survey was carried out during the second phase without any significant IP anomaly. This concludes there are enough pyrrhotite for giving magnetic anomaly but not enough pyrrhotite mineralization for IP anomaly occurred in Tiferouine area.

3-2-3 Comparison with Core Drilling

The result of four core boring, which are simultaneously carried out, is tabulated with resistivity anomalies and PFE anomalies as follows:

Boring No.	Location	Geology	Mineralization	Resistivity and PFE
MJMH-1	300m east of St 5 Ln E-2, Lamrah	alternating slate, silt	Py and Po dissem. Pb Zn vain 346-353m	conductive PFE 4% at depth
MJMH-2	400m northwest of ST 7 Ln W-2, Frizem	phyllite, silt	mineralization: 132-136, 219-251, 293-295, 330-335, 365-373m	about 30 ohm-m over 5 % at depth
MJMH-3	around St 10 Ln W-2	phyllite silt	mineralization: 125-144, 193-227, 278-287, 307-332m	conductive 5 % at depth
MJMH-4	400m north of St 13 Ln W-2, NW of Frizem	phyllite silt	mineralization: 158-161, 193-198, 225-235m	about 50 ohm-m under 5 %

mineralization: Cu, Pb, Zn, Po, Py

One hole at near Lamrah in the eastern area and three holes at near Frizem in the western area are drilled. The locations of the holes were chosen with consideration of geology, apparent resistivity and PFE.

The drilling found the above-mentioned disseminated zones and mineralized zones. However, we could not find any commercial size ore deposit. Among the drilling, mineralized zones cut by MJMH-3 are the best.

We recommend the following area to be drilled, if drilling being continued:

1) The southeast extension of Hajar ore deposit in the eastern area, where IP anomaly is in depths,

and

2) In depths of the western half of the western area where IP anomaly is widely spread.

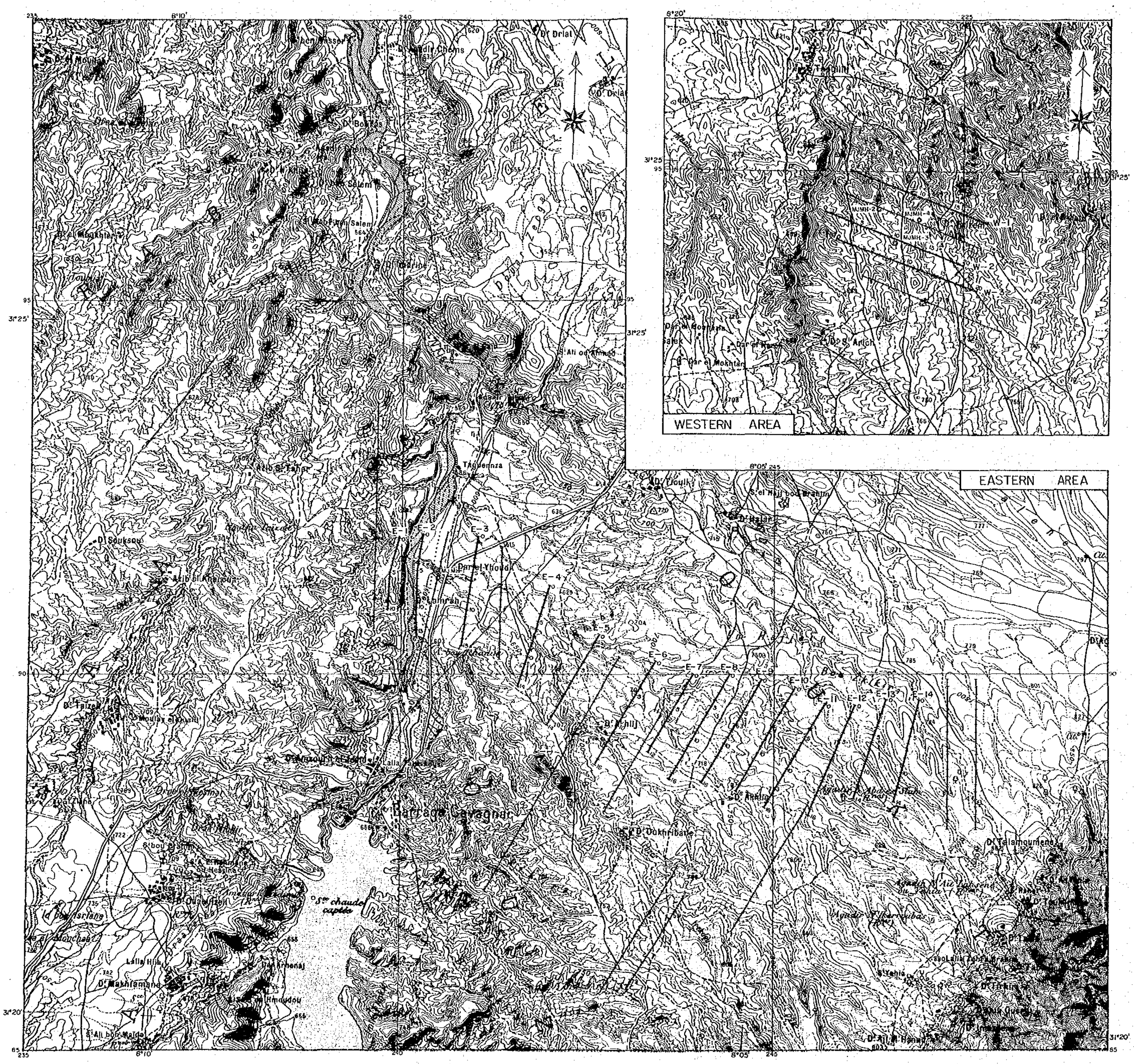
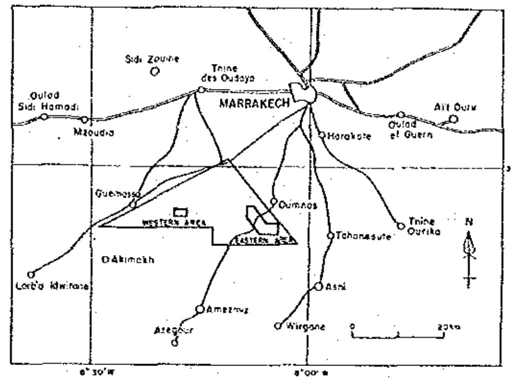


Fig. I-2

COOPERATIVE MINERAL EXPLORATION
IN
HAOUZ CENTRAL AREA, MOROCCO
(PHASE Ⅲ)

I P Survey Area with Survey Lines



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0 2,500m

Scale 1:50,000

LEGEND

E-8 / 0 5	Line Number / Station Number / IP Survey Line (Phase Ⅲ)
	IP Survey Line (Phase Ⅱ)
MJMH-1	Boring Site

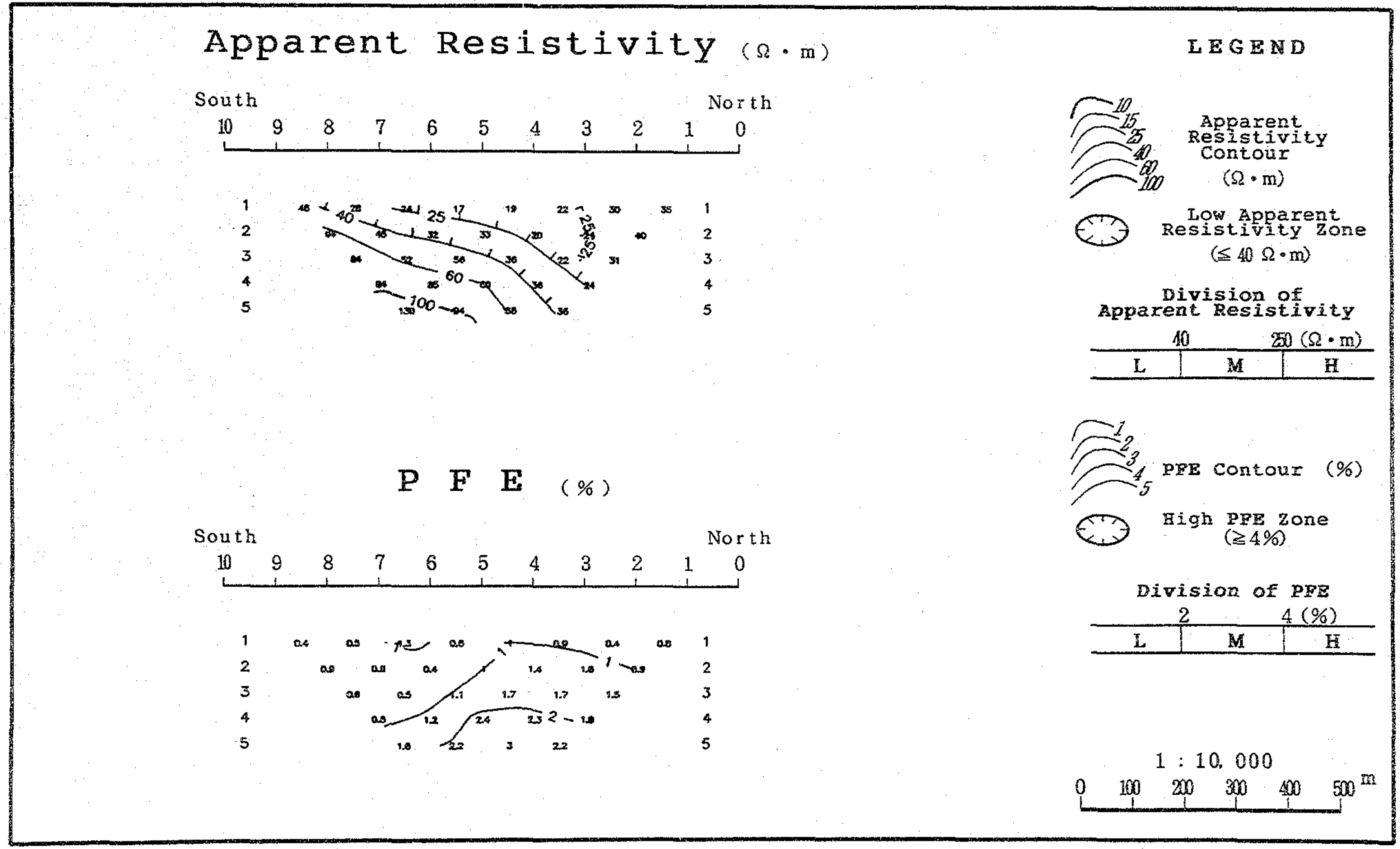


Fig. 1 –3 Apparent Resistivity and PFE Pseudo Section (Line E–1)

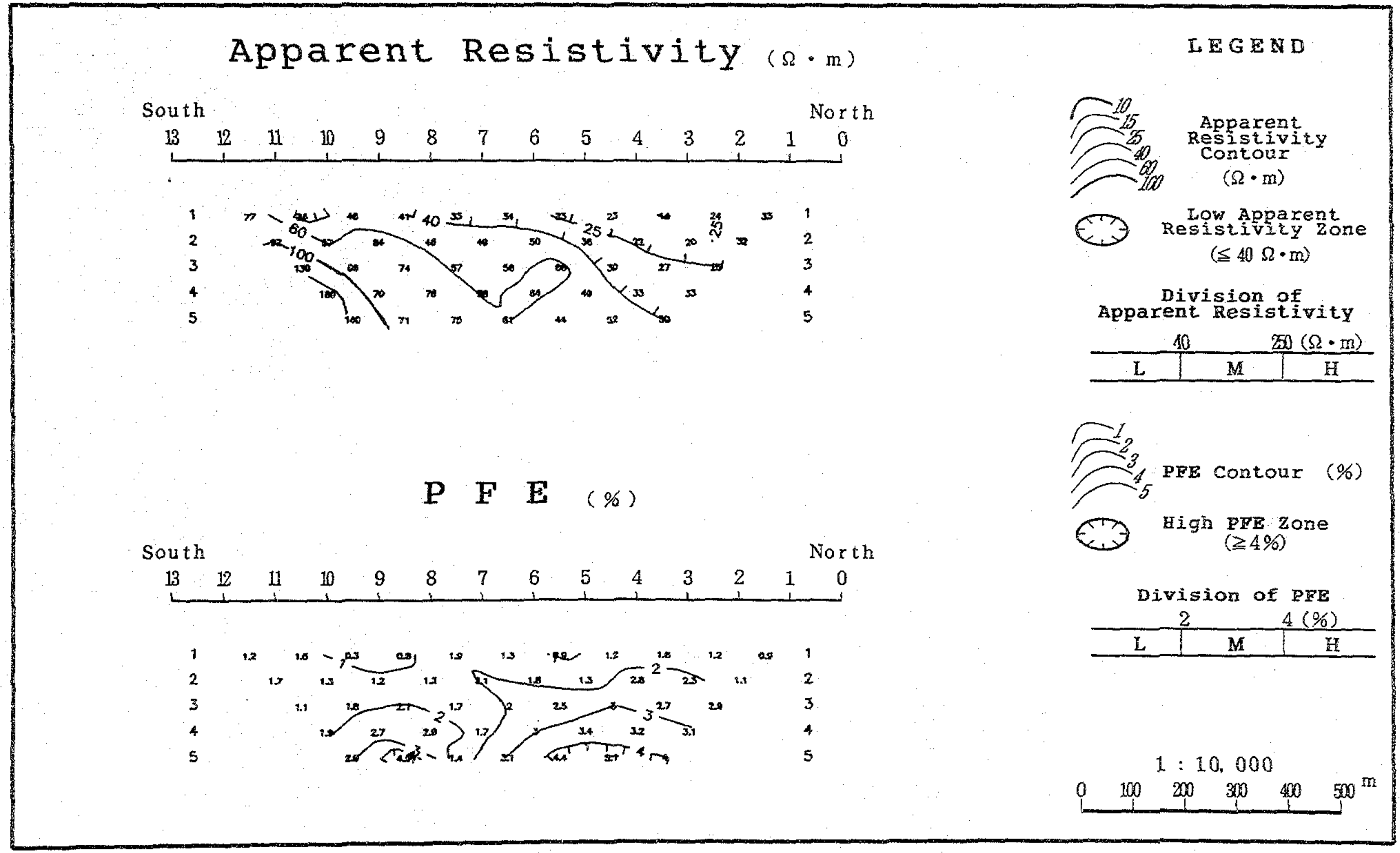


Fig. I –4 Apparent Resistivity and PFE Pseudo Section (Line E–2)

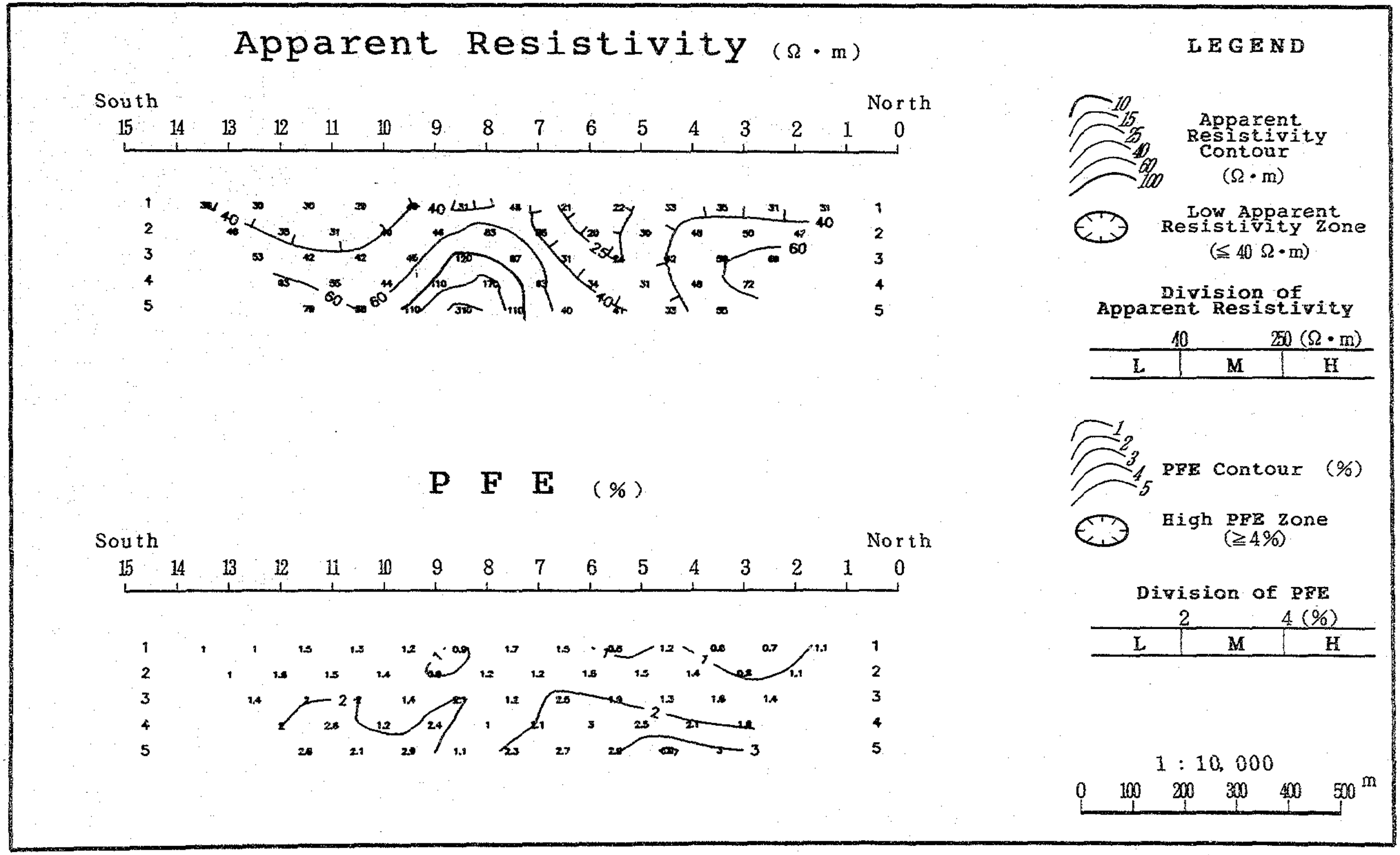


Fig. I –5 Apparent Resistivity and PFE Pseudo Section (Line E–3)

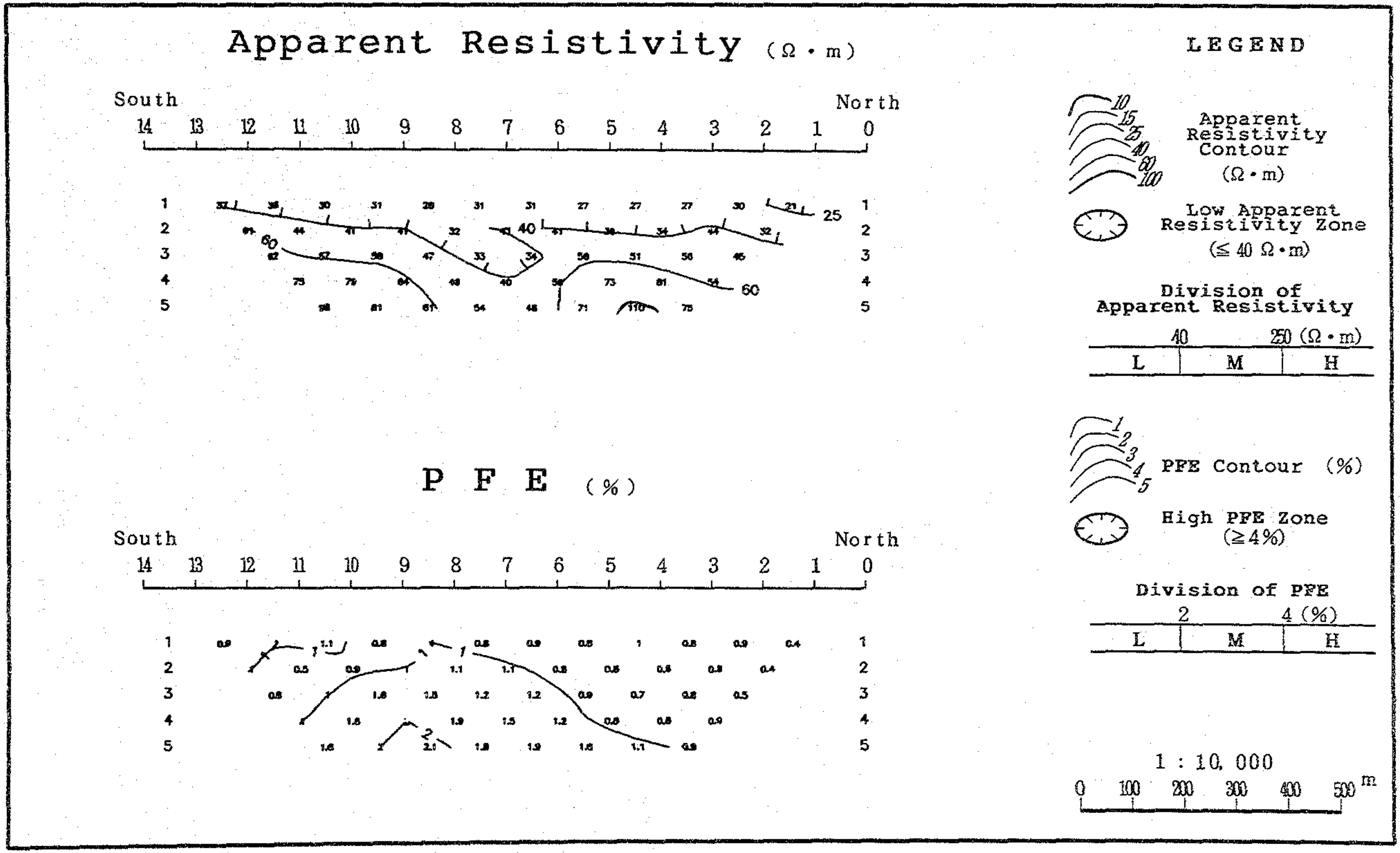


Fig. I –6 Apparent Resistivity and PFE Pseudo Section (Line E–4)

