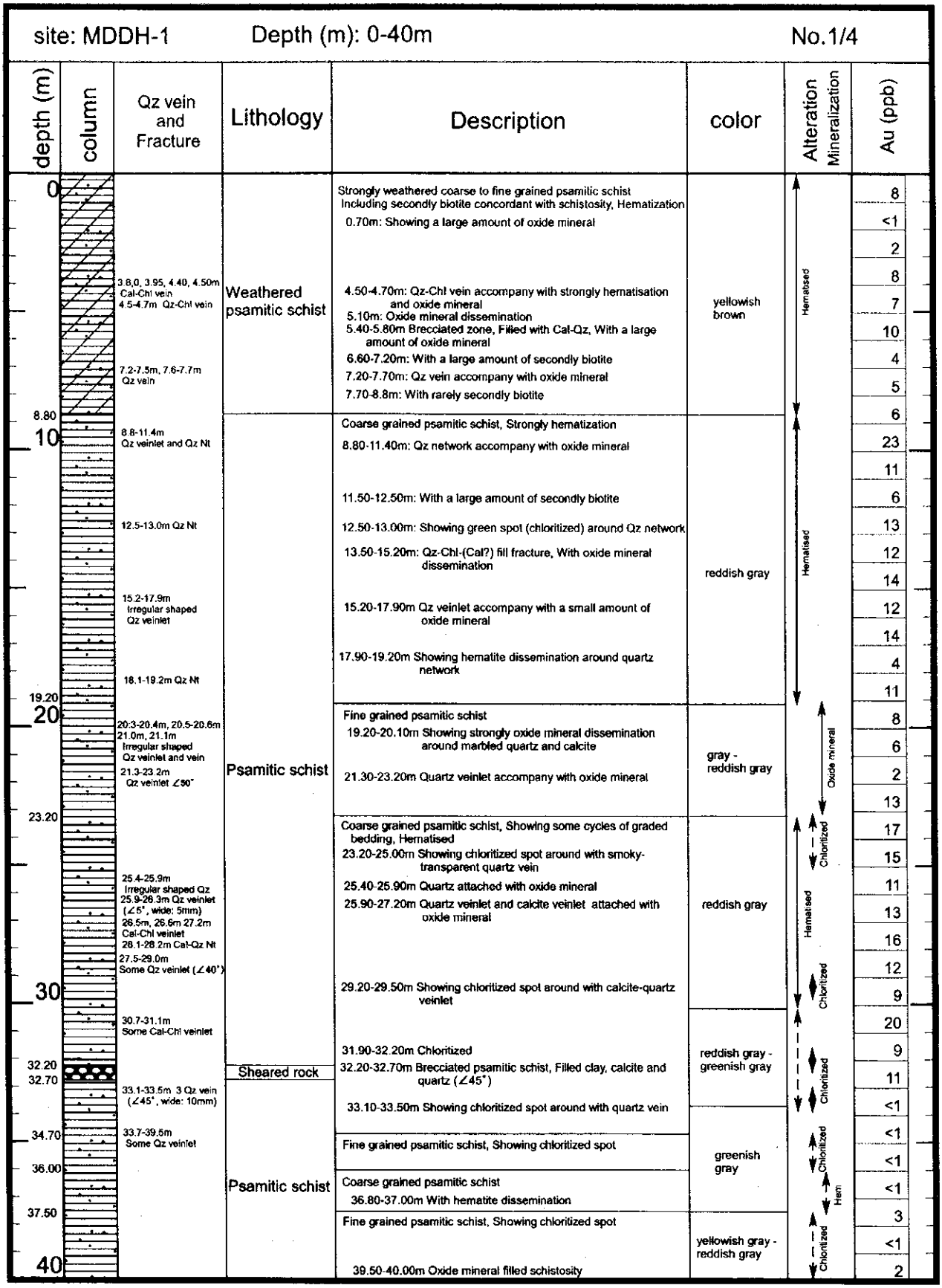
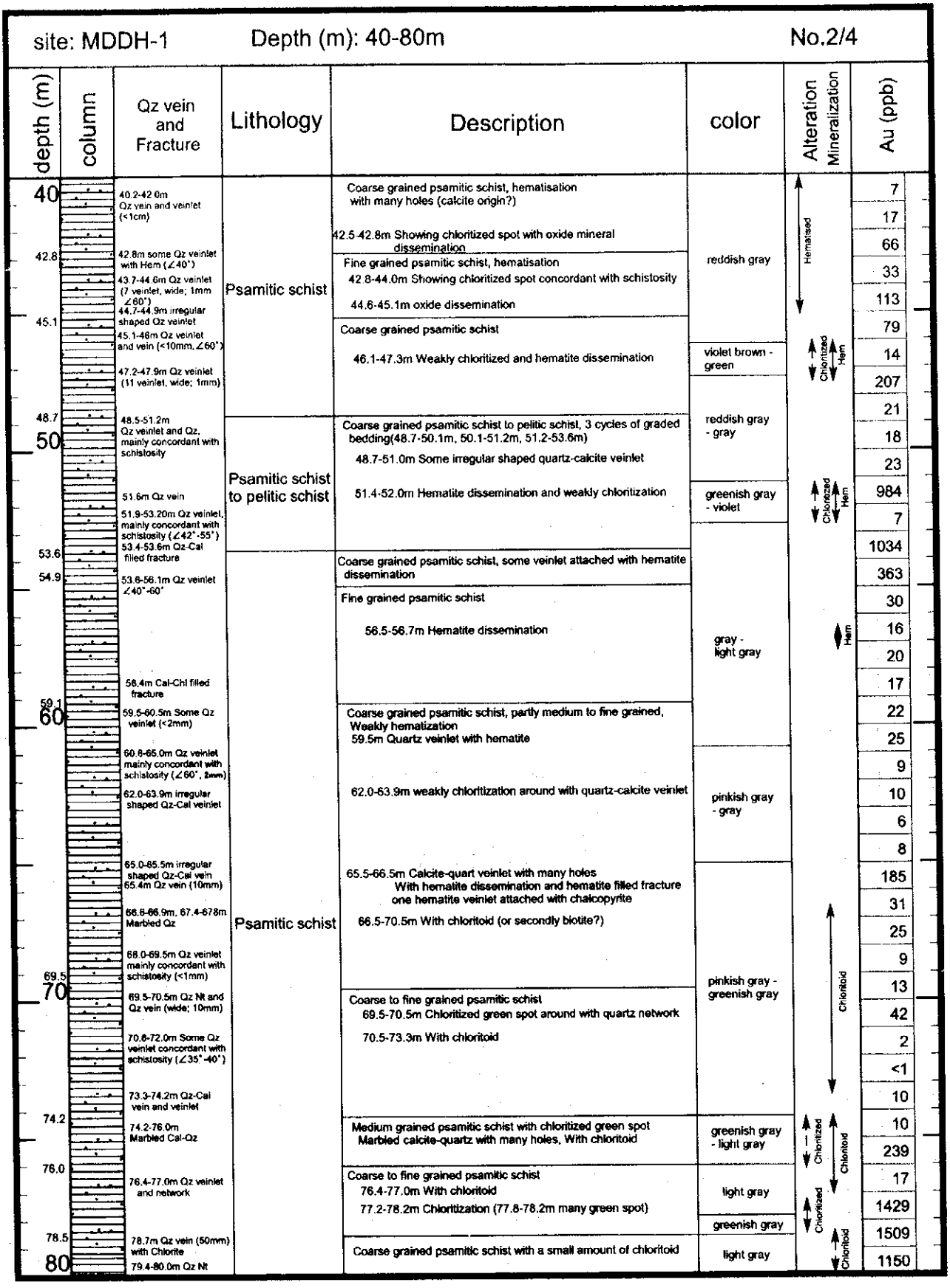
Ap. 6　la carte de colonne de sondage diamant

site: MDDH-1 Depth (m): 0-40m No.1/4



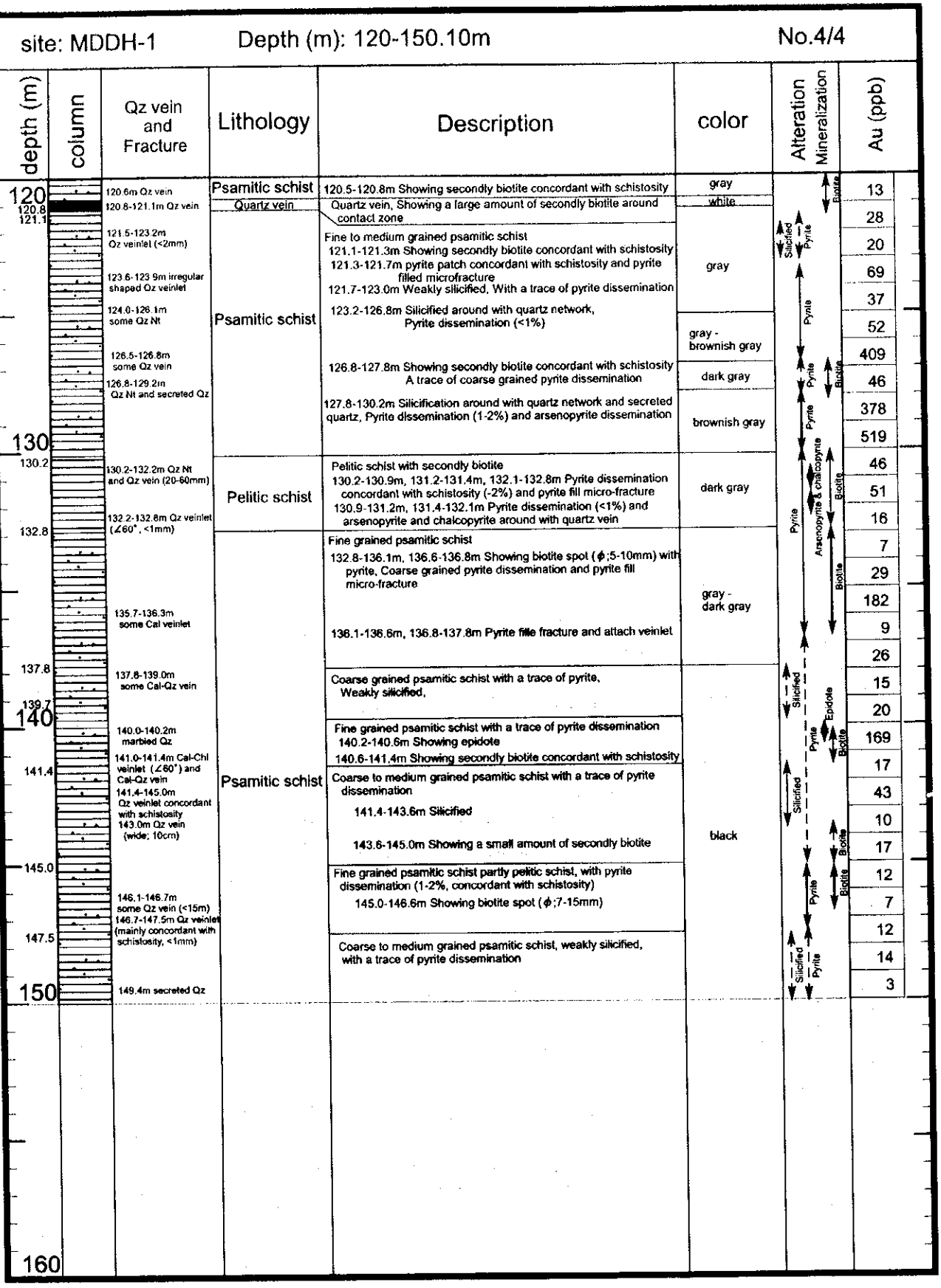
site: MDDH-1 Depth (m): 40-80m No.2/4



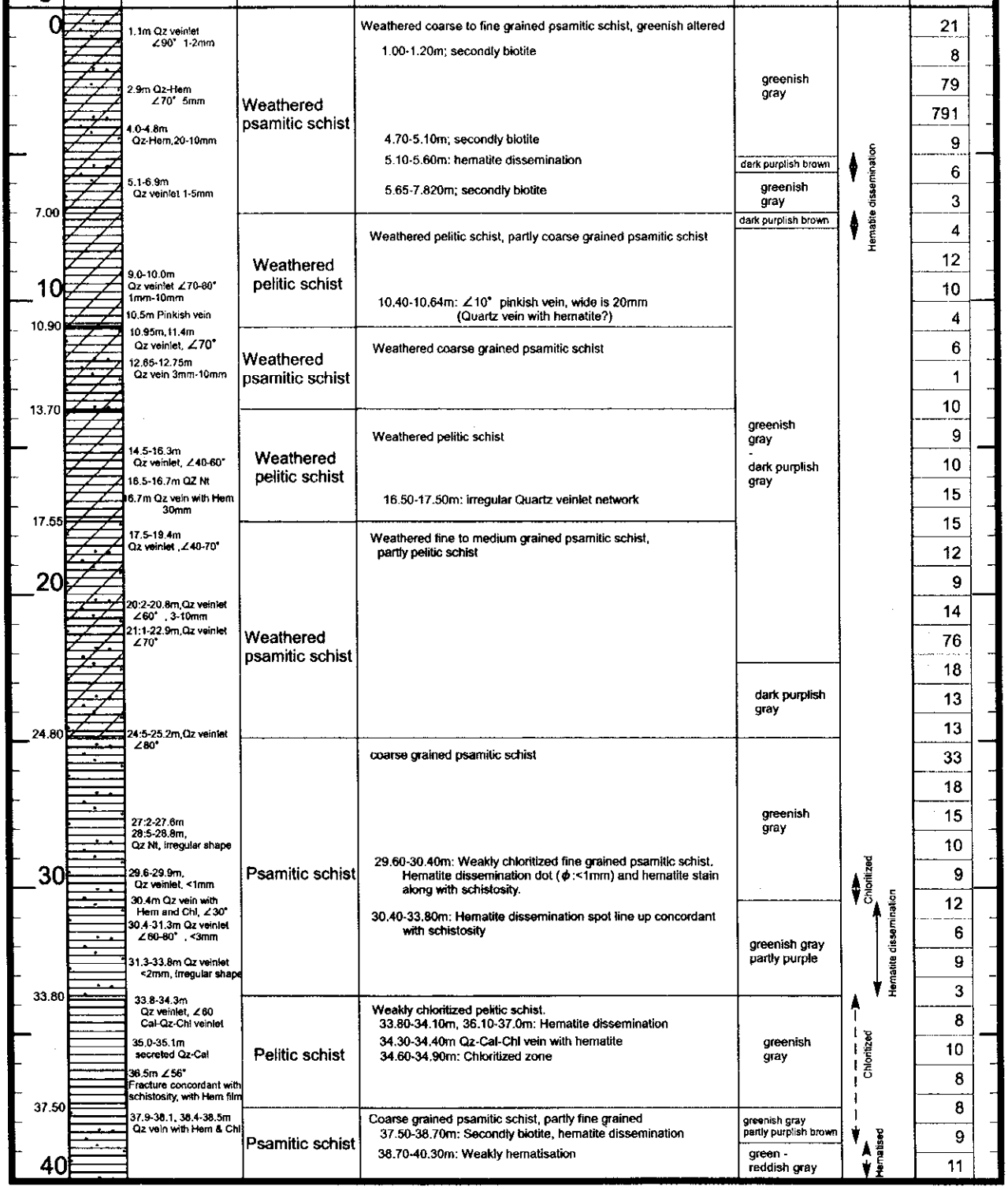
site: MDDH-1 Depth (m): 80-120m No.3/4

depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Au (ppb)
80	80.0-81.0m marbled Qz and Qz veinlet (mainly ∠60-70°, <2mm)	Psamitic schist	Fine to medium grained psamitic schist, Showing reverse graded bedding 80.0-81.0m a trace of chalcopyrite attach with quartz veinlet	gray - light gray	Chalcopyrite	919
						867
						5050
	82.9-85.0m Cal-Qz vein and veinlet		82.9-85.0m With many holes (calcite origin)	gray - greenish gray		136
						2575
85.0		Pelitic schist	Pelitic schist to fine grained psamitic schist, Showing reverse graded bedding 86.6-87.7m Oxide mineral attach with calcite-quartz vein	gray - light gray		180
	86.2-86.5m Qz veinlet cut schistosity (3mm,2mm)					52
	86.6-88.1m Some Cal-Qz vein and veinlet					240
87.7		Psamitic schist	Coarse (partly fine) grained psamitic schist, reverse graded bedding Showing a small amount of chloritoid	light gray	Chloritoid	11
90			89.6-92.2m fracture with hematite film and limonite		Limonite	9
	90.3-90.8m Some Qz veinlet					14
	92.1-92.2m Qz Nt					28
	92.7-95.7m Qz-Cal vein and veinlet		92.7-96.2m with limonite dissemination			17
						24
						16
96.2		Sheared zone	Brecciated psamitic schist and pelitic schist, Strongly chloritization Filled quartz and calcite	greenish gray - whitish green	Chloritized	14
98.4	98.4-102.6m Cal-Qz vein and veinlet	Pelitic schist	Pelitic schist, partly brecciated, Showing chloritized green spot 98.5-99.0m A trace of pyrite and chalcopyrite			6
100						31
						36
						31
						2
102.6			102.2m pyrite attach with calcite-quartz vein		Chloritized Pyrite	<1
	102.6-107.1m many irregular shaped Cal-Qz veinlet, some veinlet concordant with schistosity		Pelitic schist to fine grained pelitic schist with chloritoid, Weakly chloritization, Showing reverse graded bedding Psamitic schist part; Showing fine grained pyrite dissemination and pyrite patch attach with Cal-Qz veinlet Pelitic schist part; Showing pyrite patch attach with Cal-Qz veinlet and pyrite filled micro-fracture	gray		2
						51
						78
				black - gray	Chloritoid Pyrite	12
						22
	107.6-108.2m Qz and Cal-Qz veinlet and filled fracture					59
108.8	108.4-108.8m irregular shaped Cal-Qz vein and veinlet					4
109.2	108.9m Cal-Qz veinlet	Meta volcanics	Intrusion of meta volcanics (∠55°), Strongly chloritization Chalcopyrite attach calcite-quarts veinlet	greenish gray - whitish green	Chalcopyrite	87
110	109.2-109.8m irregular shaped Cal-Qz veinlet	Pelitic schist	Pelitic schist to fine grained pelitic schist with chloritoid 109.2-109.8m Chloritized, Pyrite attach with Cal-Qz veinlet			1
	111.1-111.4m Secreted Qz		109.8-113.8m Weakly silicified (or carbonatization?)	black - gray	Chloritoid	22
						73
	112.8-113.8m irregular shaped Cal-Qz veinlet					2039
113.8	113.8-116.2m Cal-Qz vein and filled fracture	Psamitic schist	Fine grained psamitic schist, Strongly carbonatization and chloritization, Coarse grained pyrite attach with calcite-quartz 115.8-116.2m Brecciated, Filled Calcite, With pyrite	whitish green - white	Carbonatization Chloritization	23
						95
116.2	116.2-120.0m Qz veinlet		Fine to medium grained psamitic schist with coarse grained pyrite dissemination, Coarse grained pyrite attach with quartz veinlet and calcite and pyrite fill fracture	gray	Pyrite	20
						29
						51
120						13

