5-1-6 Drilling survey

(1) Outline of the survey

Five diamond core drill holes, MJTA-1, 2, -3, -4 and –5, with the total aggregated length of 1500m, were placed in Zalturbluk Area during the 2nd and 3rd Year's Field Campaign. The specification of each drillhole is shown in below table. The locations of each drillhole and the content of laboratory tests are in Figure 5-24 and Table 1-2 respectively. The detailed descriptions of the drill cores are presented in the drill hole columns, Appendix 1～5. Geology, alteration, mineralization and the chemical analysis results for each hole are summarized graphically in Figure 5-19～5-23.

Table 5-4 Drillholes in Zalturbulak area

Hole No.	Direction	Inclination	Elevation	Hole Length	other
MJTA-1	-	90°	489m	350m	Phase I
MJTA-2	-	90°	479m	350m	Phase I
MJTA-3	90°	70°	487m	250m	Phase II
MJTA-4	135°	70°	489m	250m	Phase II
MJTA-5	-	90°	474m	300m	Phase II

(2) Results

In this section, the characteristics of mineralization in Central Zalturbulak prospect and Southern Zalturbulak prospect are comprehensively interpreted on the basis of the result of the 3rd Year's Drilling Investigation, together with the results of those of the previous two years.

<u>Central Zalturbulak prospect</u>

Two occurrences of mineralization have been located in this, namely, the disseminated Cu mineralization related to the Devonian diorite porphyry in Aktau West and the disseminated Cu-Mo mineralization related to the late Carboniferous granite in West Zalturbulak and Aktau West. The investigation results are illustrated as a composite map in Figure 5-24.. Drilling profiles are shown in Figure 5-25.

1) Mineralization related to the diorite porphyry

(a) Mode of Occurence

This mineralization occurs in an Ordovician volcano-sedimentary rock distributing area in the western part of Aktau and comprises Au and Cu concentrations. The mineralization observed in MJTA-1 and MJTA-4 is mostly considered to have relation to the diorite porphyry. The mineralization is distinguished into three types in accordance with combinations of metallic elements and with associated alteration types, namely, ① Cu-Au, ② Au-(Cu) and ③ Au subtypes in ascending order of the

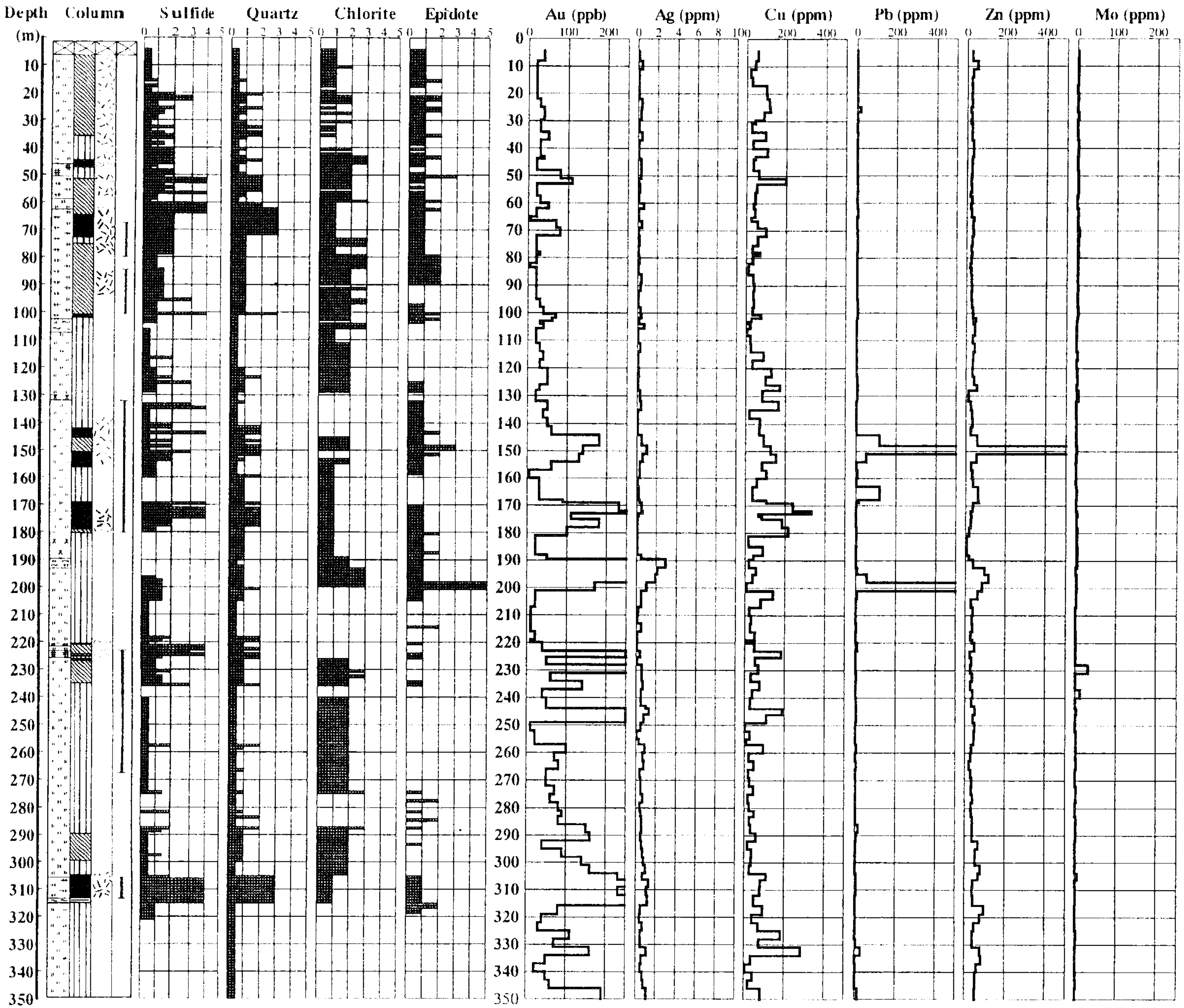


Figure 5-19 Alteration mineral assemblage and assay results of the drill core samples from MJTA-1

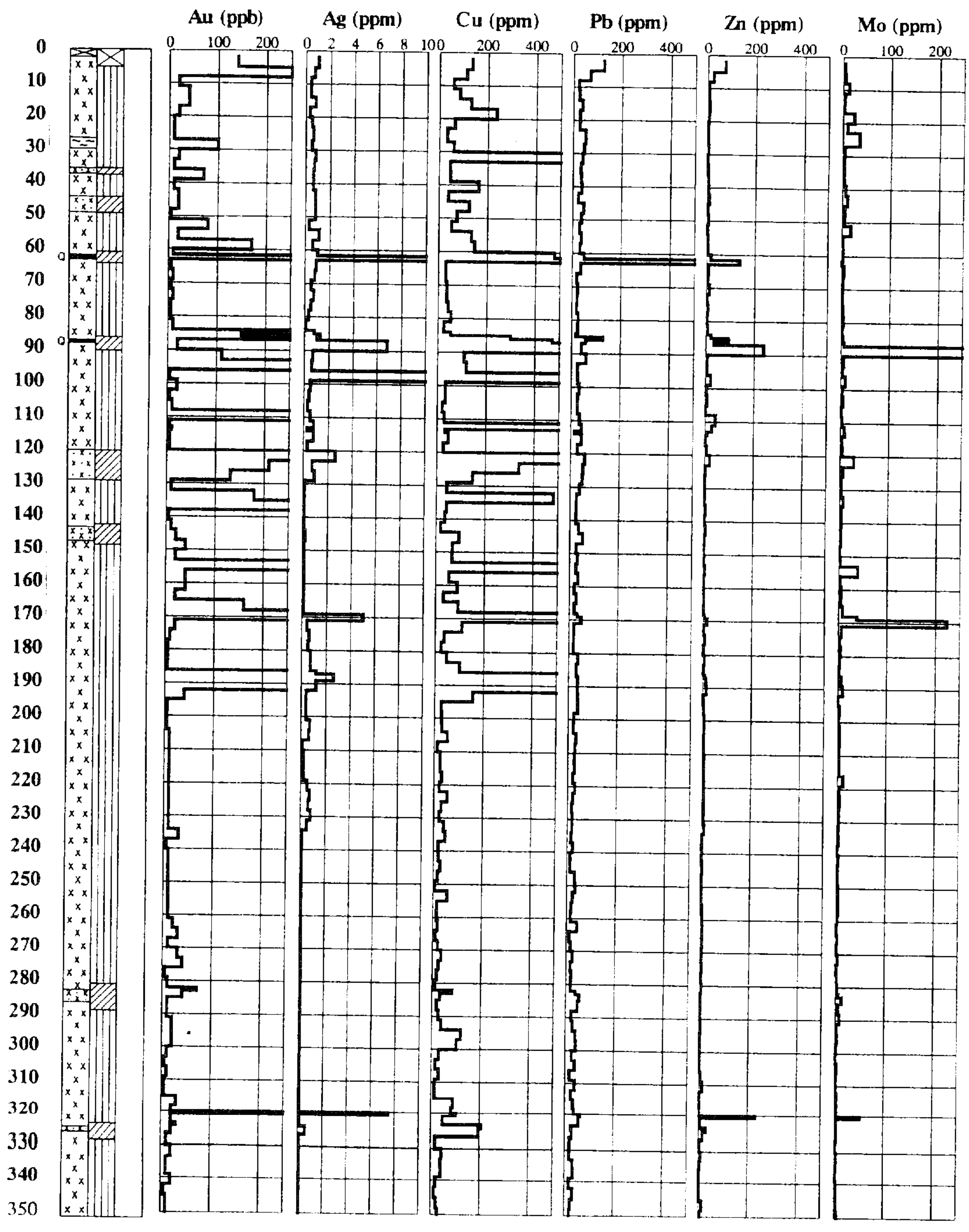


Figure 5-20 Alteration mineral assemblage and assay results of the drill core samples from MJTA-2