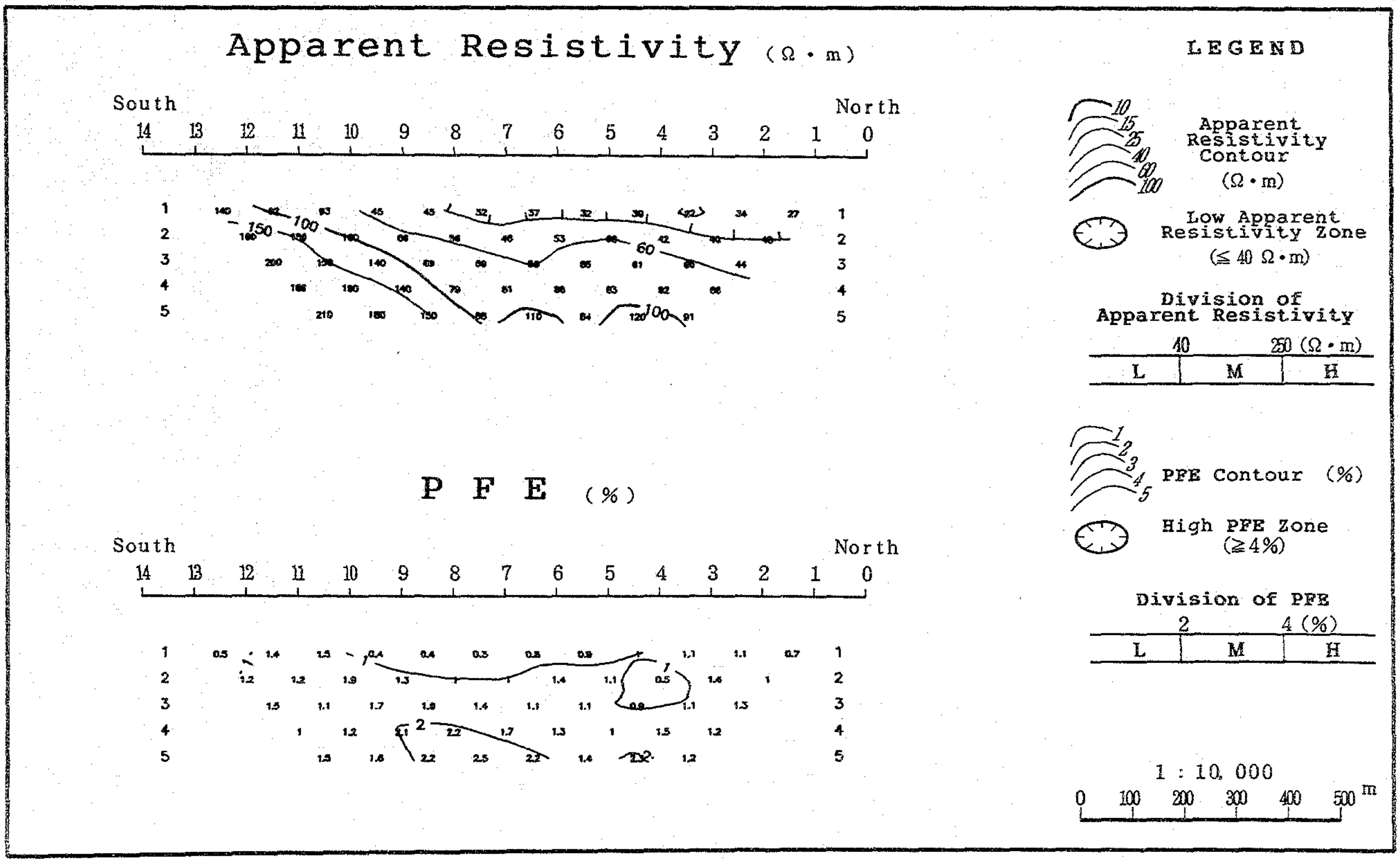


Fig. I –7 Apparent Resistivity and PFE Pseudo Section (Line E–5)

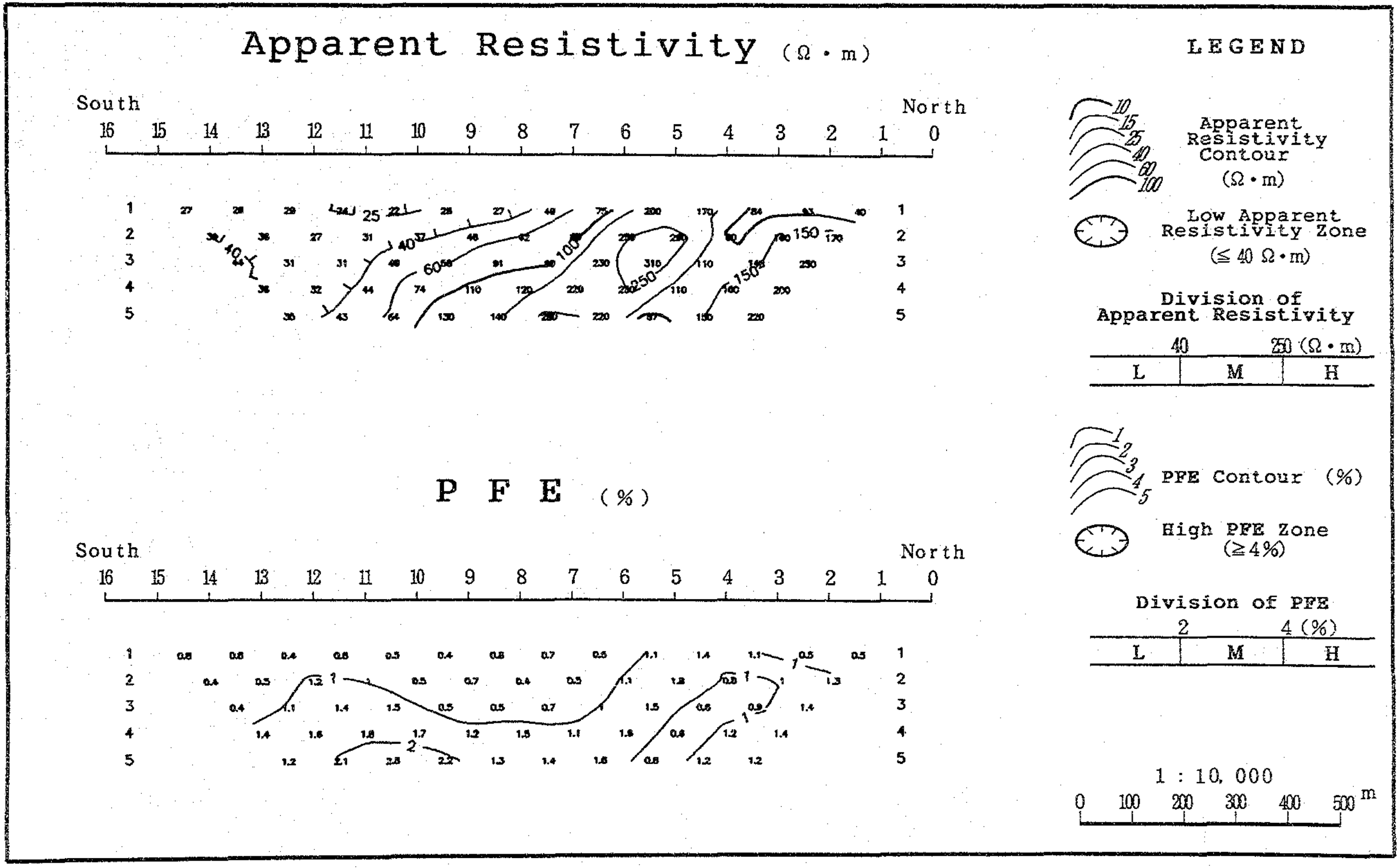


Fig. I –8 Apparent Resistivity and PFE Pseudo Section (Line E–6)

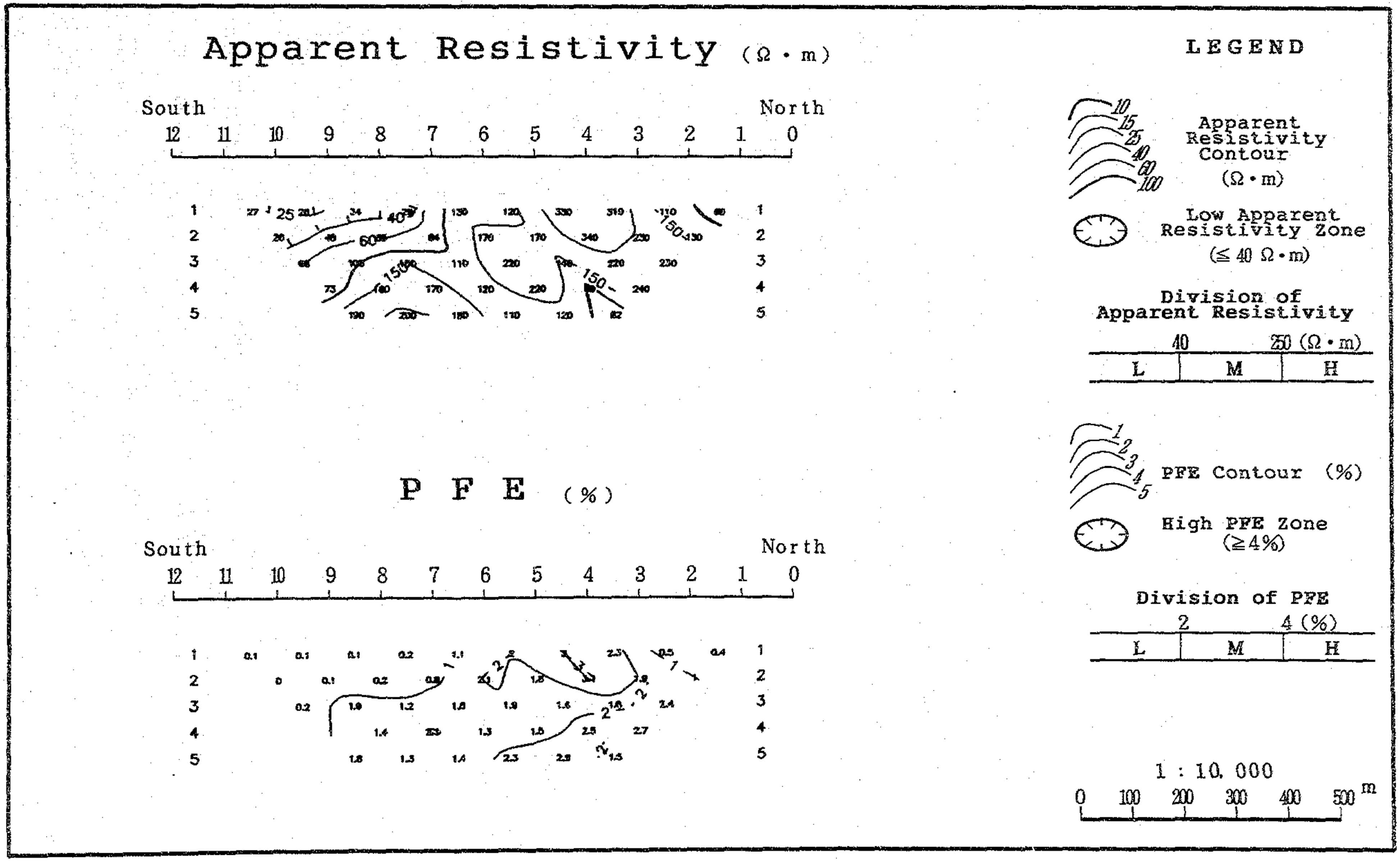


Fig. I –9 Apparent Resistivity and PFE Pseudo Section (Line E–7)

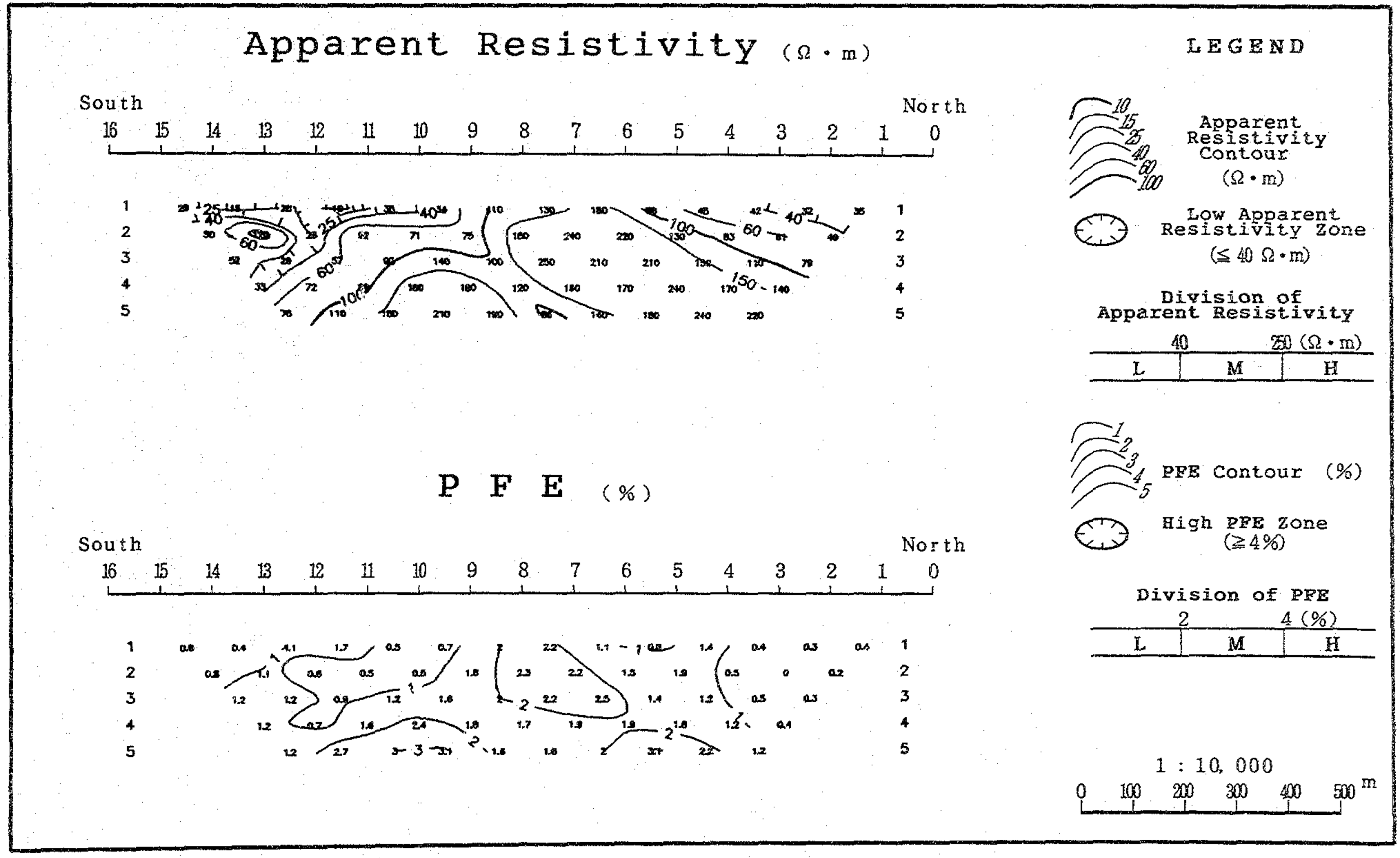


Fig. I –10 Apparent Resistivity and PFE Pseudo Section (Line E–8)

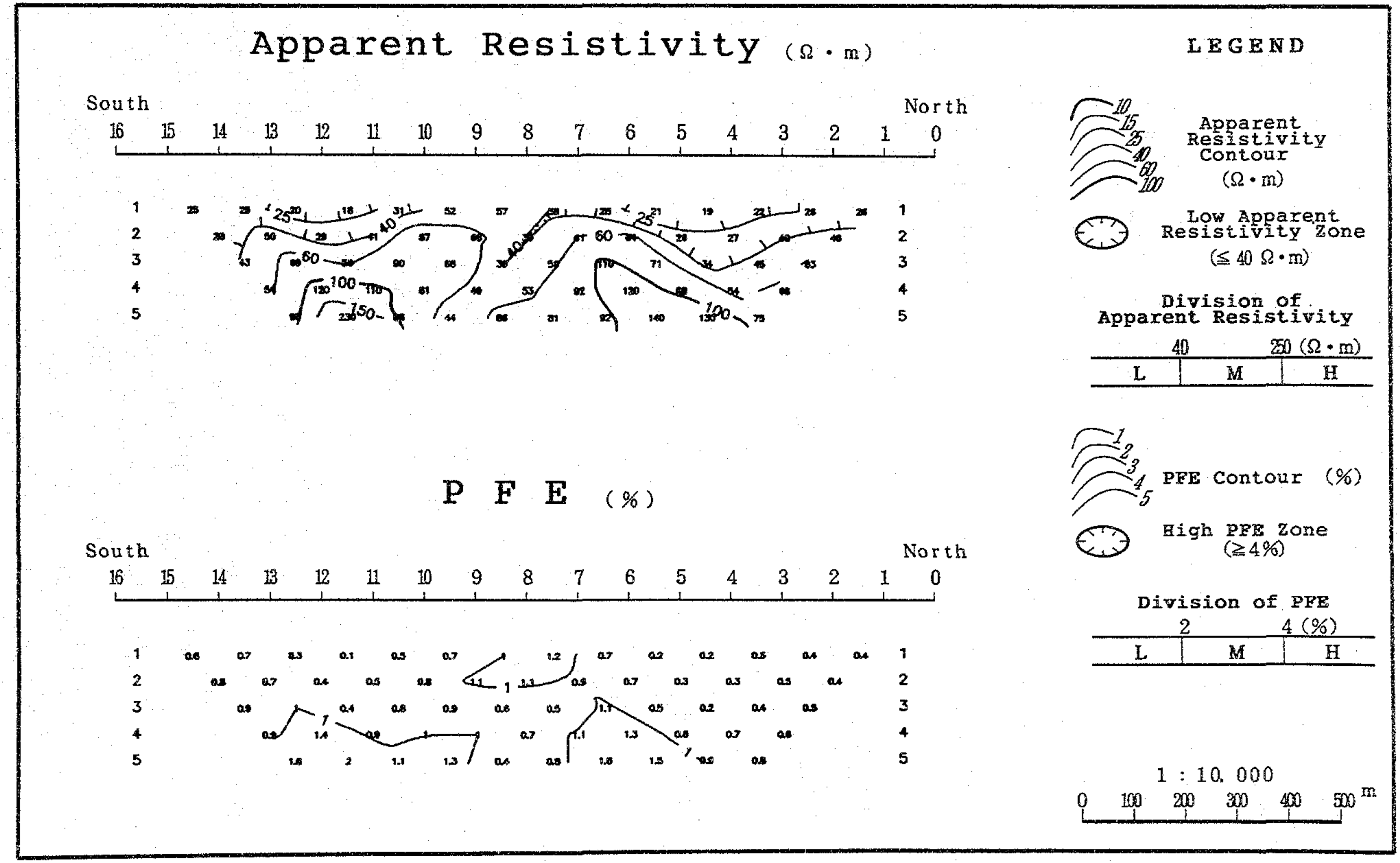


Fig. I –11 Apparent Resistivity and PFE Pseudo Section (Line E–9)