site: MDDH-1 Depth (m): 120-150.10m No.4/4

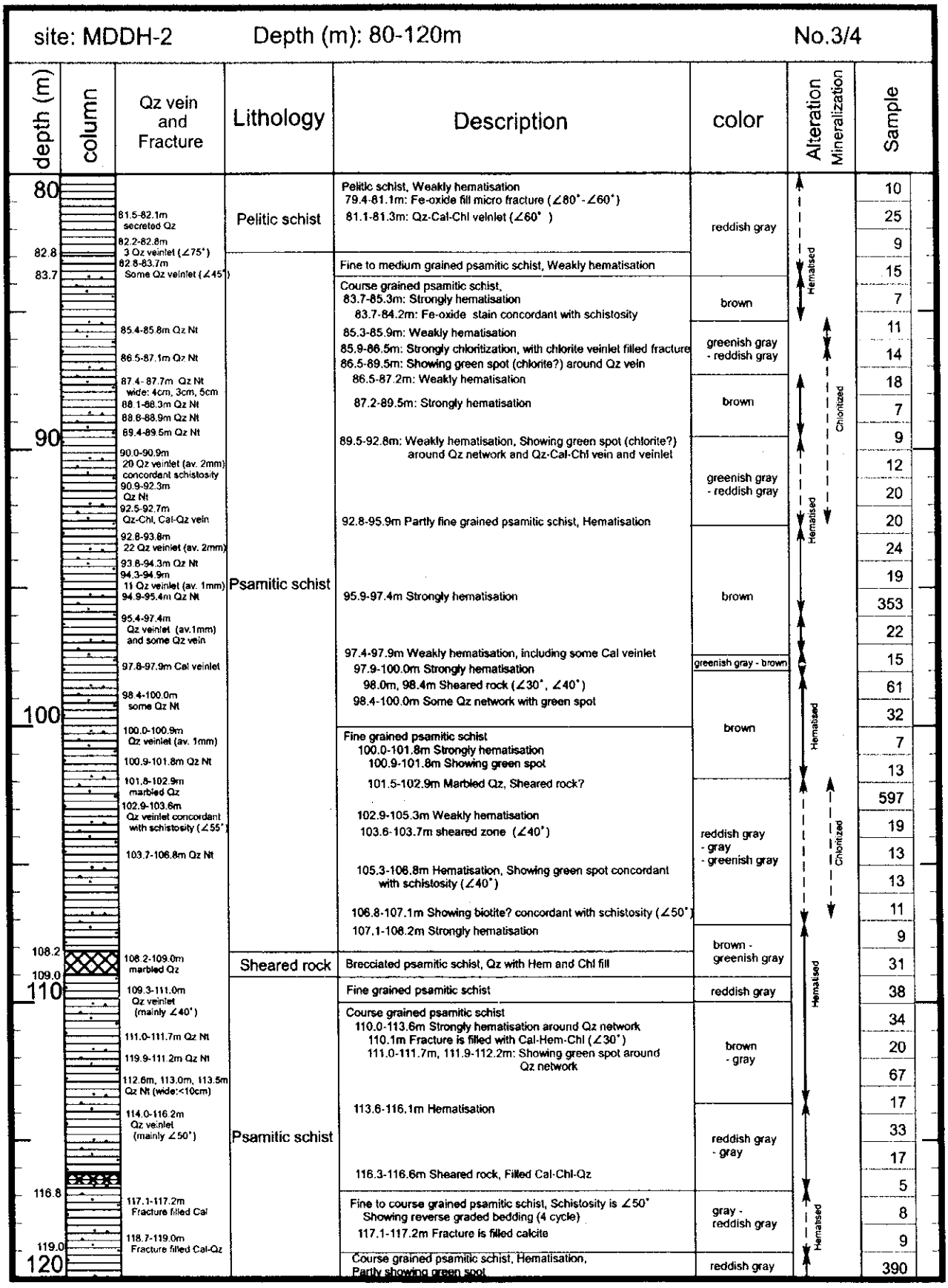


site: MDDH-2 Depth (m): 0-40m No.1/4



site: MDDH-2 Depth (m): 40-80m No.2/4

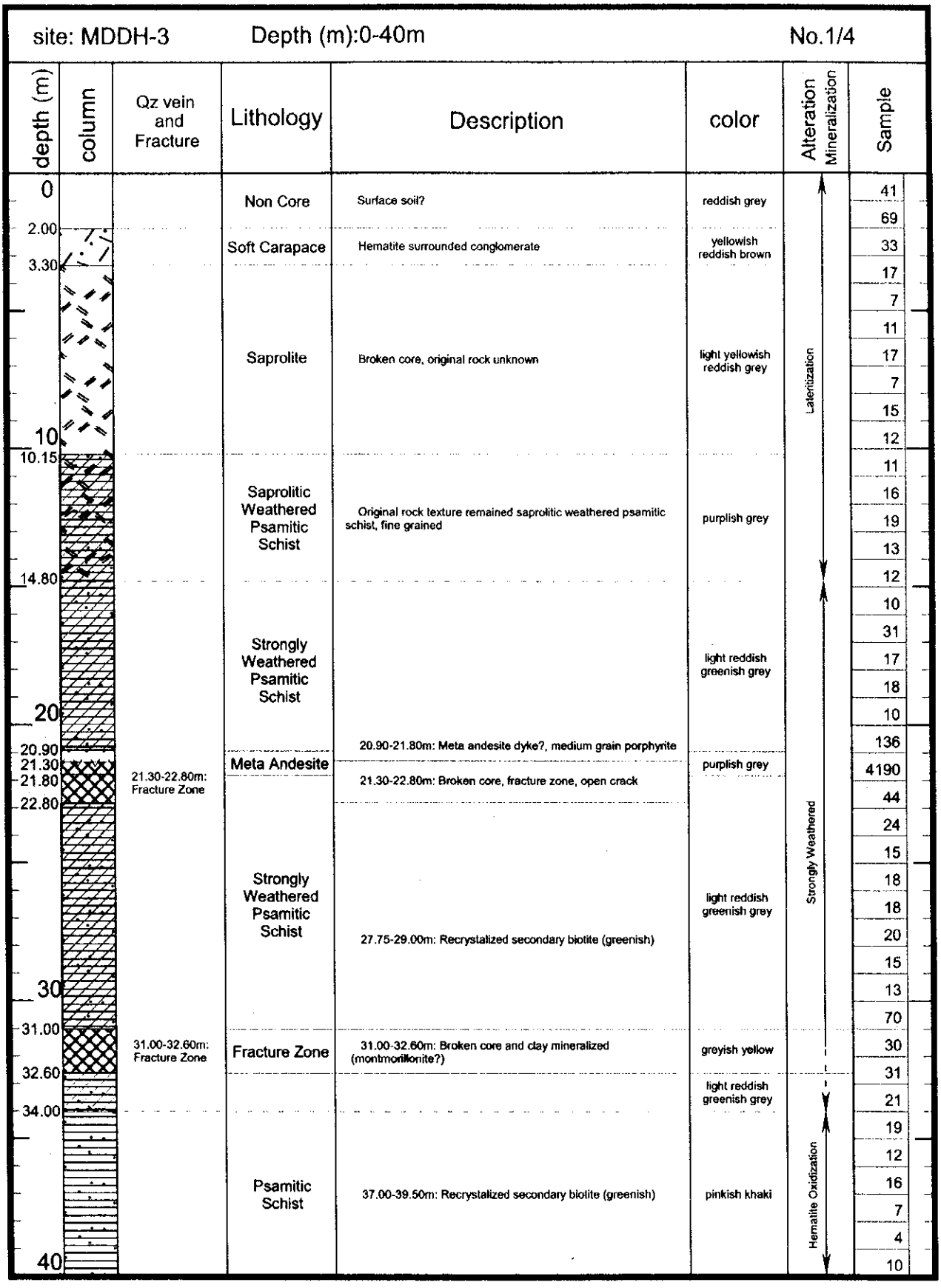
depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
40	40.2-42.0m Qz vein and veinlet (<1cm)	Psamitic schist	Coarse grained psamitic schist, Hematisation Showing chloritized spot (diameter: 5mm)	reddish gray - green	Hematised	13
	42.8m Qz vein, 3cm ∠20°		42.8m: Chloritized around quartz vein			6
						10
43.3			Fine grained psamitic schist, Strongly hematisation Showing chloritized spot (diameter: 5mm)	reddish gray		8
			44.4-44.7m: Cal-Chl vein (wide:4cm, 3cm ∠30°)			11
45.9			Coarse grained psamitic schist,		Hematised Chloritized	11
	46.2-47.2m: Qz veinlet <1mm, ∠60-80° 20 veinlet / m		45.9-50.0m; Strongly hematisation. Showing chloritized spot	Brownish gray		48
	48.1-49.4m: Qz veinlet <4mm, ∠60° 10 veinlet / m 48.94m: Cal-Qz vein					13
						12
50						10
	50.2-51.4m: Qz veinlet <4mm, ∠50-60° 10 veinlet / m		50.0-53.7m; Chloritization and weakly hematization			10
			50.4-51.4m: Strongly chloritization	green - reddish gray	Hematised Chloritized	13
						13
	53.2-53.3m: Cal-Chl veinlet with Hem 3mm, 8mm		53.7-55.3m; Strongly hematisation. Showing chloritized spot	Brownish gray	Hematised Chloritized	14
						11
55.3			Fine grained psamitic schist. Hematisation			6
				greenish gray - reddish gray	Hematised	8
	57.5m: Qz Nt, wide:3cm		57.7-59.0m: Strongly hematisation			5
			58.6-58.7m: Sheared rock, Brecciated schist filled Qz-Cal with Hem			3
58.9	58.6-58.7m brecciate zone					14
60			Coarse grained psamitic schist			
	60.6-60.7m: Qz Nt		58.9-61.3m: Strongly hematisation			13
			59.5-60.0m: Cal-Chl vein with many hole (∠40°)			12
			60.0-61.3m: iron-oxide stain along with schistosity			
			61.3-62.2m: Hematisation, Showing chloritized spot			8
	62.2-62.6m: Qz-cal veinlet, <5mm, ∠60-80° 62.8m: Qz Nt, wide:5cm		62.2-65.7m: Strongly hematisation	brown partly greenish gray	Hematised Chloritized	9
	63.4-63.9m: Qz veinlet, 8 veinlet/m, <1mm, ∠60° 64.0m: smoky Qz vein		63.2-63.7m: iron-oxide stain along with micro-fracture			6
	64.1-64.8m; Cal-Qz vein		64.1-64.8m: Cal-Qz vein and veinlet with Chl			
65.7		Sheared rock	65.7-67.0m: Brecciated psamitic schist	reddish gray - gray		8
67.0		Psamitic schist	Coarse grained psamitic schist, Strongly hematisation			12
			67.9-68.9m: iron-oxide stain along with schistosity and fill micro-fracture	brown partly greenish gray	Hematised	18
	68.9-69.9m: Qz and Cal-Qz veinlet, Qz Nt					9
70			70.3-70.9m: Cal-Qz fill fracture			5
			71.0m: Cal-Qz-Chl vein ∠60°			7
71.0	71.3m: Qz veinlet		Fine to coarse grained psamitic schist, Hematisation	reddish gray - greenish gray	Hematised	9
	72.1-72.2m: Qz Nt 72.3-72.7m: Qz veinlet		72.1-72.4m: Cal-Qz like marble			7
73.0	73.6-74.3m: Qz veinlet and vein Chl-Hem veinlet		Coarse grained psamitic schist 73.0-77.1m: Strongly hematisation, Partly showing secreted Qz			9
			73.3-73.5m, 75.1-75.2m, 75.4-75.6m, 75.7-6.0m: Qz network with Chloritisation	brown	Hematised	12
	75.3-77.0m Cal-Chl veinlet and Qz veinlet (main ∠50°					15
						19
			77.1-79.4m: Partly hematisation			15
			78.4-78.6m: Strongly chloritized, Fracture is filled Chlorite	green - reddish gray	Hematised Chloritized	9
79.4						11
80		Pelitic schist	Pelitic schist, Weakly hematisation			


site: MDDH-2
Depth (m): 80-120m
No.3/4
depth (m)
column
Qz vein and Fracture
Lithology
Description
color
Alteration Mineralization
Sample
80
90
100
110
120
82.8
83.7
108.2
109.0
116.8
119.0
81.5-82.1m secreted Qz
82.2-82.8m 3 Qz veinlet (∠75°)
82.8-83.7m Some Qz veinlet (∠45°)
85.4-85.8m Qz Nt
86.5-87.1m Qz Nt
87.4-87.7m Qz Nt wide: 4cm, 3cm, 5cm
88.1-88.3m Qz Nt
88.6-88.9m Qz Nt
89.4-89.5m Qz Nt
90.0-90.9m 20 Qz veinlet (av. 2mm) concordant schistosity
90.9-92.3m Qz Nt
92.5-92.7m Qz-Chl, Cal-Qz vein
92.8-93.8m 22 Qz veinlet (av. 2mm)
93.8-94.3m Qz Nt
94.3-94.9m 11 Qz veinlet (av. 1mm)
94.9-95.4m Qz Nt
95.4-97.4m Qz veinlet (av.1mm) and some Qz vein
97.8-97.9m Cal veinlet
98.4-100.0m some Qz Nt
100.0-100.9m Qz veinlet (av. 1mm)
100.9-101.8m Qz Nt
101.8-102.9m marbled Qz
102.9-103.6m Qz veinlet concordant with schistosity (∠55°)
103.7-106.8m Qz Nt
108.2-109.0m marbled Qz
109.3-111.0m Qz veinlet (mainly ∠40°)
111.0-111.7m Qz Nt
119.9-111.2m Qz Nt
112.6m, 113.0m, 113.5m Qz Nt (wide:<10cm)
114.0-116.2m Qz veinlet (mainly ∠50°)
117.1-117.2m Fracture filled Cal
118.7-119.0m Fracture filled Cal-Qz
Pelitic schist
Psamitic schist
Sheared rock
Psamitic schist
Pelitic schist, Weakly hematisation
79.4-81.1m: Fe-oxide fill micro fracture (∠80°-∠60°)
81.1-81.3m: Qz-Cal-Chl veinlet (∠60°)
Fine to medium grained psamitic schist, Weakly hematisation
Course grained psamitic schist,
83.7-85.3m: Strongly hematisation
83.7-84.2m: Fe-oxide stain concordant with schistosity
85.3-85.9m: Weakly hematisation
85.9-86.5m: Strongly chloritization, with chlorite veinlet filled fracture
86.5-89.5m: Showing green spot (chlorite?) around Qz vein
86.5-87.2m: Weakly hematisation
87.2-89.5m: Strongly hematisation
89.5-92.8m: Weakly hematisation, Showing green spot (chlorite?) around Qz network and Qz-Cal-Chl vein and veinlet
92.8-95.9m Partly fine grained psamitic schist, Hematisation
95.9-97.4m Strongly hematisation
97.4-97.9m Weakly hematisation, including some Cal veinlet
97.9-100.0m Strongly hematisation
98.0m, 98.4m Sheared rock (∠30°, ∠40°)
98.4-100.0m Some Qz network with green spot
Fine grained psamitic schist
100.0-101.8m Strongly hematisation
100.9-101.8m Showing green spot
101.5-102.9m Marbled Qz, Sheared rock?
102.9-105.3m Weakly hematisation
103.6-103.7m sheared zone (∠40°)
105.3-106.8m Hematisation, Showing green spot concordant with schistosity (∠40°)
106.8-107.1m Showing biotite? concordant with schistosity (∠50°)
107.1-108.2m Strongly hematisation
Brecciated psamitic schist, Qz with Hem and Chl fill
Fine grained psamitic schist
Course grained psamitic schist
110.0-113.6m Strongly hematisation around Qz network
110.1m Fracture is filled with Cal-Hem-Chl (∠30°)
111.0-111.7m, 111.9-112.2m: Showing green spot around Qz network
113.6-116.1m Hematisation
116.3-116.6m Sheared rock, Filled Cal-Chl-Qz
Fine to course grained psamitic schist, Schistosity is ∠50°
Showing reverse graded bedding (4 cycle)
117.1-117.2m Fracture is filled calcite
Course grained psamitic schist, Hematisation, Partly showing green spot
reddish gray
brown
greenish gray - reddish gray
brown
greenish gray - reddish gray
brown
greenish gray - brown
brown
reddish gray - gray - greenish gray
brown - greenish gray
reddish gray
brown - gray
reddish gray - gray
gray - reddish gray
reddish gray
Hematised
Chloritized
Hematised
Chloritized
Hematised
Hematised
Hematised
10
25
9
15
7
11
14
18
7
9
12
20
20
24
19
353
22
15
61
32
7
13
597
19
13
13
11
9
31
38
34
20
67
17
33
17
5
8
9
390