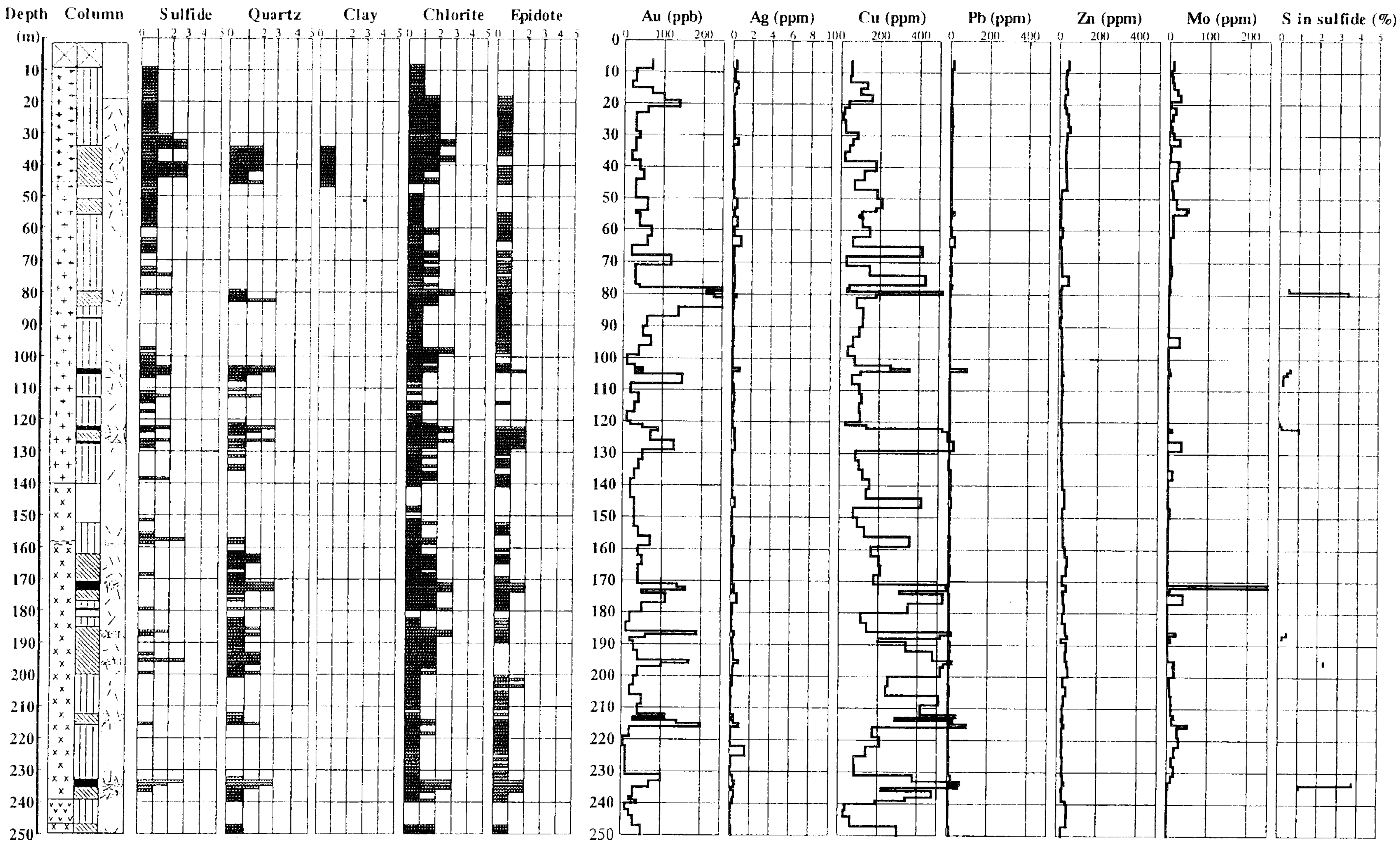


Figure 5-21 Alteration mineral assemblage and assay results of the drill core samples from MJTA-3

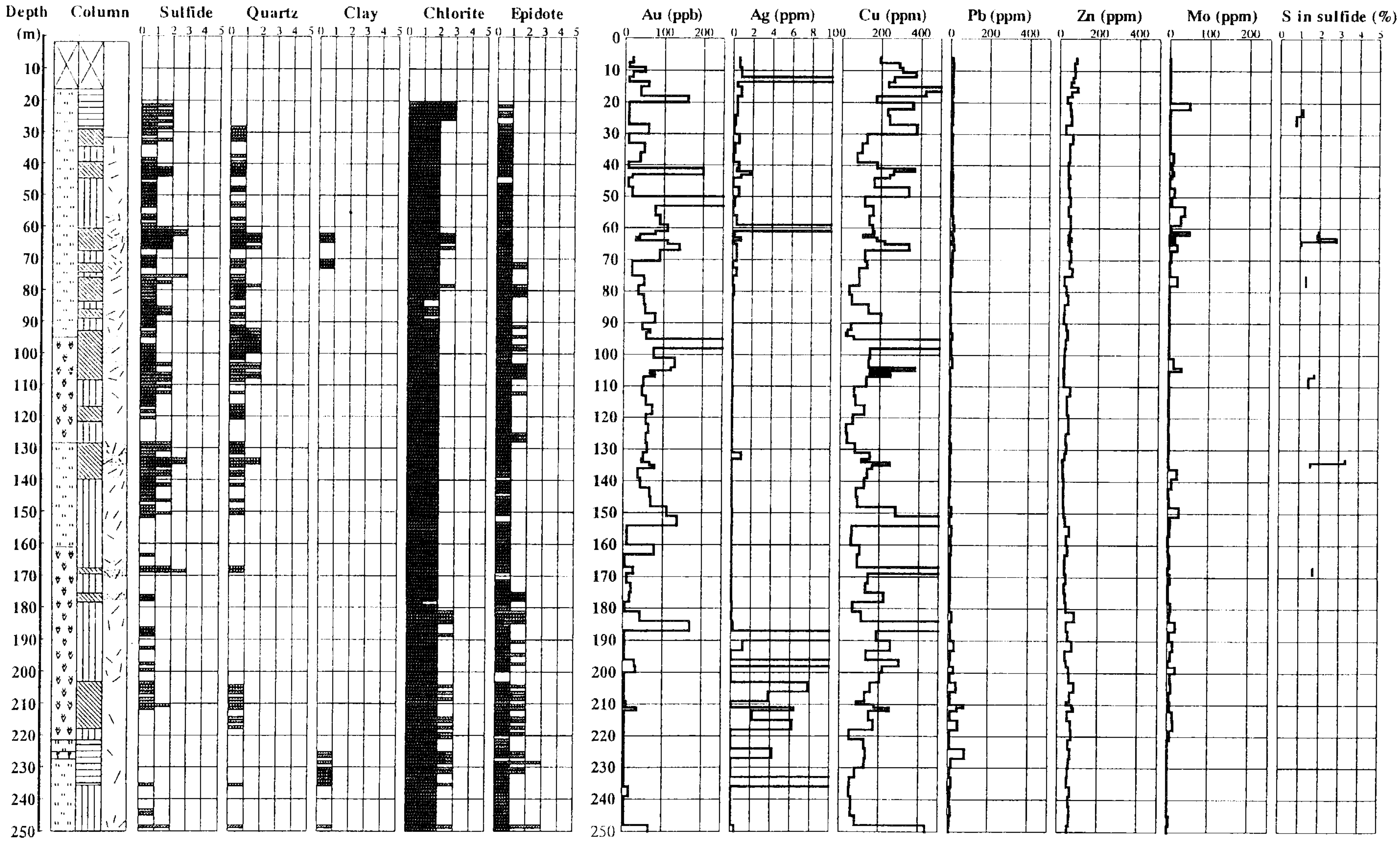


Figure 5-22 Alteration mineral assemblage and assay results of the drill core samples from MJTA-4

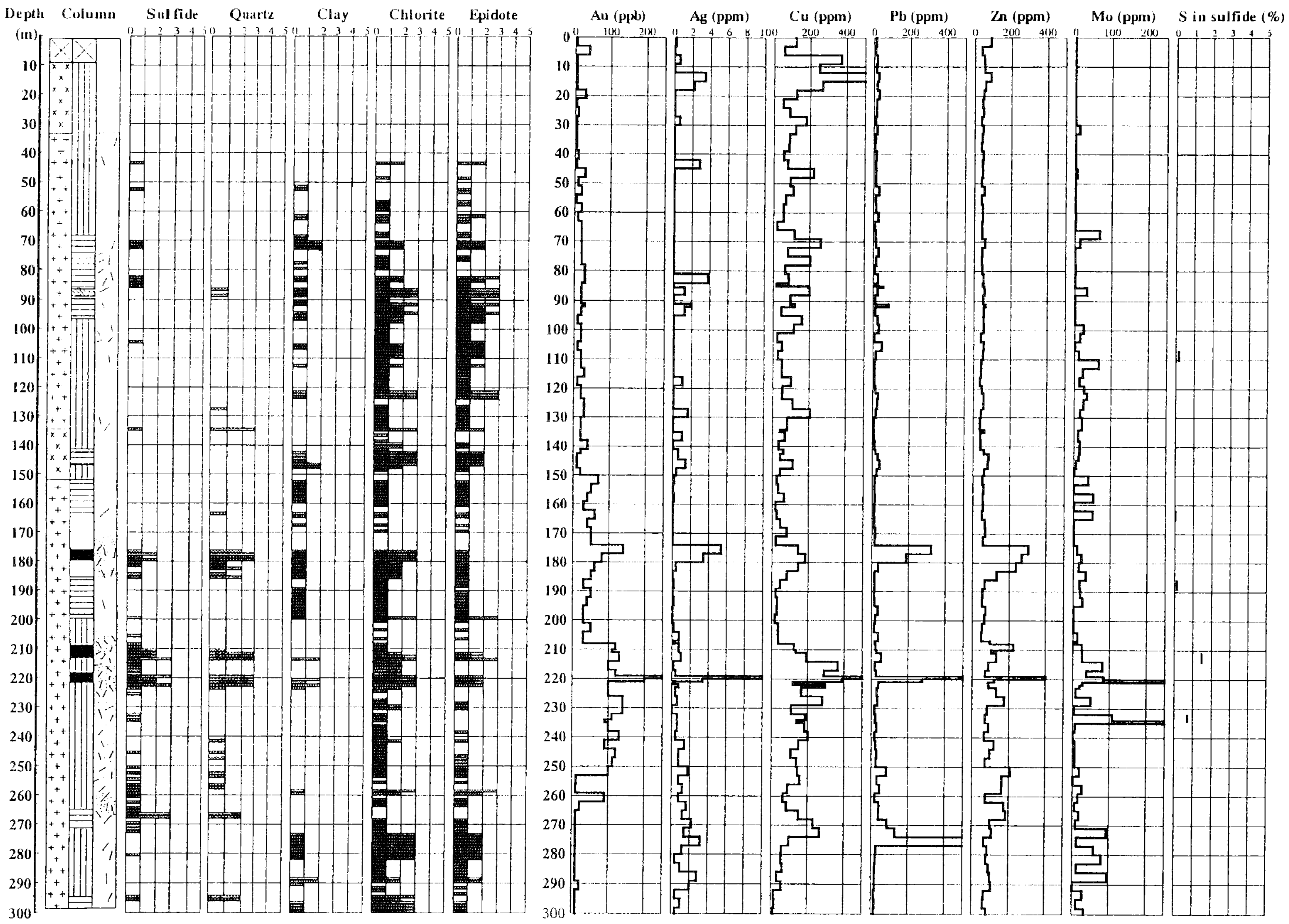


Figure 5-23 Alteration mineral assemblage and assay results of the drill core samples from MJTA-5

LEGEND OF LOG SYMBOLS

Rock facies symbols

- Diorite porphyry
- Diorite
- Granite
- Granodiorite
- Altered granodiorite
- Andesite
- Shear zone
- Fine grained tuff
- Coarse grained tuff, Porphyritic tuff
- Porphyry
- Dacite
- Rhyolite porphyry
- Breccia dyke
- Quartz vein