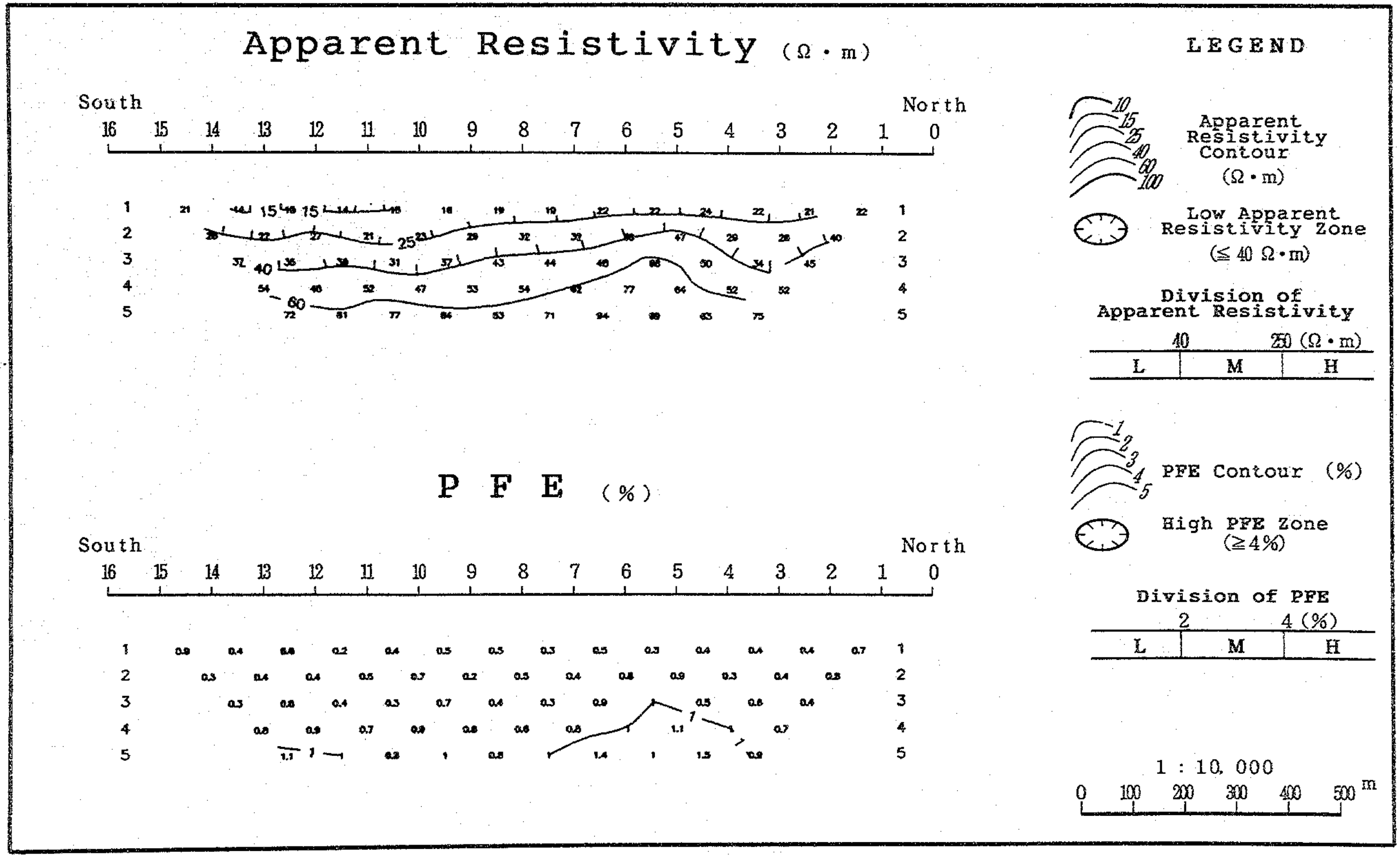


Fig. I –12 Apparent Resistivity and PFE Pseudo Section (Line E–10)

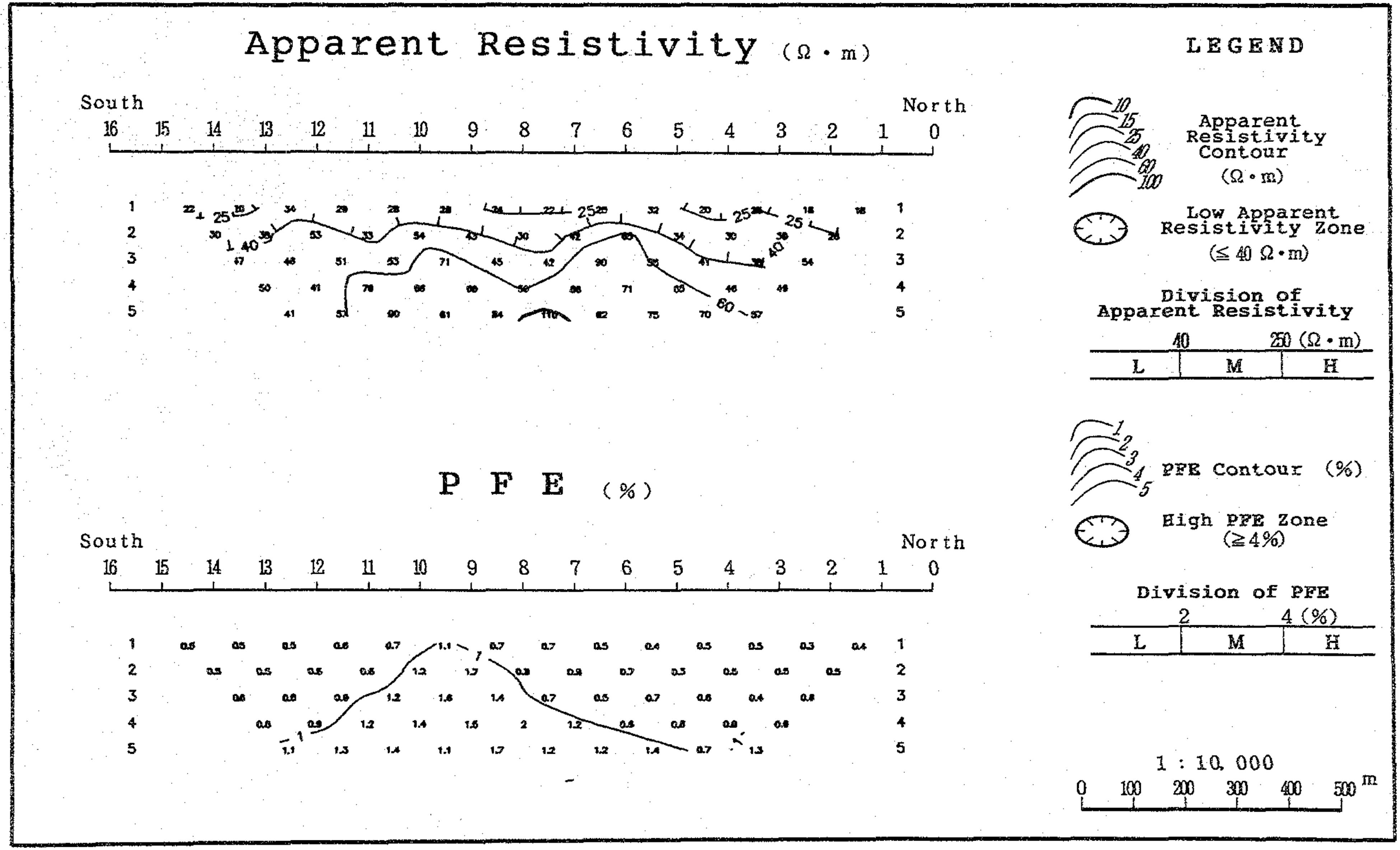


Fig. I –13 Apparent Resistivity and PFE Pseudo Section (Line E–11)

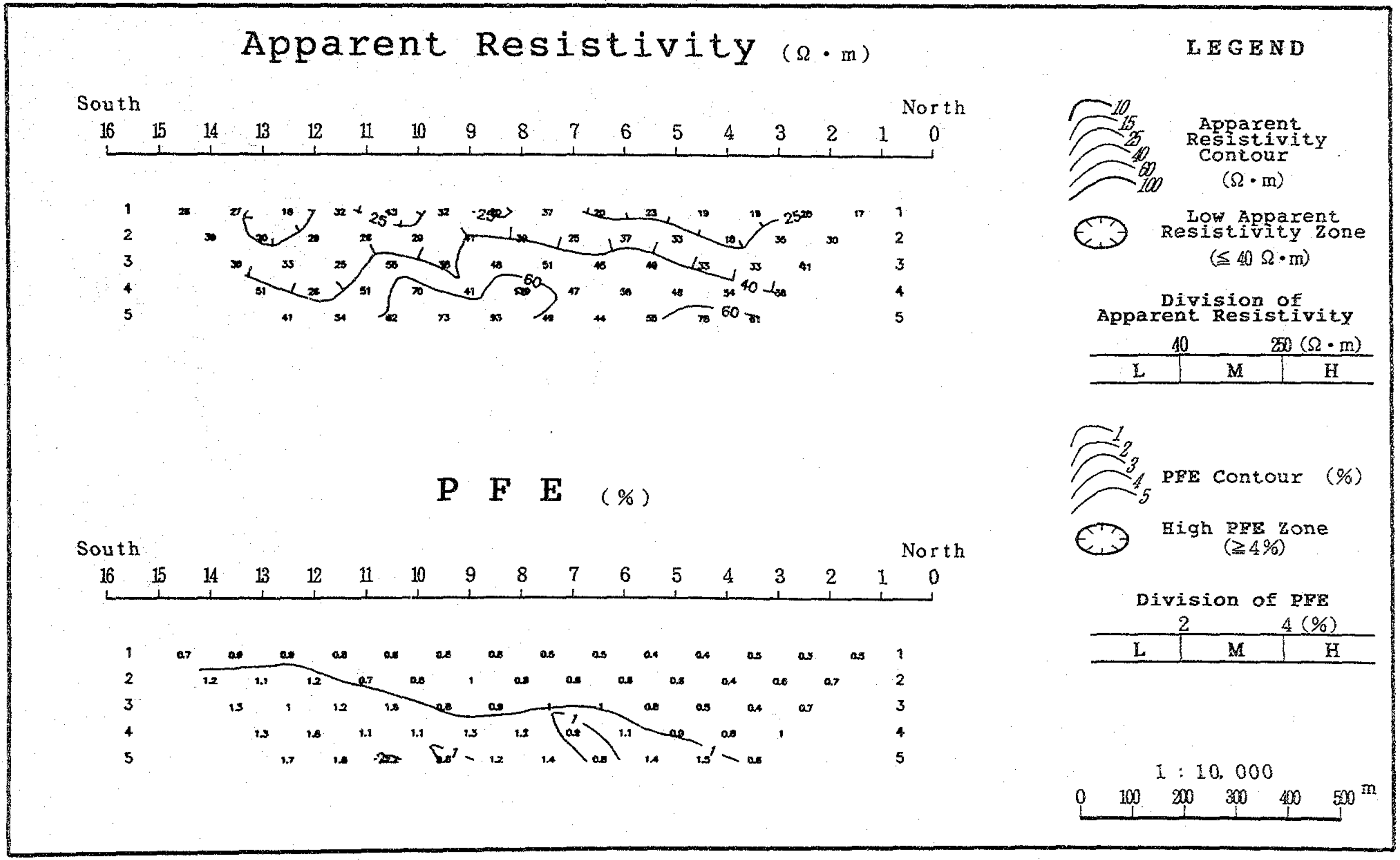


Fig. I –14 Apparent Resistivity and PFE Pseudo Section (Line E–12)

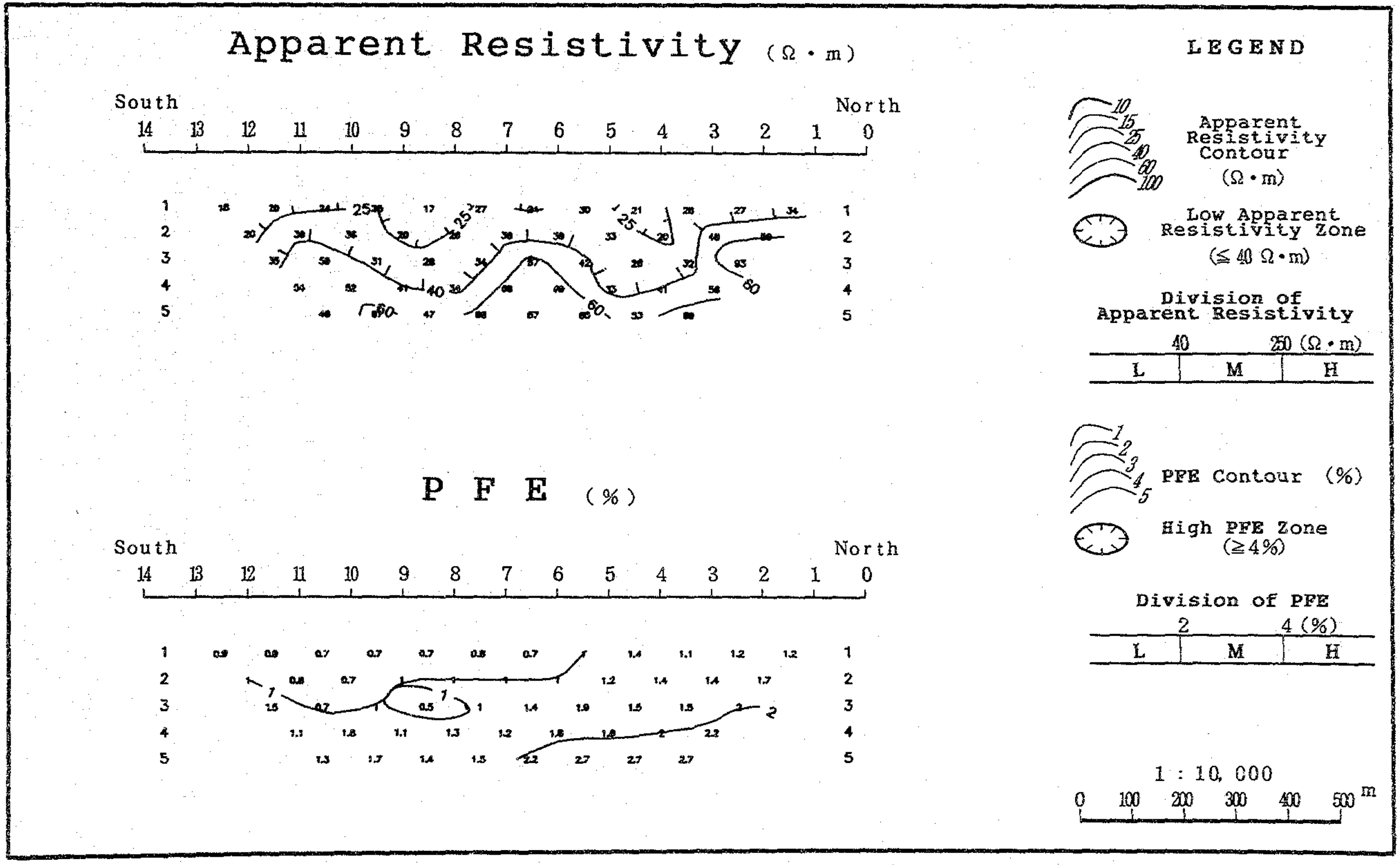


Fig. I –15 Apparent Resistivity and PFE Pseudo Section (Line E–13)

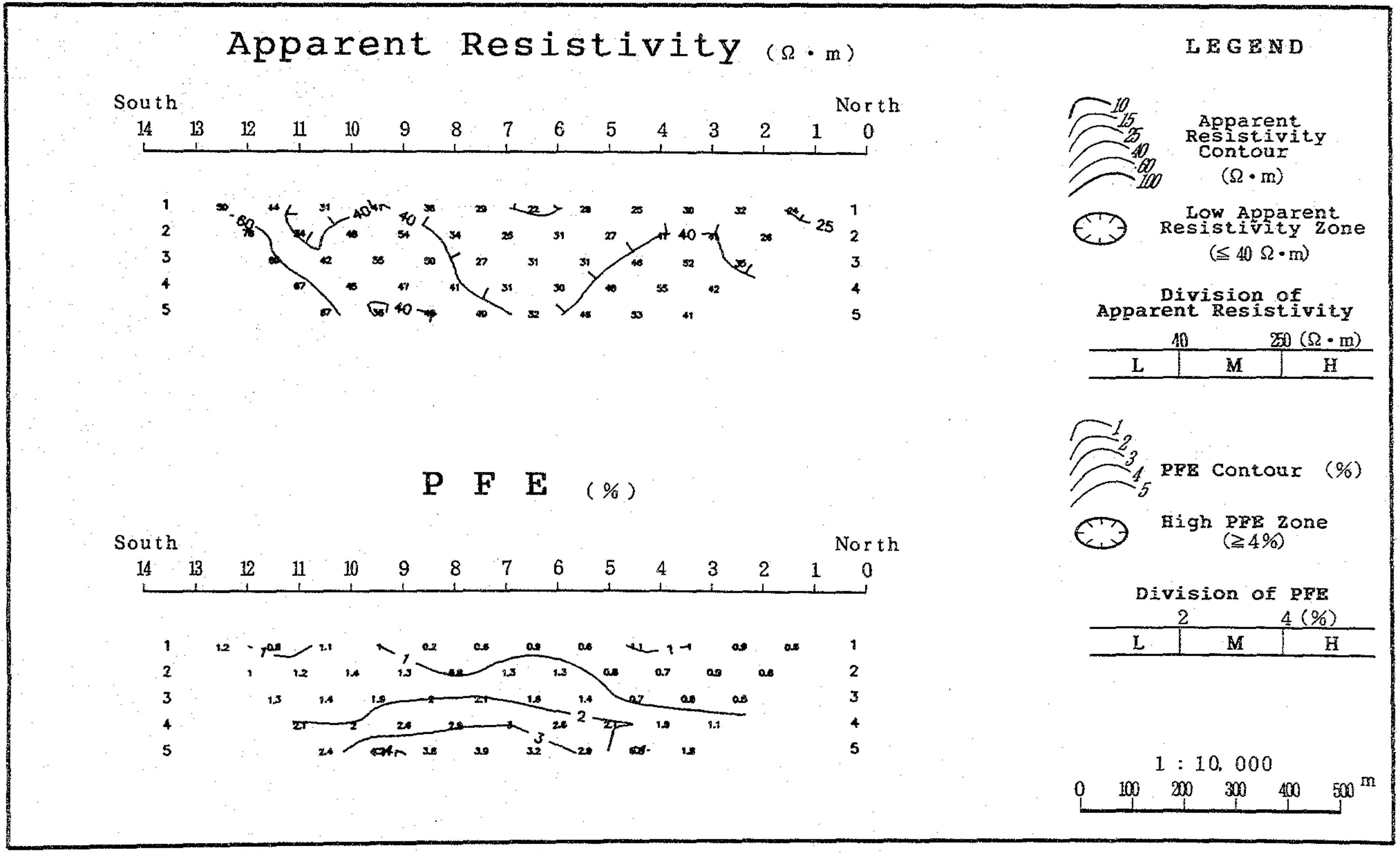


Fig. I –16 Apparent Resistivity and PFE Pseudo Section (Line E–14)