site: MDDH-2 Depth (m): 120-150.10m No.4/4

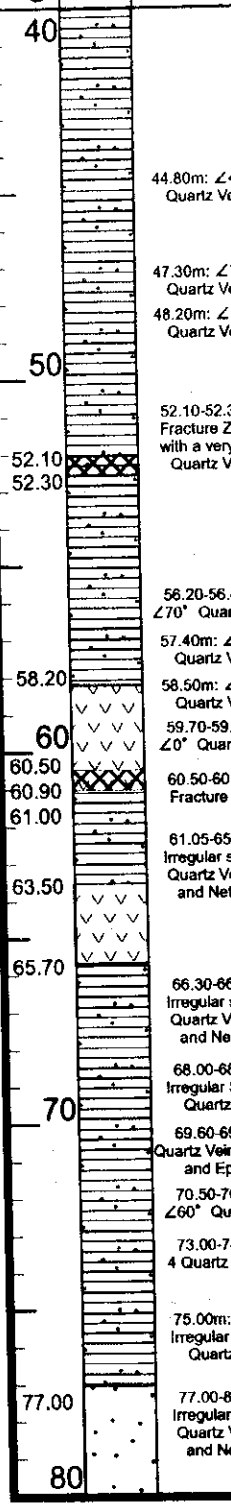
depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
120	119.6-121.0m Qz-Cal veinlet filled fracture	Psamitic schist	Course grained psamitic schist, Partly black colored pelitic schist, Hematisation, Partly showing green spot	reddish gray	Hematised	16
	121.0-121.8m Qz veinlet (∠60°)		120.0m Qz veinlet with chalcopyrite			13
121.8	122.2m some Qz veinlet		Fine grained psamitic schist			37
			122.3-122.7m Chloritized	greenish gray		
122.7	122.7-125.7m Cal-Chl-Qz filled fracture and veinlet	Meta volcanics	Meta tuff, Weakly chloritization	dark gray		8
			122.7-124.8m Some irregular fracture is filled Cal and Qz			11
			123.6m, 125.7m Cal-Chl veinlet with pyrite			
125.7	125.7-127.5m Cal-Chl-Qz filled fracture	Psamitic schist	Fine grained psamitic schist, Weakly chloritization		Chloritized	47
			Fracture is filled Cal-Qz-Chl with pyrite		Pyrite	15
127.5		Meta volcanics	Meta tuff, Weakly chloritization	gray - greenish gray		17
			128.9-129.3m Fracture is filled Qz-Cal			16
130	128.9-129.3m Qz-Cal filled fracture					8
130.9	130.9m Some Cal-Chl-Qz veinlet (<2mm)	Psamitic schist	Fine grained psamitic schist (∠30°)		Pyrite	19
	130.9-133.0m Qz veinlet (∠55°, 6 veinlet/m)		Trace pyrite dissemination concordant with schistosity and filling micro fracture	gray		18
						10
133.5	133.5-135.0m secreted Qz	Pelitic schist	Pelitic schist, Pyrite dissemination concordant with schistosity and pyrite veinlet, Total amount of pyrite is 1%		Pyrite	15
				dark gray		11
135.2	135.6-136.7m Qz veinlet (mainly ∠45°, <1mm)	Psamitic schist	Fine grained psamitic schist (∠55°), With trace pyrite dissemination			10
			135.6-136.7m Pyrite dissemination and veinlet (1%)			12
136.7	136.5-136.7m secreted Cal-Qz		Course grained psamitic schist	gray	Arsenopyrite & Pyrite	19
	136.7-138.0m Smoky Qz vein		136.7-138.0m Smoky Qz vein (wide: 2cm) attend with arsenopyrite and pyrite dissemination			38
	138.0-140.9m Mainly Qz-Cal irregular veinlet		138.0-140.0m Pyrite dissemination		Pyrite	43
140			139.7-140.0m Fine grained psamitic schist, Showing graded bedding			
			140.0-140.9m Pyrite dissemination (1%), Cal-Chl veinlet with arsenopyrite (∠45°)		Arsenopyrite & Pyrite	42
	141.8m Qz Nt		140.9-141.9m Fine grained psamitic schist with arsenopyrite dissemination and filling micro fracture			36
	141.9-143.9m secreted Qz and Qz veinlet		141.9-143.9m secreted Qz attend with pyrite (<1%)		Pyrite	34
						33
	143.9-148.7m Qz veinlet (<5mm)		143.9-145.2m Qz veinlet, With trace pyrite dissemination	dark gray		105
			145.2-148.0m Qz veinlet and network Qz, With trace pyrite dissemination			50
					Pyrite	26
						25
			148.0-148.7m Fine grained psamitic schist, Qz veinlet with pyrite			41
150	148.7-150.2m secreted Qz and Qz-Chl veinlet		148.7-150.2m Weakly silicified, Qz-Chl veinlet with pyrite			68
160						

site: MDDH-3 Depth (m):0-40m No.1/4



depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
0		Non Core	Surface soil?	reddish grey	Laterization	41
2.00		Soft Carapace	Hematite surrounded conglomerate	yellowish reddish brown		69
3.30						33
		Saprolite	Broken core, original rock unknown	light yellowish reddish grey		17
						7
						11
						17
						7
						15
10						12
10.15		Saprolitic Weathered Psamitic Schist	Original rock texture remained saprolitic weathered psamitic schist, fine grained	purplish grey		11
						16
						19
						13
14.80						12
		Strongly Weathered Psamitic Schist		light reddish greenish grey	Strongly Weathered	10
						31
						17
						18
20						10
20.90			20.90-21.80m: Meta andesite dyke?, medium grain porphyrite			136
21.30		Meta Andesite		purplish grey		4190
21.80	21.30-22.80m: Fracture Zone		21.30-22.80m: Broken core, fracture zone, open crack			44
22.80		Strongly Weathered Psamitic Schist	27.75-29.00m: Recrystalized secondary biotite (greenish)	light reddish greenish grey		24
						15
						18
						18
						20
						15
30						13
31.00						70
	31.00-32.60m: Fracture Zone	Fracture Zone	31.00-32.60m: Broken core and clay mineralized (montmorillonite?)	greyish yellow		30
32.60						31
				light reddish greenish grey	Hematite Oxidization	21
34.00						19
		Psamitic Schist	37.00-39.50m: Recrystalized secondary biotite (greenish)	pinkish khaki		12
						16
						7
						4
40						10

site: MDDH-3 Depth (m):40-80m No.2/4



depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
40		Psamitic Schist	Hematite oxidized psamitic schist	pinkish khaki	Hematite Oxidization	13
	44.80m: ∠40° Quartz Vein					8
						7
						9
	47.30m: ∠70° Quartz Vein					17
	48.20m: ∠70° Quartz Vein					13
50						25
	52.10-52.30m: Fracture Zone, with a very few Quartz Vein					8
52.10			52.10-52.30m: Brecciated fracture including quartz, mica and rock fragments			10
52.30						12
	56.20-56.40m: ∠70° Quartz Vein					7
	57.40m: ∠70° Quartz Vein					27
58.20	58.50m: ∠60° Quartz Vein	Meta Andesite	Meta andesite with very weak schistosity	purplish grey		18
	59.70-59.90m: ∠0° Quartz Vein		60.50-60.90m: Fracture zone, broken core with open crack			12
60						15
60.50						57
60.90	60.50-60.90m: Fracture Zone					10
61.00		Psamitic Schist	Medium to coarse grained psamitic schist	greenish grey to pinkish grey		16
	61.05-65.00m: Irregular shaped Quartz Veinlets and Network					10
63.50		Meta Andesite	Meta andesite with very weak schistosity	purplish grey to greenish grey		30
						13
65.70						8
	66.30-66.70m: Irregular shaped Quartz Veinlets and Network					9
	68.00-68.40m: Irregular Shaped Quartz Vein					115
70						9
	69.60-69.75m: Quartz Vein, Chlorite and Epidote	Psamitic Schist	Fine to coarse grained psamitic schist, with reverse grading, including very fine segregated quartz vein	greenish grey	Chloritization & Epidotization	179
	70.50-70.80m: ∠60° Quartz Vein					127
	73.00-74.00m: 4 Quartz Veins/m					13
						7
	75.00m: ∠90° Irregular Shaped Quartz Vein					14
77.00	77.00-81.30m: Irregular shaped Quartz Veinlets and Network	Greenschist	Fine grained greenschist (fine tuff), partly recrystalized secondary biotite	light green to greenish grey	Hematite Oxidization	4
80						4
						19
						13
						<1
						5
						4
						7
						9
						136

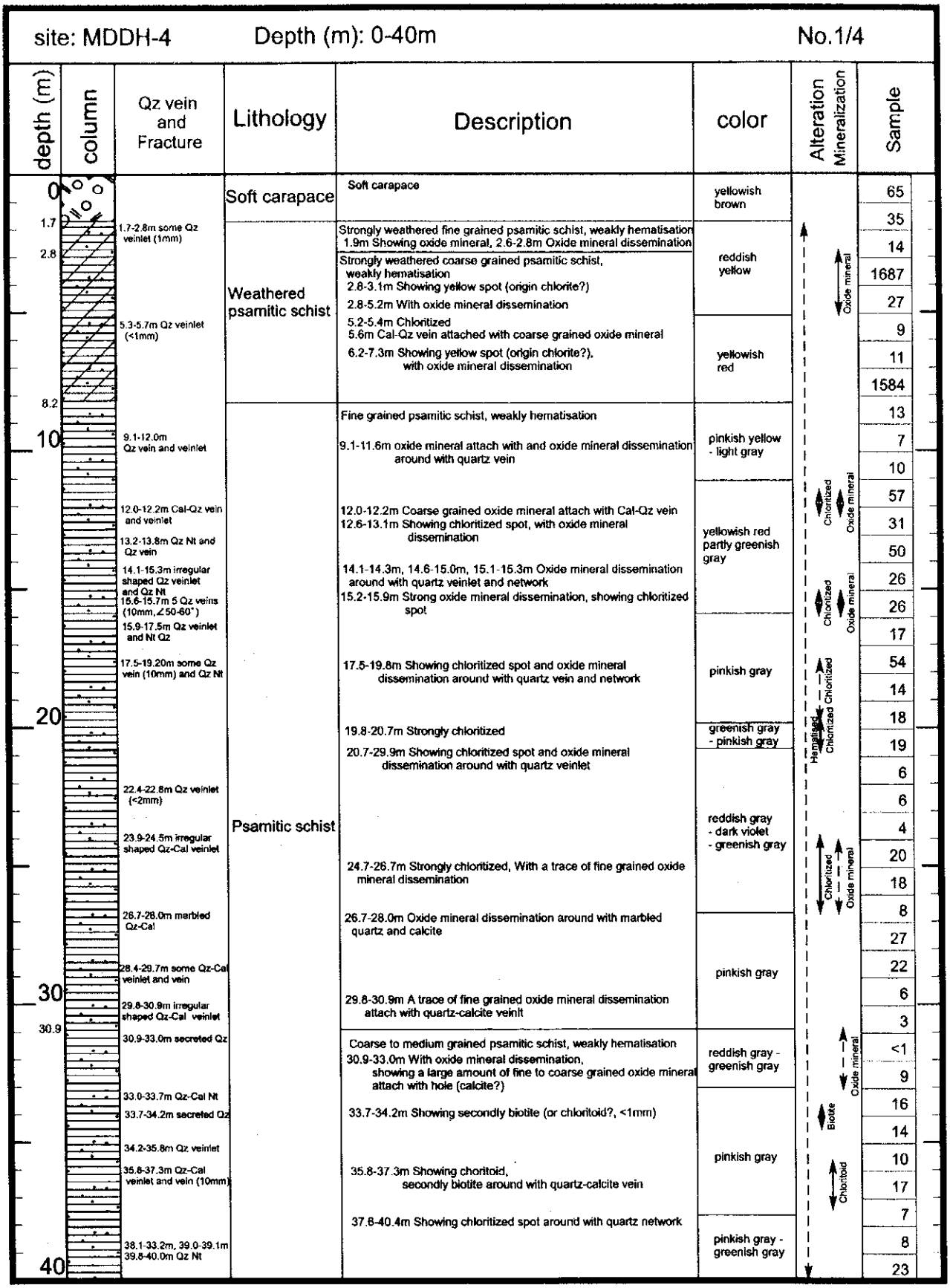
site: MDDH-3 Depth (m):80-120m No.3/4

depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
80		Greenschist	Fine grained greenschist (fine tuff)	light green to greenish grey	Hematite Oxidization	7
81.60	83.65m: ∠85° Epidote and Calcite Vein					21
	85.00-89.60m: Irregular shaped Quartz Veinlets and Network	Psamitic Schist	Fine to coarse grained psamitic schist, with reverse grading	grey to greenish grey		8 23 39 127 26 43 63
	89.20-89.30m: ∠60° Quartz and Chlorite Vein					
	89.40-92.20m: Irregular shaped Quartz Veinlets and Network					
90					Pyrite	216
	92.20-93.00m: ∠5-20° Quartz, Calcite and Epidote Vein		91.20-91.50m: recrystalized secondary biotite, concordant with schistosity			85
			92.20-93.00m: with epidote, calcite and chlorite vein			70 61
93.00	93.60, 94.30, 95.00, 95.80, 96.50, 96.70, 97.10, 97.70, 98.10, 99.50m: ∠40-70° Quartz and Chlorite Vein	Meta Andesite	Meta andesite, with weak schistosity, including recrystalized secondary biotite, concordant with schistosity, completely altered	greenish grey	Quartz, Chlorite and Pyrite vein / Chlorite and Calcite	30 5410 233 42 27 83
100	100.55m: ∠40° Quartz and ChloriteVein (w=5cm)					21 76 48 34 41 33
105.20	105.20-106.80m: Irregular shaped Quartz Vein and Network	Psamitic Schist	Fine to medium grained psamitic schist, disseminated with film like pyrite	dark grey to black	Pyrite	28
106.80		Meta Andesite	Meta andesite, weakly schistosed, including recrystalized secondary biotite	greenish grey		76 26 48
110						200 592
111.00	111.00-113.20m: Irregular shaped Quartz Vein and Network	Pelitic Schist	Very fine grained pelitic schist, disseminated with film like pyrite (0.1%)	dark grey to black	Pyrite	120 15
113.20		Meta Andesite	Meta andesite, weakly schistosed, including recrystalized secondary biotite	greenish grey		26 539
115.40	115.40-116.00m: Film like pyrite dissemination	Psamitic Schist	Fine to medium grained psamitic schist 115.40-120.90m: Film like pyrite disseminated zone (0.3%)	dark grey to black	Film like Pyrite	28 70 19 11
120						14