Alteration symbols

- Propyritic alteration
- Argillic alteration
- Silicification
- Strong silicification
- Sericitization+Chloritization (only MJTA-2)

Mineralization symbols

- Quartz(+ Pyrite)veinlets
  Pyrite veinlets
- Quartz(+ Pyrite)network
  Pyrite network
- Pyrite dissemination ($< 3\%$)
- Pyrite dissemination ($\geqq 3\%$)

- Zone of Tourmalinization

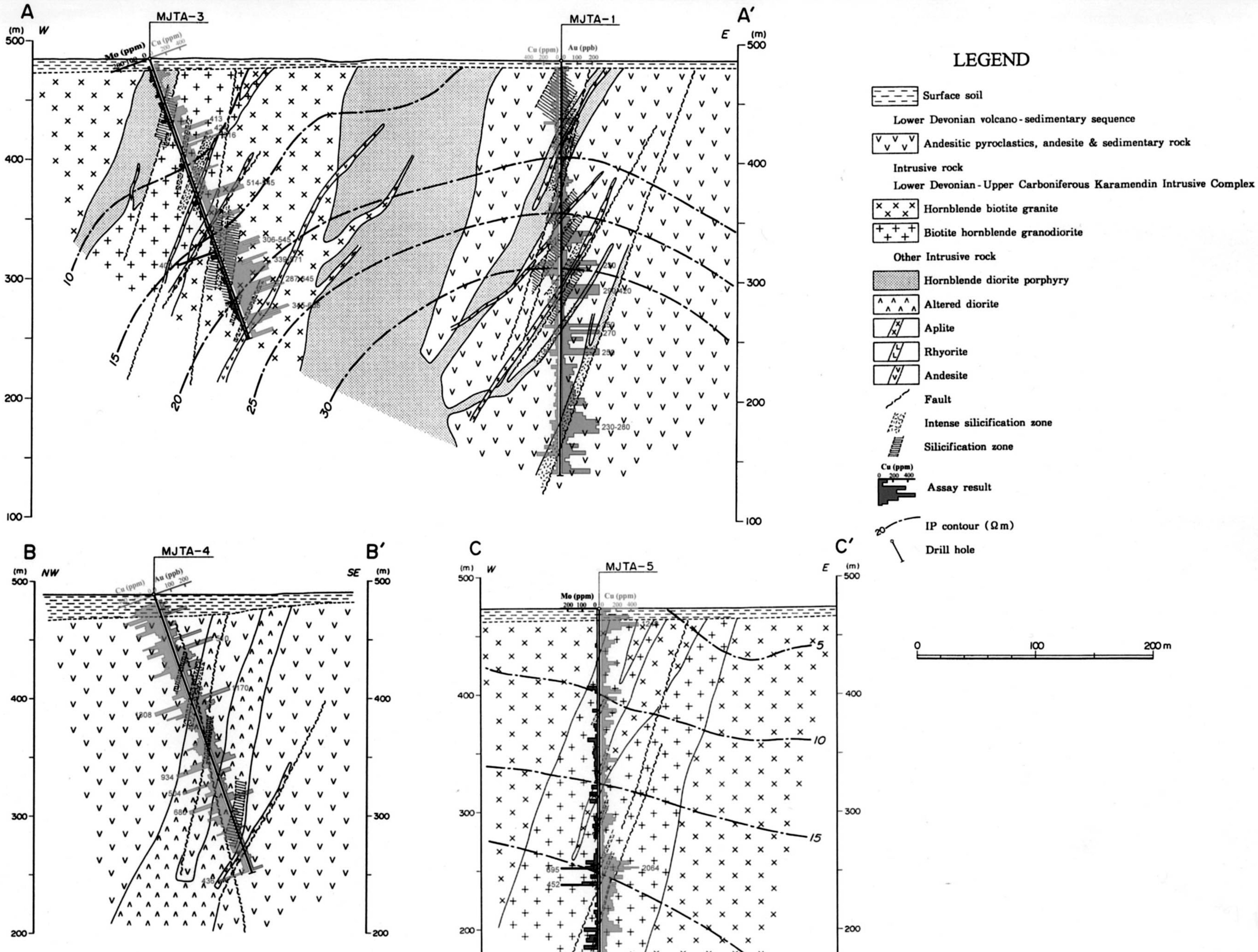


Figure 5-25 Cross Section though drilling sites

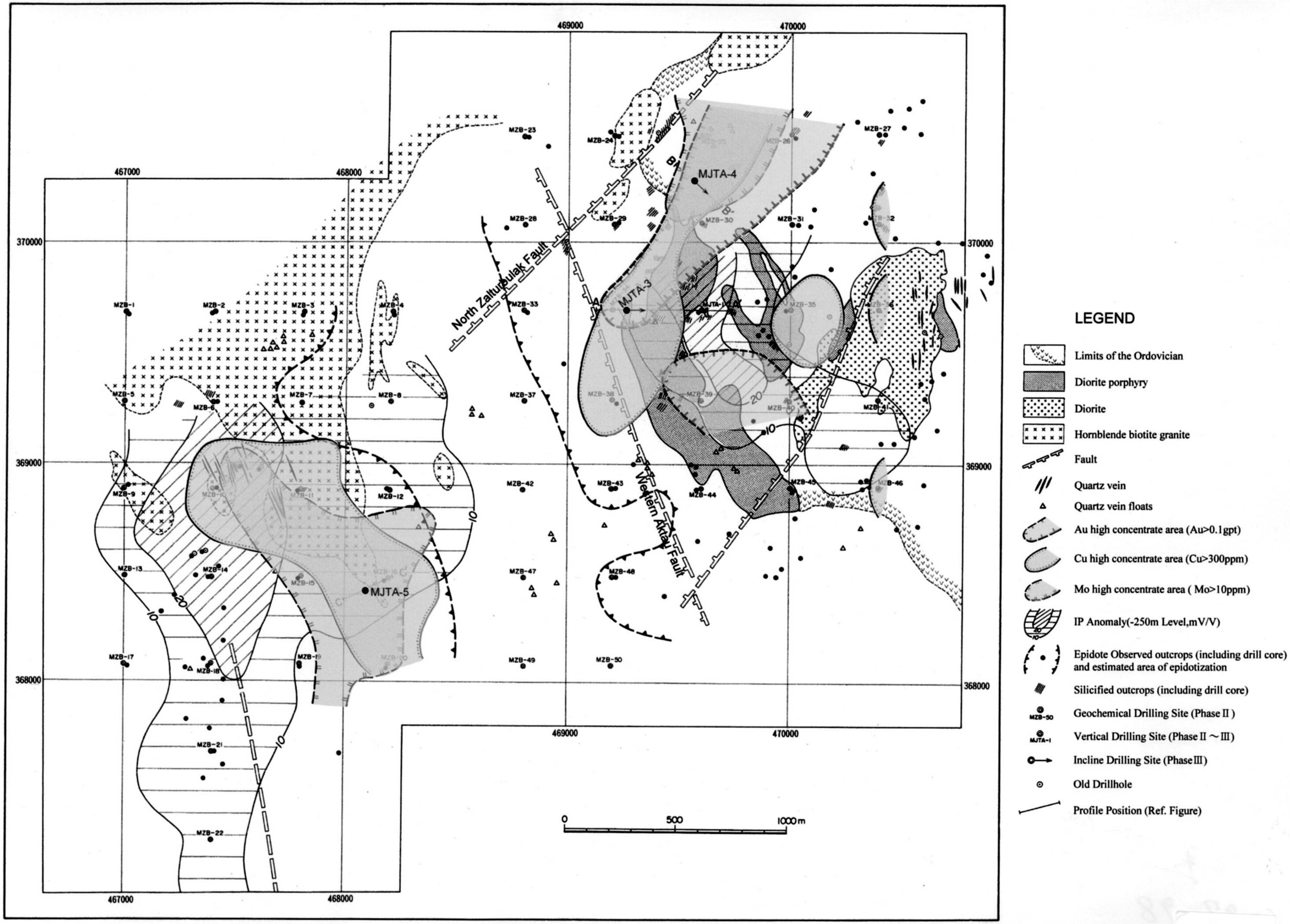


Figure 5-24 Interpretation Map of Geology, Geochemistry, Mineral Occurrence and Geophysical Survey of Central Zalturbulak Prospect

stages of mineralization. The mineralization of ①Cu-Au subtype is representative of three subtype and described below in detail. The ② Au-(Cu) subtype mineralization is observed locally and ③ Au subtypes is thoght to occurr in the late stage. The concentrations of both subtype is weakly anomalous.

On the surface, the mineralization is recognized in a vast plain as a constellation of scattered outcrops of silcified rocks in the center and of surrounding propylitized rocks. The geological prospecting, geochemical rock sampling and shallow pilot and deep exploratory drilling to date have confirmed that the NE-SW trending zone of mineralization is associated with the northern half of an oval diorite porphyry body elongating roughly in the N-S direction(Figure 5-24). The mineralization, in association with quartz-sericite alteration, comprises chalcopyrite occurring as dissemination accompanied by a large amount of pyrite or in quartz-pyrite networks. Intense mineralization often occurs along walls of dikes or within fault zones.

Microscopic observation of polished sections has identified such ore minerals as pyrite, chalcopyrite, pyrrhotite and magnetite accompanying minor electrum, molybdenite, cubanite and gersdorffite. Chalcopyrite occurs as dissemination in association with pyrite veinlets or as inclusions within pyrite grains. A particular type of magnetite, containing silica, is identified under microscope. The direct evidences such as ore mineral association and the product of a particular type of magnetite, containing silica, suggest that the mineralization of this type in Aktau West has been formed a temperature more than 300 °C.

Noteworthy copper values which are obtained for two 3-m sections of MJTA-4 are 1308 and 934 ppm but are by far too low for any economic consideration. Several core samples of 3-m sections indicate Au values in the order of hundreds ppb but are very sporadic in their occurrences.

(b) Selection of promising area

A composite map is prepared by compiling all the data to date and shown in Figure 5-24.. A Cu-Au concentration was outlined by the 2nd Year rock geochemical prospecting, elongating in the NE-SW direction from the central part(near MJTA-1) of the diorite porphyry body northward. The hole, MJTA-4, drilled in the center of the Cu-Au geochemical concentration during this year's field campaign, includes mineralization and alteration which are similar in their features to those associated with porphyry style ore deposits in general. However, the mineralization is no higher in concentration of Cu and Au than a level of geochemical significance. Although only two drill holes have been put down in the geochemical concentration to date, there will be a little possibility to locate the mineralization of this type with any economic significance in size and grade, taking account of its extension confined within Ordovician series which terminates some 400m north of MJTA-4, bounded by North Zalturbulak fault. No improvement in the degree of concentration with depth is expected either, judging from the assay results of drill cores of the two holes.