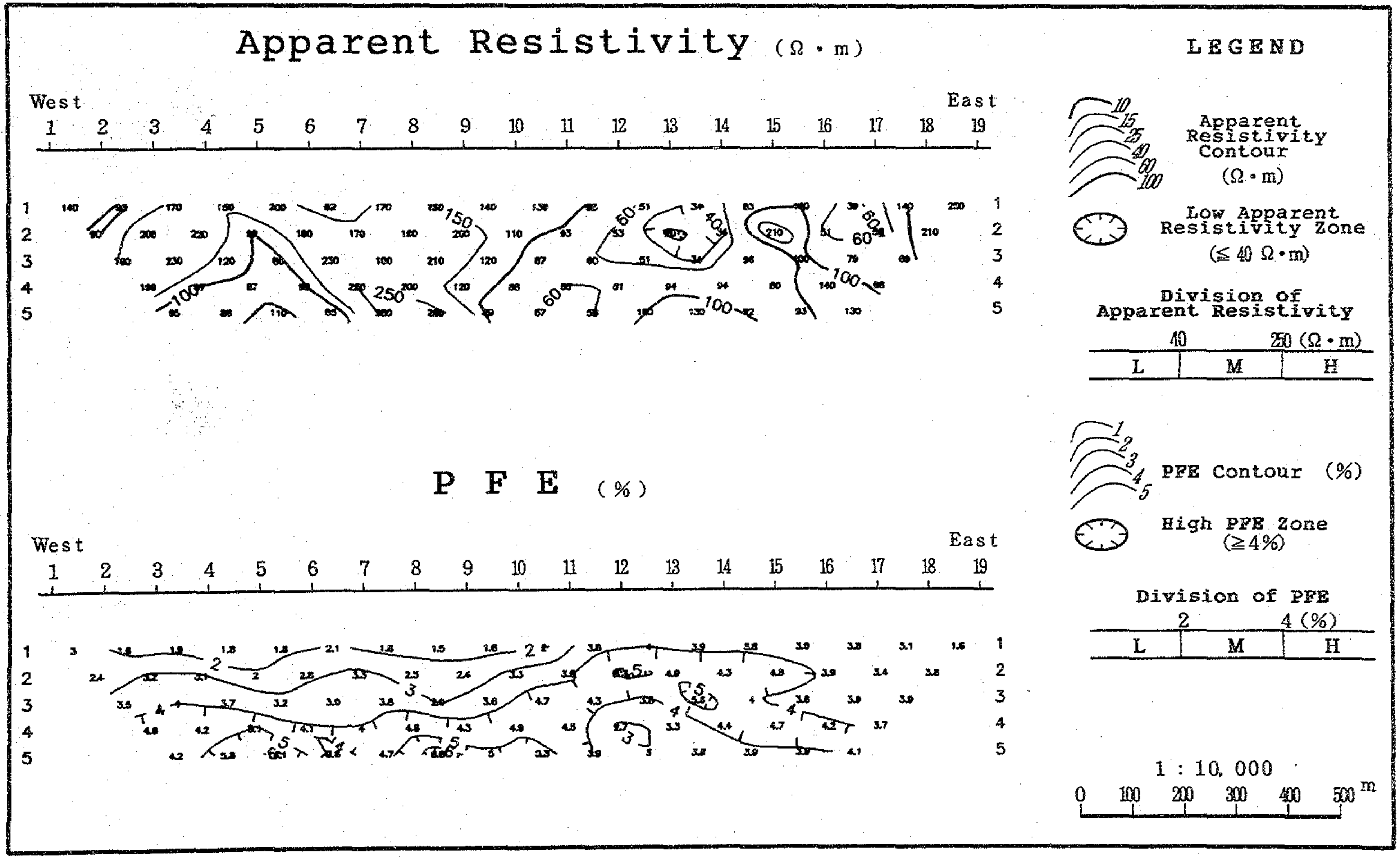


Fig. I –17 Apparent Resistivity and PFE Pseudo Section (Line W–1)

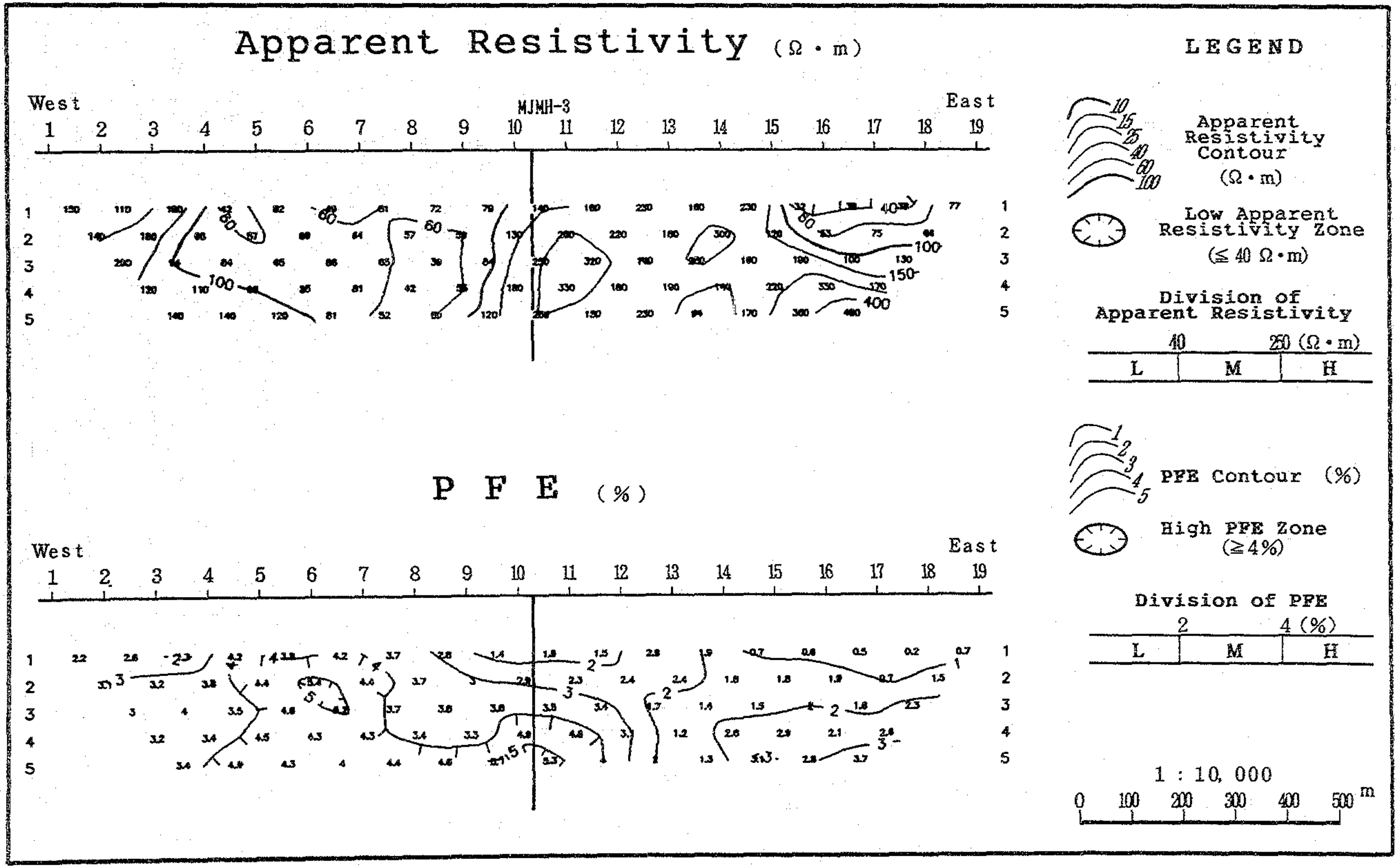


Fig. I –18 Apparent Resistivity and PFE Pseudo Section (Line W–2)

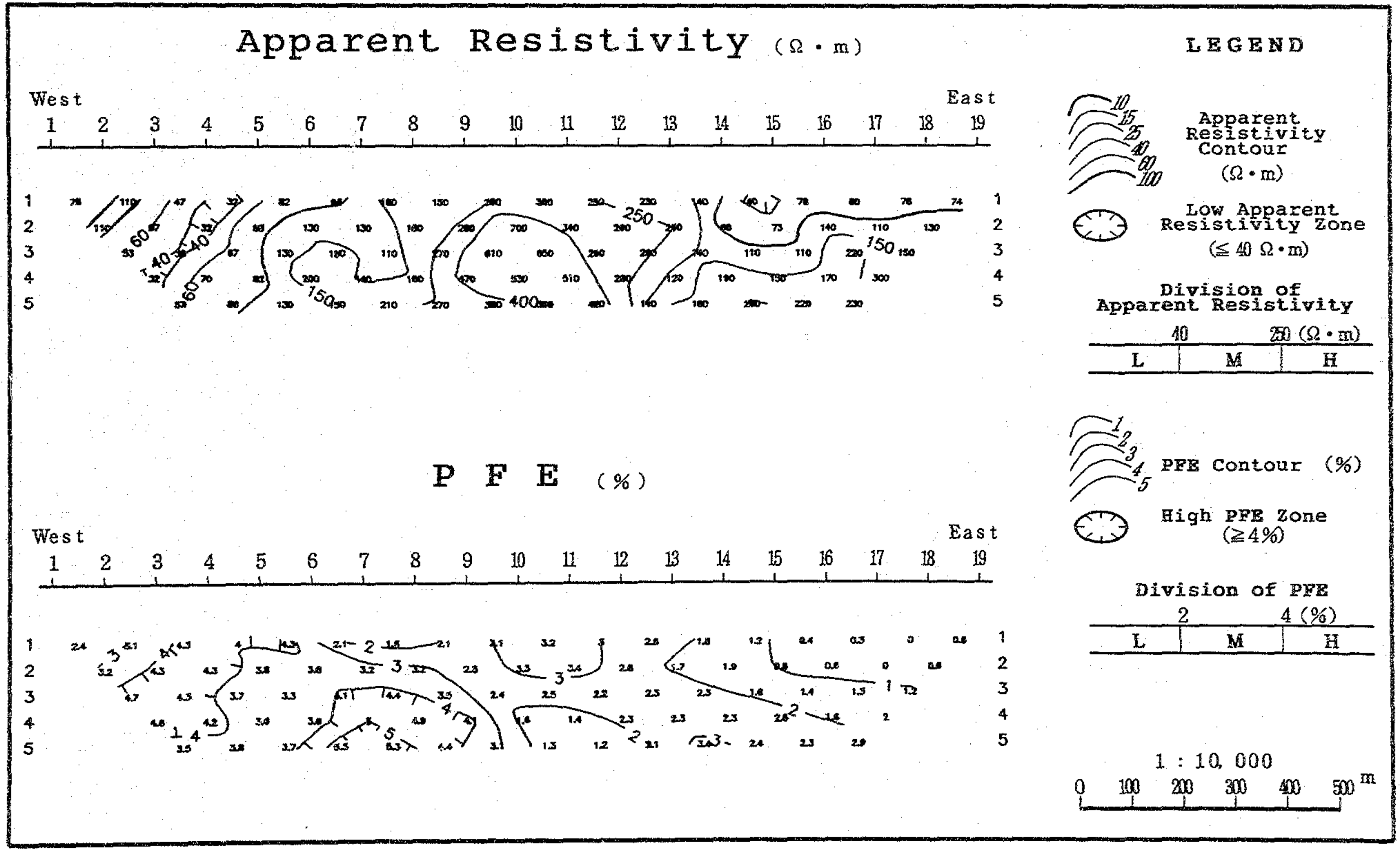


Fig. I –19 Apparent Resistivity and PFE Pseudo Section (Line W–3)

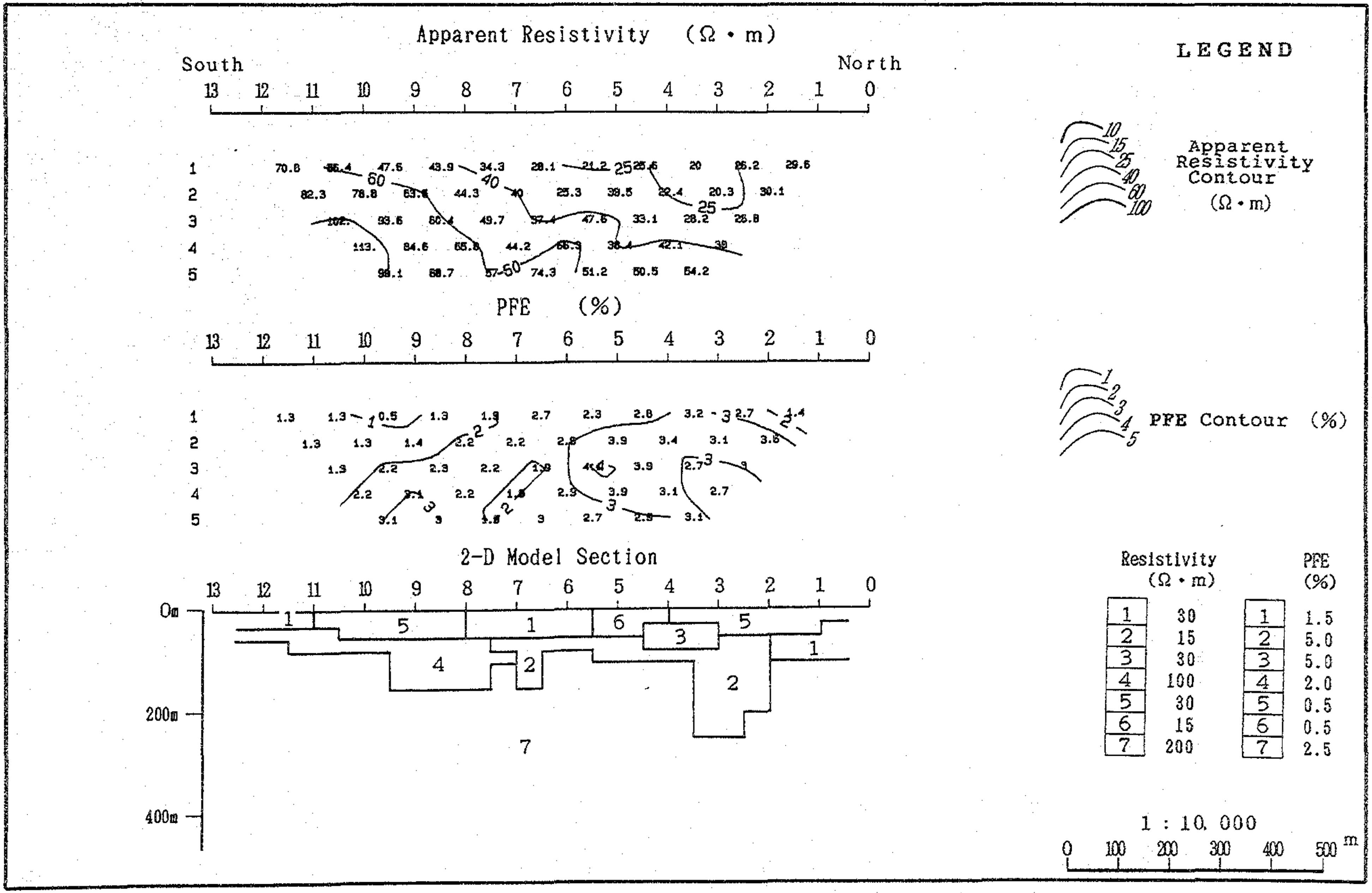


Fig. I –20 Results of IP Modeling (Line E–2)

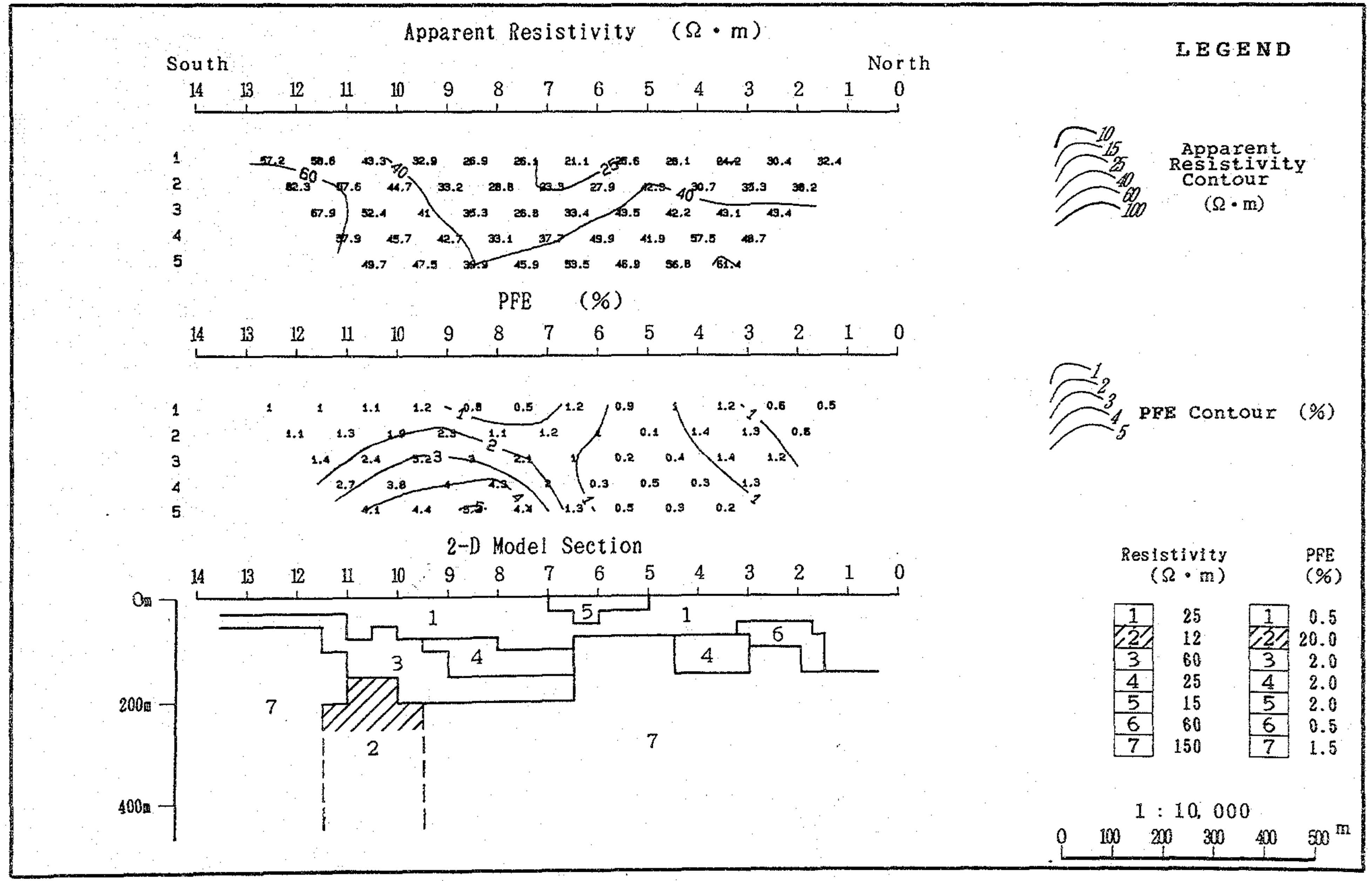


Fig. I –21 Results of I P Modeling (Line E–14)