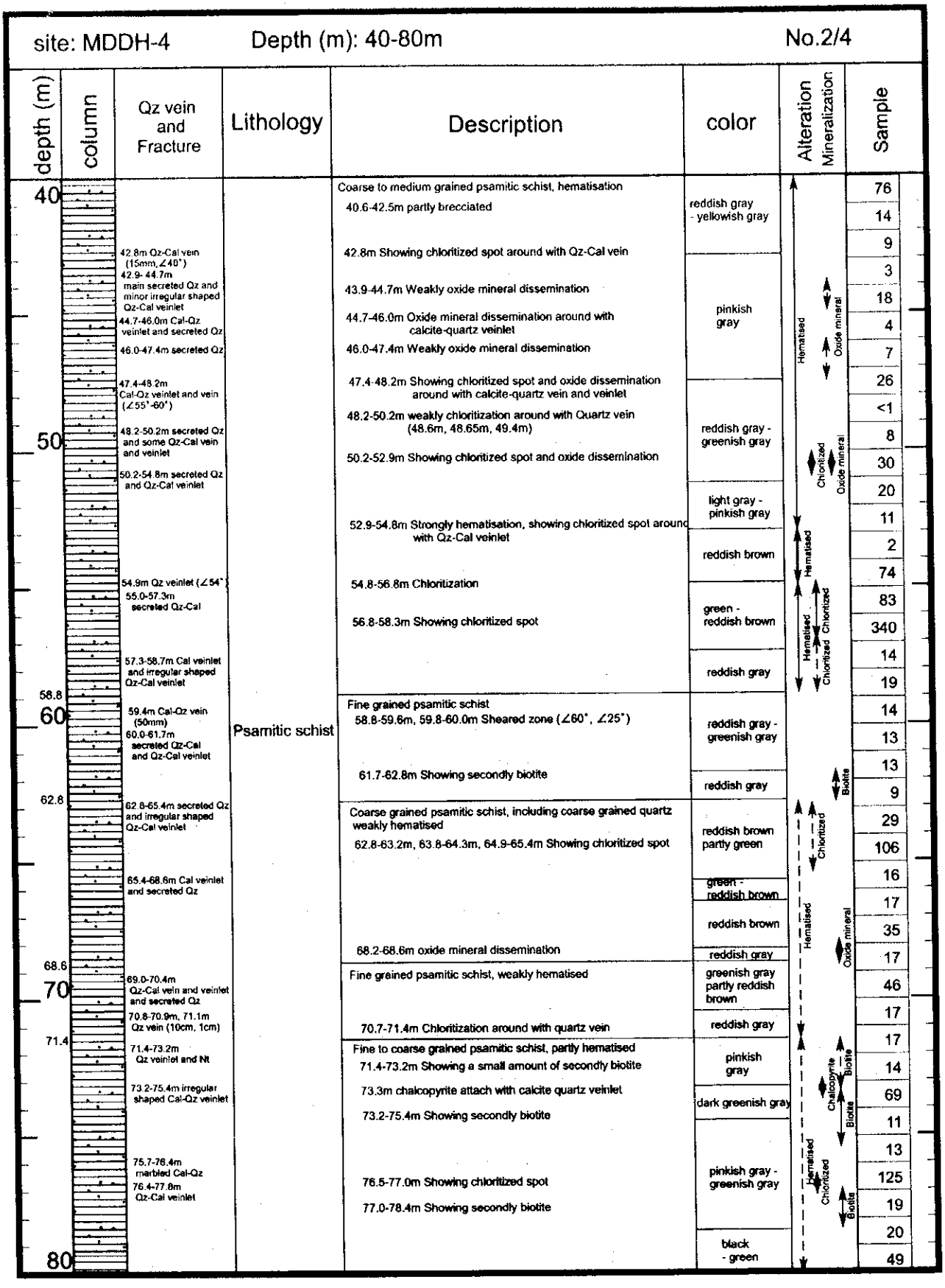
site: MDDH-3 Depth (m):120-150m No.4/4

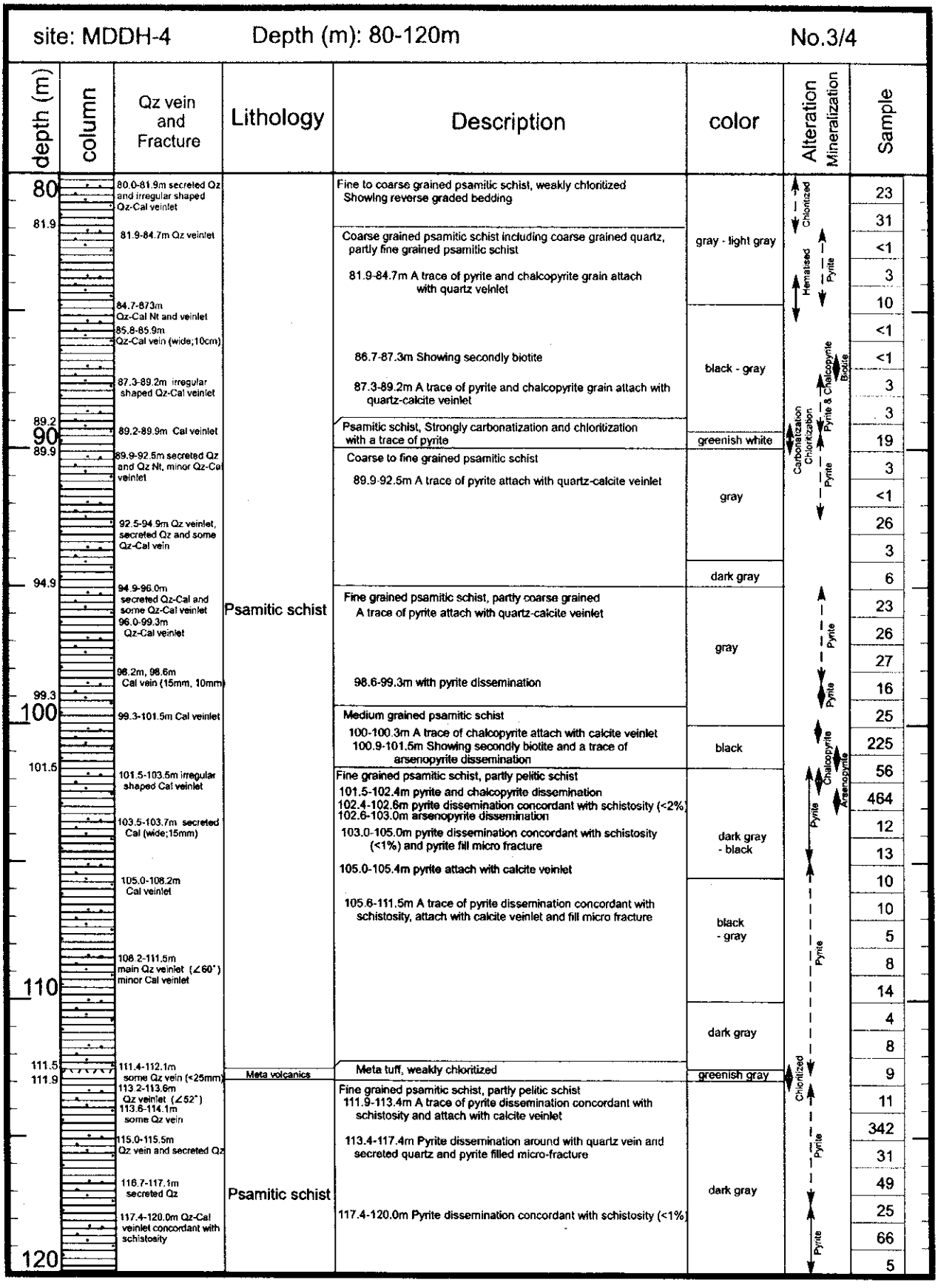
depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
120		Psamitic Schist		grey	Pyrite mineralization (vein or film)	18
120.90		Meta Andesite	Meta andesite, weakly schistosed, with recrystalized secondary biotite, concordant with schistosity			13
						9
						3
124.90	124.90-127.00m: Irregular shaped Quartz Vein	Psamitic Schist	Medium grained psamitic schist, with irregular shaped segregated quartz vein			14
						19
127.00	127.80-127.90m: ∠40° Quartz Vein	Meta Andesite	Meta andesite, weakly schistosed, with recrystalized secondary biotite			13
						11
128.60						11
130	128.60-132.50m: Irregular shaped Quartz Vein	Psamitic Schist	Medium to coarse grained psamitic schist, with recrystalized secondary biotite			122
	131.10-131.20m: ∠40° Quartz Vein		128.60-132.50m: irregular shaped quartz vein and network with a very few pyrite			16
	131.70-131.90m: ∠40° Quartz Vein					24
						13
	134.60-134.80m: ∠50° Quartz and Pyrite Vein					14
						25
						29
						73
			136.10-140.90m: pyrite mineralization zone, with pyrite (w<3mm), chlorite and quartz vein			67
138.40	136.10-140.90m: Pyrite Vein and Film Zone with Irregular shaped Quartz Vein					8
140		Pelitic Schist	With fine grained pelitic schist	dark grey to black		10
140.60	140.10-140.30m: Quartz Vein and Chlorite	Psamitic Schist	Fine to coarse grained psamitic schist, with irregular shaped segregated quartz vein	grey		8
	141.00-148.00m: Irregular shaped Quartz Vein and Network					9
						23
						33
						38
						55
	148.30-148.80m: Irregular shaped Quartz Vein and Network					43
						21
	149.00-150.00m: Irregular shaped Quartz Vein					116
150						658

site: MDDH-4 Depth (m): 0-40m No.1/4



site: MDDH-4 Depth (m): 40-80m No.2/4




site: MDDH-4
Depth (m): 80-120m
No.3/4
depth (m)
column
Qz vein and Fracture
Lithology
Description
color
Alteration Mineralization
Sample
80.0-81.9m secreted Qz and irregular shaped Qz-Cal veinlet
81.9-84.7m Qz veinlet
84.7-873m Qz-Cal Nt and veinlet
85.8-85.9m Qz-Cal vein (wide;10cm)
87.3-89.2m irregular shaped Qz-Cal veinlet
89.2-89.9m Cal veinlet
89.9-92.5m secreted Qz and Qz Nt, minor Qz-Cal veinlet
92.5-94.9m Qz veinlet, secreted Qz and some Qz-Cal vein
94.9-96.0m secreted Qz-Cal and some Qz-Cal veinlet
96.0-99.3m Qz-Cal veinlet
96.2m, 98.6m Cal vein (15mm, 10mm)
99.3-101.5m Cal veinlet
101.5-103.5m irregular shaped Cal veinlet
103.5-103.7m secreted Cal (wide;15mm)
105.0-108.2m Cal veinlet
108.2-111.5m main Qz veinlet (∠60°) minor Cal veinlet
111.4-112.1m some Qz vein (<25mm)
113.2-113.6m Qz veinlet (∠52°)
113.6-114.1m some Qz vein
115.0-115.5m Qz vein and secreted Qz
116.7-117.1m secreted Qz
117.4-120.0m Qz-Cal veinlet concordant with schistosity
Psamitic schist
Meta volcanics
Psamitic schist
Fine to coarse grained psamitic schist, weakly chloritized
Showing reverse graded bedding
Coarse grained psamitic schist including coarse grained quartz, partly fine grained psamitic schist
81.9-84.7m A trace of pyrite and chalcopyrite grain attach with quartz veinlet
86.7-87.3m Showing secondly biotite
87.3-89.2m A trace of pyrite and chalcopyrite grain attach with quartz-calcite veinlet
Psamitic schist, Strongly carbonatization and chloritization with a trace of pyrite
Coarse to fine grained psamitic schist
89.9-92.5m A trace of pyrite attach with quartz-calcite veinlet
Fine grained psamitic schist, partly coarse grained
A trace of pyrite attach with quartz-calcite veinlet
98.6-99.3m with pyrite dissemination
Medium grained psamitic schist
100-100.3m A trace of chalcopyrite attach with calcite veinlet
100.9-101.5m Showing secondly biotite and a trace of arsenopyrite dissemination
Fine grained psamitic schist, partly pelitic schist
101.5-102.4m pyrite and chalcopyrite dissemination
102.4-102.6m pyrite dissemination concordant with schistosity (<2%)
102.6-103.0m arsenopyrite dissemination
103.0-105.0m pyrite dissemination concordant with schistosity (<1%) and pyrite fill micro fracture
105.0-105.4m pyrite attach with calcite veinlet
105.6-111.5m A trace of pyrite dissemination concordant with schistosity, attach with calcite veinlet and fill micro fracture
Meta tuff, weakly chloritized
Fine grained psamitic schist, partly pelitic schist
111.9-113.4m A trace of pyrite dissemination concordant with schistosity and attach with calcite veinlet
113.4-117.4m Pyrite dissemination around with quartz vein and secreted quartz and pyrite filled micro-fracture
117.4-120.0m Pyrite dissemination concordant with schistosity (<1%)
gray - light gray
black - gray
greenish white
gray
dark gray
gray
black
dark gray - black
black - gray
dark gray
greenish gray
dark gray
Chloritized
Hematised
Pyrite
Pyrite & Chalcopyrite
Biotite
Carbonatization
Chloritization
Pyrite
Pyrite
Pyrite
Chalcopyrite
Arsenopyrite
Pyrite
Pyrite
Chloritized
Pyrite
Pyrite
80
81.9
89.2
90
89.9
94.9
99.3
100
101.5
110
111.5
111.9
120
23
31
<1
3
10
<1
<1
3
3
19
3
<1
26
3
6
23
26
27
16
25
225
56
464
12
13
10
10
5
8
14
4
8
9
11
342
31
49
25
66
5

site: MDDH-4 Depth (m): 120-150.10m No.4/4

depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
120	120.0-123.2m secreted Qz	Psamitic schist	Fine grained psamitic schist 120.0-122.5m Pyrite dissemination concordant with schistosity	dark gray	Pyrite	138
	122.5-123.2m some Qz-Cal veinlet (∠60-70°, <2mm)		122.5-123.2m Pyrite attach with Qz-Cal veinlet			87
123.2		Sheared zone	Breeciated psamitic schist, filled with calcite and quartz			4
123.7	123.7-125.4m some Qz vein (<30mm) and Qz veinlet concordant with schistosity	Pelitic schist	Pelitic schist to fine grained psamitic schist Pyrite dissemination concordant with schistosity		Pyrite	5
125.4		Psamitic schist	Fine to coarse grained psamitic schist, weakly silicified with graded bedding 125.4-131.5m Showing coarse grained secondly biotite A trace of pyrite dissemination concordant with schistosity, around with quartz vein and fill fracture		Pyrite	18
	126.4m, 128.4-128.6m 129.5m, 129.8-129.7m 130.5m Secreted Qz					5
						5
						3
					Pyrite Biotite	57
130	129.4-129.9m some Qz vein (wide; <40mm)					14
						17
			131.5-133.0m Silicified, showing secondly biotite, with coarse grained pyrite dissemination (1%)			22
	133.0-1340m Qz vein and veinlet (∠70°)		133.0-134.0m With a trace of pyrite dissemination		Pyrite	102
134.0			Fine to medium grained psamitic schist, weakly silicified, Showing secondly biotite in the fine grained part 134.0-136.2m pyrite dissemination concordant with schistosity and around with quartz vein and veinlet (2%)			7
	134.0-136.2m a lot of Qz vein and veinlet				Pyrite Biotite	10
	136.2-138.5m Qz veinlet		136.2-138.5m With a trace of pyrite dissemination			47
						3
						21
138.5						66
139.5	138.5-139.5m some Qz vein (<50mm)	Meta volcanics	Meta tuff with pyrite dissemination (2%), coarse grained pyrite attach with quartz vein	black	Pyrite	35
140		Psamitic schist	Fine grained psamitic schist with a trace of pyrite dissemination	dark gray		31
141.3		Meta volcanics	Meta tuff, biotite concordant with schistosity	black	Pyrite	31
141.6		Psamitic schist	Fine grained psamitic schist	dark gray		
142.4		Meta volcanics	Meta tuff, with coarse grained pyrite dissemination (<2%)	greenish gray		20
142.9	142.7m Qz vein	Psamitic schist	Fine to coarse grained psamitic schist 142.9-144.3m With a trace of pyrite dissemination 144.3-145.0m Showing biotite spot (<3mm) with pyrite, pyrite dissemination concordant with schistosity 145.0-147.2m With a trace of pyrite dissemination	dark gray - black	Pyrite Biotite	4 5 6 9
	145.4-146.2m some Qz veinlet					
147.5		Meta volcanics	Meta tuff with fine grained pyrite dissemination (1%) 147.2-147.4m, 148.3-148.8m Showing secondly biotite	greenish gray - dark brown	Pyrite Biotite	56 15
148.8						
150		Psamitic schist	Fine grained psamitic schist with pyrite dissemination (<1%) Showing biotite spot	black - dark gray		13
160						

site: MDDH-5 Depth (m): 0-40m No.1/4

depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
0		Hard Carapace	Pebble size broken carapace 1.00-1.30, 1.80-2.30m: Not broken core	dark yellowish reddish brown	Laterization	9
2.30						16
3.00		Soft Carapace	Broken carapace			7
		Saprolite	Very soft, original rock unknown, montmorillonite altered	light yellowish reddish brown		9
						17
						<1
						8
7.65	8.70m:∠90° Quartz Vein (w=1mm)	Weathered Schist	Saprolitic weathered fine psamitic schist, with crack (∠40°)	pinkish khaki		<1
8.50						8
10	11.10-11.20m: Fracture with Clay Mineral	Strongly Weathered Pelitic Schist	9.40-11.40m: Hematite film crack, concordant with schistosity, ∠45-60°	pinkish khaki to light khaki		<1
	11.90m:∠30° Quartz Vein (w=1cm)		10.70m: Hematite film with chlorite, ∠60°		Hematite Spot	<1
	12.80-12.95m: Fracture with Chlorite		11.40-11.50m: Hematite spot, irregularly shaped			23
	14.20, 14.80m: ∠80° Quartz Vein (w=1mm)		13.30-15.00m: Hematite film crack, concordant with schistosity, ∠45-80°	light grey		14
	15.80m:∠80° Quartz and Hematite Vein (w=1mm)		15.50m: Small fault with clay (montmorillonite?)			4
			17.20-17.50m: Chloritization zone	pinkish khaki		1
			17.40-17.80, 18.40-18.60m: Broken core (fault?)			38
18.80			19.80-20.10m: Strongly chloritized, with irregular chlorite network vein (2mm)			34
20	17.40, 18.15, 19.12m:∠80° Quartz Vein			pinkish greenish grey	Chloritization	4
	19.40-19.50, 20.00-21.00m: ∠60-80° Quartz Veinlets		21.00-22.00m: ∠60-80° , Quartz vein (w=1mm)			12
			22.00-23.00m: ∠60-80° , Quartz vein (w=1mm), 5veins/m			102
	21.20, 22.80 23.70m:∠60-80° Quartz and Hematite Vein		22.70-22.80m: Broken core (fracture?)	pinkish khaki		1
			23.90m: Quartz veinlet (w<1mm), 10veins/10cm			5
	25.00-27.00m: Quartz Film	Weakly Weathered Pelitic Schist	24.20, 24.60m: Quartz film (w<1mm), 10veins/10cm	greenish grey	Chloritization	27
			27.20-27.45m: Hematite film dominate			2
	27.40, 28.10m: Quartz Hematite and Chlorite		28.00-28.10m: Hematite film dominate, with quatrz and chlorite			<1
			28.50-28.80m: Hematite, quartz and chlorite film dominate			6
			29.00-30.00m: Hematite, quartz and chlorite film or vein dominate	pinkish brown or greenish grey		25
30			29.90-33.70m: Hematite film dominate, ∠70-80°		Chloritization	19
	31.00m:∠70-80° Quartz Vein					11
	31.40m: Quartz and Hematite Vein	Pelitic Schist	32.20-32.60, 32.70-32.90m: Irregular quartz, chlorite and hematite network vein			54
33.00	32.00m:∠80° Quartz Vein (w=1cm)		33.20-33.30, 33.40-33.70, 36.20-36.60m: Irregular quartz and hematite vein, ∠60-80°			25
	35.00-35.10, 36.10-36.20, 39.60-39.80m: ∠70° Fracture with Quartz Vein	Psamitic Schist	33.80, 34.40-34.70m: Irregular quartz and hematite vein, ∠70°			10
			34.15-34.40m: Fine grained psamitic schist			56
	36.80-37.20m:∠80° Quartz Vein (w=1cm)		35.00-35.10, 36.10-36.20, 39.6-39.8m: Brecciated quartz vein with mica	pinkish khaki		17
			37.00-39.00m: Quartz network vein zone, 10 zone/m, ∠70-80°			12
40						18
						15
						14
						39
						12