2) Mineralization Related to Granite

(a) Mode of Occurrence

A branch of hornblende-biotite granite(hereinafter called 'granite') stems out of its main body in the northwestern part of Zalturbulak and extends south southeastward. A geochemical concentration of copper and molybdenum was outlined in association with the branch of granite by the 2nd year's rock geochemical prospecting. Mineralization of copper, molybdenum and gold is intersected by the hole, MJTA-5, drilled in the center of the geochemical concentration. Similar mineralization is also observed inassociation with the granie in the hole, MJTA-3, drilled in West Aktau. It is, therefore, reasonably assumed that the mineralization of this type has been formed in association with stocks of the granite branching from the main granite body.

The mineralized zone is characterized by development of abundant quartz-pyrite networks and/or pyrite-chalcopyrite dissemination, though only floats of quartz veins are observed on the surface. Overprinting these quartz-pyrite networks and pyrite-chalcopyrite, a number of quartz veinlets are occasionally observed in MJTA-5 and are concentrated with Au, Ag, Pb and Zn as well as Cu and Mo. Primary ore minerals are pyrite, chalcopyrite, molybdenite. magnetite, pyrrhotite, galena and electrum in descending order of the amount. Chalcopyrite occurs as dissemination or inclusions within pyrite. Molybdenite is mostly associated with extremely fine quartz veinlets which can be identified only under microscope.

Chloritization and epidotization are ubiquitously developed both in MJTA-3 and-5, and are locally overprinted by quartz-sericite or clay alteration. Three alteration zones are distinguished, focusing on quartz-sericite and clay alteration.

Several 10m-sections between 120 and 240 m of MJTA-3 indicate Cu contents of 500 ppm or higher. In the several fine quartz veins zone of MMAJ-5, 2m-section(an assay run) from 219 to 221 m shows an assay result of 280 ppb Au, 14 ppm Ag, 2064 ppm Cu, 1060 ppm Pb, 403 ppm Zn and 85 ppm Mo.

(b) Selection of promising

It may be reasonable to assume that favourable loci for the Mo-Cu-Au mineralization are peripheral zones of the granite bodies off-shooting from the main body in the northwest. No geochemical concentration of Mo, Cu and Au are located in association with such favourable zones, other than those drill tested by MJTA-3 and-5. In addition, fracture development, which is essential for a porphyry style deposit of economic significance, is generally poor in granitoids of the general area. Therefore, no target for further exploration virtually remains in West Zalturbulak and West Aktau from the geological and geochemical points of view.

One of the two outstanding IP anomalies, located to the west of the Cu-Mo geochemical concentration, remains untested. However, the records of the investigations during the former USSR era provide no supporting information for possible economic mineral concentration associated with the IP anomaly. Therefore, the priority of the IP anomaly is low for a follow-up exploration target.

Southern Zalturbulak Prospect

Five mineralized zones have been selected for the exploration targets in the Southern Zalturbulak Prospect(Figure 5-26 and Figure 5-1) Of these five mineralized zones, the Central Zalturbulak Zone was selected for a drilling target in the 1998 exploration program as the result of the 1997 campaign. In this part, the characteristics of mineralization in the Central Zalturbulak Zone is described below.

(a) Outline of the zone(Figure 5-26)

The Central Zalturbulak zone is located in the southwestern part of the Southern Zalturbulak Prospect and one of the mineralized zones in the Terektinsky Uplift Region that were extensively explored during the era of the former USSR. Two parallel exploration tunnels run in the NNW-SSE direction in the center of this zone, where the surface indications of mineralization are most pronounced.

The locations of the mineral indications are shown in Figure 5-27 and their profiles in Figure 5-28(1) to (4). The mineralization comprises a number of veins that occur in the two major fault zones trending in the NNW-SSE direction or in fractures parallel to these faults. These veins are grouped into three vein systems for their spatial closeness; (i) the Western Main Vein system for the veins within or in the proximity to the western major fault (W-1 a, W-1, W-2, W-3, W-4), (ii) the Central Vein System for those within or in the proximity to the eastern major fault (C-1, C-2, C-3) and (iii) the Intermediate Vein System for the group of veins in between (P-1, P-2, P-3, P-4, P-5). The block diagram showing their occurrence is in Figure 5-29.

(b) Geology

The host rocks for the mineralization are principally hornblende-biotite granite intruded by hornblende diorite, aplite and breccia pipes.

(c) Mineralization

(i)Occurrences

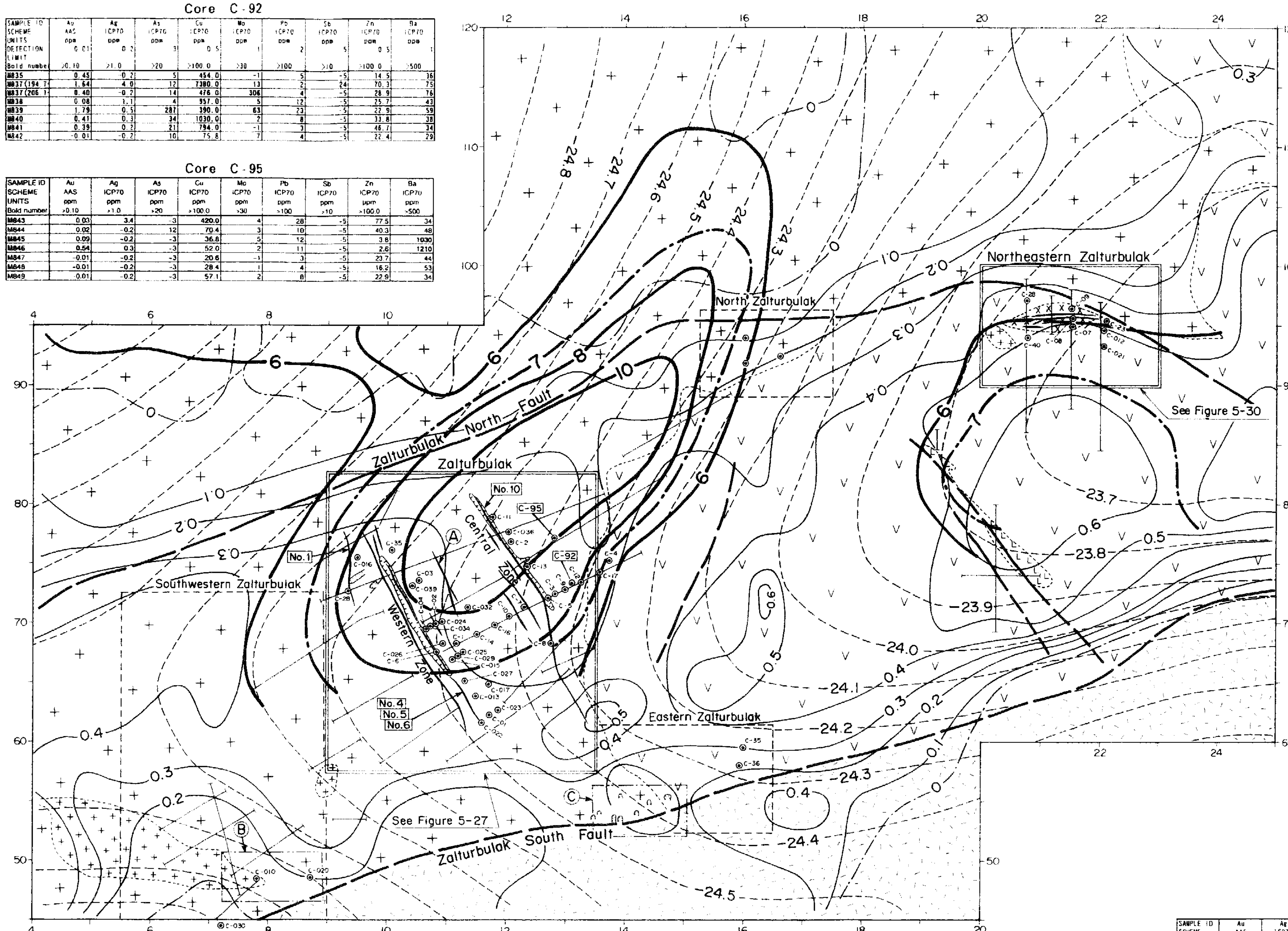
Veins are composed of yellow, yellowish brown or light grey coloured quartz and clays. Sericite is the major clay mineral accompanied by minor chlorite and montmorillonite in places. Silicification is commonly associated with veins. Reddish brown iron oxides occur as networks or dissemination in clay veins or clay alteration zones, particularly where gold is significantly concentrated. In drill cores, this feature is observed in association with zones of dense development of quartz veins and veinlets. Envelopes of sericite and chlorite alteration is developed along

Core C-92

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
M835	0.45	-0.2	5	454.0	-1	5	-5	14.5	36
M837(194.7	1.64	4.0	12	7380.0	13	2	24	70.3	75
M837(206.1	0.40	-0.2	14	476.0	306	4	-5	28.9	76
M838	0.08	1.1	4	957.0	5	12	-5	25.7	43
M839	1.79	0.5	287	390.0	63	23	-5	22.9	59
M840	0.41	0.3	34	1030.0	2	8	-5	33.8	38
M841	0.39	0.2	21	794.0	-1	3	-5	46.7	34
M842	-0.01	-0.2	10	75.8	7	4	-5	22.4	29

Core C-95

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
M843	0.03	3.4	-3	420.0	4	28	-5	77.5	34
M844	0.02	-0.2	12	70.4	3	10	-5	40.3	48
M845	0.09	-0.2	-3	36.8	5	12	-5	3.8	1030
M846	0.54	0.3	-3	52.0	2	11	-5	2.6	1210
M847	-0.01	-0.2	-3	20.6	-1	3	-5	23.7	44
M848	-0.01	-0.2	-3	28.4	1	4	-5	16.2	53
M849	-0.01	-0.2	-3	57.1	2	8	-5	22.9	34