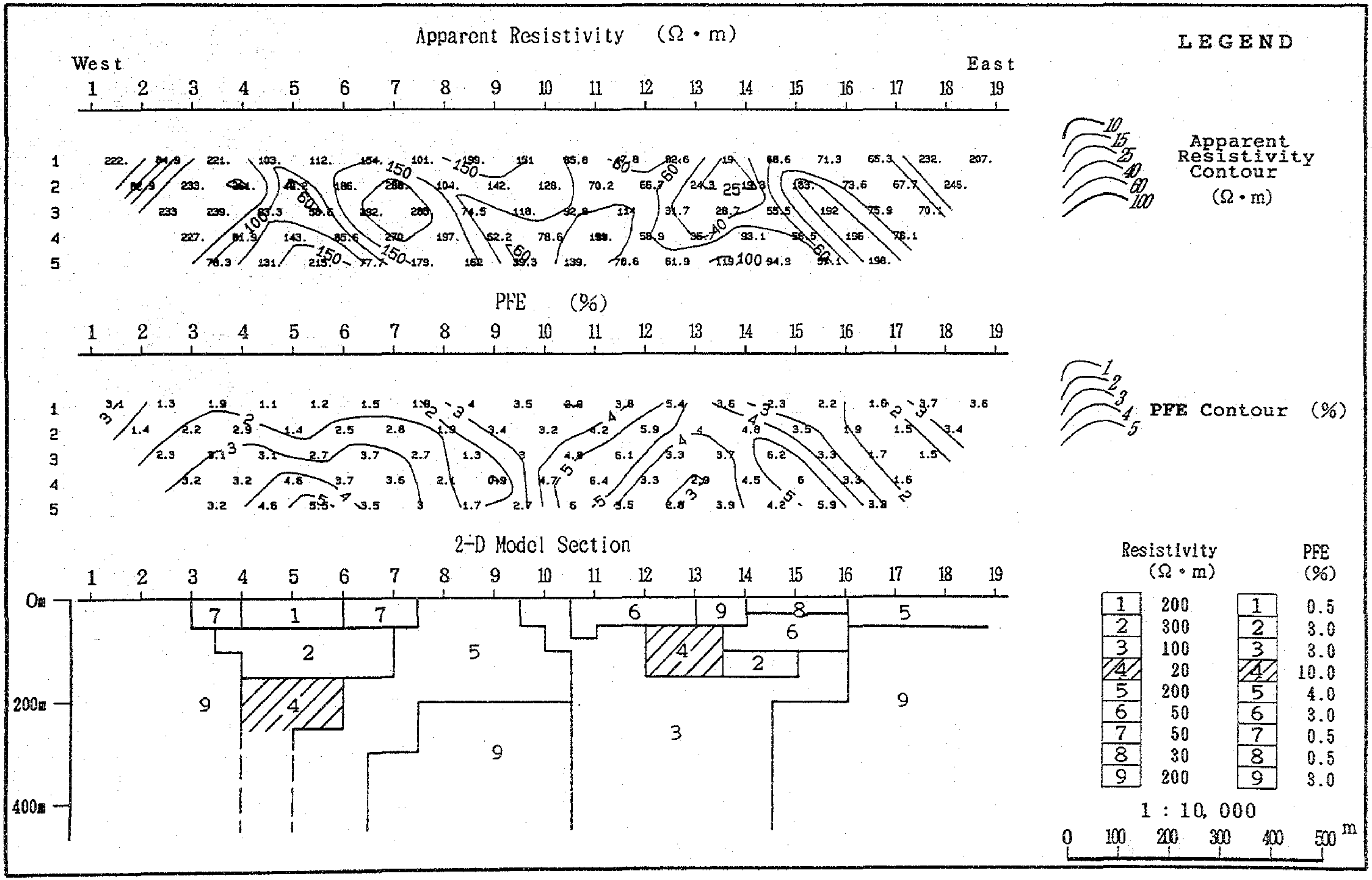


Fig. I –22 Results of I P Modeling (Line W–1)

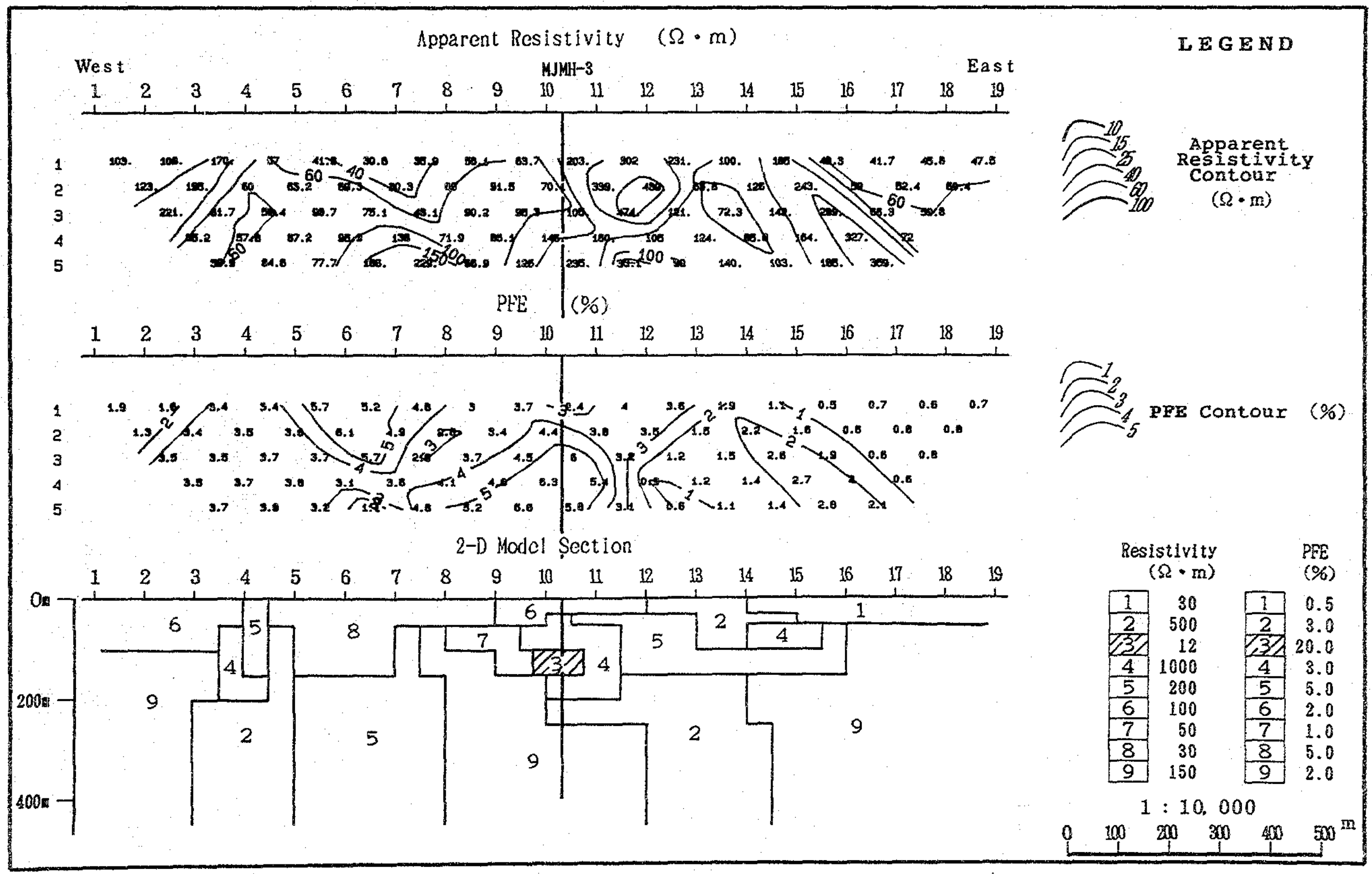


Fig. I –23 Results of I P Modeling (Line W–2)

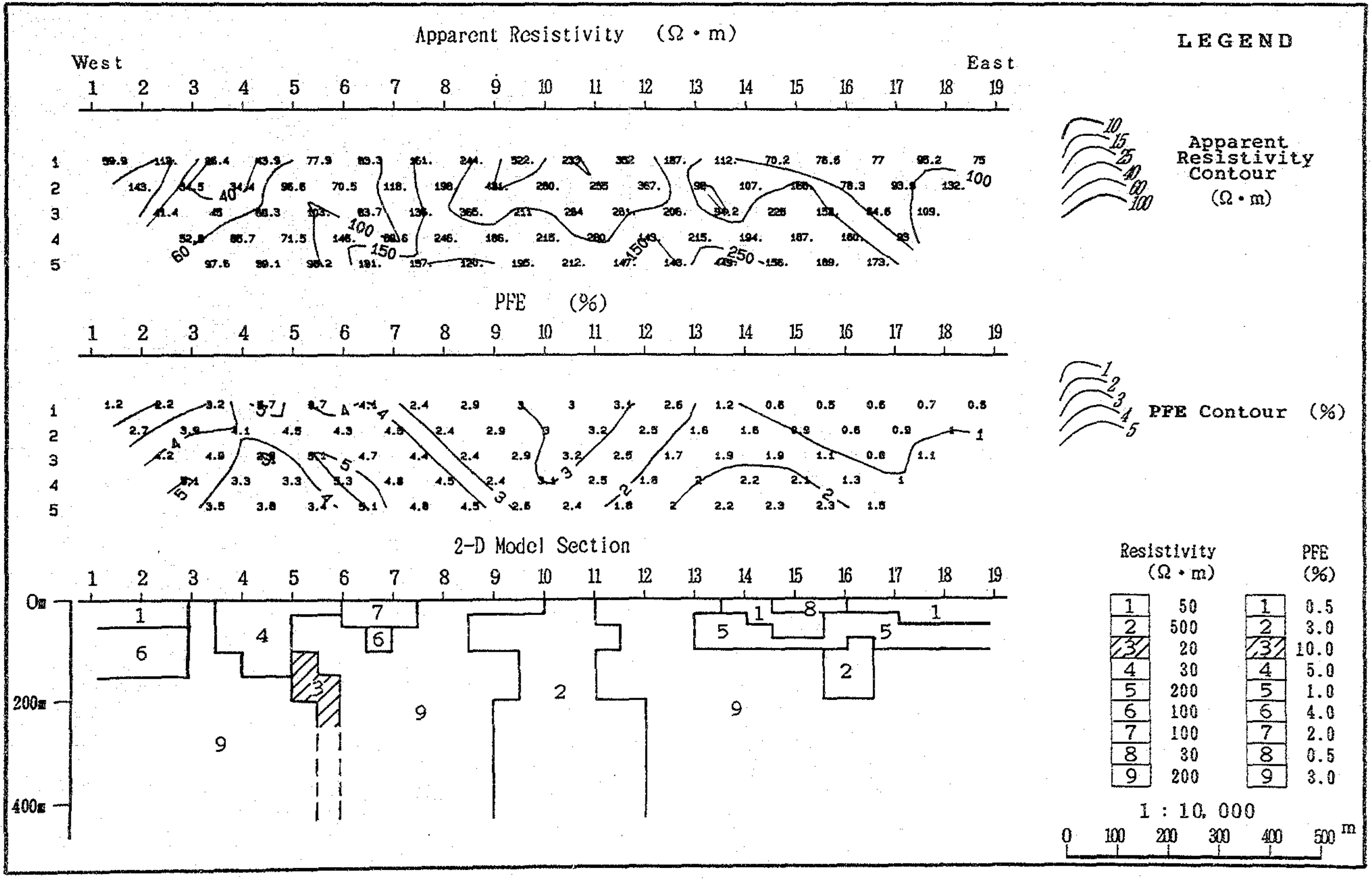


Fig. I –24 Results of I P Modeling (Line W–3)

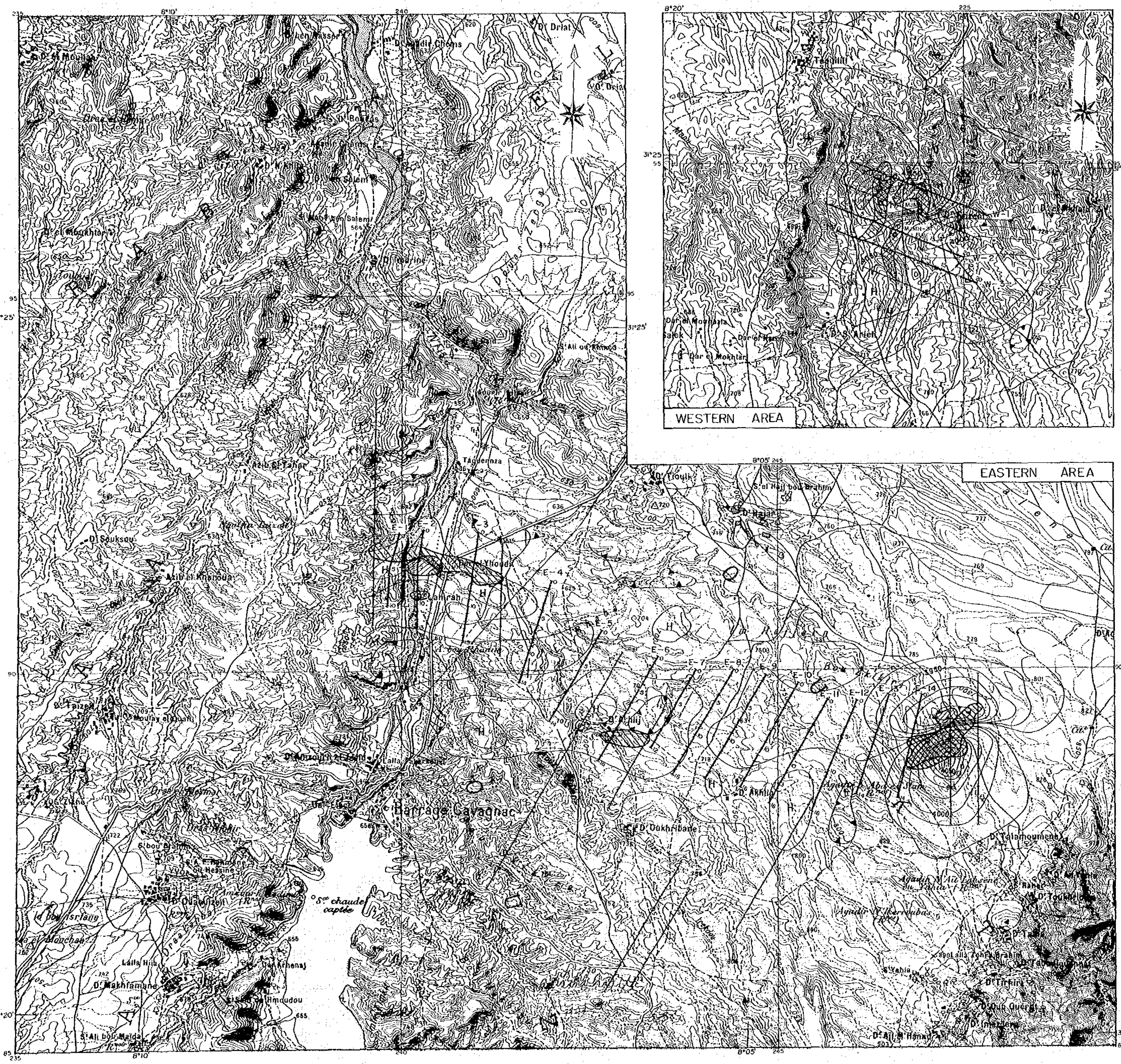
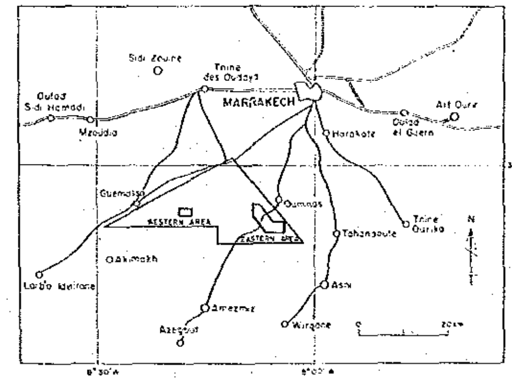


Fig.I-25

COOPERATIVE MINERAL EXPLORATION
IN
HAOUZ CENTRAL AREA, MOROCCO
(PHASE III)

Map of Geophysical Interpretation



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FEBRUARY 1990

Prepared by MINDECO

0 2,500m

Scale 1:50,000

LEGEND

E-8 0 5 — Line Number, Station Number, IP Survey Line (Phase III)

IP Survey Line (Phase II)

MJMM-1 — Boring Site

Low Apparent Resistivity Anomaly
Eastern Area : n=5, ≤40 Ω·m
Western Area : n=5, ≤60 Ω·m

High PFE Anomaly
Eastern Area : n=5, ≥4%
Western Area : n=5, ≥5%

L — Low Magnetic Anomaly

H — High Magnetic Anomaly

PART II
DRILLING EXPLORATION

CHAPTER 1 OUTLINE OF DRILLING EXPLORATION

1-1 Purpose

In the Third Phase survey, drilling exploration was carried out in the Hajar-Amzourh area and the Frizem area which were extracted for the promising areas of mineral resource.

The purpose is to confirm the possibility and occurrence of ore deposit in the geochemical and geophysical anomalous zones in the mineralized horizons.

1-2 Outline of the Drilling

Drilling was conducted at 4 sites in the depth of 400 m totalling 1,600 m in 4 holes (Fig. II-1). The operation was done by Morrocan contractor with 2 drilling machines, Longyear-8. The drilling period was 90 days from September 17, 1989 to December 15, 1989.

The drilling locations and drilling lengths are as follows.

No.	Area	Coordinate		Elev.	Incl.	Depth
		N	E			
MJMH-1	(Lamrah Area)	91.250	240.540	600 m	-90°	400.40 m
MJMH-2	(Frizem Area)	94.470	223.830	688 m	-90°	401.30 m
MJMH-3	(Frizem Area)	91.050	224.120	712 m	-90°	400.80 m
MJMH-4	(Frizem Area)	94.330	224.410	692 m	-90°	400.20 m

1-3 Core Logging and Analysis

The geologic logs were compiled in the scale of 1:200. As a rule, a quarter-split pieces were collected from the mineralized parts of core, and chemical analysis was done in 4 elements such as copper, lead, zinc and silver.

In addition, microscopic observation and X-ray diffraction test were conducted for some ore and rock samples.

Main analyses are given as follows.

1)	Chemical analysis (Ag.Cu.Pb.Zn):	62 pcs
2)	Polished section:	10 pcs
3)	Thin section:	20 pcs
4)	X-ray diffraction analysis:	10 pcs