Hematite Oxidization

site: MDDH-5 Depth (m): 40-80m No.2/4

depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration / Mineralization	Sample
40	40.30m: ∠85° Quartz Vein and Chlorite, with irregular shaped Segregated Quartz		Hematite oxidized pinkish khaki colored, fine to coarse grained psamitic schist, including irregular shaped segregated quartz and sometimes chlorite	pinkish khaki	Hematite Oxidization	41
	46.50m: ∠80° Quartz Vein			greenish grey or pinkish khaki	Chlorite and Pyrite	32
44.60	46.65m: Quartz and Chlorite Vein (w=1.5cm)		44.60-45.00m: Hematite film network dominant			5
	47.20m: Quartz and Hematite Vein (w=1cm)		45.50m: Quartz and chlorite vein (w=1cm)			28
	47.70-47.80m: Quartz Network		46.80m: irregular shaped Quartz network vein with chlorite, pinkish colored zone, totally hematitization dominate			13
50	49.80m: Quartz Veinlet and Pyrite					15
	50.50, 51.30, 53.70, 55.40, 55.90-56.20m: ∠40° Quartz and Chlorite			pinkish khaki with greenish grey patch		3
						7
						9
						7
			55.00-55.20m: Coarse grained			6
						43
						16
						94
						12
						7
			56.00-57.00m: Quartz and chlorite vein			12
			57.00-58.00m: Quartz vein, with no sulfide			5
	58.40m: irregular shaped Quartz Network		58.50-60.60, 61.50-63.60m: With very few Quartz vein, with no sulfide and no hematite			6
60		Psamitic Schist		grey		65
						52
61.00	60.60-61.00m: Quartz Network, with no sulfide		61.00-62.00m: Coarse grained psamitic schist			13
62.00						7
			63.00-63.80m: Coarse grained psamitic schist			3
	63.60-63.80, 66.40-66.60, 67.10-67.70m: Quartz and Chlorite Vein					2
			65.00-68.00m: Hematite and chlorite disseminated zone	reddish green	Hematite Oxidization	22
			65.00-66.00m: Quartz and chlorite veinlet and network			7
	69.30m: ∠5° Quartz Veinlet and Pyrite					43
			68.00-68.60m: ∠5-10° , Open crack dominated zone, fault or fracture zone?	greenish grey	Hematite Oxidization / Chlorite and Pyrite	<1
70	69.50-69.60, 70.10-71.60m: ∠30° Quartz and Chlorite Vein			reddish greenish grey		9
						8
72.00	72.80-74.10m: ∠60-80° Quartz and Hematite Vein		72.00-80.00m: 10cm ordered alteration of coarse(50%) and fine (50%) psamitic schist, normal grading			10
						9
	75.40m: ∠70° Quartz, Chalcopyrite, Pyrite and Chlorite Vein (w=1.5cm)			grey		13
					Chlorite, Calcite and Epidote / Pyrite	14
	76.20m: ∠70° Quartz and Chlorite Vein					13
78.80						4
						12
78.95	78.20-78.50m: Chlorite, Calcite, Epidote, Quartz Vein (Fracture?)		78.80-78.95m: meta volcanic, porphyritic texture, strongly chloritized	greenish grey	Chlorite, Calcite and Epidote / Pyrite	37
80				grey		13

site: MDDH-5 Depth (m): 80-120m No.3/4

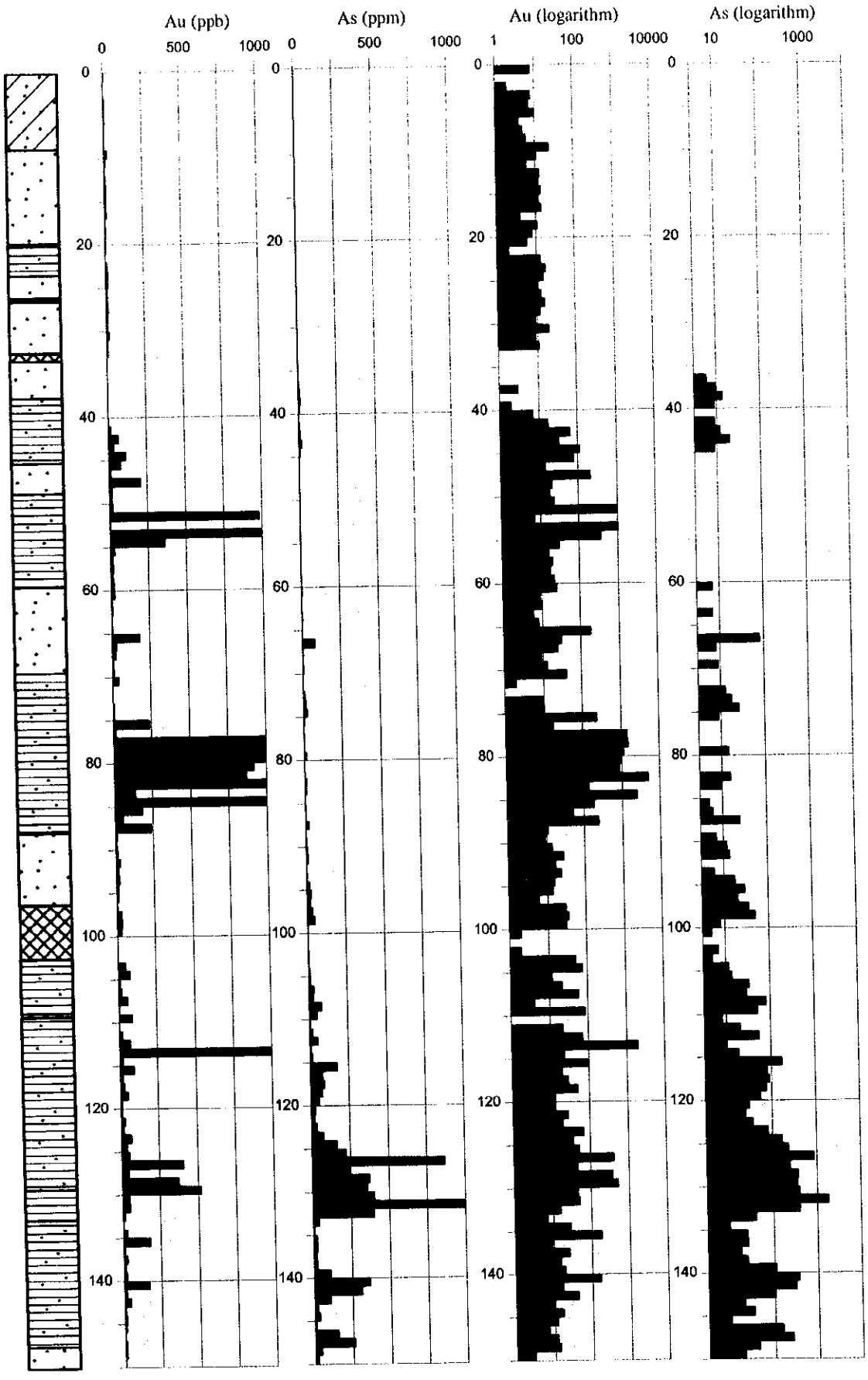
depth (m)	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
80	83.40-83.50m: ∠60° Quartz, Chlorite, Pyrite vein	Psamitic Schist	3-10cm ordered alternation between coarse (50%) and fine (50%) grained psamitic schist, normal grading	grey		50
						31
						19
	85.90, 87.00m: ∠70-85° Quartz, Chlorite vein	Chloritized Zone	Chloritized zone, with secondary biotite and chlorite	light greenish grey	Chloritization, Pyrite	37
						13
	88.25-88.35m: Quartz, Chlorite, Pyrite vein (w=1.5cm)		3-10cm ordered alternation between coarse (50%) and fine (50%) grained, normal grading, including irregular shaped segregated quartz			87
	88.80m: Quartz, Chlorite, Pyrite, Chalcopyrite, vein (w=0.5cm)		86.00-98.90m: Film like pyrite dissemination dominated			135
			88.40-88.60m: Quartz veinlet with pyrite, 6 veins/10cm			32
90			89.00-89.25m: Quartz and chlorite veinlet (∠5,70°)			23
						31
	90.00-91.00m: irregular shaped Quartz, Chlorite, Pyrite vein		89.60-89.80m: Quartz and chlorite vein, irregular shaped			17
		Psamitic Schist	91.00-92.00m: Quartz, chlorite and pyrite vein, with a little chalcopyrite (∠70-80°)	grey		52
	92.00-92.70, 92.80-93.00m: Quartz, Chlorite Network vein		92.00-92.70m: Quartz and chlorite network veinlet, with a little pyrite			45
						24
	93.20m: irregular shaped Quartz, Chlorite, Pyrite vein		93.20m: irregular shaped quartz, chlorite, pyrite film			15
			93.20-98.90m: irregular shaped quartz, chlorite, pyrite film		Film like Pyrite Dissemination	24
						21
						35
98.90	95.00, 95.25m: Quartz, Chlorite, Pyrite vein					173
100			Quartz porphyry, with porphyritic texture, rounded shaped quartz and plagioclase phenocryst, including 0.5-1.0cm irregular shaped secondary biotite, mafic material completely altered			32
	95.80-96.00m: Pyrite disseminated					9
						21
	99.20m: Quartz vein					9
	100.90-101.30m: Quartz vein with mica	Quartz Porphyry		light grey		13
						43
	102.40, 103.05, 103.40-103.50m: Quartz vein				Quartz and Pyrite	29
						16
	103.70-103.90m: Quartz, Pyrite vein					74
						10
109.85						134
110	110.00-110.50, 110.90-113.00m: irregular shaped Quartz vein		Fine grained psamitic schist			791
			109.85m: Quartz, pyrite and arsenopyrite mineralization			1405
						123
						70
	114.50-114.70, 115.90-123.10m: irregular shaped Quartz vein	Psamitic Schist		grey		80
						35
						22
					Quartz, Pyrite and Arsenopyrite	26
						24
120						30

site: MDDH-5 Depth (m): 120-150.10m No.4/4

depth (m)	column	Qz vein and Fracture	Lithology	Description	color	Alteration Mineralization	Sample
120		120.00-123.10m: irregular shaped Quartz network vein		Fine to medium grained psamitic schist, margin of quartz porphyry dyke			11
							15
							59
							20
							19
		125.00-127.00m: ∠70-80° 4 veinlets/m					24
		127.00-129.15m: ∠60-80° Quartz network vein	Psamitic Schist				12
							24
							21
130		128.30m: ∠60° Quartz and Chlorite vein (w=1cm)					14
		130.65m: ∠30° Quartz and Chlorite vein (w=2cm)					15
							19
		131.10-132.20m: ∠60-80° Quartz network vein					21
							17
		132.60-133.00m: ∠60-80° Quartz network vein			grey	Pyrite and Arsenopyrite	17
							41
		133.50-135.80m: ∠60-80° Quartz network vein	Quartz Porphyry Dyke	Medium grained, upper side boundary (∠40°)			36
138.50							40
							115
140		137.70-138.50, 138.90-140.50, 138.90-141.50m: Quartz network vein		Fine to medium grained psamitic schist, margin of quartz porphyry dyke			42
							44
		141.00, 142.90m: Quartz vein (w=3cm)					86
							43
							60
144.00		144.00-147.00m: irregular shaped Quartz vein zone	Psamitic Schist				29
							73
							28
147.10		147.10-147.60m: Quartz vein					162
147.70							59
150							30
150.10							
160							

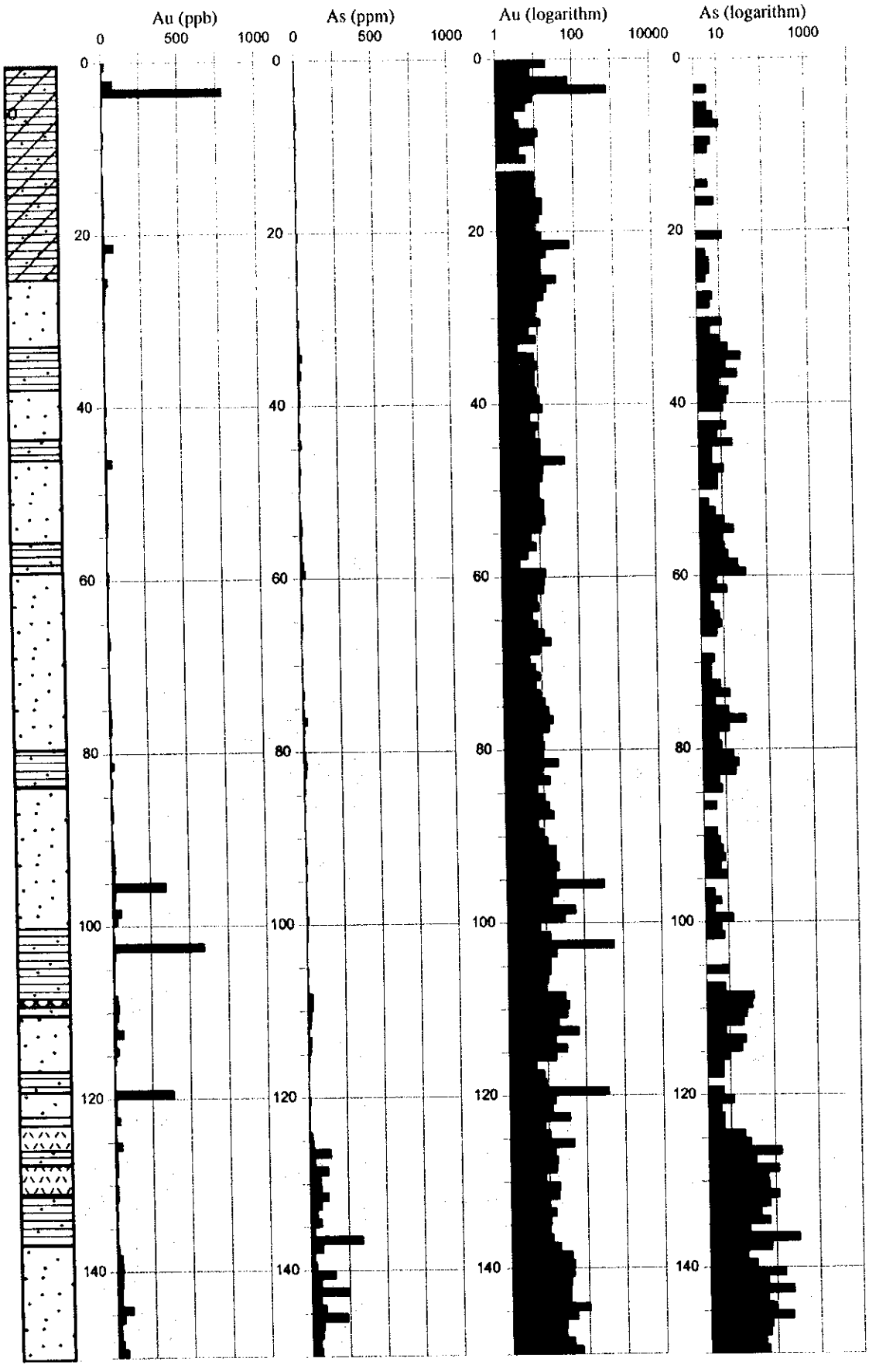
Ap. 7　le profil de l'enrichissement d'Au, As (le sondage diamant)