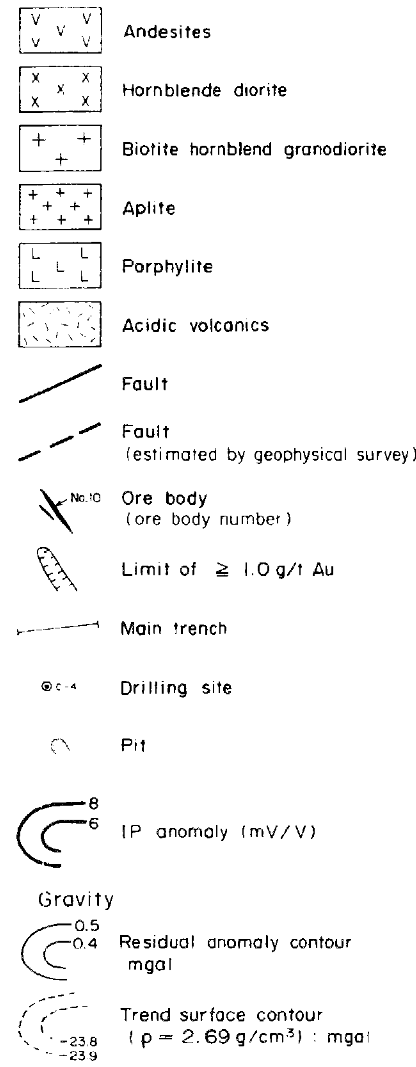
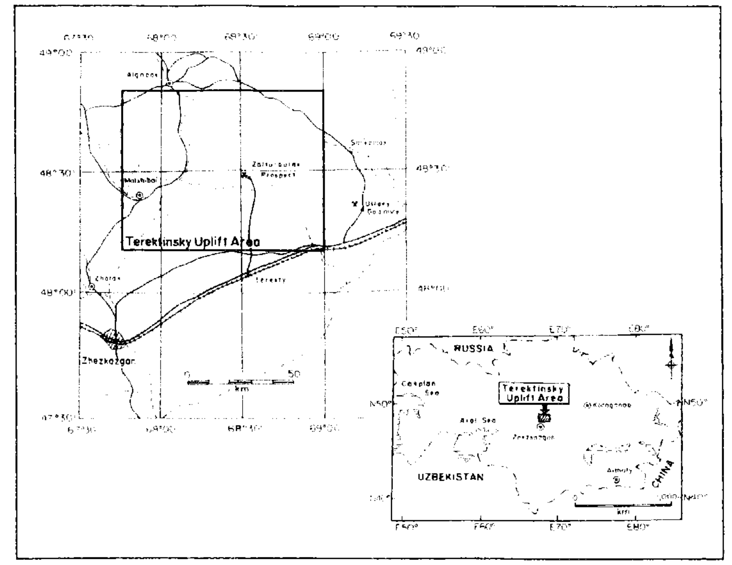


Plate IV-3-1-1

REPORT ON THE MINERAL EXPLORATION
IN
THE TEREKTINSKY UPLIFT AREA,
REPUBLIC OF KAZAKHSTAN
(PHASE I)

Interpretation Map of Geology, Mineral Occurrence and Geophysical Survey Result of Zalturbulak prospect



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

FEBRUARY 1998

No.1 Vein

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
M159	0.71	1.0	149	272.0	80	52	28	15.7	15
M160	0.19	-0.2	388	366.0	6	181	6	130.0	242
M161	0.07	-0.2	109	319.0	5	97	-5	88.9	152
M163	0.19	-0.2	-3	82.2	-1	5	-5	36.6	106
M164	0.31	-0.2	9	103.0	3	6	-5	43.8	39
M165	0.02	-0.2	16	88.3	29	8	-5	8.8	59
M166	-0.01	-0.2	24	159.0	15	6	5	31.3	38
M167	0.82	-0.2	29	167.0	31	36	-5	27.8	48
M168	0.02	-0.2	16	184.0	13	7	-5	66.4	61
M169	0.14	-0.2	38	291.0	62	10	-5	65.2	78
M170	0.70	-0.2	16	248.0	7	6	-5	75.4	45
M171	-0.01	-0.2	38	253.0	41	12	-5	37.9	132
M172	0.33	-0.2	10	281.0	5	7	-5	79.5	94
M173	1.46	-0.2	57	246.0	17	111	-5	36.1	77
M174	0.04	-0.2	23	328.0	7	17	-5	88.5	115
M175	0.49	-0.2	37	199.0	21	33	-5	21.2	86
M176	0.13	-0.2	25	133.0	5	17	-5	34.1	74
M177	0.97	-0.2	13	187.0	4	12	-5	60.7	47
M178	0.13	-0.2	9	180.0	10	12	-5	51.4	40
M179	0.10	-0.2	12	195.0	7	9	-5	66.3	44
M180	0.05	-0.2	-3	159.0	4	5	-5	56.5	32
M181	-0.01	-0.2	18	162.0	38	5	-5	32.7	48
M182	-0.01	-0.2	4	82.9	1	4	-5	42.2	75
M183	0.23	-0.2	13	70.2	2	4	-5	36.9	119
M184	0.39	-0.2	-3	128.0	6	4	-5	24.9	171
M185	0.04	-0.2	13	111.0	8	5	-5	54.0	65
M186	0.05	-0.2	58	157.0	31	21	-5	16.1	327
M187	0.01	-0.2	9	72.0	1	7	-5	31.1	105
M188	-0.01	-0.2	7	45.5	2	9	-5	25.5	80
M203	1.46	-0.2	42	155.0	16	32	-5	16.5	55
M204	0.08	-0.2	36	215.0	22	40	-5	22.7	81
M205	0.01	-0.2	21	58.5	3	4	-5	32.6	76
M206	0.06	-0.2	9	80.4	1	3	-5	36.6	64
M207	0.10	-0.2	10	86.3	-1	5	-5	24.2	63

No.4, 5, 6 Vein (Western Zone)

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
N1083	0.17	-0.2	46	318.0	2	21	-5	93.5	132
N1086	0.17	-0.2	700	768.0	40	1600	36	401.0	105
N1087	0.12	-0.2	192	442.0	15	842	7	171.0	78
N1088	20.80	0.4	903	1120.0	93	260	189	179.0	76
N1089	0.13	0.4	48	146.0	9	5	6	121.0	47
N1090	0.04	-0.2	75	194.0	7	23	16	222.0	53
N1091	0.40	0.2	265	685.0	717	863	42	147.0	39
N1094	0.82	3.3	36	57.2	25	25	7	12.4	13
N1095	0.79	1.4	344	391.0	26	61	36	77.4	45
N1096	0.04	-0.2	14	106.0	10	31	5	29.5	29
N1097	0.95	0.3	479	3220.0	713	17	60	127.0	104
N1098	0.54	-0.2	31	438.0	9	14	7	146.0	41
N1099	0.20	0.6	325	394.0	11	61	39	171.0	90

No.10 Vein (Central Zone)

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
M149	0.17	-0.2	14	351.0	3	2	-5	30.6	99
M150	0.85	-0.2	3	446.0	1	5	-5	14.8	127
M151	0.59	-0.2	25	641.0	8	14	-5	42.4	67
M152	0.03	-0.2	12	98.1	1	7	-5	16.3	81
M154	0.20	-0.2	8	57.7	1	5	-5	15.7	41

Ⓐ

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
M189	0.38	-0.2	16	200.0	4	3	-5	52.3	69
M190	-0.01	-0.2	17	159.0	18	15	5	36.6	44
M191	0.13	-0.2	17	193.0	5	10	-5	76.0	41
M192	0.05	-0.2	22	167.0	18	70	-5	41.4	77
M193	0.07	0.2	9	147.0	2	4	-5	57.0	30
M500	0.06	-0.2	-3	177.0	3	3	-5	71.0	38

Ⓑ

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
G1202	0.05	-0.2	3	520.0	12	9	5	24.7	72
G1203	0.02	-0.2	6	311.0	5	6	-5	30.2	72
G1204	0.23	-0.2	13	306.0	12	9	16	32.3	37
G1205	-0.01	-0.2	12	52.8	2	6	-5	21.4	71
G1206	0.01	-0.2	11	61.5	2	8	-5	24.3	51
G1207	0.21	-0.2	52	156.0	82	9	-5	16.6	158
G1207A	0.68	0.9	144	196.0	127	10	5	4.8	173

Ⓒ

SAMPLE ID	Au	Ag	As	Cu	Mo	Pb	Sb	Zn	Ba
SCHEME	AAS	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION LIMIT	0.01	0.2	3	0.5	1	2	5	0.5	1
Bold number	>0.10	>1.0	>20	>100.0	>30	>100	>10	>100.0	>500
M102	0.04	-0.2	14	22.7	4	6	-5	1.0	84
M104	-0.01	-0.2	5	14.3	4	3	-5	3.0	37
M107	0.13	-0.2	8	16.2	1	3	-5	8.4	48
M108	0.03	-0.2	13	7.6	1	3	-5	4.0	77
M110	-0.01	-0.2	12	9.1	1	-2	-5	5.3	54
M111	0.02	-0.2	16	15.9	-1	2	-5	10.6	61
M112	0.02	-0.2	14	11.5	1	-2	-5	5.6	94
M113	0.15	-0.2	8	10.1	1	3	-5	4.2	134
M114	0.01	-0.2	10	19.5	2	5	-5	7.8	48
M115	0.02	-0.2	14	14.4	1	4	-5	4.7	220
M116	0.02	0.3	14	13.4	-1	3	-5	3.2	54
M117	0.03	-0.2	11	19.0	3	4	-5	4.3	70
M118	0.03	-0.2	12	16.1	3	6	5	4.6	154
M119	-0.01	0.3	4	6.7	2	13	-5	4.9	74
M120	-0.01	-0.2	13	7.1	2	22	-5	4.8	93
M121	-0.01	0.2	5	4.9	-1	8	-5	4.7	60
M122	0.01	0.2	-3	8.1	7	4	-5	4.8	44
M123	-0.01	-0.2	7	4.9	-1	7	-5	5.0	57

Figure 5-26 Interpretation Map of Geology, Geochemistry, Mineral Occurrence and Geophysical Survey of Southern Zalturbulak Prospect

