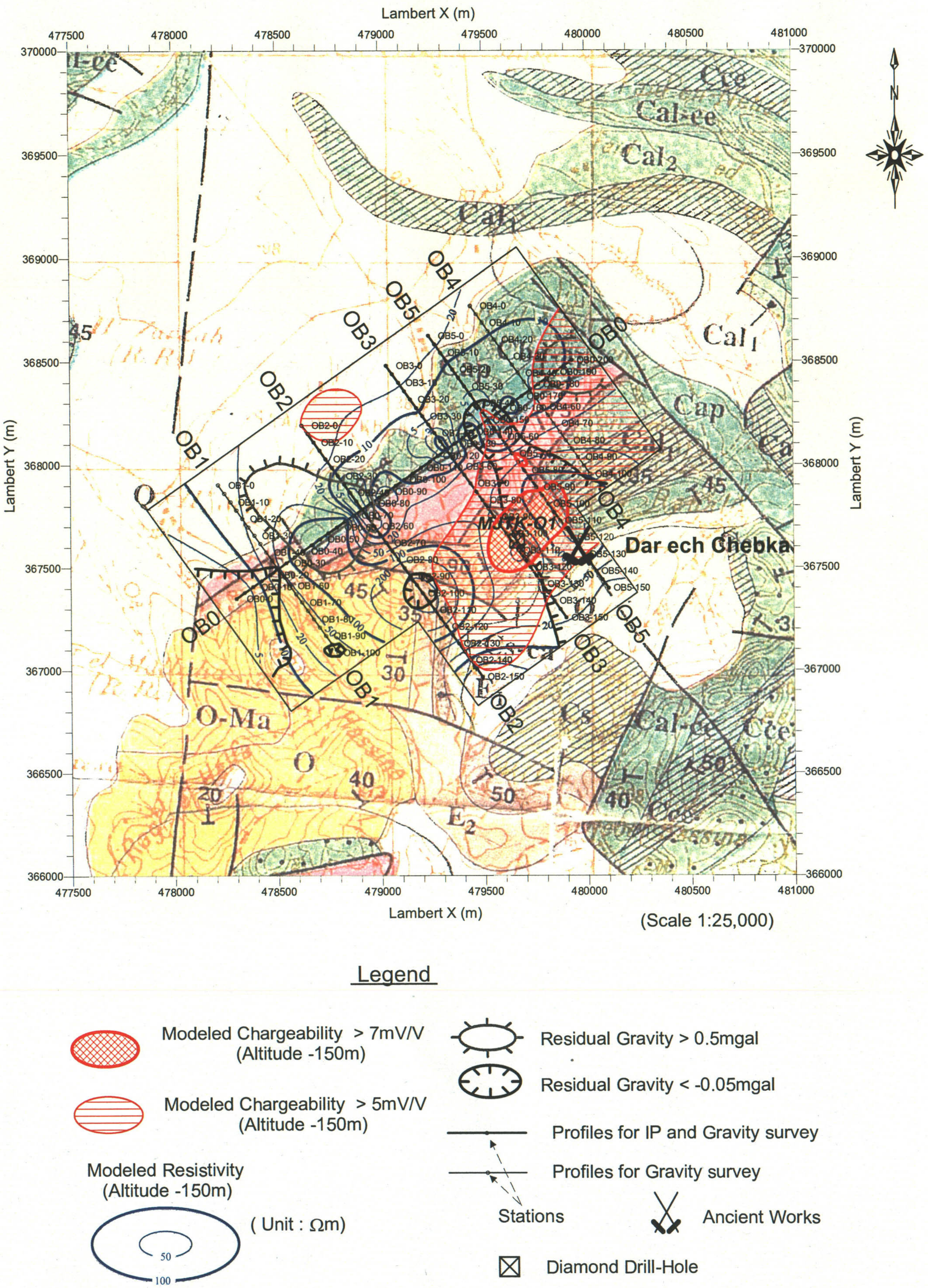

Figure 91 Interpreted geophysical survey map in Oued Jebs-OB prospect

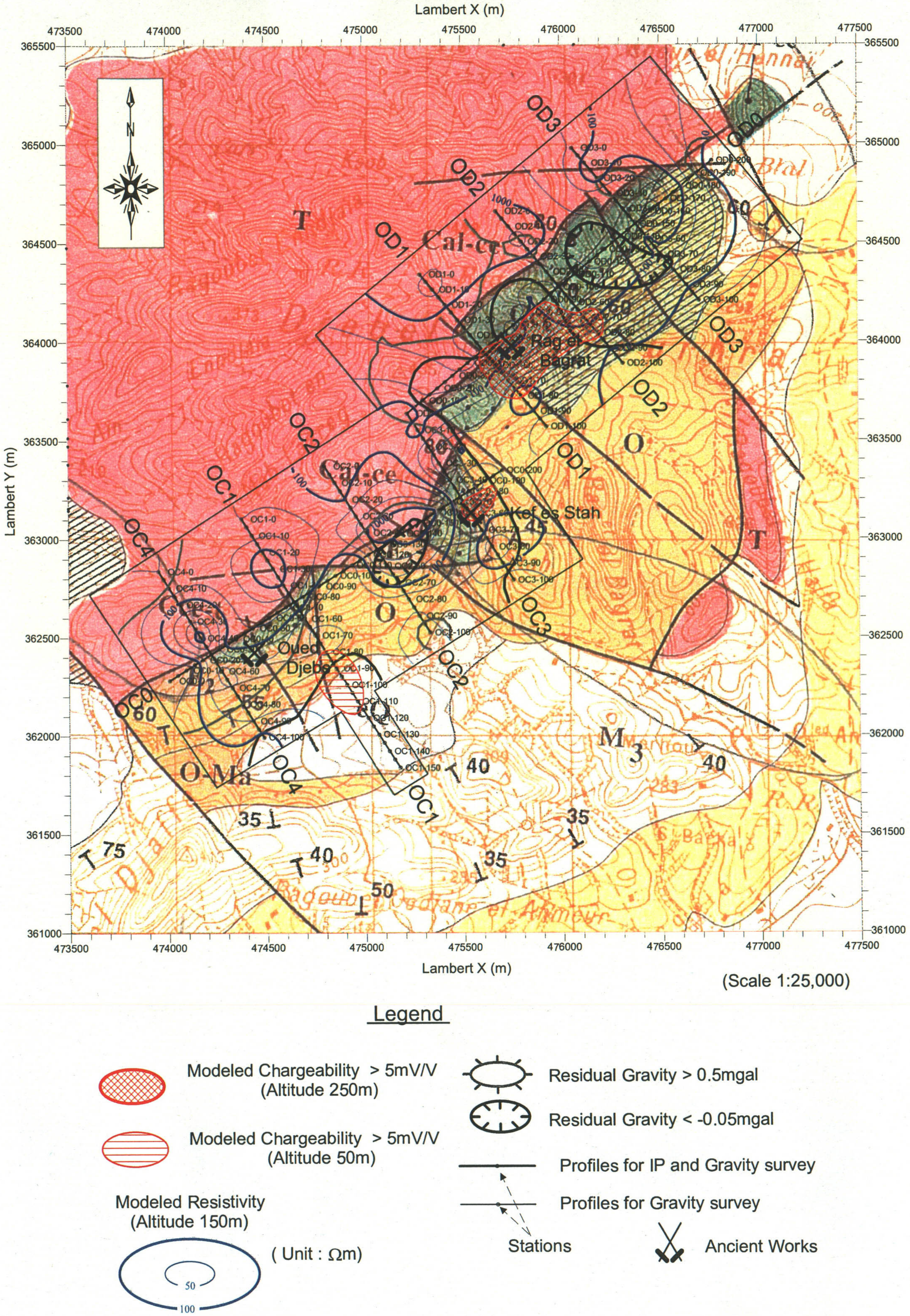

Figure 92 Interpreted geophysical survey map in Oued Jebs-OC·OD prospect

Triassic systems and the Cretaceous system in the Bou K'hil, the Bazina Kebira and the Siliana prospects. The fact that electrical conductivity of the water collected from the drill hole MJTK-A1 conducted in the Siliana prospect is very conductive of 91 mS/cm, which is three times of the seawater lead the idea that these conductive layer are saturated with the high conductive pore water. The Tertiary system lying in the southern side of the Triassic systems indicates high resistivity. Dar ech Chebka small old working is located in the southern marginal part of a resistive anomaly.

In the OB sub-prospect it is very difficult to identify the geology using the residual gravity and resistivity directly. Low residual gravity anomaly is corresponded to the high resistivity around the station OA2-100 and the OB5-100 in the southeastern part, where the Tertiary system distributes. The outlines of the low anomaly of residual gravity below -0.05 mgal extending northwestwards along the survey line OA5 agreed with two faults running in the NW-SE direction through the Tertiary system. The Dar ech Chebka small old working is located within this low residual gravity.