MDDH-1



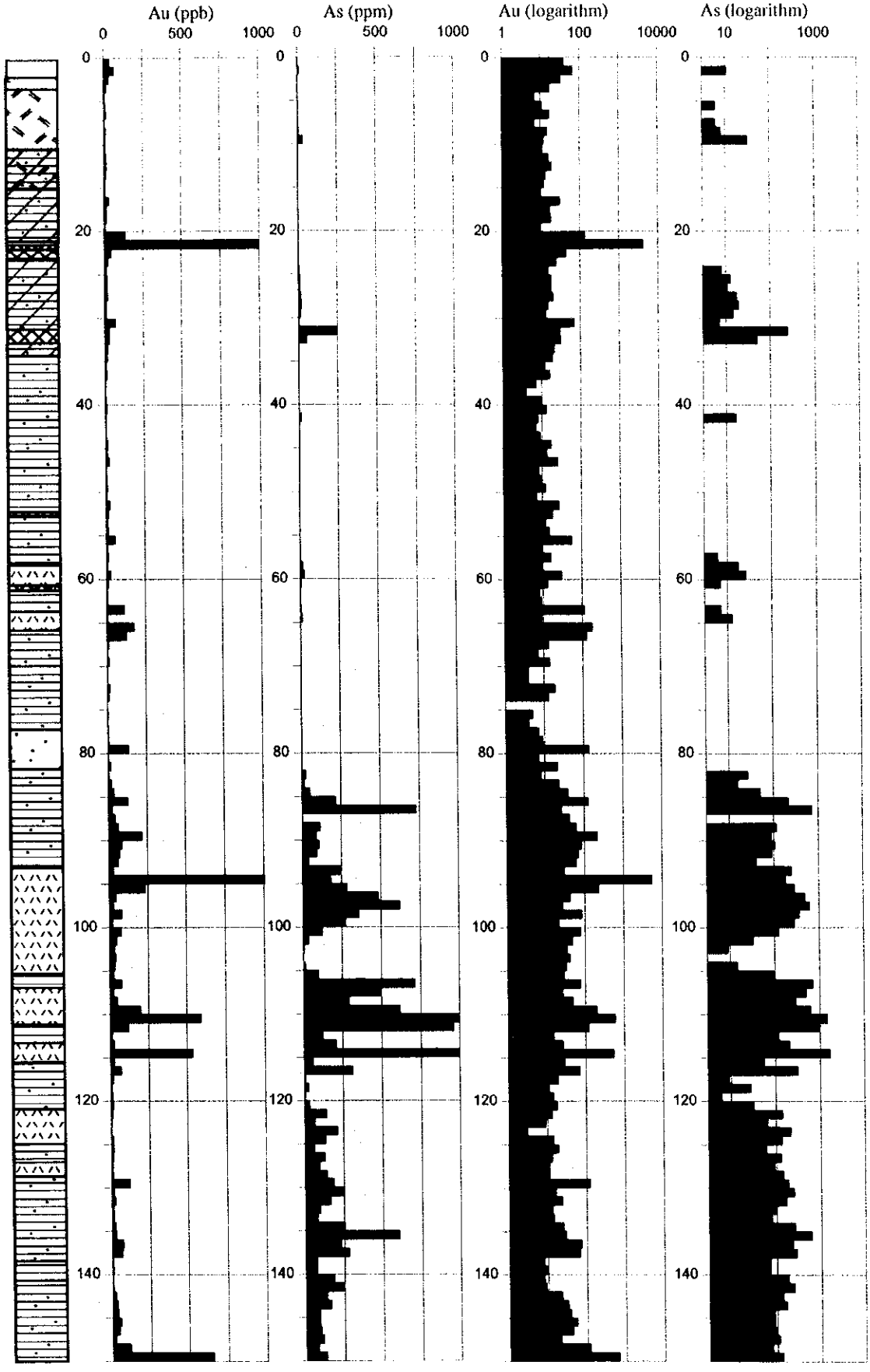
Summery of Diamond drilling (1)

MDDH-2



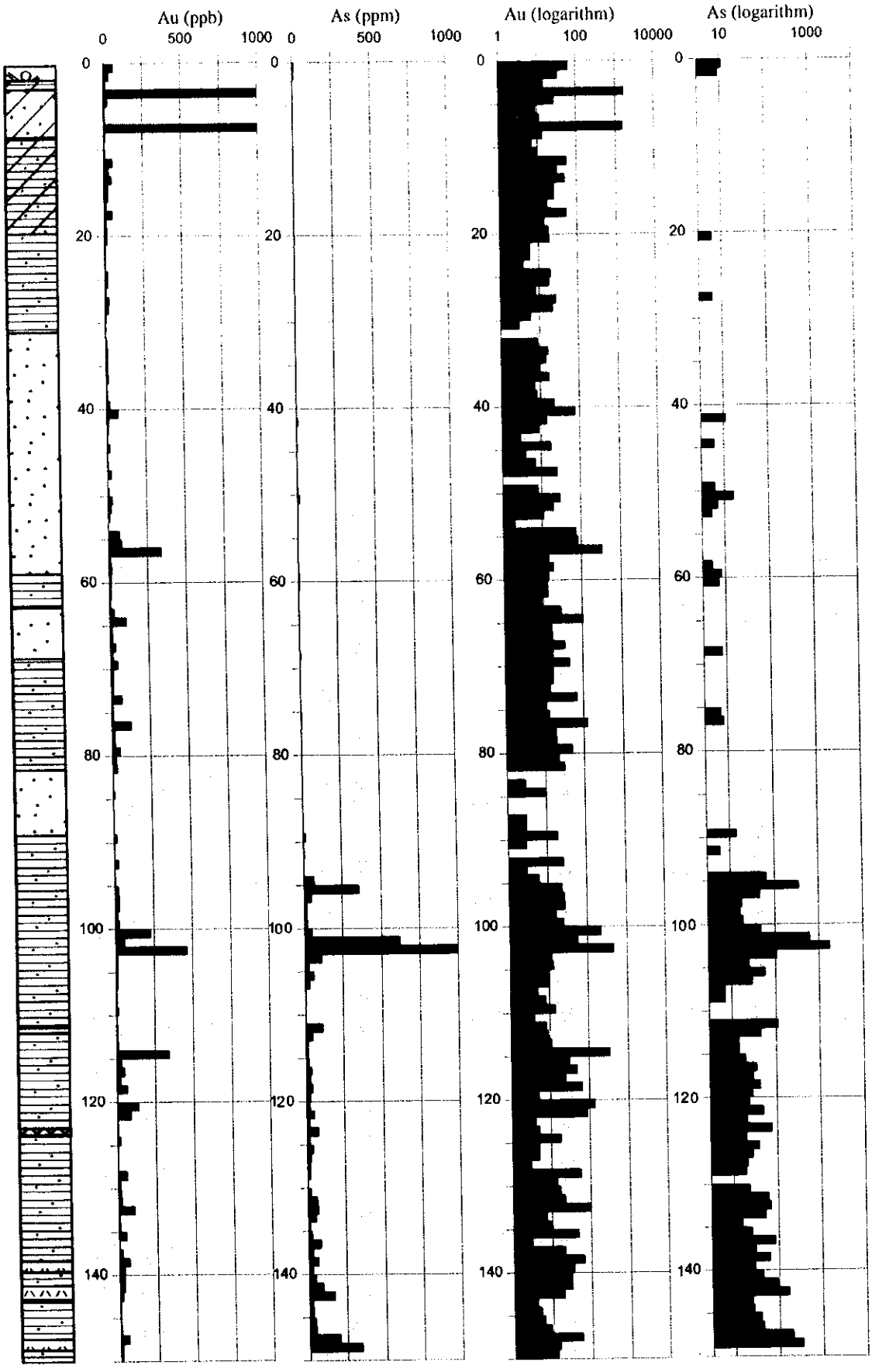
Summery of Diamond drilling (2)

MDDH-3



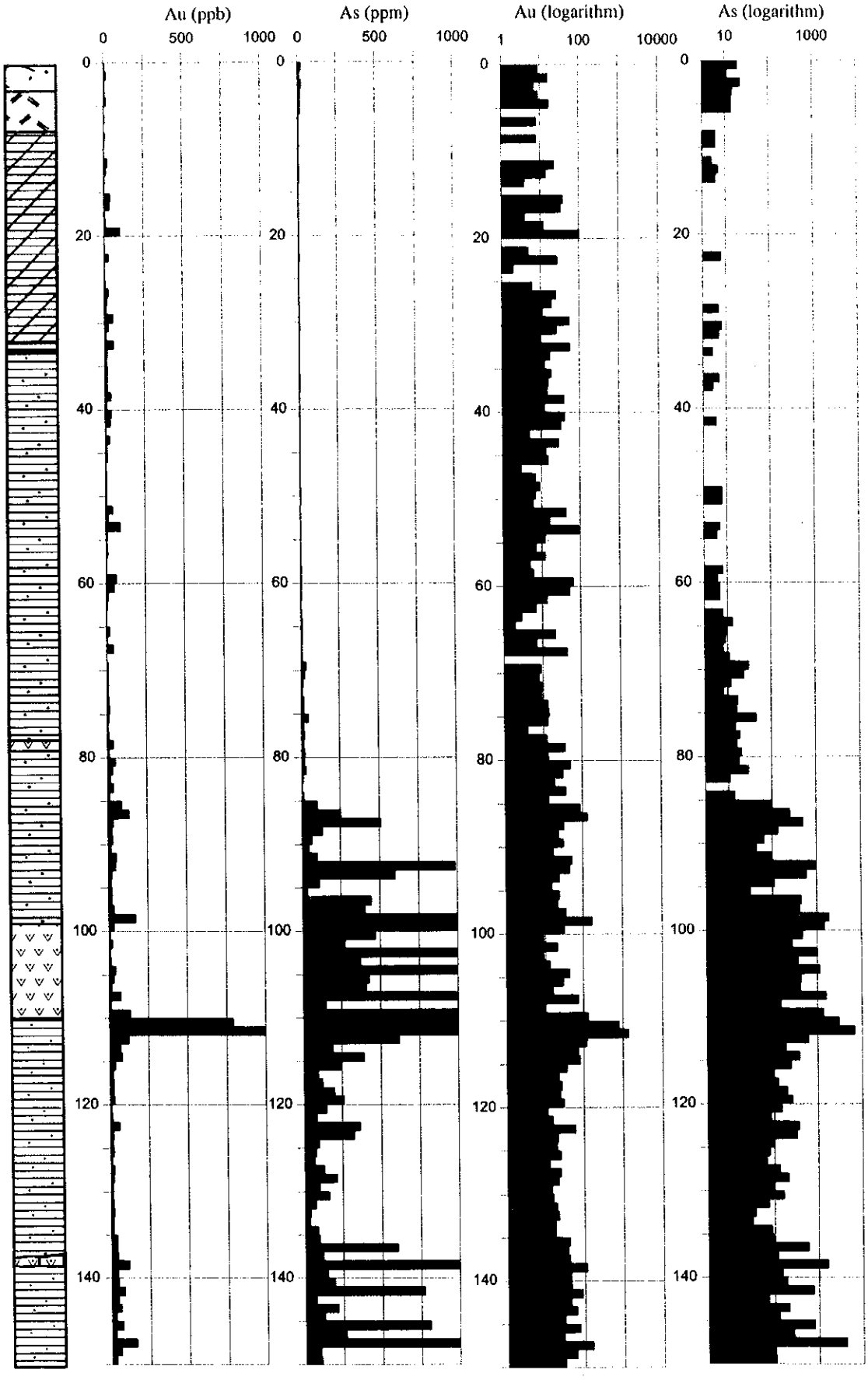
Summery of Diamond drilling (3)

MDDH-4



Summery of Diamond drilling (4)

MDDH-5



Summery of Diamond drilling (5)

Ap. 8 le résultat du sondage RC et le tableau de procédé

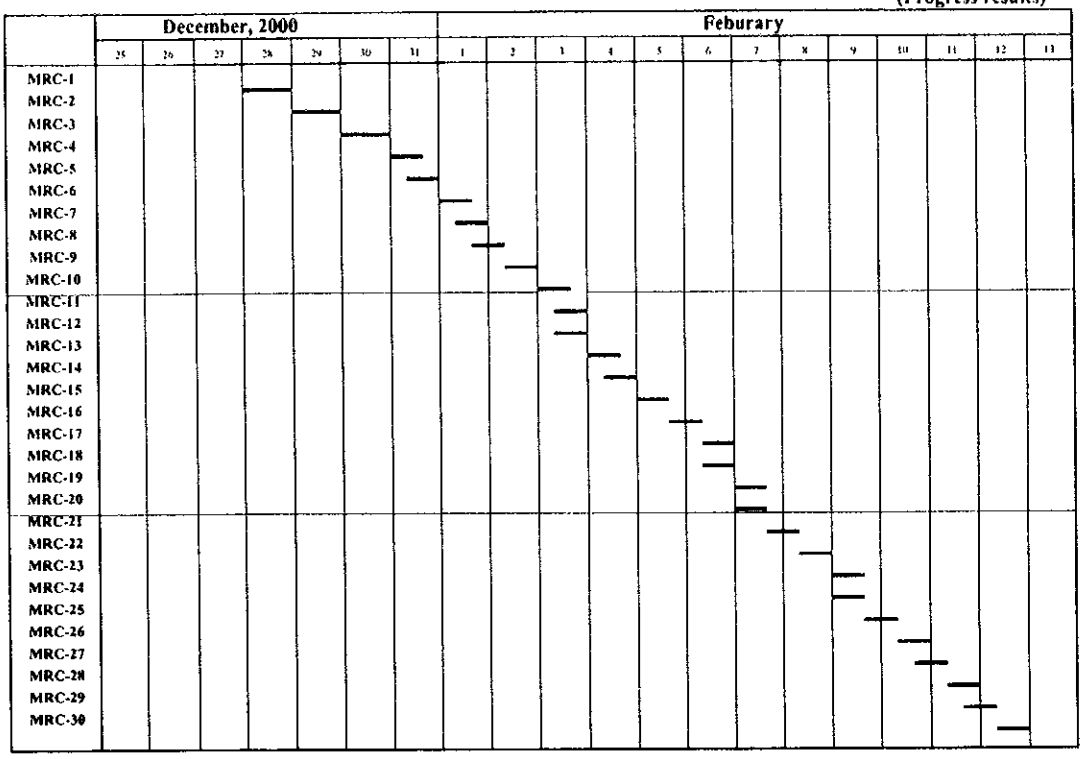
Ap. 9 la liste des équipements et les biens consomptibles utilisés pour le sondage RC et de leur quantité

Ap. 10 la liste du résultat et du tableau de procédé du sondage diamant

Ap. 11 la liste des équipements et des biens consomptibles utilisés pour le sondage diamant et de leur quantité

Ap.8 Progress results & Shedule of RC drilling holes

(Progress results)



(Drilling schedule)

Date	Content of works
December 18-27	Selection & determination of drillsite
December 23-27	Transportation to drillsites
December 28	Commencement of drilling
Feburary 12	Completion of drilling
Feburary 12-14	Transportation to Bamako

Ap. 9 List of the RC Drilling Equipment and Amount of Consumed Materi

(Equipment)

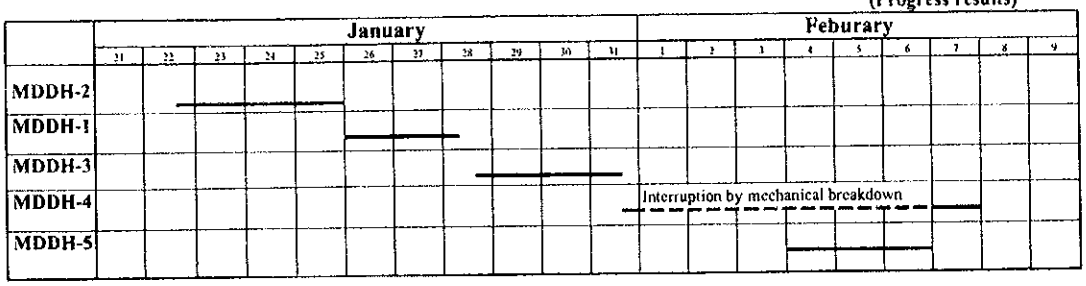
Denommination	Model
Drilling machine	RESKA30-F95, 6x6 trucking
Compressor	Ingersoll-Rand x 1, Power 21 bar/min, mount on 6 x 6 truck
Air hammer	Bourons, ϕ 5"1/2 x 3
Rod	RC50 ϕ 4"1/2 ,3mx 40
Truck	Truck as lod carrier x 1
Clinometer	Tropari
Other materials	Fishing tap(tarauds), Socket/screw bell(cloche)
Power unit	A2-72-4

(Consumed Materials)

Article	unit	Quantity
Cemented Tungusten bit(133mm)	Pcs	7
Cemented Tungusten bit(137mm)	Pcs	8
Diesel	L	7,000
grease	kg	6.9

Ap. 10 Progress results & Shedule of diamond drilling holes

(Progress results)



(Drilling schedule)

Date	Content of works
January 19-21	Selection & determination of drillsite
January 20-22	Transportation to drillsites
Januaru 23	Commencement of drilling
Feburary 7	Completion of drilling
Feburary 8-10	Transportation to Bamako

Ap. 11 List of the DD Drilling Equipment and Amount of Consumed Materia

(Drilling Equipment)

Denommination	Model
Drilling machine	RESKA30-F95, 6x6 trucking
Rod	RC50 ϕ 88.9m/m:3mx 20, ϕ 76.0m/m:3mx 60
Truck	Truck as lod carrier x 1
Clinometer	Tropari
Power unit	A2-72-4
Pompe	MG-15
Other materials	Fishing tap(tarauds), Socket/screw bell(cloche)

(Amount of Consumed Materials)

Article	unit	Quantity
Cemented Tungusten bit(97.5mm)	Pcs	3
Cemented Tungusten bit(76.5mm)	Pcs	9
Diesel	L	5,150
grease	kg	27.5
Core box	Pcs	170
Bentonite	L	345

Ap. 12　la liste du résultat de l'analyse microchimique

Thin section (DDH samples)