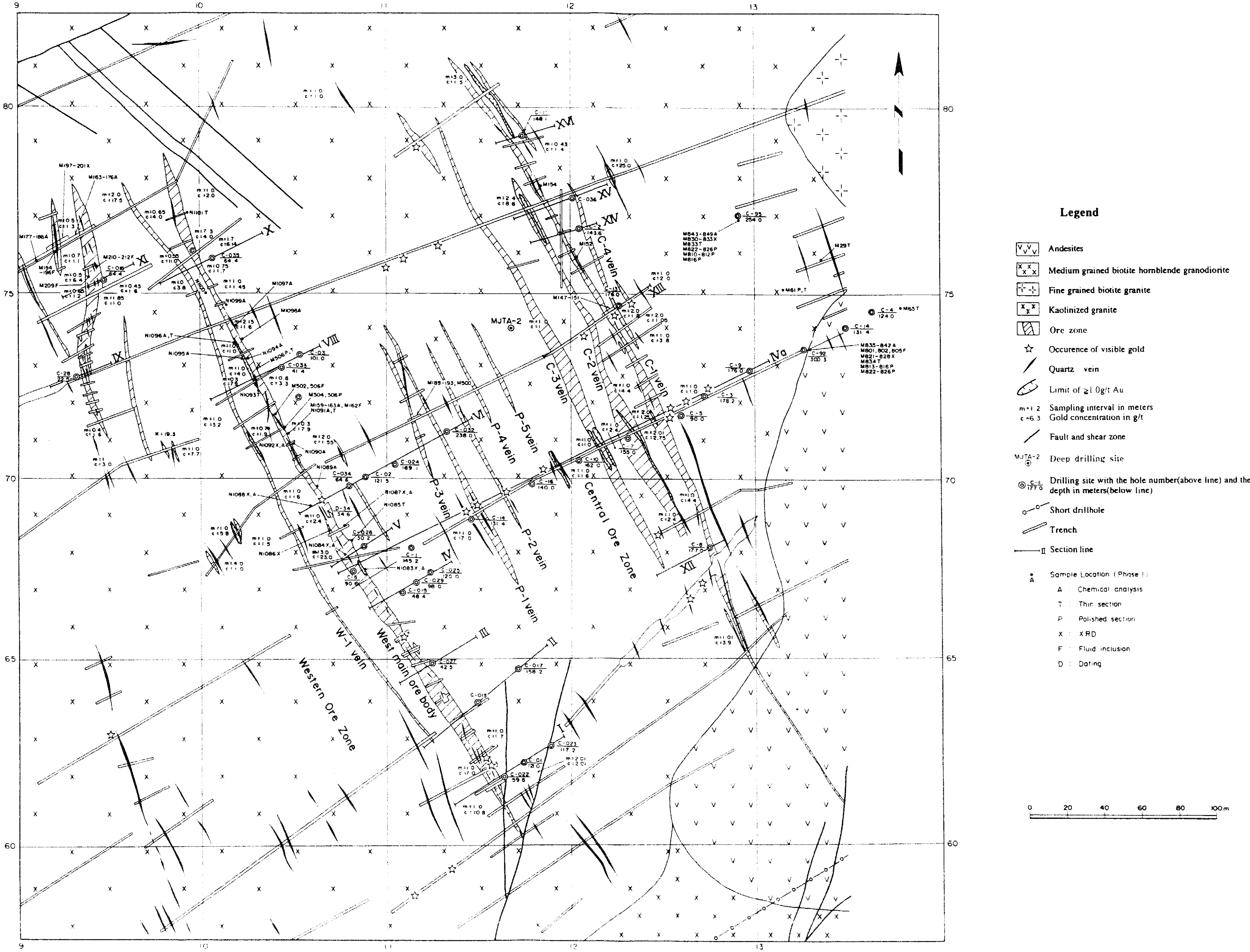


Figure 5 27 Mineral Occurrence of Central Zalturbulak zone

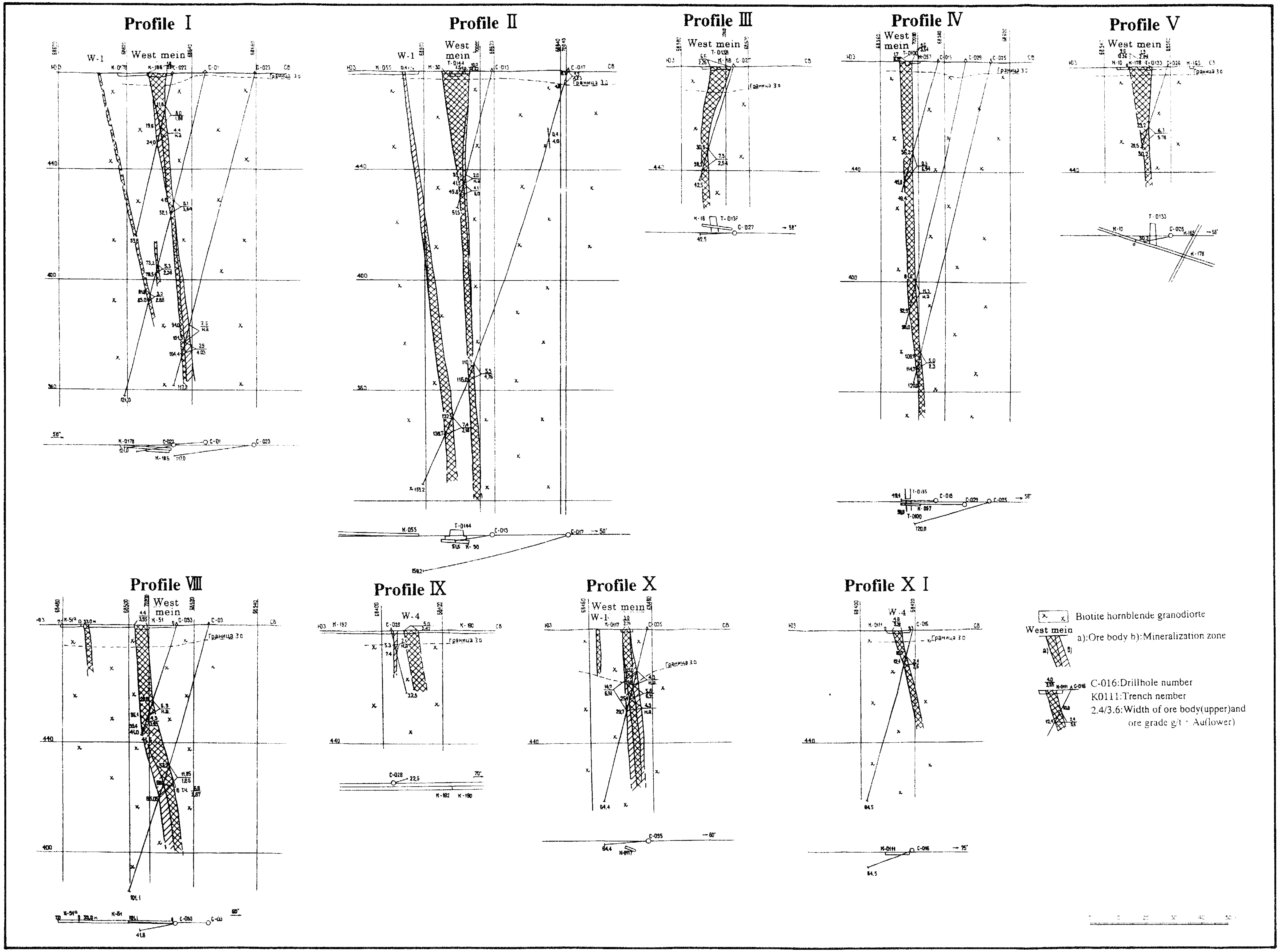


Figure 5-28 Cross Section through Central Zaiturbulak zone (1/4)

Profile Ⅳ a

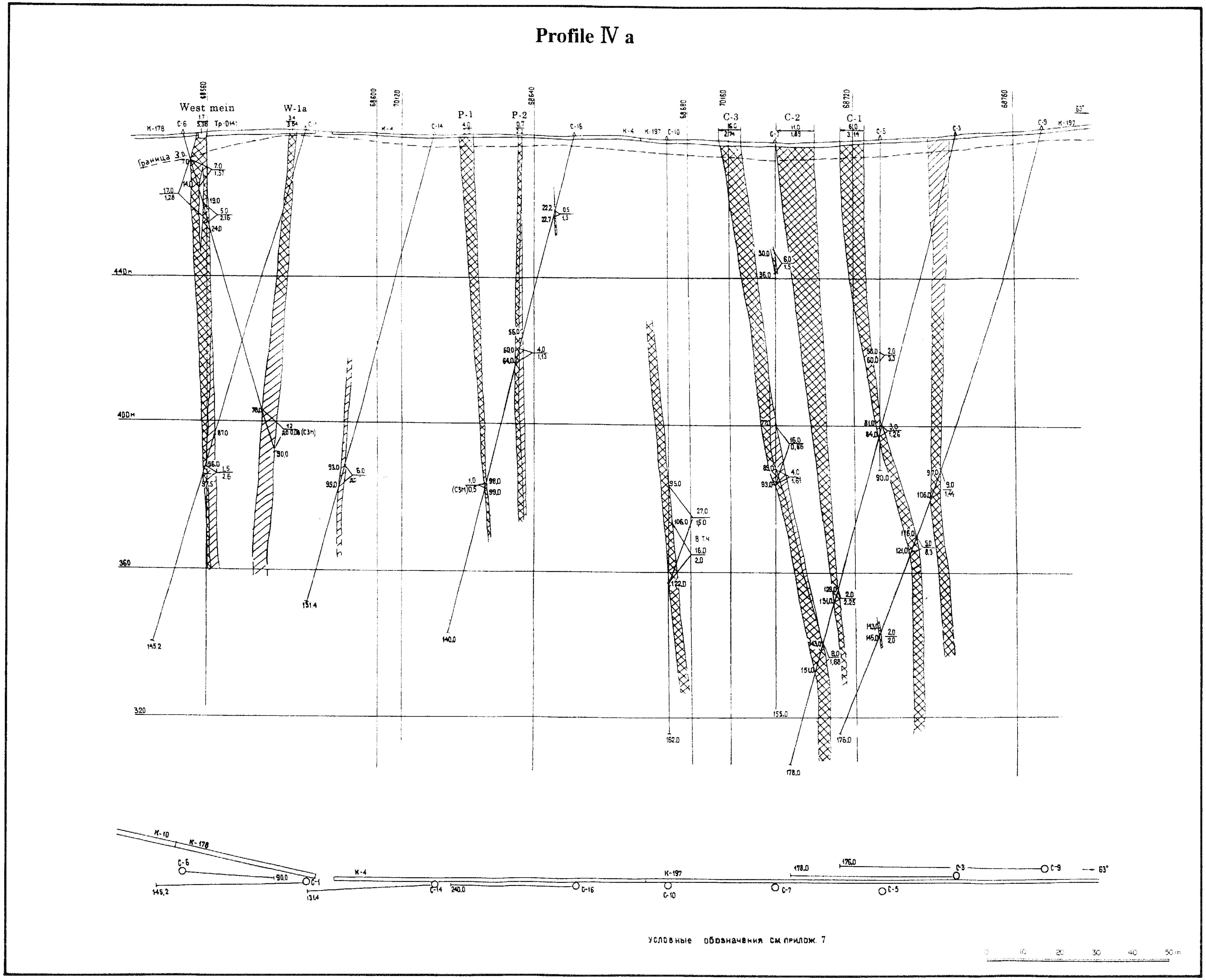


Figure 5-28 Cross Section through Central Zalturbulak zone (2/4)