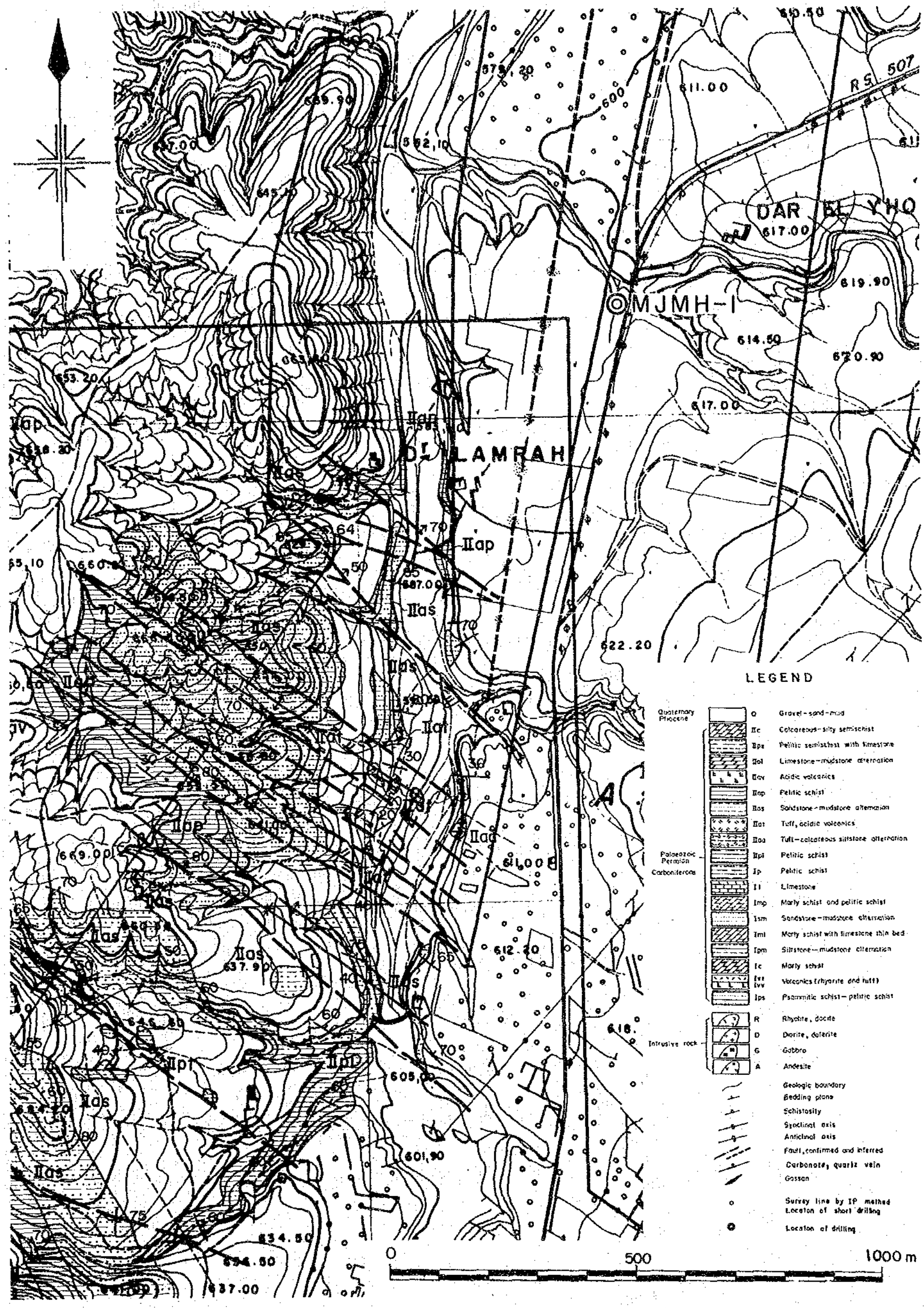

Fig. II-1-1 Location Map of Drilling Site (I) Lamrah Area

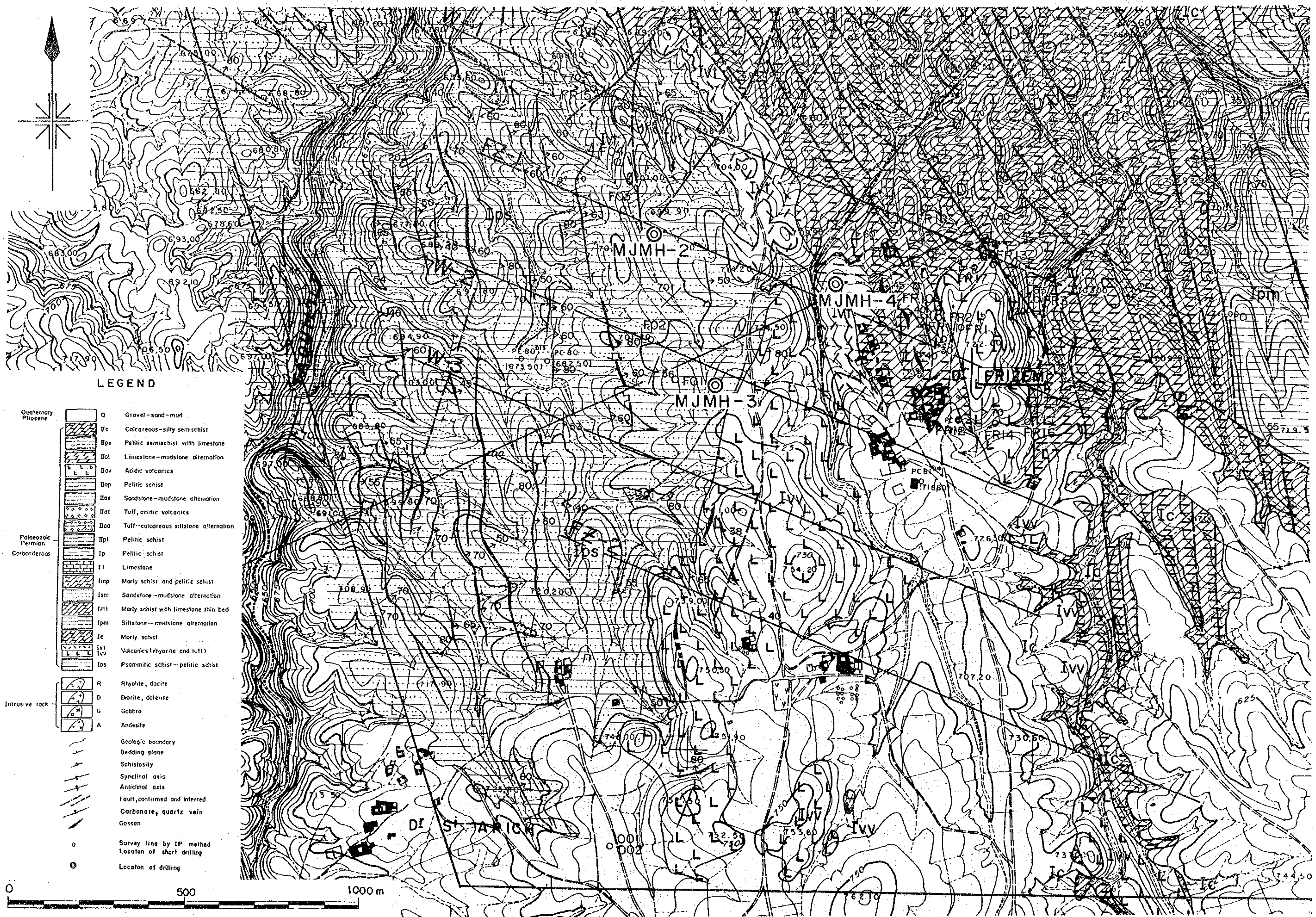

Fig. II-1-2 Location Map of Drilling Site (2) Frizem Area

CHAPTER 2 DRILLING OPERATION

2-1 Preparation and Transportion

Two drilling machines, Longyear-8 were lent from BRPM. All machines, equipments and materials were transported from the Kettara mine about 30 km northwest of the drilling sites and Rabat by 6 t truck.

For the drill hole MJMH-1, water was supplied by pumping up from the stream nearby. For the MJMH-2, MJMH-3, and MJMH-4, water was transported using truck from At Tnine about 16 km south of Frizem.

The basement was prepared at Takerkoust and Frizem villages.

2-2 Drilling Operation

Overburden was drilled using Tricone bit. After reaching the basement rock, wire-line method using HQ bit was employed using bentonite or CMC mud water. On the way of drilling, NW casing-pipes were sunk down in the hole and the hole was drilled by NQ bit in final (Fig. II-2).

(1) MJMH-1

Hole length:	400.40 m
Core length:	355.30 m
Core recovery:	88.7%
Date commenced:	September 20, 1989
Date completed:	October 11, 1989

0 - 50.00 m: The hole was excavated in overburden by 6" Tricone bit to the depth of 50 m. The rock fragments were collected at every 1 m for judging the rock type.
50 - 68.20 m: After confirming the basement rock, wire-line method using HQ bit was employed and NW casing-pipes were sunk to the depth of 68.20 m.

68.20 - 400.20 m: To the final depth of 400.20 m, the hole was drilled by NQ bit. At the depth of 322 m, some gears in the transmission were broken and changing the broken gears and some adjustments of the machine were needed.

(2) MJMH-2

Hole length: 401.30 m
Core length: 392.20 m
Core recovery: 97.7%
Date commenced: October 9, 1989
Date completed: November 3, 1989

0 - 9.00 m: 6" Tricone bit was used.
9.00 - 103.70 m: HQ bit was used and NW casing pipes were set up.
103.70 - 401.20 m: The hole was drilled by NQ bit. At the depth of 353.10 m, the transmission became bad condition and repair of machine, exchanging some parts was needed.

(3) MJMH-3

Hole length: 400.80 m
Core length: 391.80 m
Core recovery: 97.7%
Date commenced: October 22, 1989
Date completed: November 9, 1989

0 - 9.00 m: The drilling was commenced using 4 3/4" Tricone bit.
9.00 - 88.30 m: HQ bit was used and NW casing-pipes were set up.
88.30 - 400.80 m: NQ wire-line method was employed. The drilling operation was progressed smoothly, though gears of the transmission were broken at the depth of 154 m.

(4) MJMH-4

Hole length: 400.20 m
Core length: 393.60 m
Core recovery: 98.2%
Date commenced: November 9, 1989
Date completed: December 11, 1989

0 - 6.50 m: The hole was drilled using 6 1/4" Tricone bit.
6.50 - 54.65 m: HQ bit was used and NW casing-pipes were sunk down.
54.65 - 400.25 m: The hole was drilled by NQ wire-line method. In the deeper depth than 250 m, the rock was fractured and broken into small pieces and water-loss became severe, so two trucks were used to transport the needed water. A fractured zone was found from 330 m to 350 m. As fractured soft rock and hard rock consisting of quartz veins came alternatively, an accident of the bit burnt occurred at the depth of 330 m. At the depth of 299 m and 395 m, accidents in the transmission happened, and the gears as well as bearings were exchanged and repaired.

2-3 Mobilization and Removal

Two 6 t trucks were employed to transport the drilling equipments. Drilling machine and engine were set on a push car that was pulled by 6 t truck. After drilling operation, all the machines and equipments were removed and kept in the warehouse of Kettara mine and Rabat.

The number of days used for mobilization and removal is shown as follows.

No.	Transport	Mobilization	Removal	Total (days)
MJMH-1	2	5		7
MJMH-2	4	1		5
MJMH-3		5	6	11
MJMH-4		3	4	7
Total	6	14	10	30

2-4 Record of Performance

The drilling record, the efficiency and the core recovery are as follows.

Item	MJMH-1	MJMH-2	MJMH-3	MJMH-4	Total
Drilled Depth (m)	400.40	401.30	400.80	400.20	1,602.70
Working Days	22	25	18	31	96
Total Length/ Net Drill Days	18.2	16.0	22.3	12.9	16.7
Core Recovery (%)	88.7	97.7	97.7	97.2	95.3