No.	Sample	Rock name	Texture	Minerals															Remarks
				Biotite	Muscovite	Chloritoid	Epidote	Chlorite	Tourmaline	Albite	Quartz	Calcite	Zircon	Titanite	Apatite	Hematite	Pyrite	Graphite	
1	MDDH-1 53.4m	Chloritoid schist	schistose	◎	○	+		+	+	○	◎	·				+			calcite vein, altered K-feldspar(?)
2	MDDH-1 53.9m	Biotite schist	blastopsammitic, schistose	◎	+			+		+	○	+	·	·		+		·	chlorite vein, calcite vein, K-feldspar(?), chlorite pseudomorphs after chloritoid
3	MDDH-1 77.0m	Chloritoid schist	schistose	○	+	+		○	○	○	○							·	fine grained, K-feldspar(?)
4	MDDH-1 77.6m	Biotite-Muscovite schist	blastopsammitic, schistose	○	○			○	○	+	○	+	·			·			Meta-sandstone, altered K-feldspar(?)
5	MDDH-1 81.0m	Chloritoid schist	schistose	◎	○	+		○	+	○	○	·						·	
6	MDDH-1 82.0m	Meta-sandstone	blastopsammitic	○	+	·		○	+	+	○	○				·		·	chlorite pseudomorphs after chloritoid, altered K-feldspar(?)
7	MDDH-1 82.9m	Chloritoid schist	blastopsammitic, schistose	○	◎	+		+	○	+	+					·		·	
8	MDDH-1 83.4m	Chloritoid-bearing Muscovite schist	schistose	+	◎	·		○	·	○	○	○				·		·	albite vein, calcite vein, chlorite pseudomorphs after chloritoid
9	MDDH-1 84.7m	Biotite schist	blastopsammitic	◎	·			+	·	○	○	·				·			altered K-feldspar(?), meta-sandstone
10	MDDH-1 85.7m	Chloritoid schist	schistose	◎	+	·		○	○	+	+								chlorite pseudomorphs after chloritoid
11	MDDH-1 113.6m	Biotite schist	granoblastic	◎	+					○	○							+	Schistosity is not developed.
12	MDDH-1 114.6m	Biotite schist	blastopsammitic, schistose	○	·			+		+	○	○							chlorite pseudomorphs after chloritoid
13	MDDH-2 123.0m	Biotite schist	schistose	◎				○		○	+								meta-tuff
14	MDDH-3 21.5m	Biotite schist	blastopsammitic, schistose	○	+					+	○					+			altered K-feldspa.(?), Schistosity is not developed.
15	MDDH-3 94.9m	Biotite schist	schistose	◎				+		+	○				·		·		calcite vein, altered K-feldspar(?)
16	MDDH-3 101.5m	Biotite schist	schistose	◎				+		○	○						·	·	albite vein
17	MDDH-3 115.9m	Biotite-Muscovite schist	schistose	◎	○			+	○	○	○	·					·	·	opaque minerals vein, albite vein
18	MDDH-3 139.65m	Biotite-Muscovite schist	schistose	◎	◎			+	·	+	+						·	+	chlorite pseudomorphs after chloritoid, albite vein, opaque minerals vein
19	MDDH-4 3.0m	Meta-sandstone	blastopsammitic	+						+	○					+			red-stained rock
20	MDDH-4 93.0m	Biotite-Muscovite schist	blastopsammitic, schistose	◎	◎			○	·	+	○		·		·			·	altered K-feldspar(?)
21	MDDH-4 110.0m	Biotite-Muscovite schist	schistose	○	◎			○	·	○	○	·					·	+	chlorite pseudomorphs after chloritoid, calcite vein,
22	MDDH-4 137.3m	Biotite-Muscovite schist	schistosity	◎	◎			○	+	○	○						·	+	chlorite pseudomorphs after chloritoid
23	MDDH-5 107.0m	Biotite hornfels	blastoporphyritic, granoblastic	○				+		○	◎				·		·	·	relic plagioclase and quartz
24	MDDH-5 109.8m	Biotite hornfels	blastoporphyritic, granoblastic	○	+					○	○				+				muscovite vein
25	MDDH-5 111.9m	Biotite schist	balstopsammitic, schistose	◎	+			·		○	○							·	meta-sandstone, quartz vein
26	Morila	Biotite hornfels	blastopsammitic, granoblastic	○			+	○		○	◎			+			+		calcite vein, fragments of microcline

Thin section (Rock samples)

No.	Rock name	Location	Area	Line Name	Easting	Northing	Texture	Minerals																			Remarks
								Plagioclase	Albite	K-feldspar	Quartz	Muscovite	Biotite	Clinopyroxene	Orthpyroxene	Chlorite	Opque mineral	Talc	Titanite	Tourmaline	Olivine	Amphibole	Apatite	Chloritoid	Zircon	
RS008	Olivine basalt	Dyke	Diamou	L	692400	1333000	phyric, quenched	◎						◎		○	◎	○			+					olivine is phenocryst and psudomorph
RS011	Muscovite schist	DPit-56	Diamou	L	694000	1333000	schistose		○		◎	◎	+				◎		+	+						folded
RS014	Gabbro	in situ float	Diamou	K/L	693170	1333200	equigranular	◎		+	+		○	◎		○	○	+								partly ophitic
RS020	Biotite-muscovite hornfels	outcrop	Diamou	L	692946	1333005	granoblastic	○	○		◎	○	○			·	·		·							plagioclase is psudomorph
RS022	Biotite-muscovite hornfels	Outcrop	Diamou		693731	1333743	granoblastic	+	○		◎		◎			+	·		·							plagioclase is psudomorph
RS033	Muscovite-biotite schist	outcrop	Kouloukoro	A/B	688440	1341100	schistose		○		◎	◎	◎			+	+		+	+				+		not folded
RS035	Gabbro	outcrop	Kouloukoro	N	692090	1338000	equigranular	◎		+	+		+	◎		○	+	○								partly ophitic
RS039	Muscovite granite	Outcrop	Kouloukoro	B	687672	1340798	equigranular	○		+	○	○														very coarse-grained
RS041	Biotite-muscovite hornfels	Outcrop	Kouloukoro	B	687729	1340871	granoblastic	○	○		◎	·	○				·		·							plagioclase is psudomorph
RS043	Basalt	Outcrop	Siliba-S	R	683080	1346750	non-porphyritic	◎						◎		○	○									fine-grained basalt without vesicles
RS044	Muscovite schist	Float	Siliba-S	R	680000	1346750	schistose		○		○	◎				○	◎									folded
RS047	Noritic gabbro	Outcrop	Siliba-S	O	682600	1347500	equigranular	◎		+	+		+	◎	○	○	○	○								partly ophitic
RS050	Noritic gabbro	Outcrop	Siliba-S	C	679700	1350270	equigranular	◎		+	+		+	○	○	+	○	○								partly ophitic
RS052	Conglomerate	Dyke	Kalako	Outside	702300	1343450	clastic	·		·	◎	+	·				·									matrix-support
RS053	Gabbro	outcrop	Kalako	J	699975	1341745	equigranular	◎		+	+		○	◎		○	○	○								partly ophitic
RS054	Muscovite granite	Float	Kalako	B	702100	1343750	equigranular	○			○	○	+							○						very coarse-grained
RS055	Biotite granite	Float	Sirikoro	T	709000	1331000	equigranular	○		○	○		○			+			·			+	·		·	very coearse-grained
RS056	Crystalline schist	Outcrop	Sirikoro		707391	1334763	schistose		○		◎	○					◎									folded, severly altered
RS057	Sandstone	Float	BB		699102	1361020	clastic and growth				◎		·													orthoquartzite, well rounded and sorted

Thin section (DDH samples)

No.	Sample	Rock name	Description
1	MDDH-1 53.4m	Chloritoid schist	The schistosity is defined by the preferred orientation of biotite and muscovite. Chloritoid porphyroblasts are platy grains (up to 1.5 mm long), whose long axes are oblique to the schistosity. Chloritoid is often replaced by chlorite. Red-stained K-feldspar(?) grains are also abundant. Albite veins and calcite veins are also observed.
2	MDDH-1 53.9m	Biotite schist	Blastopsammitic texture. The schistosity is defined by the preferred orientation of biotite. Chlorite pseudomorphs after chloritoid are observed. A calcite vein and a chlorite vein crosscut the schistosity.
3	MDDH-1 77.0m	Chloritoid schist	Fine-grained biotite and muscovite define the schistosity. Tourmaline and chloritoid porphyroblasts are oblique to the schistosity. Chloritoid (up to 2 mm long) contains inclusions of tourmaline, and is often replaced by chlorite. Red-stained K-feldspar(?) grains are abundant.
4	MDDH-1 77.6m	Biotite-Muscovite schist	Blastopsammitic texture. The schistosity is defined by the preferred orientation of muscovite and biotite. Sandy layers alternate with muddy layers. Chlorite-rich green mafic blocks of about 1 cm size (chloritoid pseudomorphs?) are also included. Altered K-feldspar grains are
5	MDDH-1 81.0m	Chloritoid schist	Fine-grained biotite and muscovite define the schistosity. Sandy layers are also present. Chloritoid porphyroblasts are oblique to the schistosity. Chlorite occurs as pseudomorphs after chloritoid. Albite vein crosscuts the schistosity.
6	MDDH-1 82.0m	Meta-sandstone	Blastopsammitic texture. The weak schistosity is defined by the preferred orientation of biotite and muscovite. K-feldspar is also abundant. Chlorite pseudomorphs after chloritoid is observed. A calcite vein crosscuts the schistosity. Altered K-feldspar grains are abundant.
7	MDDH-1 82.9m	Chloritoid schist	The rock is fine-grained with well-developed schistosity. Sandy layers are also present. The schistosity is defined by the preferred orientation of muscovite and biotite. Chloritoid porphyroblasts contains inclusions of tourmaline, quartz and albite.
8	MDDH-1 83.4m	Chloritoid-bearing Muscovite schist	Protolith is pelitic with some sand grains. Muscovite defines the schistosity. Albite vein and calcite vein are observed. Chloritoid is replaced by chlorite.
9	MDDH-1 84.7m	Biotite schist	Blastopsammitic texture. The schistosity is defined by the preferred orientation of biotite. Altered K-feldspar is abundant.
10	MDDH-1 85.7m	Chloritoid schist	Fine-grained schistose rock. The schistosity is defined by fine-grained biotite and muscovite. Chlorite pseudomorphs after chloritoid are observed. Tourmaline (up to 1 mm long) is abundant. Albite vein crosscuts the schistosity.
11	MDDH-1 113.6m	Biotite schist	The weak schistosity is defined by fine-grained biotite. Fine- to mediumu-grained quartz and albite form granoblastic texture. An albite vein and an opaque mineral vein are observed.
12	MDDH-1 114.6m	Biotite schist	Blastopsammitic texture. Biotite defines the schistosity. Abundant calcite is observed. Chlorite pseudomorphs after chloritoid is also observed.
13	MDDH-2 123.0m	Biotite schist	Protolith is tuff with some sand grains. The Weak schistosity is defined by biotite.
14	MDDH-3 21.5m	Biotite schist	Blastopsammitic texture. Schistosity is not developed well. But the weak schistosity is defined by biotite and minor muscovite. Altered K-feldspar is observed.
15	MDDH-3 94.9m	Biotite schist	Abundant biotite defines the schistosity. Altered K-feldspar(?) is also abundant. Calcite vein crosscuts the schistosity.
16	MDDH-3 101.5m	Biotite schist	The schistosity is defined by medium-grained biotite (0.2-0.8 mm) and chlorite. Plagioclase is observed in the matrix. Albite vein crosscuts the schistosity.

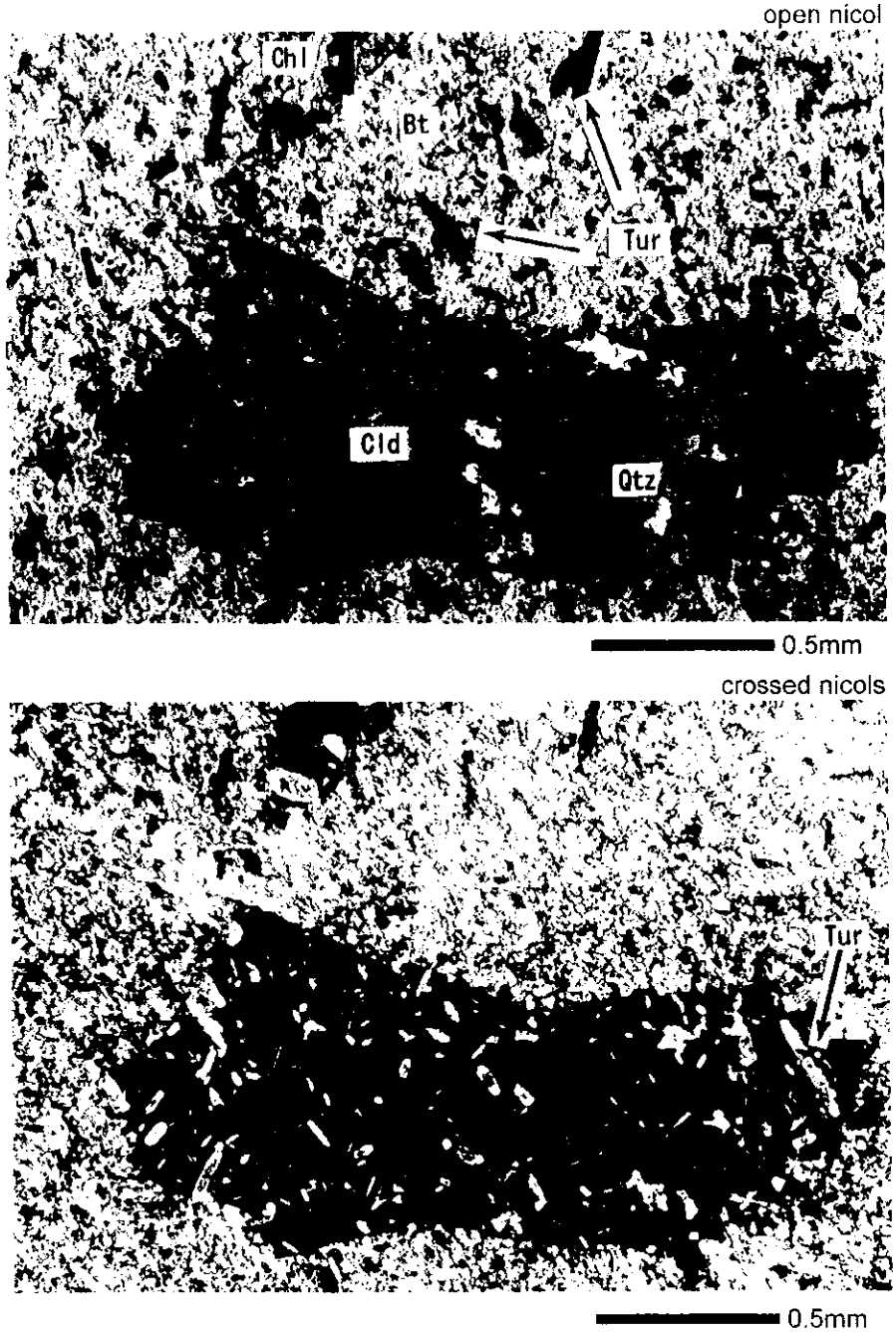
Thin section (DDH samples)

No.	Sample	Rock name	Description
17	MDDH-3 115.9m	Biotite-Muscovite schist	The schistosity is defined by fine-grained biotite and muscovite (<0.1 mm). Tourmaline is abundant. Opaque mineral vein and albite vein are observed.
18	MDDH-3 139.65m	Biotite-Muscovite schist	Fine-grained biotite and muscovite define the dominant late-stage schistosity, but folded alignment of graphite traces the early stage foliation. Tourmaline is common, and is oblique to the schistosity. Chlorite pseudomorphs after chloritoid are also common. Albite vein crosscuts the schistosity.
19	MDDH-4 3.0m	Meta-sandstone	Red-stained meta-sandstone. Biotite is observed. Schistosity is not developed.
20	MDDH-4 93.0m	Biotite-Muscovite schist	Blastopsammitic texture. Fine-grained biotite and muscovite (<0.1mm) define the schistosity. Red-stained K-feldspar(?) grains are abundant.
21	MDDH-4 110.0m	Biotite-Muscovite schist	Fine-grained biotite and muscovite (<0.1mm) define schistosity. Chlorite pseudomorphs (<2mm) after chloritoid is observed. Calcite vein crosscuts the schistosity.
22	MDDH-4 137.3m	Biotite-Muscovite schist	The schistosity is defined by fine-grained biotite and muscovite (<0.1mm). Some medium-grained biotite-rich bands and muscovite-rich bands parallel the foliation. Tourmaline is common. Chlorite pseudomorphs after chloritoid are also present, and are oblique to the
23	MDDH-5 107.0m	Biotite hornfels	Blastoporphyritic texture after quartz porphyry. Plagioclase phenocrysts of up to 4 mm size are abundant, and some quartz phenocrysts are also present. The groundmass is composed of granoblastic aggregate of fine-grained quartz and plagioclase with some biotite. Small graines of apatite (0.1mm) are also obseved.
24	MDDH-5 109.8m	Biotite hornfels	Blastoporphyritic texture. Plagioclase phenocrysts (up to 3mm size) and quartz phenocrysts are observed. The groundmass is composed of granoblastic aggregate of fine-grained quartz and plagioclase (albite). Fragnents of microcline are also observed. A Muscovite-albite veine crosscuts the matrix.
25	MDDH-5 111.9m	Biotite schist	Blastopsammitic texture. The schistosity is defined by abundant biotite and minor muscovite. Albite-quartz vein is observed.
26	Morila	Biotite hornfels	Blastopsammitic texture. Biotite, plagioclase and quartz are observed with minor epidote. Some microcline fragments are also obseved. Calcite veins crosscuts the schistosity.