The weak chargeability anomaly above 5 mV/V extends from the vicinity of the Dar ech Chebka small old working to the northeastern end of the base line OB0. Because the IP survey is not applied to the line OB4, the area included in this anomaly is not valid yet. The maximum chargeability of this anomaly exceeds 7mV/V in the northwestern side of the Dar ech Chebka small old working. This anomaly may relate to the low residual gravity lying between two faults running in the NW-SE direction. It is difficult to estimate validity of the weak chargeability anomaly in the northwestern end of the line OB2 because the surface above the anomaly is covered with the Quaternary system.

(c) OC-OD sub-prospects (Figure 92)

Such as the OA sub-prospect high resistivity zone beyond 100 Ωm extending in the northwestern side of the base line OC0, the line OC3 and the base line OD0 is corresponded to the distribution of the Triassic system. High resistivity may reflect much content of the dolomite. In the OD sub-prospect expansion of this high resistivity zone southeastwards into the distribution area of the Cretaceous system may indicates hidden Triassic layer under the Cretaceous systems. Distribution of high resistivity clearly represents the geological structures shifted along a fault with NW-SE trending in the boundary between the OC and OD sub-prospect. A conductive anomaly extending in the northeastern side of the fault suggests a fracture zone accompanied with faults. Three mineral indications of the Oued Jebes, the Kef Lasfar and the Rag el Bagrat are located in the southeastern marginal zone of the high resistivity zone extended.

High residual gravity zone exceeding 0.5 mgal is corresponded to the resistive zone beyond 100 Ωm, which may reflect the Triassic system. A low anomaly of residual gravity less than -0.05 mgal stretches from the southeast northwestwards to the Rag el Bagrat mineral indication such as the vicinity of the Dar ech Chebka small old working.

It is supposed that this low residual gravity anomaly well corresponded to the conductive anomaly may reflect a fractured zone with faults. The features in the eastern side of the fault running from the station OC1-90 through the OC2-70 tend to indicate low residual gravity and low resistivity, but are not so much clearly recognized.

Chargeability anomalies exceeding 5 mV/V appear in the shallow part around the Rag el Bagrat mineral indication, in the shallow part around the Kef Lasfar old working and in the deep part around the station OD1-100. It is guessed that the first and third anomalies located within areas indicating low resistivity and low residual gravity have a close relation to fracture zones accompanied with faults. In the vicinity of the Kef Lasfar old working the small chargeability anomaly lies in the area, where both properties of resistivity and residual garavity decline northeastwards sharply. There is, however, no valid chargeability anomaly in the vicinity of the biggest Oued Jebes old working in the current prospect.

7.2.4 Laboratory Test

Enforced wet densities of 21 rock samples collected in and around the prospects are resulted in the range between 2.24 through 3.57 g/cm^3 from density measurement in laboratory. The estimated average density of 2.67 g/cm^3 is higher than the correction density of 2.4 g/cm^3 adopted in the current gravity survey. Around a half of samples are collected from mineral indications sparsely distributed within the prospects. Hard rock samples with better property are measured in the many case of laboratory test, although many fragile rocks possibly disintegrated during shaping or immersion are lying in the field. The mineralized rocks in the range between 2.65 through 3.57 g/cm^3 and the dolomitic rocks ranging from 2.71 through 3.10 g/cm^3 in the Triassic system show higher density. The density of other rocks, except for 2 rock samples less than 2.50 g/cm^3, ranges between 2.60 and 2.70 g/cm^3.

The results from resistivity and chargeability measurement of 21 rock samples measured density show resistivity ranging from 58 to 14,086 Ωm are averaged around 2,460 Ωm.

The chargeablity of mineralized samples is distigushed clearly from that of the others. The chargeability of the non-minaralized samples is ratively low ranging between 0.4 and 9.6 mV/V, while the 2 mineralized samples indicate high chargeablity more than 10 mV/V except for the celestite sample.

Resistive rocks, except for two samples shown higher density than 3.10 g/cm^3, tend to increase density, but their correlation is weak. There is no valid correlation between resistivity and chargeability.