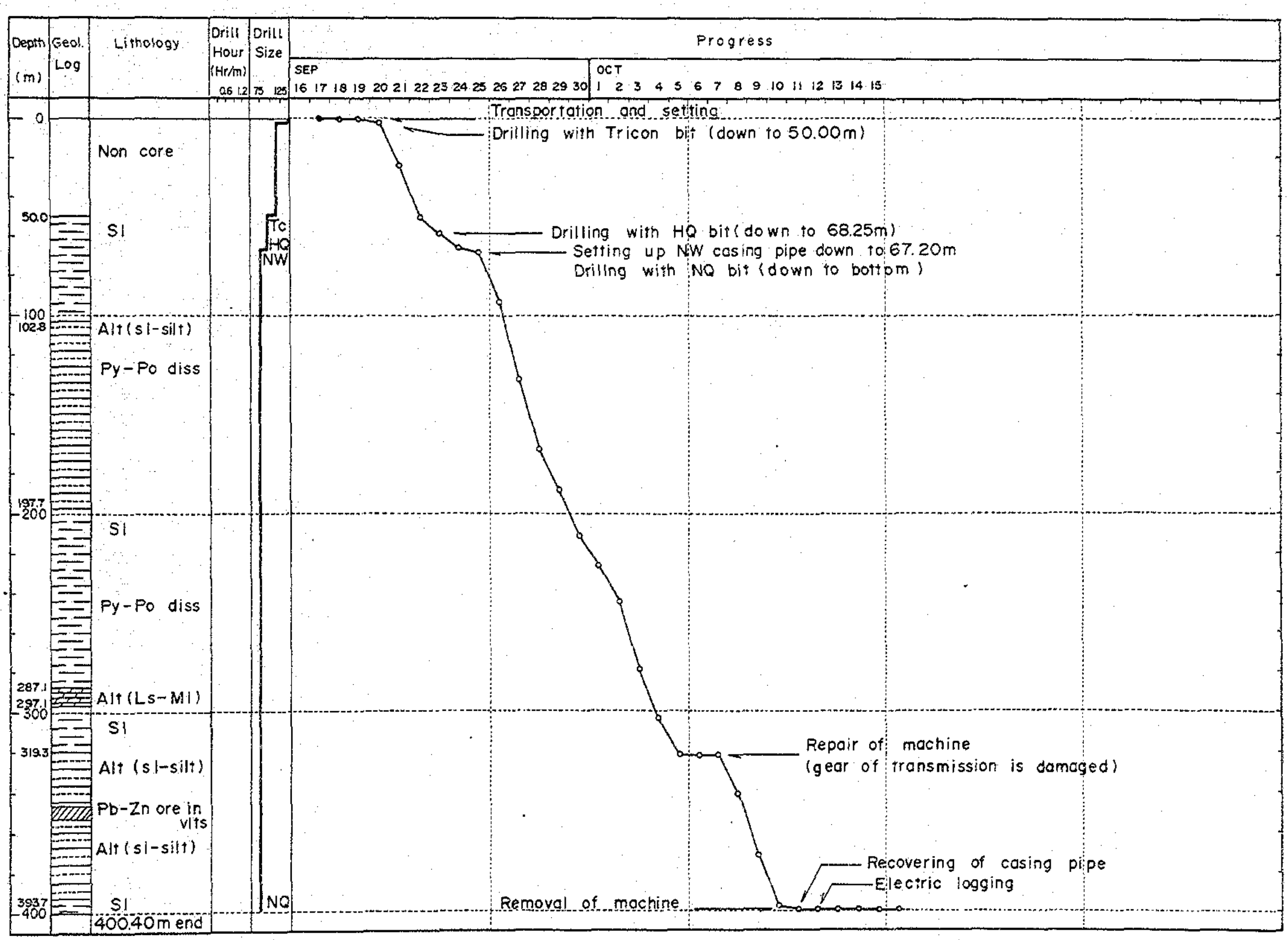

Fig. II-2-1 Progress Diagram of Drilling (1) MJMH-1

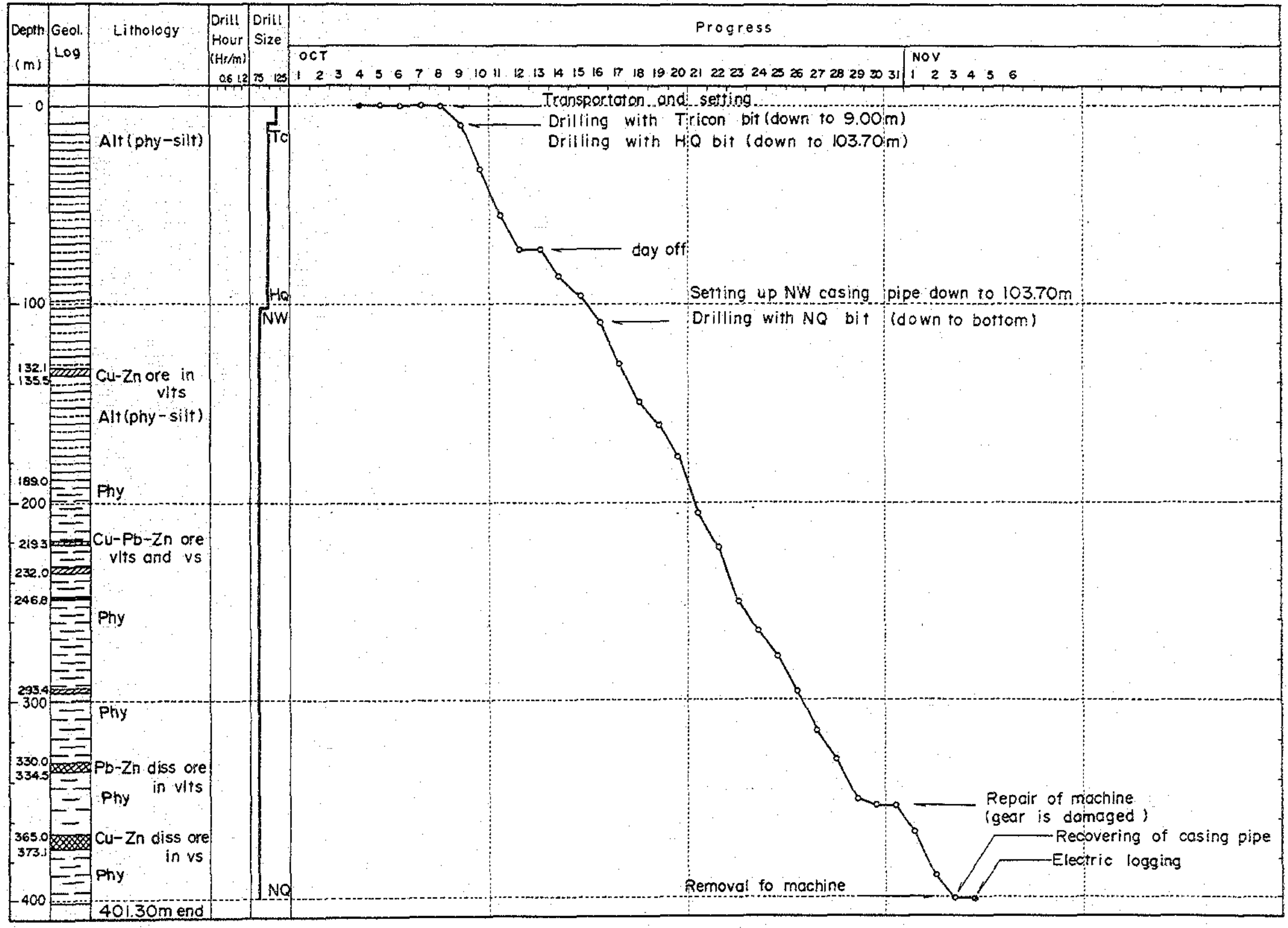

Fig. II-2-2 Progress Diagram of Drilling (2) MJMH-2

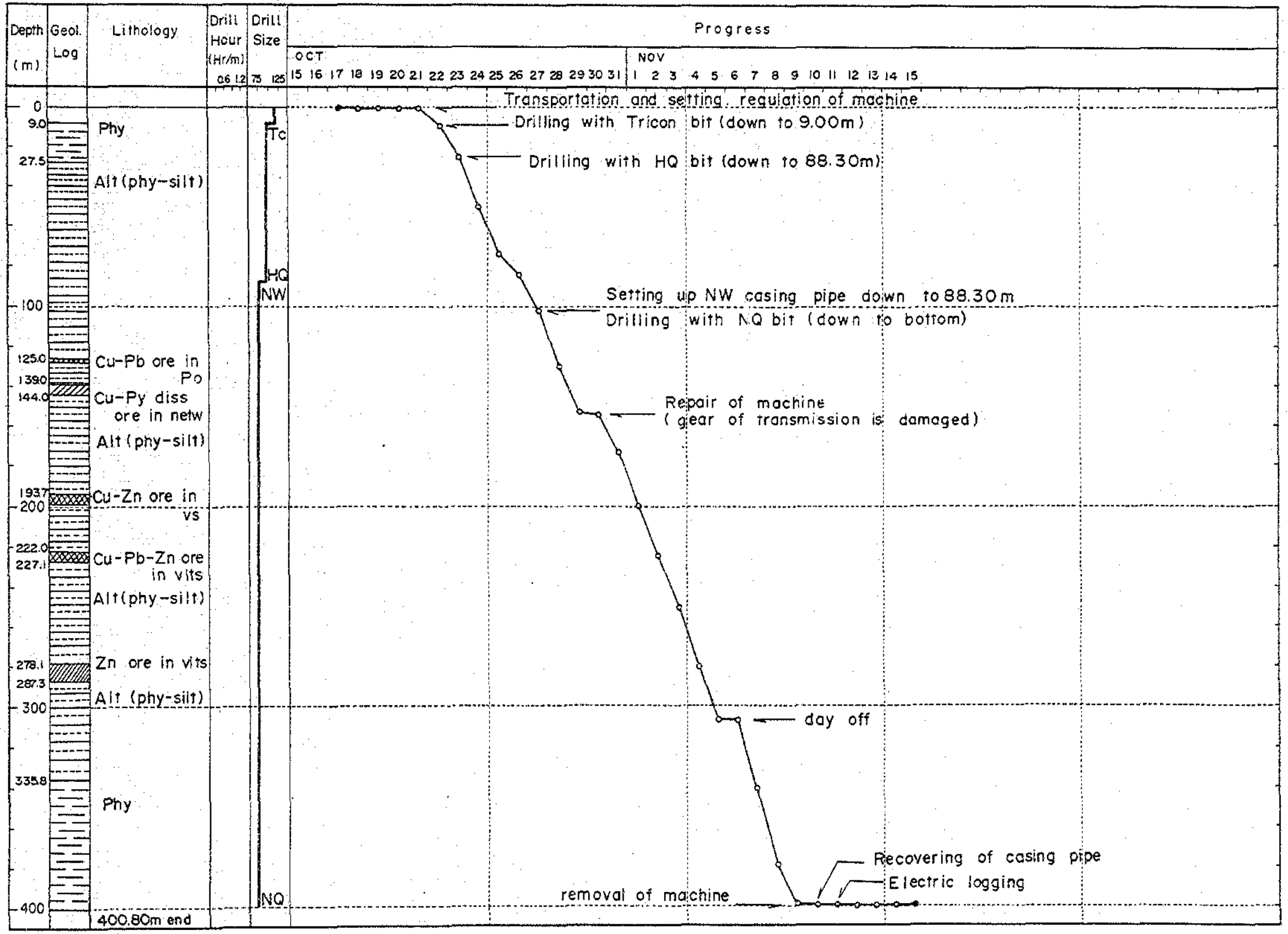

Fig. II-2-3 Progress Diagram of Drilling (3) MJMH-3

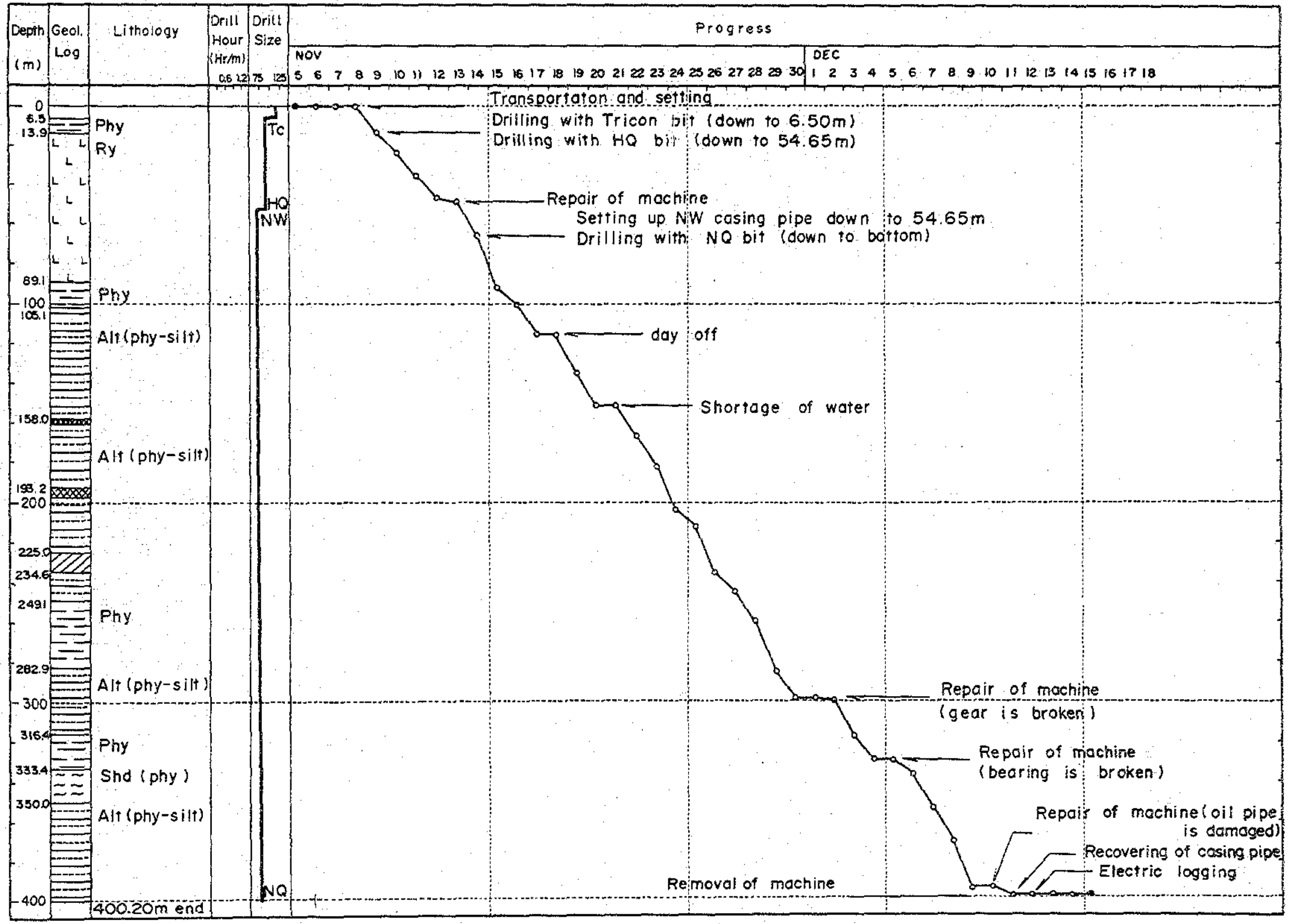

Fig. II-2-4 Progress Diagram of Drilling (4) MJMH-4

CHAPTER 3 GEOLOGY AND MINERALIZATION IN THE DRILL HOLE

3-1 MJMH-1

(1) Location: About 15 m east of the station 6 of the IP line LM-2 in the Lamrah area.

(2) Purpose: Exploration of the concealed IP anomaly zone (PFE = 3 - 4%, AR = 20 - 30 Ωm, Fig. II-3-1).

(3) Lithology: Covering sediments are down to 34 m and then after basement rock appears. The basement rock consists mainly of slate and an alternation of slate and siltstone. The alternation pattern of slate and siltstone is usually at intervals of 1 mm to 10 m and 1 m, showing transitional relation. Slate shows dark-grey to black colour. Siltstone is partly calcareous and shows pale-grey colour. Between 288 m and 297 m, limestone and marlstone are intercalated.

(4) Texture and structure: Slate and siltstone have foliation structure. The inclinations of foliation are fractured between 25° and 40°.

(5) Mineralization: The oxidized zone is down to 66 m. The rock becomes soft influenced by argillization and disseminated with limonite.
In the primary zone at the deeper depth than 66 m, dissemination of fine-graind pyrite is found widely in the rock. The mode of dissemination is veinlets, firm-like and cloudy.
Mineralized veinlets of lead, zinc, pyrrhotite and pyrite about 10 cm in width are found from 346 m to 353 m (Fig. II-4-1).

The assay results of the veinlet ores are as follows.

Depth (m)	Width(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)	Type of Ore
346.4-346.6	0.2	5	0.11	6.36	0.96	vlts
349.2-349.4	0.2	16	0.01	0.01	7.05	vlts
350.7-350.8	0.1	3	0.03	16.00	16.00	vlts
352.3-352.4	0.1	3	0.02	9.58	9.58	vlts
Av.	0.15	8	0.05	6.39	6.91	

(6) Discussion: Siltstone is generally calcareous and dolomitic and forms a fine alternation 1 mm to 1 cm and 10 cm with slate. Under the microscope, siltstone is comparatively rich in sericite and chlorite and forms a fine banding structure between the parts of quart and chlorite.
The siltstone is probably originated in tuffeceous rock. The basement rocks in this hole is generally taffaceous and mineralized, which will be corresponding to a part of the Hajar horizon.

3-2 MJMH-2

(1) Location: About 40 m west of the station 6 of the IP line FZ-1 in the Frizem area.

(2) Purpose: Exploration of the concealed IP anomaly zone (PFE = 5%, AR = 30 Ωm) and strong magnetic anomaly zone (Fig. II-3-2).

(3) Ligholögy: From the surface to the depth of 46 m, the rock in the hole is phyllite, and it becomes an alternation of phyllite and siltstone, and the deeper depth of 189 m is mainly phyllite.
Phyllite is dark-grey or black colour and siltstone is pale grey colour. They are forming a fine alternation at intervals of 1 mm to 1 cm and 10 cm. Fault fractured zone is seen between 208 m and 212 m.

(4) Texture and structure: Schistose structure and foliation structure develop remarkably in the phyllite and siltstone. Innumerable joints are found parallel to the schistosity. The interval is several millimeters to 2 cm. The rock is dislocated step by step by the joints parallel to the schistosity planes.

Inclination of the foliation structure becomes more flat to the deeper depth as shown below.

0 m - 130 m:	30° - 40°
130 m - 200 m:	20° - 30°
200 m - 310 m:	15° - 20°
310 m - 400 m:	10°

(5) Mineralization: Mineralized parts of copper, lead and zinc are found at the depth of about 130 m, about 230 to 250 m, about 330 m and about 370 m. Ore minerals are chalcopyrite, galena, sphalerite, pyrite and pyrrohotite. Gangue minerals are quartz, calcite, dolomite and siderite. Characteristic alterations related to the mineralization are silicification and carbonitization (Fig. II-4-2).

The type of mineralization is characterized by vein-type, network-type and dissemination-type. The boundary of ore and host rock is transitional without clear difference.

1) Vein-type ore: Mineralized veins are usually 10 cm to 1 m in width occuring parallel to the foliation structure. In many places the veins are brecciated.

2) Veinlets-type ore: This is an aggregation of veinlets several millimeters to maximum 2 cm occurring parallel to the foliation structure.

3) Dissemination-type ore: The scale of ore is usually several millimeters to centimeters and the shape is irregular patch. Assay results of the main mineralized parts are as follows.

Depth (m)	Width(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)	Type of Ore
232.0-233.3	1.3	8	0.01	2.31	1.86	vlts
246.8-247.8	1.0	9	9.07	0.02	0.17	v
293.4-295.0	1.6	4	0.05	0.33	1.59	vlts
372.1-273.1	1.0	23	0.02	0.91	1.92	vlts
Av.	1.2	10	0.23	0.91	1.44	

(6) Discussion: According to the result of X-ray diffraction analysis on the ore samples taken at 247 m and 373 m, quartz, dolomite, siderite and calcite were determined as gangue minerals.

3-3 MJMH-3

(1) Location: About 6 m south of the station 10 of the IP line W-2 in the Frizem area.

(2) Purpose: Exploration of the concealed IP anomaly zone (PFE = 5%) which is the deeper part of the western gossan (Fig. II-3-3).

(3) Lithology: The rock is phyllite down to 63 m, an alternation of phyllite and siltstone from 63 m to 291 m, and mainly phyllite from 291 m. The interval pattern of alternation changes from 1 mm to 1 cm and maximum 10 cm. Fault fracture zones are found at the depth of 145 m, 149 m, 184 m, and 291 m.

(4) Texture and structure: Inclination of the foliation structure turns to more flat to the deeper depth as shown below.

0 m - 110 m: 30° - 50°
110 m - 270 m: 20° - 30°
270 m - 400 m: 5° - 15°

(5) Mineralization: Mineralized parts of copper, lead and zinc are found at more than ten sites between 125 m and 344 m. The ores are veinlets in width of 1 mm to 1 cm, veins in width of 10 cm to 1 m, and dissemination type. Ore minerals are pyrite, galena, sphalerite, pyrite, and pyrrhotite. Gangue minerals are quartz and carbonate minerals.
The direction of veinlets and veins and the elongation of the dissemination are parallel to the foliation structure (Fig. II-4-3).
Assay results of the main mineralized parts are as follows:

Depth (m)	Width (m)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Type of Ore
125.9-126.9	1.0	8	0.61	0.10	0.66	v
316.4-317.4	1.0	3	0.11	0.79	0.95	vlts
324.6-326.5	1.9	3	0.11	0.28	2.06	v
329.3-330.6	1.3	11	0.09	3.08	2.87	v
330.6-331.9	1.3	5	0.04	0.76	0.97	vlts
Av.	1.3	6	0.17	0.99	1.62	

(6) Discussion

1) According to the result of X-ray diffraction and microscopic observation, as for ore minerals, marcasite is found as well as pyrite, pyrrhotite, chalcopyrite, galena and sphalerite.

2) A tendency that phyllite is comparatively rich in chlorite and biotite and siltstone is comparatively rich in quartz and calcite is found by X-ray diffraction and microscopic observation, although both phyllite and siltstone are composed mainly of quart, chlorite and sericite showing similar mineral component and texture.

3-4 MJMH-4

(1) Location: About 70 m northeast of the station 11 of the IP line FZ-1 in the Frizem area.

(2) Purpose: Exploration for the concealed IP anomaly zone (PFE = 5%, AP = 50 m) and the deeper part of the mineralized zone confirmed by MJMH-2 and MJMH-3 (Fig. II-3-2).

(3) Lighology: The rock is mainly rhyolite down to 89 m. The upper part of 34 m is volcanic rock showing porphyritic and massive texture. The lower part of 41 m is pyroclastic rock showing foliation structure.
Between 89 m and 115 m, it consists mainly of phyllite, which intercalates rhyolitic pyroclastic rock.
The foliation structure in the phyllite and siltstone below the pyroclastic rock is severely disordered.
Between the depth of 116 m and 249 m, it consists of an alternation of phyllite and siltstone in the interval of 1 mm to 1 cm and 20 cm. The deeper depth of 249 m is mainly of phyllite which is strongly fractured. The core is exfoliated to the flakes at the interval of 1 cm to 2 cm. Fault fractured zone is found between 333 m and 350 m.

(4) Texture and structure: Inclination of the foliation structure is shown below.

0 m - 160 m:	30° - 45°
160 m - 200 m:	20° - 25°
200 m = 300 m:	15° - 20°
300 m - 400 m:	20° - 30°

(5) Mineralization: Mineralized parts of copper, lead and zinc are found at the depth of 158 m to 161 m, 193 m to 198 m, and 225 m to 235 m. Ore minerals are chalcopyrite, galena, sphalerite and pyrite.
Gangue minerals are mainly quartz and carbonate minerals. The ores are of vein, veinlet, network and dissemination (Fig. II-4-2).
Assay results of main mineralized parts are as follows.

Depth (m)	Width(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)	Type of Ore
159.8-160.4	0.6	5	0.01	1.14	1.34	netw
171.5-171.7	0.2	16	0.19	0.48	2.57	vlts
304.6-304.7	0.1	3	0.92	0.04	0.28	netw
362.5-362.9	0.4	11	0.03	0.91	2.64	v
Av.	0.3	8	0.11	0.88	1.82	

(6) Discussion; Under the microscopy, a flaky mineral, which is supposed to be pentlandite, is observed around the pyrrhotite masses in the polished section of No. 4 - 196.

3-5 Consideration

(1) Lamrah Area

1) The Quaternary covering sediment is 34 m in thickness at the drilling site.
2) The basement rock is composed mainly of phyllite and siltstone. Siltstone is forming a fine alternation with phyllite. Sillstone is probably originated in tuffeceous sediment. The alternation will be corresponded to a part of the Hajar mineralized horizon.
3) The alternation is disseminated widely with pyrite, and lead and zinc veinlets are found in some places.
4) The mineralization in this area is inferred to be formed in the peripheral zone of the sedimentary massive orebody related to the latest stage of volcanic activity in the Hajar horizon.

(2) Frizem West Area

1) The basement rock of this area is composed mainly of phyllite and siltstone. Siltstone is forming a fine alternation with phyllite and probably originated in tuffeceous sediment.
2) The alternation are mineralized widely. Ore minerals are pyrite, pyrrhotite, chalcopyrite, galena and sphalerite. Gangue minerals are calcite, dolomite siderite and quartz.
3) The type of ore is veinlet, vein, network and dissemination and the parts of ore are transitional to the host rock. The veinlets and veins are usually parallel to the schistosity and foliation structure. Every mineralized parts is small-scale or low-grade.
4) Some mineralized parts are seemed to continue to the gossan on the surface. Although, the continuities are not simple because they have been dislocated by numerous schistosity plane faults and the perpendicular direction faults. They have suffered probably secondary deformation and metamorphism.
5) The mineralization in this area is inferred to be formed in the peripheral zone and the lower part of the massive orebody related to the activity of acidic volcanic rock in the upper part.
6) For the Frizem east mineralized zone, drillings were conducted in 1986, and the occurrence of low grade dissemination and network-type of ones was confirmed (Tab. II-1).

   Both mineralized zone of Frizem east and west show similar type of mineralization.

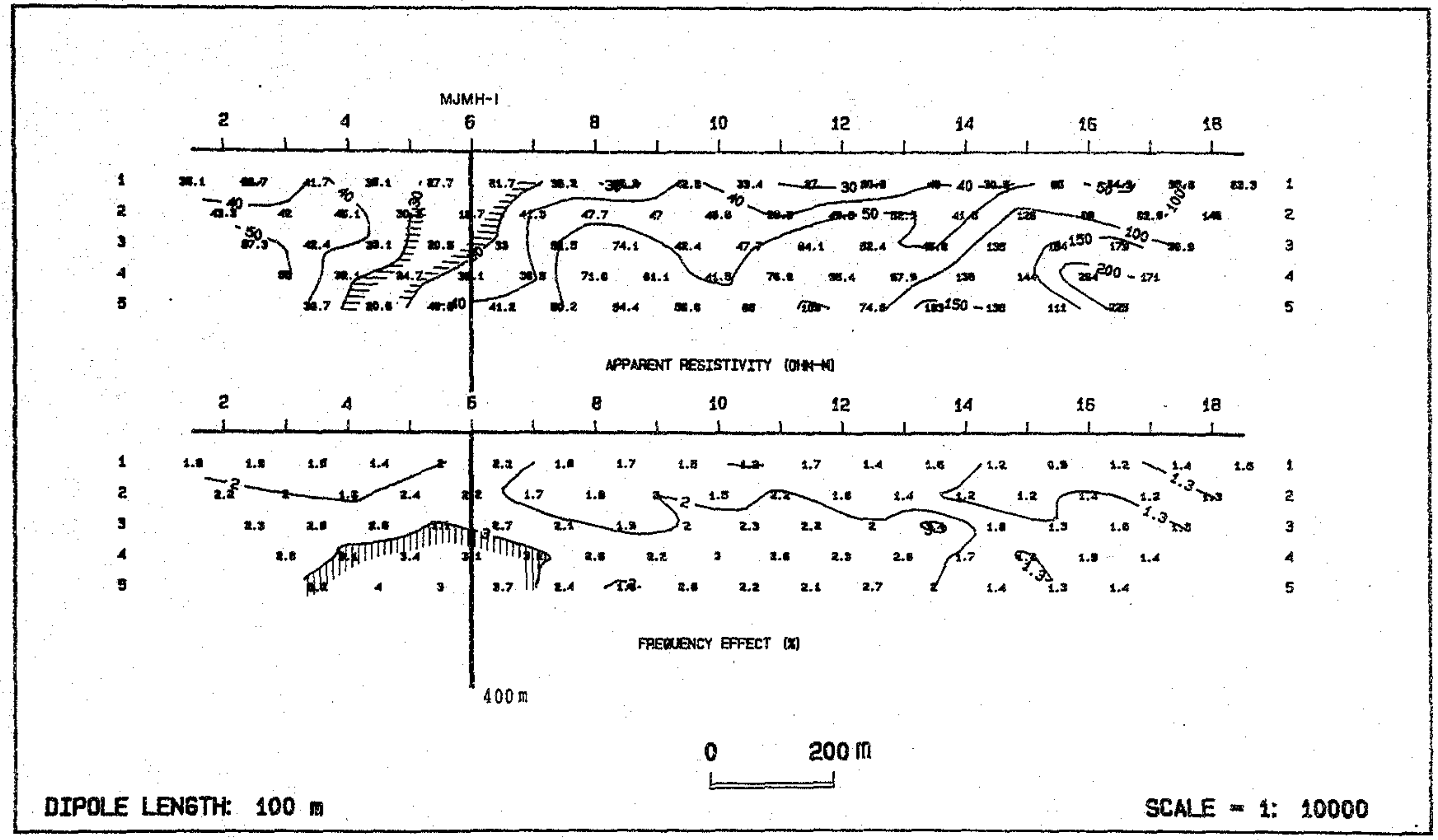

Fig. II-3-1 Relation of Drilling Site and IP Survey Section (I) MJMH-I

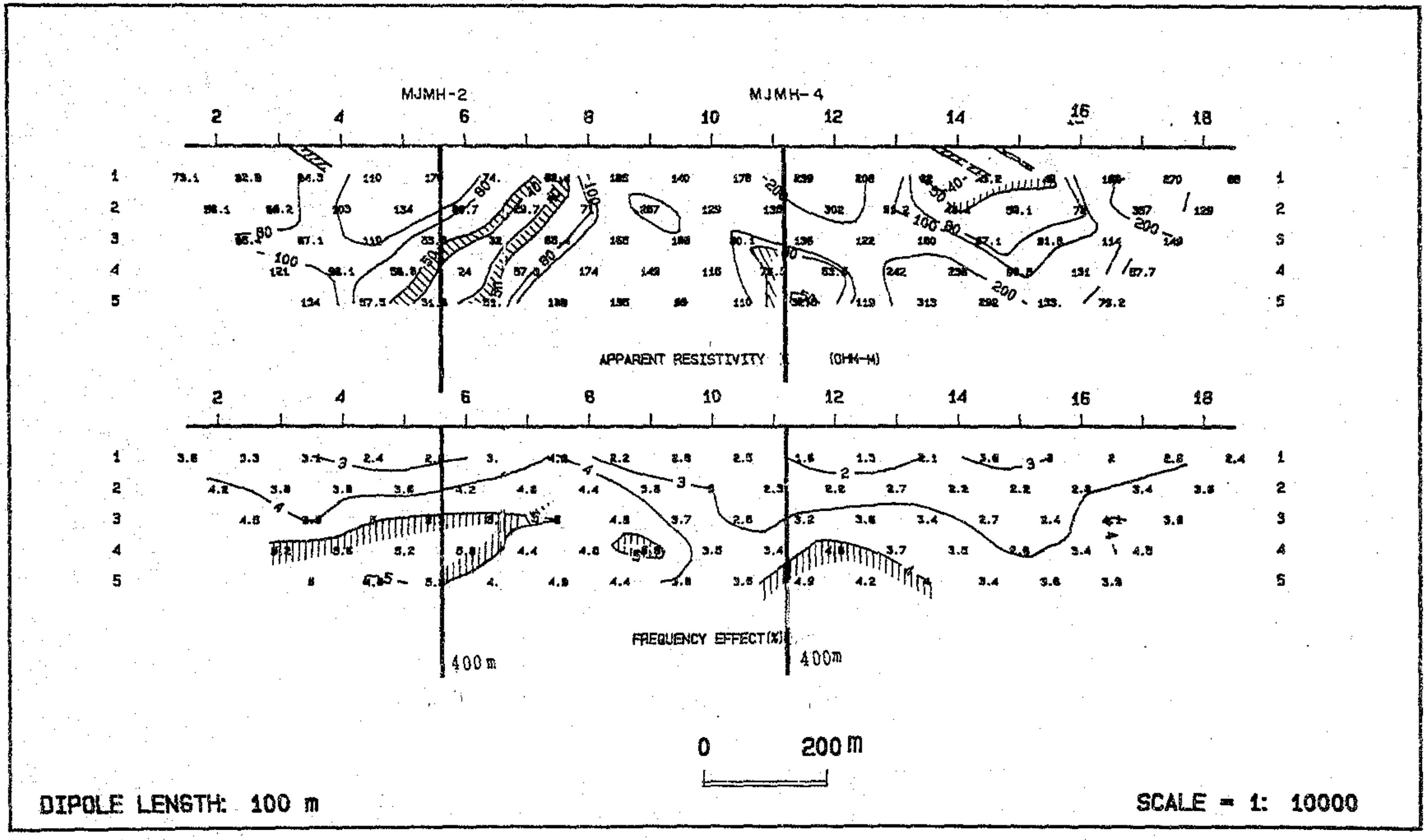

Fig. II-3-2 Relation of Drilling Site and IP Survey Section (2) MJMH-2 and MJMH-4