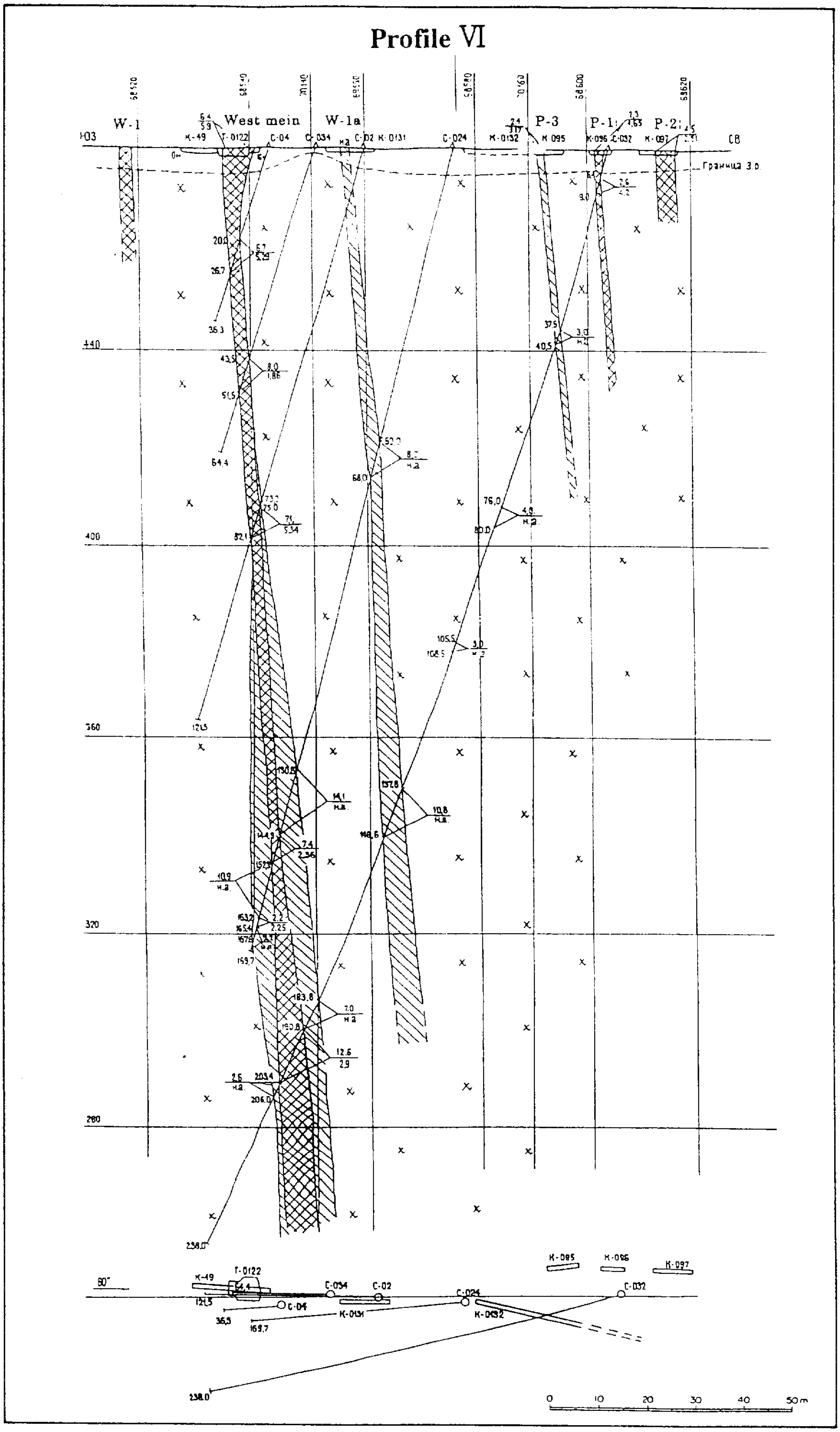


Figure 5-28 Cross Section through Central Zalturbulak zone (3/4)

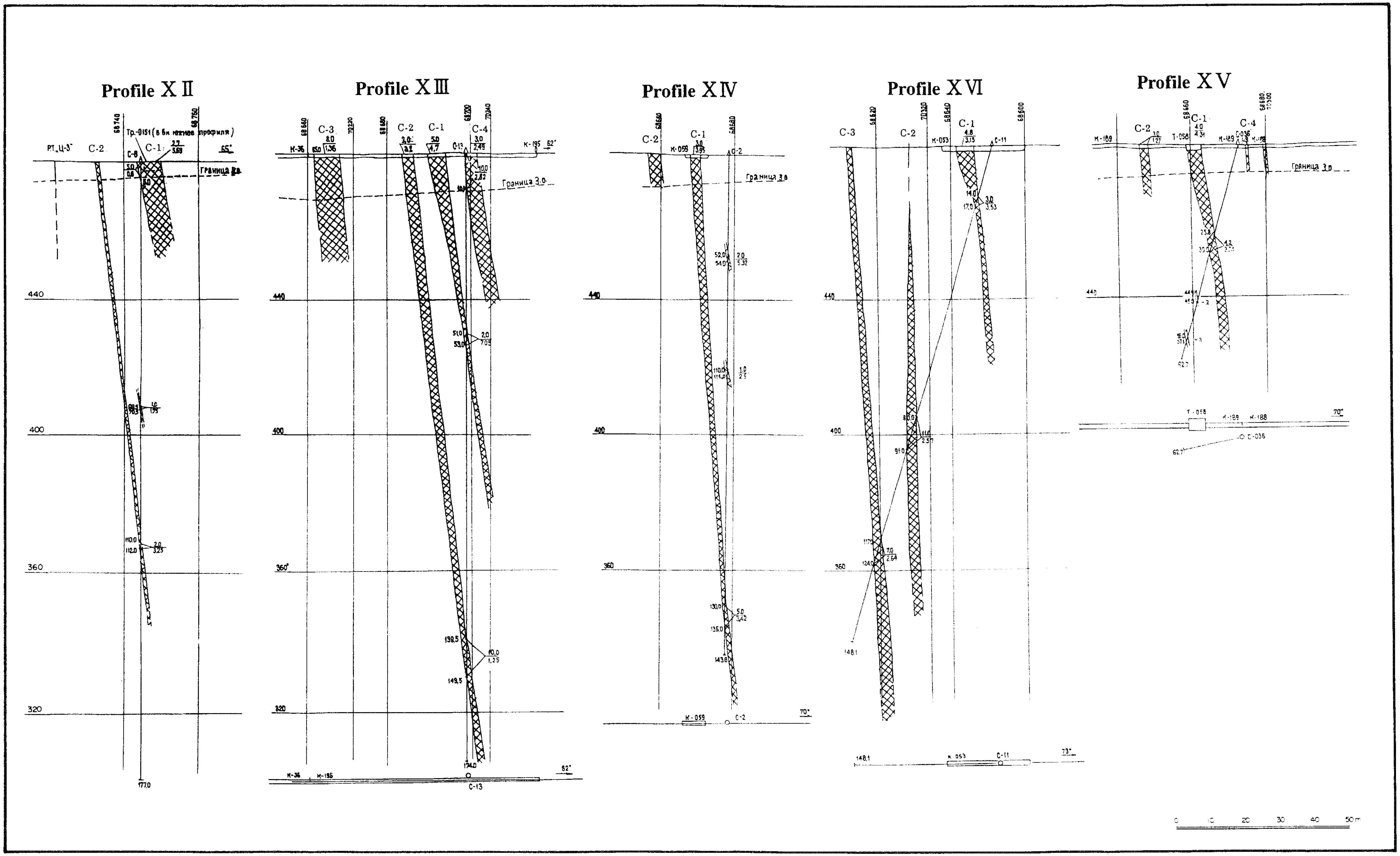


Figure 5-28 Cross Section through Central Zalturbulak zone (4/4)