7.3 Drilling Investigation

7.3.1 summary of the Drilling Operation

The geological summary plan of the Oued Jebes prospect is shown in Figure 93, incorporating the drill hole locations. As shown in the figure, the geology of the prospect comprises the Triassic diapir, the Cretaceous limestone and marl, the Tertiary system (Eocene, Oligocene Miocene and pliocene) consisting mainly of limestone, marl, sandstone and argillite, and the Quaternary system. The Cretaceous system contains the Jebel Bou Mouse, Dar Chebka and Kef Lasfar mineral occurences.

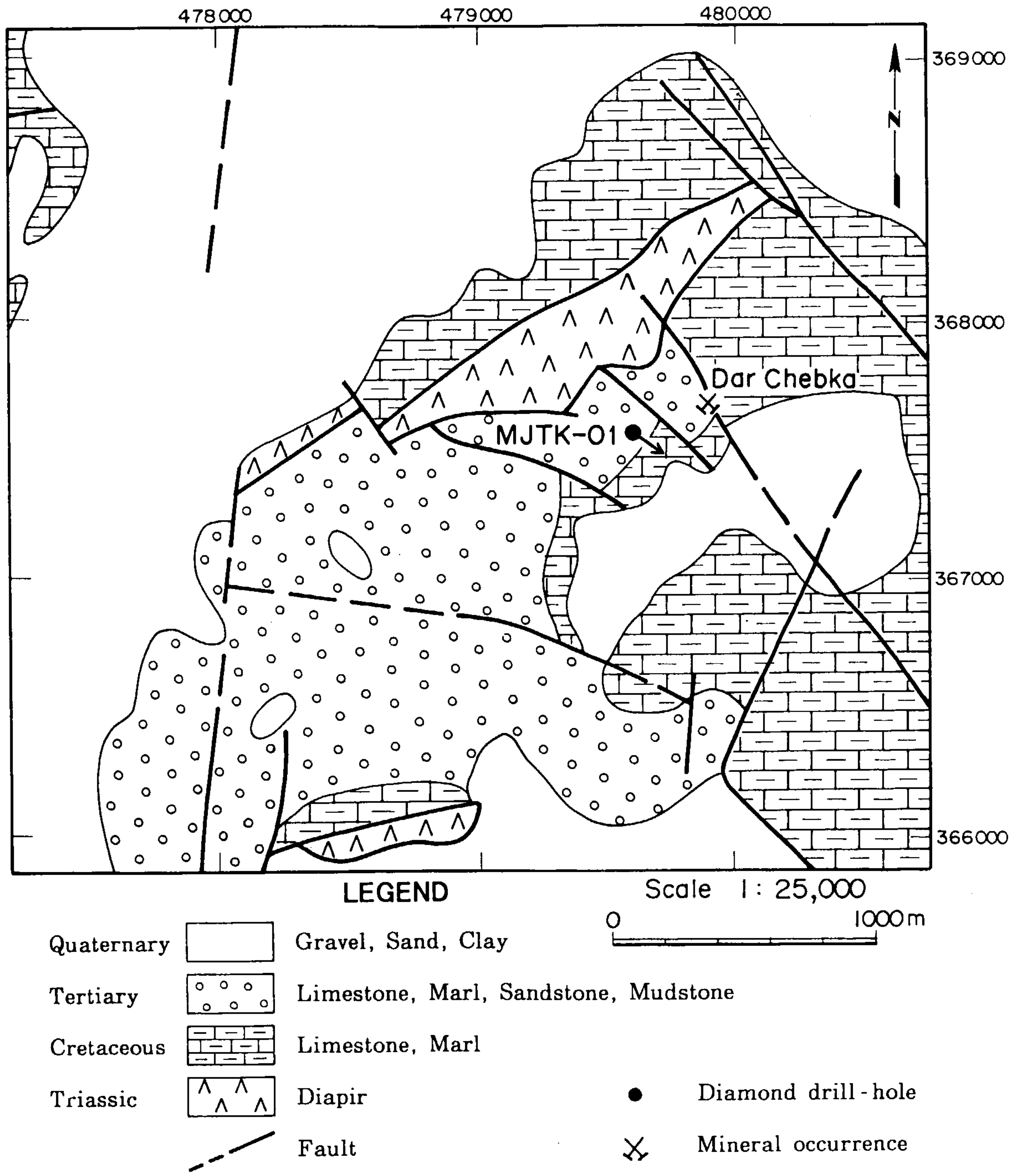

Figure 93 Geology and Drill Hole Location of the Oued Jebs Prospect

7.3.2 Result of Drilling Operation

One drill hole, MJTK-01 was drilled along the geophysical survey line, OB3 in order to verify the new mineral indication that had been located in the 3st Year Campaign. The columnar hole section and the geological profile along the section including the hole are shown in Appendix 11 and Figure 94 respectively.