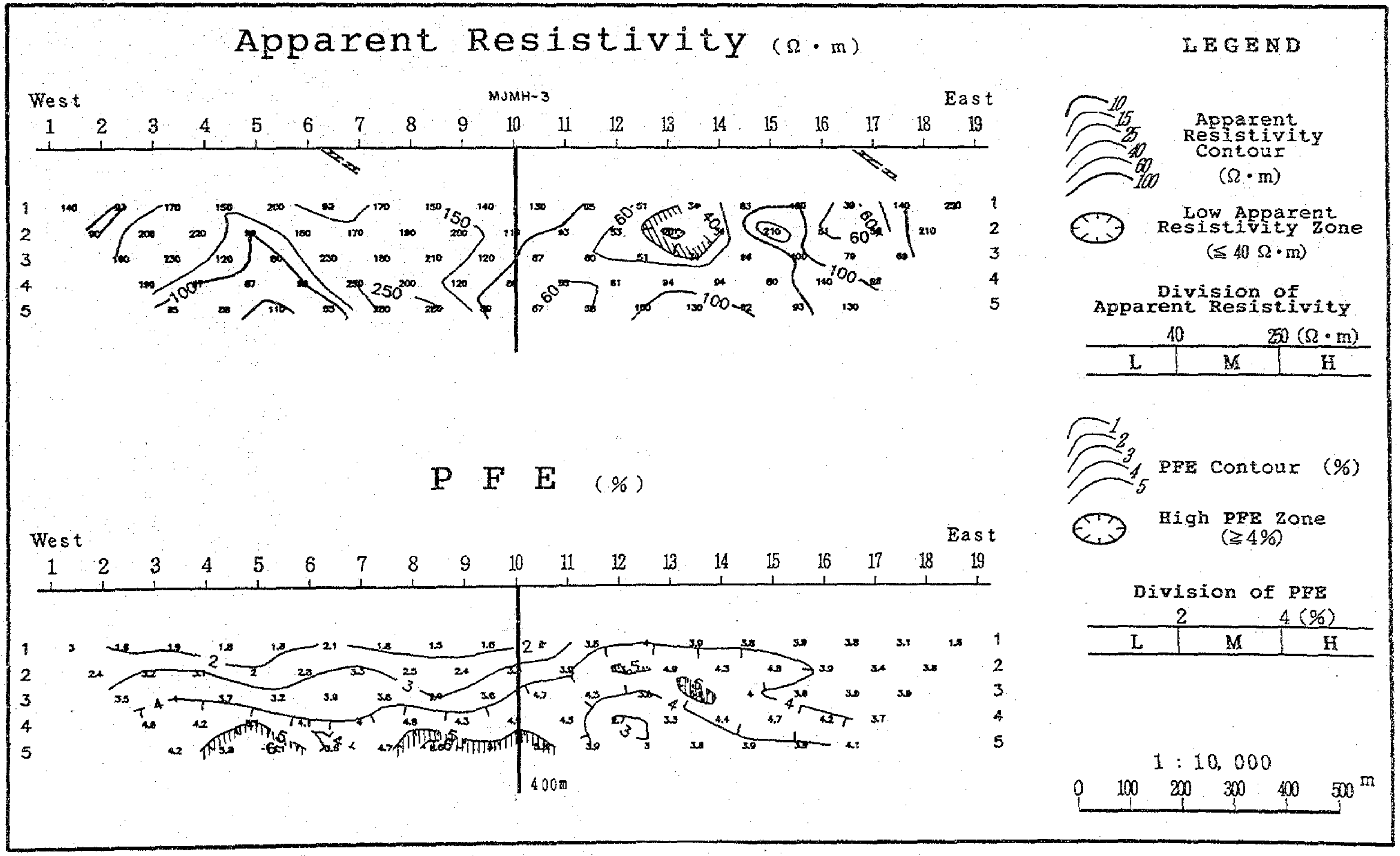

Fig. II-3-3 Relation of Drilling Site and IP Survey Section (3) MJMH-3

	Intv(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)
1	0.2	5	0.11	6.36	0.96
2	0.2	16	0.01	0.01	7.05
3	0.1	3	0.03	6.12	16.00
4	0.1	3	0.02	9.58	9.58

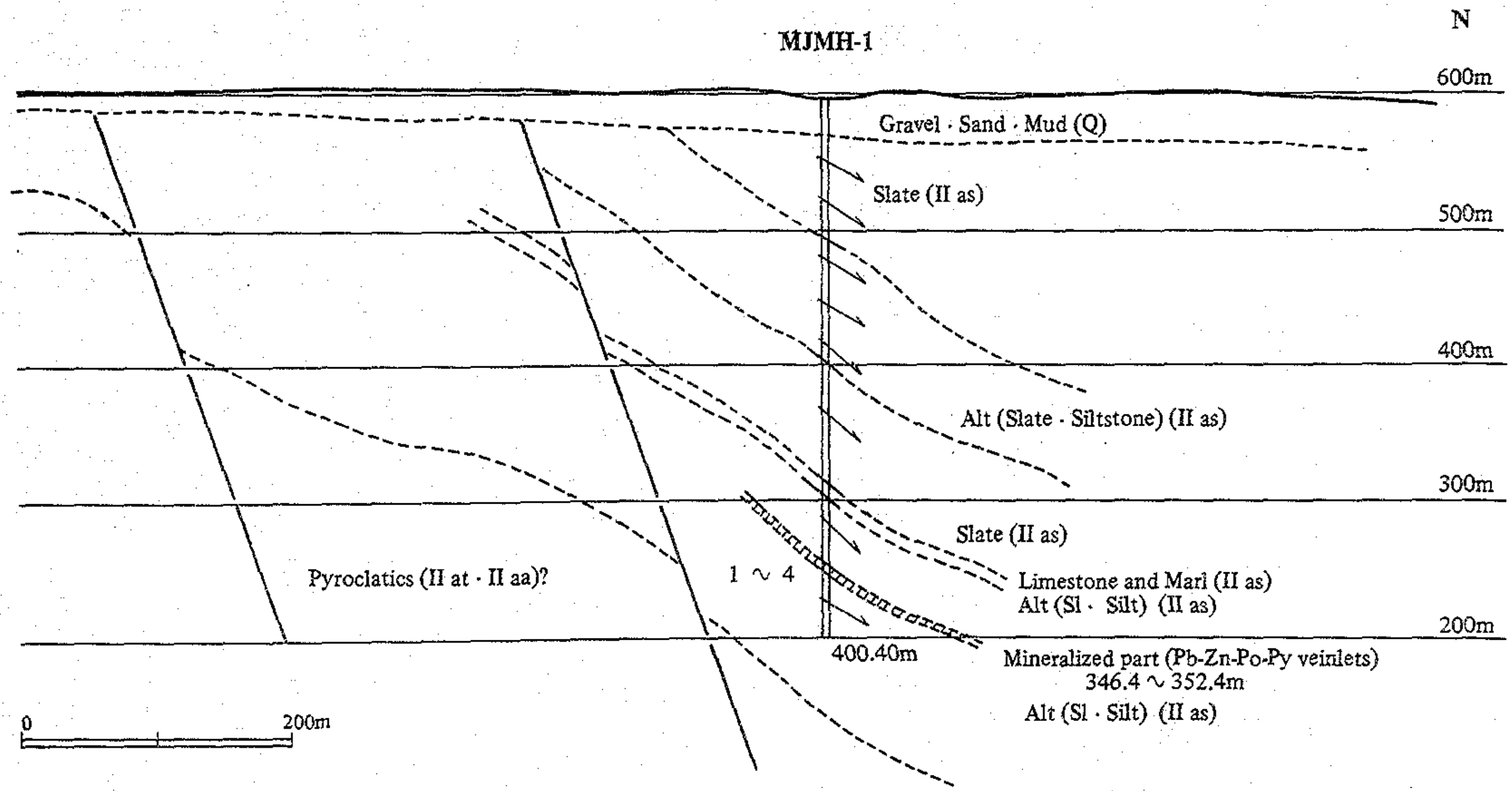

Fig. II-4-1 Geological Section of Drilling Result (1) MJMH-1

	Intv(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)
1	1.3	8	0.01	2.31	1.86
2	1.0	9	1.07	0.02	0.17
3	1.6	4	0.05	0.33	1.59
4	1.0	23	0.02	0.91	1.92

	Intv(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)
6	0.6	5	0.01	1.14	1.34
7	0.2	16	0.19	0.48	2.57
8	0.1	3	0.92	0.04	0.28
9	0.4	11	0.03	0.91	2.64

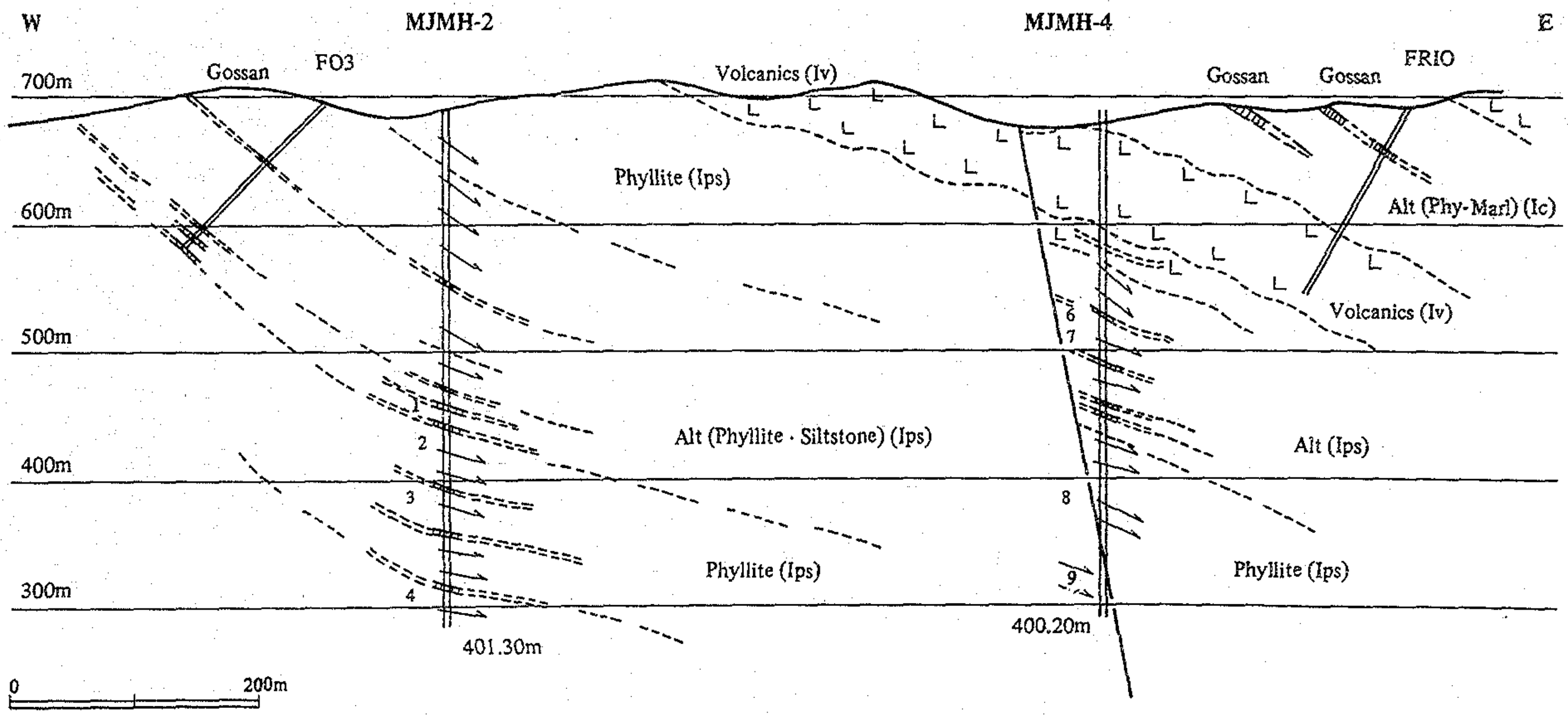

Fig. II-4-2 Geological Section of Drilling Result (2) MJMH-2 MJMH-4

	Intv(m)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)
1	1.0	8	0.61	0.10	0.66
2	1.0	3	0.11	0.79	0.95
3	1.9	3	0.11	0.28	2.06
4	1.3	11	0.09	3.08	2.87
5	1.3	5	0.04	0.76	0.97

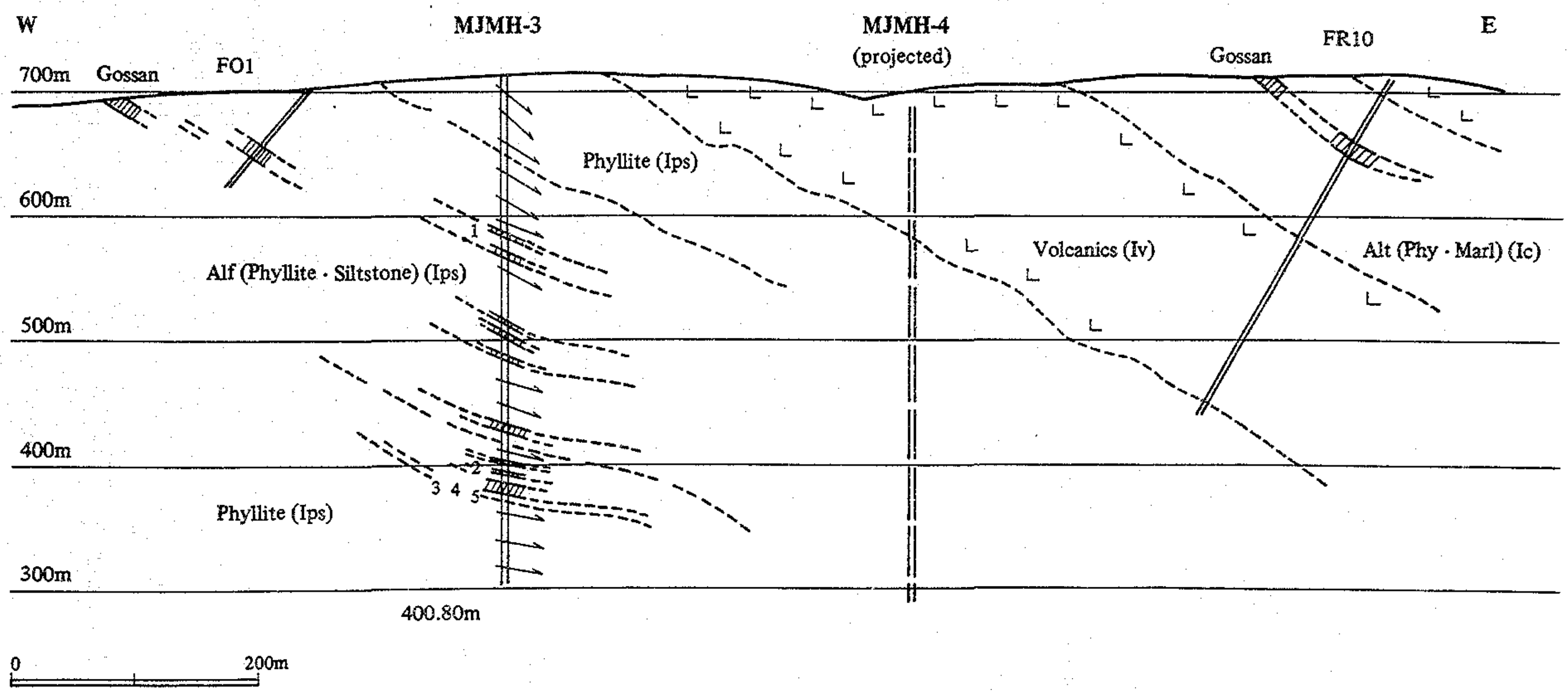

Fig. II-4-3 Geological Section of Drilling Resalt (3) MJMH-3

Tab. II − 1 List of Existing Drillings in the Frizem Area

No.	Date	Area	Direc.	Incl.	Depth (m)	Mineralization	Intv(Depth) (m)	Cu (%)	Pb (%)	Zn (%)	Ag (%)
F01	65/66	Fz-W	270°	-50°	100	Py・Po・Cp diss ・vlt	—				
F02	65/66	Fz-W	270°	-50°	150	Py Diss ・vs	—				
F03	65/66	Fz-W	270°	-50°	160	Py・Cp diss ・vlt	—				
F04	65/66	Fz-W	?	?	115.50	Py Cp vlt	—				
FR1	65/66	Fz-E	270°	-50°	141	Py・Po・Cp diss-vlt	—				
FR2	65/66	Fz-E	275°	-75°	80	Py・Cp diss ・vlt	—				
FR3	65/66	Fz-E	?	?	?	?	—				
FR4	65/66	Fz-E	262°	-44°	171	Po mas	—				
FR5	65/66	Fz-E	90°	-75°	111	Py・Cp diss-vs	—				
FR10	86	Fz-E	270°	-60°	171.55	Py・Cp・Po vlt	9.9 (36.4- 46.3)	0.40	0.06	0.19	5
FR11	86	Fz-E	255°	-60°	276.05	Po・Zn diss	9.0 (42.6- 51.6)	0.30	0.44	2.72	2
FR12	86	Fz-E	270°	-60°	307.90	Py・Zn・Pb・Cp・Po	6.7 (49.7- 56.4) 10.8 (60.0- 70.8)	0.32 0.32	0.73 0.95	1.85 2.88	14 23
FR13	86	Fz-E	—	-90°	267.75	Py・Po・Cp・Zn・Pb	13.4 (38.8- 52.2) 6.5 (174.9-181.4)	0.11 1.01	0.06 0.74	2.67 0.64	16 9
FR14	86	Fz-E	270°	-60°	401.10	Py・Po・Cp・Zn・Pb	4.6 (85.1- 89.7)	0.25	1.23	2.95	26
FR15	86	Fz-W	270°	-60°	200.75	Py・Po・Cp vlt	7.9 (78.9- 83.8)	0.59	0.23	0.30	9
FR16	86	Fz-E	270°	-60°	241.90	Py・Po・Cp vlt	2.1 (149.3-151.4)	0.02	0.01	0.09	4
FR17	86	Fz-E	270°	-60°	267.70	Py・Po・Cp・Zn	15.7 (107.9-123.6) 29.5 (135.7-165.2)	0.07 0.20	1.71 0.84	1.82 1.04	7 8
FR18	86	Fz-E	270°	-60°	368.50	Py・Po・Cp・Pb	2.2 (125.1-127.3)	0.05	0.50	0.83	7

Py = Pyrite
Po = Pyrrhotite
Cp = Chalcopyrite

diss = dissemination
vlt = veinlets
vs = veins
mas = massive