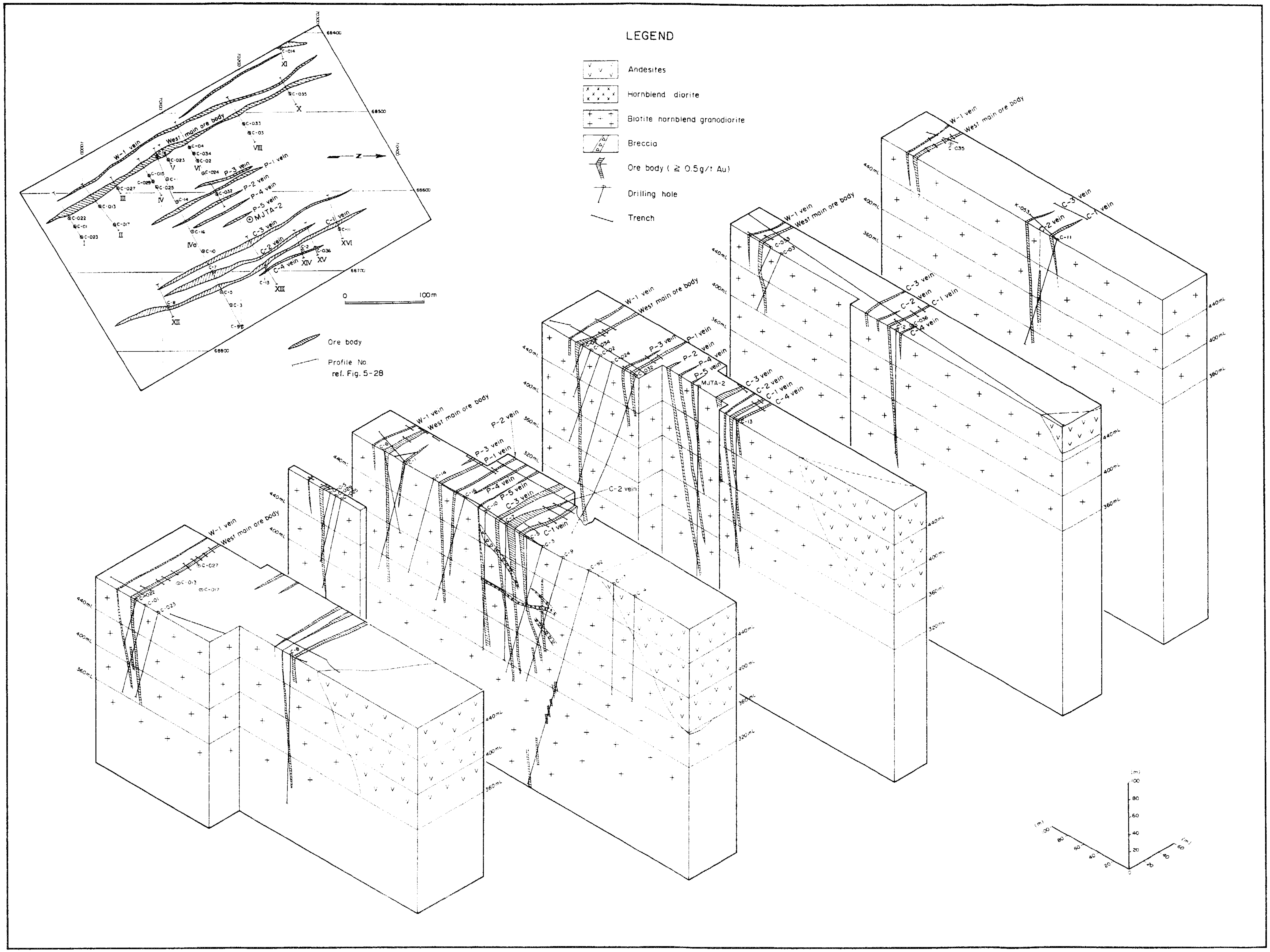


Figure 5-29 Block diagram of Central Zalturbulak zone

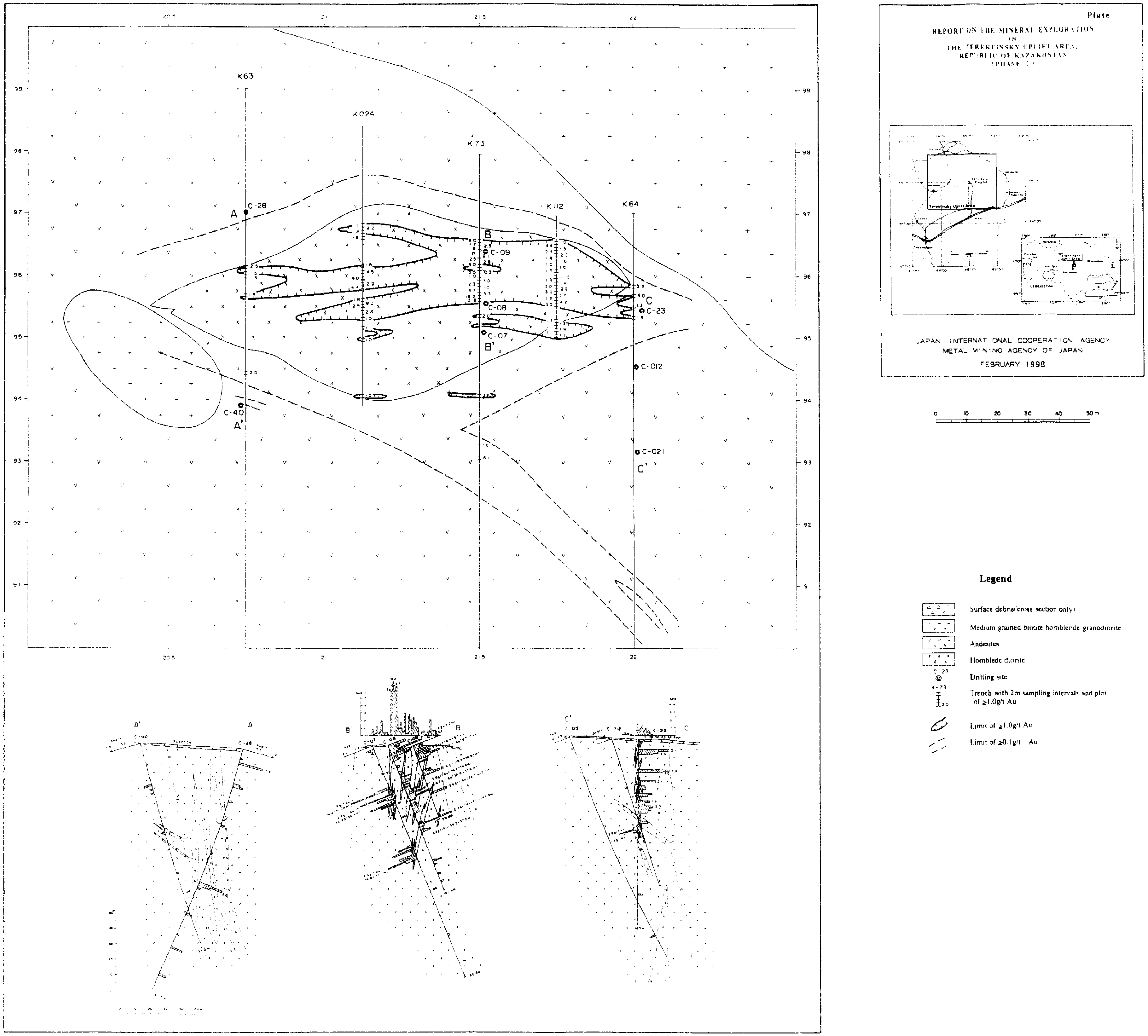


Figure 5-30 Geology and Mineral Occurrence of Northeastern Zalturbulak zone

mineralized veins as observed in drill cores as well as on the surface. However, it is extremely difficult to visually define mineralized veins. Some quartz veins are barren in gold mineralization. Chalcopyrite and pyrite are always macroscopically observed where significant gold mineralization is present.

(ii)Ore Minerals

Assemblages of primary sulphide minerals vary in individual veins. The primary sulphides that have been observed to date are charcopyrite, pyrite, sphalerite, tetrahedrite and molybdenite. Electrum occurs as inclusions in sulphides or as isolated grains.

(iii) Homogenization Temperatures of Fluid Inclusions

Homogenization temperatures of fluid inclusions vary from a vein to another. According to the result of the fluid inclusion analysis in the 1997 campaign, the homogenization temperatures for the vein W-1 range from 196℃ to 424℃, showing a biomodal frequency distribution with two modes at 250℃ and 350℃. Three samples from the Western Main Vein System indicate the homogenization temperatures rangeing between 165 and 283℃, 165 and 283℃, and 303 and 383℃ with the averages at 218, 222 and 341℃ respectively. The homogenization temperatures of three drill core samplesfrom a vein of the Central Vein System (possibly correlated to C-2 or C-3 vein) range from 220℃ to 293℃ and from 220℃ to 293℃ and from 161℃ to 207℃, with the averages at 260℃, 265℃ and 181℃ respectively. Two samples of the vein P-5 were collected cores of the drill hole MJTA-2; one from the margin and the other from the centre of the vein intersection. The homogenization temperatures for the former sample mostly range between 100 and 200℃ with the average at 151.7℃ and the latter, between 120 and 240℃ with the average at 162.5℃.

(iv)Alteration

Veins are always enveloped with sericite alteration, which develops extensively. Green alteration comprising chlorite, epidote, pyrite and/or carbonate develops mostly around the sericite alteration zone, though partial overprinting is commonly observed.

(v)Analytical Result

Average gold grades of individual veins are recorded on the drill hole cross sections as shown in Figure 5-28. However, the old chemical analysis appears to have been done only for the mineralized intersections based on visual judgement. Some of samples which were re-analyzed in the current project failed to return satisfactorily comparable analytical results. Besides, analysis for other elements than gold were made using a handy method on site. Re-analysis should be made for gold and other elements in order to adequately assess the mineralization. Significant analytical results that were obtained during the current project are as follows;

- W-4 vein (surface samples); this vein is well mineralized with gold and copper, with the maximum gold value at 1.46 g/t for a width of 0.3m and with a number of copper values in the order of several hundred ppm.
- West Main Vein (surface samples); appreciably high values are indicated for Au, As, Cu, Mo, Pb and Zn. Some high values are returned for Ag as well. The maximum gold value of 20.8 g/t is indicated for a sample taken for a width of 0.50m in an intense clay alteration zone with iron oxides.
- C-1 vein (surface sample); mineralized with gold and copper. The maximum gold value of 0.95 g/t is indicated for a sample taken for a width of 0.3m in a intense silicification zone.
- P-5 vein (MJTA-2, the section from 61.6 to 62.5m, the estimated true width at approximately 0.35 m); a white quartz vein visually disseminated with more than 10 volume percent of pyrite and chalcopyrite. The gold value for the entire section is indicated at 18.9 g/t, as well as high values for Ag, Cu, Pb and Zn.

- P-4 vein (MJTA-2, the section from 120.0 to 129.4m, the estimated true width at 1.5m); the section comprises a number of quartz veinlets and associated green alteration. The gold value for the entire section is indicated at 2.5 g/t, including the section between 120.0 and 123.0m with the gold value of 7.08 g/t.

- P-2 vein (MJTA-2, the section from 186.0 to 192.0m, the estimated true width of 1.6m); the section comprises a number of quartz veinlets with the hanging and foot walls bounded by steeply dipping small faults. The gold value for the entire section is indicated at 3.0 g/t, including the section between 187.0 and 189.0m with the gold value at 5.24 g/t.

- Other section of MJTA-2; values of 5.48 g/t Au, 12200 ppm Cu and 224 ppm Mo are returned for the section from 169 to 171m, that includes several quartz veinlets with several millimeter widths.

(vi) Ore Resources

The estimated ore resources of individual veins are indicated in Table5-5. The ore resources for the Central Zalturbulak Zone is estimated at 1199.82 kg gold (358072 t of C1 category at an average grade of 3.35 g/t Au, with an assumed specific gravity

Table 5-5 Gold resources estimation in the Central Zalturbulak Zone

Ore body	Length (m)	Depth (m)	m^2	Vein width(m)	m^3	Specific gravity	Tonnage	Ore grade	kg	Ore reserve category
Western mineralization zone										
West main orebody West main orebod	405	50	20,250	4.8	97200	2.6	252,720	3.72	940.1184	C_1
West main orebod	405	150	60,750	3.9	233887.5	2.6	608,108	3.68	2237.8356	C_2
W-1 vein	250	50	12,500	2.0	25000	2.6	65,000	2.58	167.7	C_1
	370	150	55,500	2.2	122100	2.6	317,460	2.48	787.3008	C_2
W-2 vein	110	50	5,500	2.2	12100	2.6	31,460	3.32	104.4472	C_2
W-3 vein	120	50	6,000	3.0	18000	2.6	46,800	2.19	102.492	C_2
W-4 vein	97	50	4,850	3.2	15520	2.6	40,352	2.28	92.00256	C_2
	97	150	14,550	3.2	46560	2.6	121,056	2.28	276.00768	C_1
								3.17		
								3.35		
Central mineralization zone										
C-1 vein	350	50	17,500	3.4	59500	2.6	154700	4.1	634.27	C_1
C-1 vein	350	150	52,500	2.6	136500	2.6	354900	4.57	1621.893	C_2
C-2 vein	205	200	41,000	4.0	164000	2.6	426400	2.03	865.592	C_2
C-3 vein	268	200	53,600	4.0	214400	2.6	557440	1.95	1087.008	C_2
C-4 vein	80	50	4,000	2.1	8400	2.6	21840	2.24	48.9216	C_2
								2.81	0	
Intermitt mineralization zone										
P-1 vein	130	50	6,500	2.3	14950	2.6	38870	2.74	106.5038	C_1
P-1 vein	130	150	19,500	2.3	44850	2.6	116610	2.74	319.5114	C_2
P-2 vein	88	50	4,400	2.3	10120	2.6	26312	2.97	78.14664	C_2
P-3 vein	50	50	2,500	1.8	4500	2.6	11700	2.82	32.994	C_2
P-4 vein	50	50	2,500	2.0	5000	2.6	13000	1.91	24.83	C_2
P-5 vein	50	50	2,500	2.3	5750	2.6	14950	2.3	34.385	C_2

of 2.6) for the western Main Vein System, at 4257.685 kg gold (1515280 t of C2 category, at an average grade of 2.81 g/t Au, with an assumed specific gravity of 2.6) for the Central Vein System and at 1940.594 kg gold (551642 t of C2 category, at an average grade of 3.52 g/t Au, with an assumed specific gravity of 2.6) for the Intermediate Vein System.

(d) Assesment

The Central Zalturbulak Zone has been known for a significant gold-copper mineralization and extensively explored by drilling in the era of the former USSR. Although the result of ore resources estimation is incorporated in this report, the present assessment of this mineralization zone is still inadequate because of the following reasons;

(i) Past analytical results are often unreliable and hardly reproducible due to inappropriate sampling and analytical methods.

(ii) Drill holes are too widely spaced to adequately assess erratic gold mineralization and to estimate the resources with accuracy better than C category.

(iii) All drill holes are steeply inclined (approximately 75°to west) for steeply dipping veins, which reduces lateral coverage of subsurface data across the vein systems.