The geology of this hole comprises the Cretaceous system and the Tertiary system.The Cretaceous system is observed in sections of the intervals from 0.70 to 72.70m and from 81.45 to 352.60m, consists of limestone and marl.The Tertiary system is observed in sections of the intervals from 72.70 to 81.45m and consists of sandstone-limestone alternation.

The mineralization was encountered in the interval between 82.50 and 88.70m, and comprised calcite-(pyrite) veinlets carrying minor galena. In addition, minor galena filling fractures was observed in the interval between 272.80 and 276.30m. Other than these mineralized intervals, no notable mineralization was intersected by this hole. It is implied that the cause of the chargeability anomaly was pyrite disseminated in argillaceous limestone.

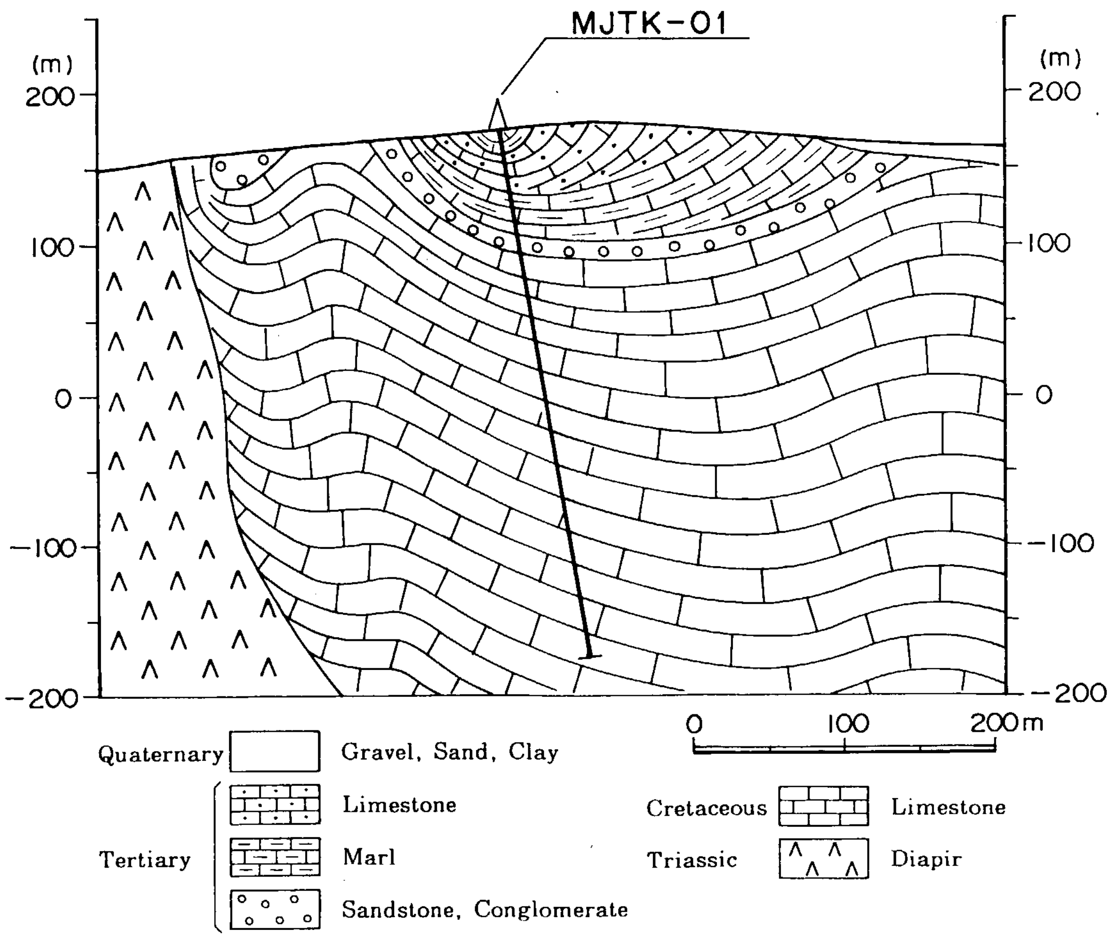

Figure 94 Geological Profile along the Hole, MJTK-01