Thin section (Rock samples

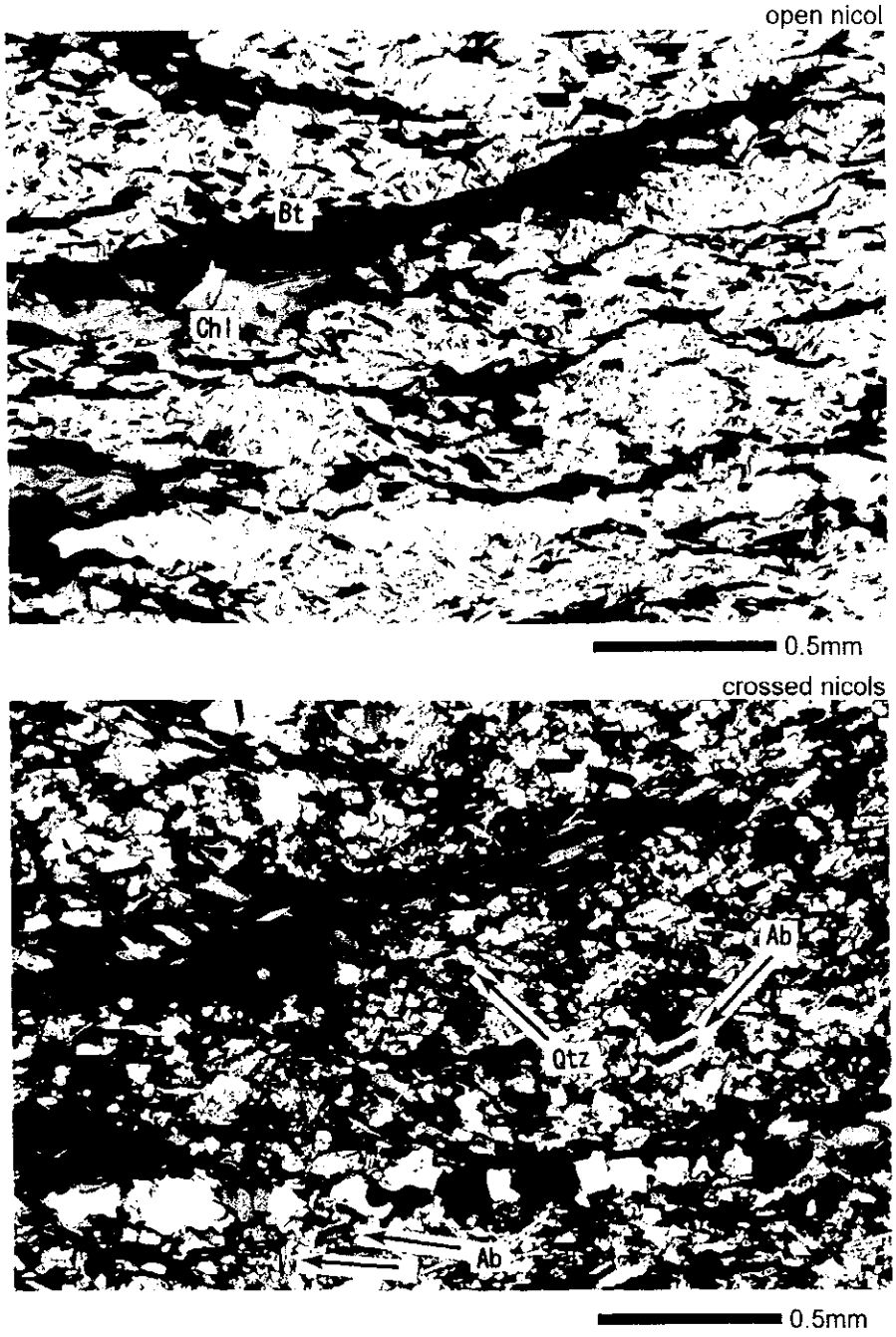
No.	Rock name	Description
RS008	Olivine basalt	This rock shows quench texture with rare phenocrysts of olivine, which is completely altered to secodary minerals(talc and chlorite) and include chromian spinels(or magnetite?). The groundmass minerals include plagioclase, augite and titanomagnetite.
RS011	Muscovite schist	Folded, strong schistosity are observed. Muscovite and biotite are arranged along the schistosity. Many light pink minerals are probably altered K-feldspar.
RS014	Gabbro	Coase-grained equigranular rock. Euhedral plagioclase and anhedral augite partry form ophitic texture. Quartz and K-feldspar show graphic texture in the interstisial spaces.
RS020	Biotite-muscovite hornfels	This rock contains blast-porphyritic quartz and plagioclase(psudomorph). The groudmass is recrystallized into fine-grained granoblastic quartz, albite, biotite, muscovite and opaque mineral.
RS022	Biotite-muscovite hornfels	This rock contains blastoporphyritic quartz and plagioclase (psudomorph). The groudmass is recrystallized into fine-grained granoblastic quartz, albite, biotite, muscovite and opaque mineral.
RS033	Muscovite-biotite schist	Biotite, muscovite and quartz are arranged along schistosity, which is not folded. Some chloritoid porphyroblasts occur with the elongation oblique to the schitosity.
RS035	Gabbro	Coase-grained equigranular rock. Euhedral plagioclase and anhedral augite partry form ophitic texture. Quartz and K-feldspar show graphic texture in the interstisial spaces.
RS039	Muscovite granite	Leucocratic, very coase-grained equigranular rock. Large K-feldspar grains are rarely contained.
RS041	Biotite-muscovite hornfels	This rock contains blast-porphyritic quartz and plagioclase(psudomorph). The groudmass is recrystallized into fine-grained granoblastic quartz, albite, biotite, muscovite and opaque mineral.
RS043	Basalt	Fine-grained, non-porphyritic rock without vesicles. The groundmass consists of plagioclase, augite and titanomagnetite.
RS044	Muscovite schist	Fine-grained rock with strong schistosity, which highly folded. Minerals are arranged along the folded schistosity. Muscovite-rich layers and opaque mineral (graphite, hematite and ilmenite?)-rich layers are interbedded.
RS047	Noritic gabbro	Coase-grained equigranular rock. Subhedral plagioclase and anhedral augite partly form ophitic texture. Orthopyroxene also occurs as coase-grained porphyritic crystal. Quartz and K-feldspar show graphic texture in the interstitial spaces.
RS050	Noritic gabbro	Coase-grained equigranular rock. Subhedral plagioclase and anhedral augite partly form ophitic texture. Orthopyroxene also occurs as coase-grained porphyritic crystal. Quartz and K-feldspar show graphic texture in the interstitial spaces.
RS052	Conglomerate	Matrix-supported conglomerate. Angular to subrounded pebbles are solely sandstone (up to 2cm), which consists of quartz and minor biotite, K-feldspar, plagioclase, muscovite and opaque minerals.
RS053	Gabbro	Coase-grained equigranular rock. Euhedral plagioclase and anhedral augite partry form ophitic texture. Quartz and K-feldspar show graphic texture in the interstisial spaces.
RS054	Muscovite granite	Leucocratic, very coase-grained equigranular rock. A melanocratic tourmaline-quartz-muscovite-biotite band is associated.
RS054	Biotite granite	Very coase-grained equigranular rock consisting of quartz, plagioclase, K-feldspar, biotite and hornblende. Accessory zircon, titanite and apatite are also present.
RS056	Crystalline schist	Red-colored rock with folded schistosity. Majyor constituent minerals are quartz, muscovite and opaque minerals (mainly hematite and limonite?).
RS057	Quartzose sandstone (Orthoquartzite)	This rock is mostly composed of quartz with minor biotite and opaque mineral. Clastic grains are well rounded and well sorted. Secondary growth of each quartz grain is evidenced by the circular arrangement of its opaque inclusions.

Sample: MDDH-1 77.0m
Rock name: Chloritoid schist



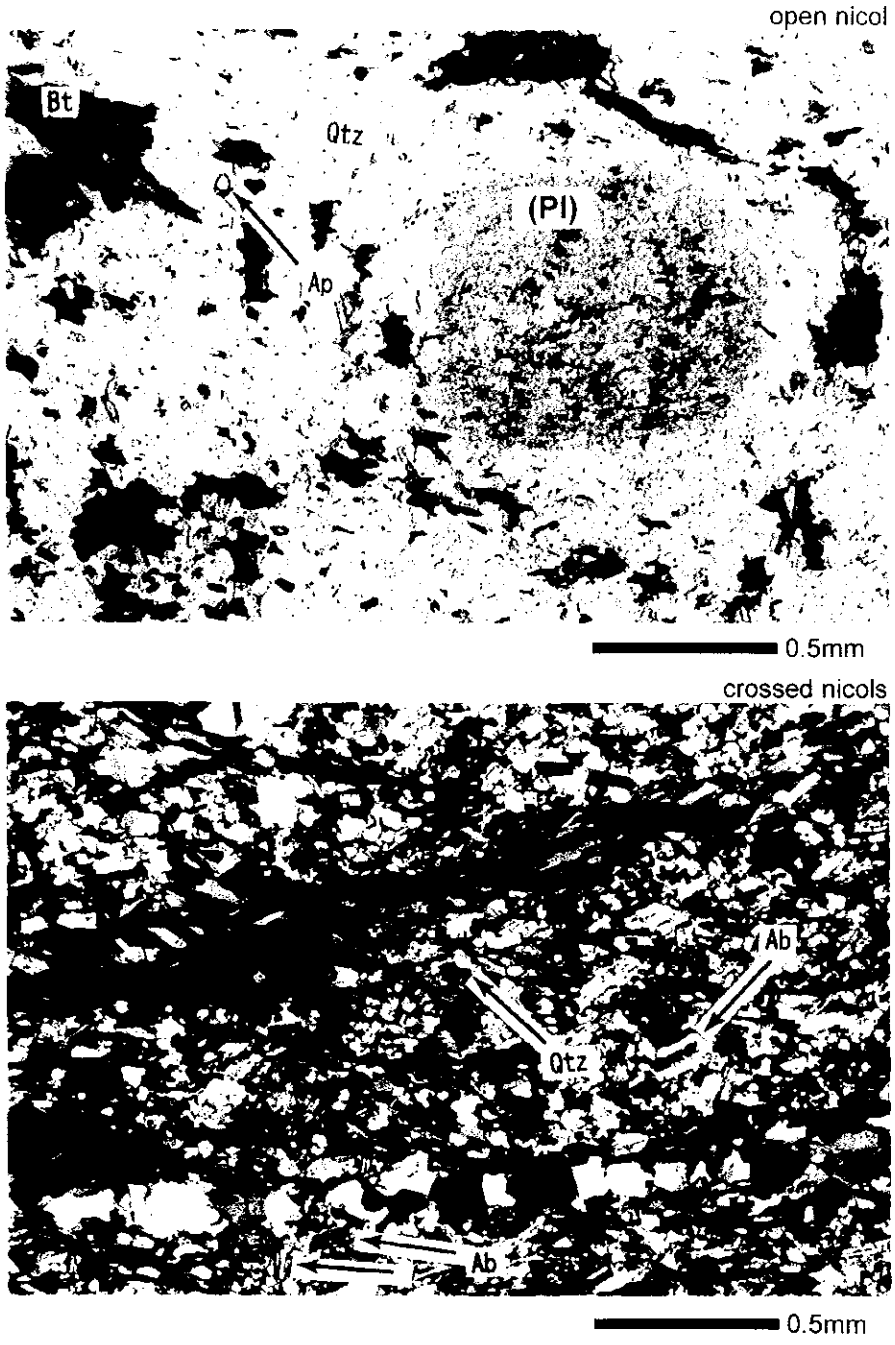
Fine-grained biotite (Bt) and muscovite define the schistosity. Tourmaline (Tur) and chloritoid porphyroblasts are oblique to the schistosity. Chloritoid (Cld: up to 2mm long) contains inclusions of tourmaline, and is often replaced by chlorite (Chl). Red-stained K-feldspar (?) grains are abundant.

Sample: MDDH-3 101.5m
Rock name: Biotite schist



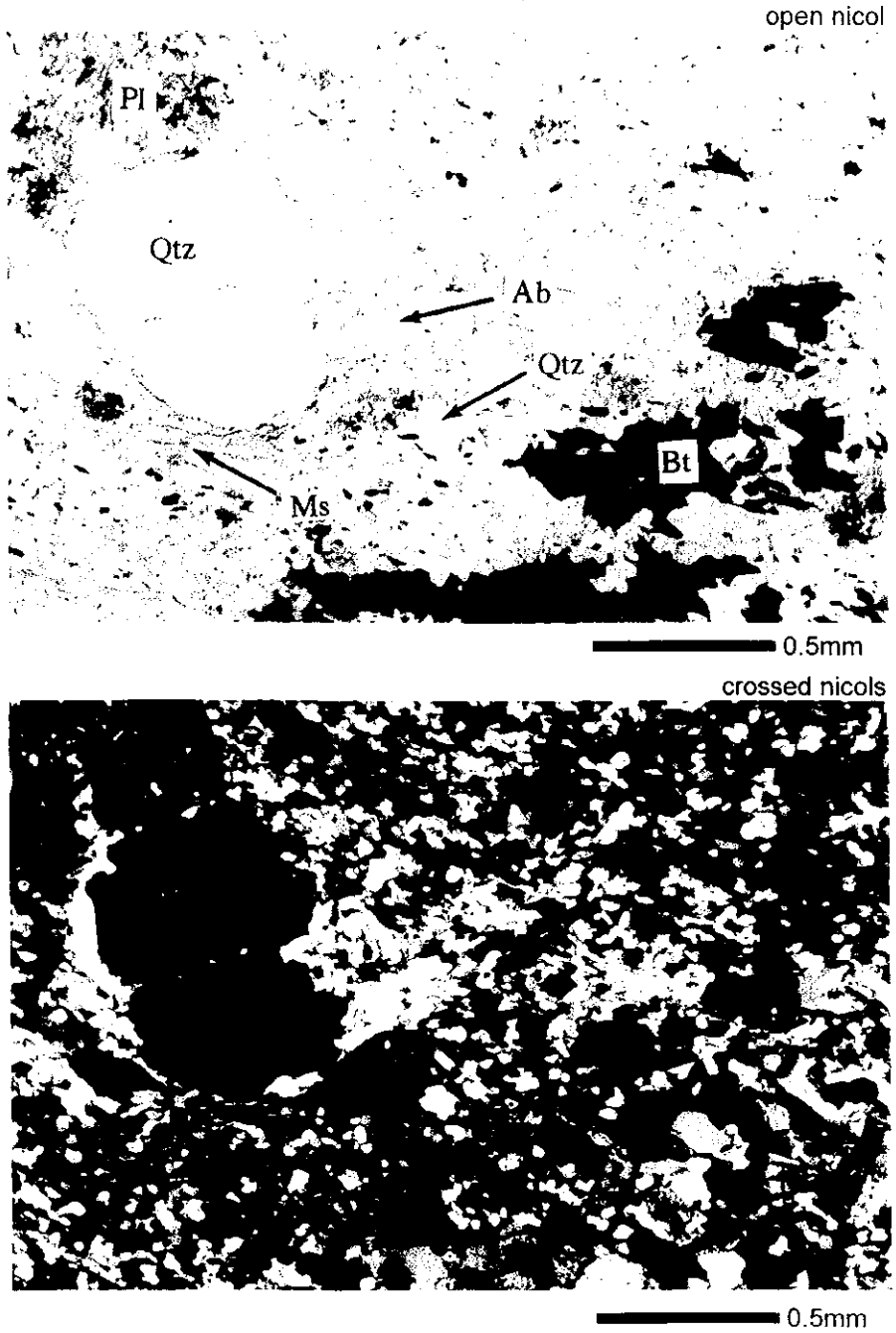
The schistosity is defined by medium-grained biotite (Bt: 0.2-0.8 mm) and chlorite (Chl). Plagioclase is observed in the matrix. Albite (Ab) vein crosscuts the schistosity.

Sample: MDDH-5 107.0m
Rock name: Biotite hornfels



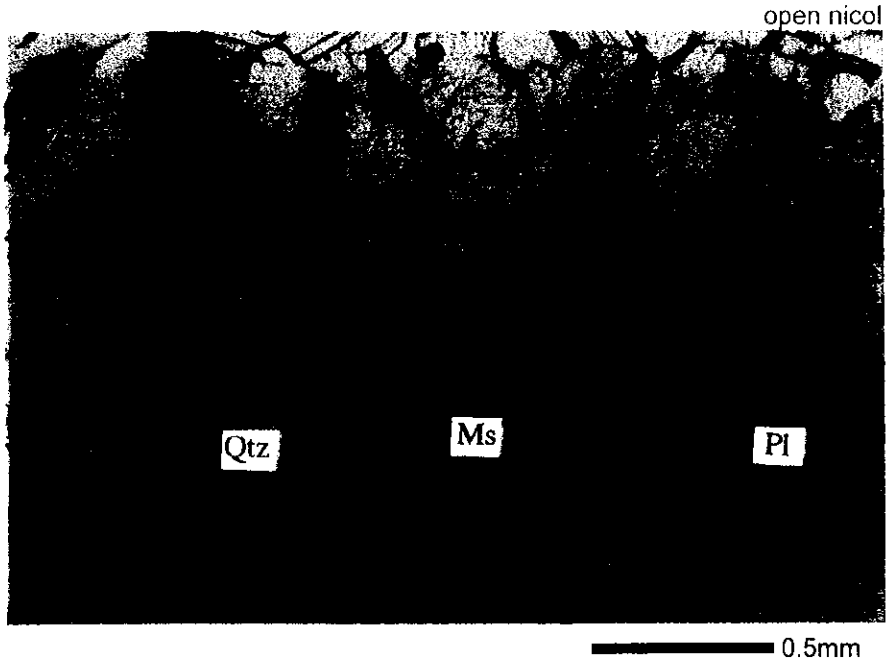
Blastoporphyritic texture after quartz porphyry. Plagioclase (Pl) phenocrysts of up to 4 mm size are abundant, and some quartz (Qtz) phenocrysts are also present. The groundmass is composed of granoblastic aggregate of fine-grained quartz and plagioclase with some biotite (Bt) . Small graines of apatite (Ap: 0.1mm) are also obseved.

Sample: RS020
Rock name: Biotite-muscovite hornfels



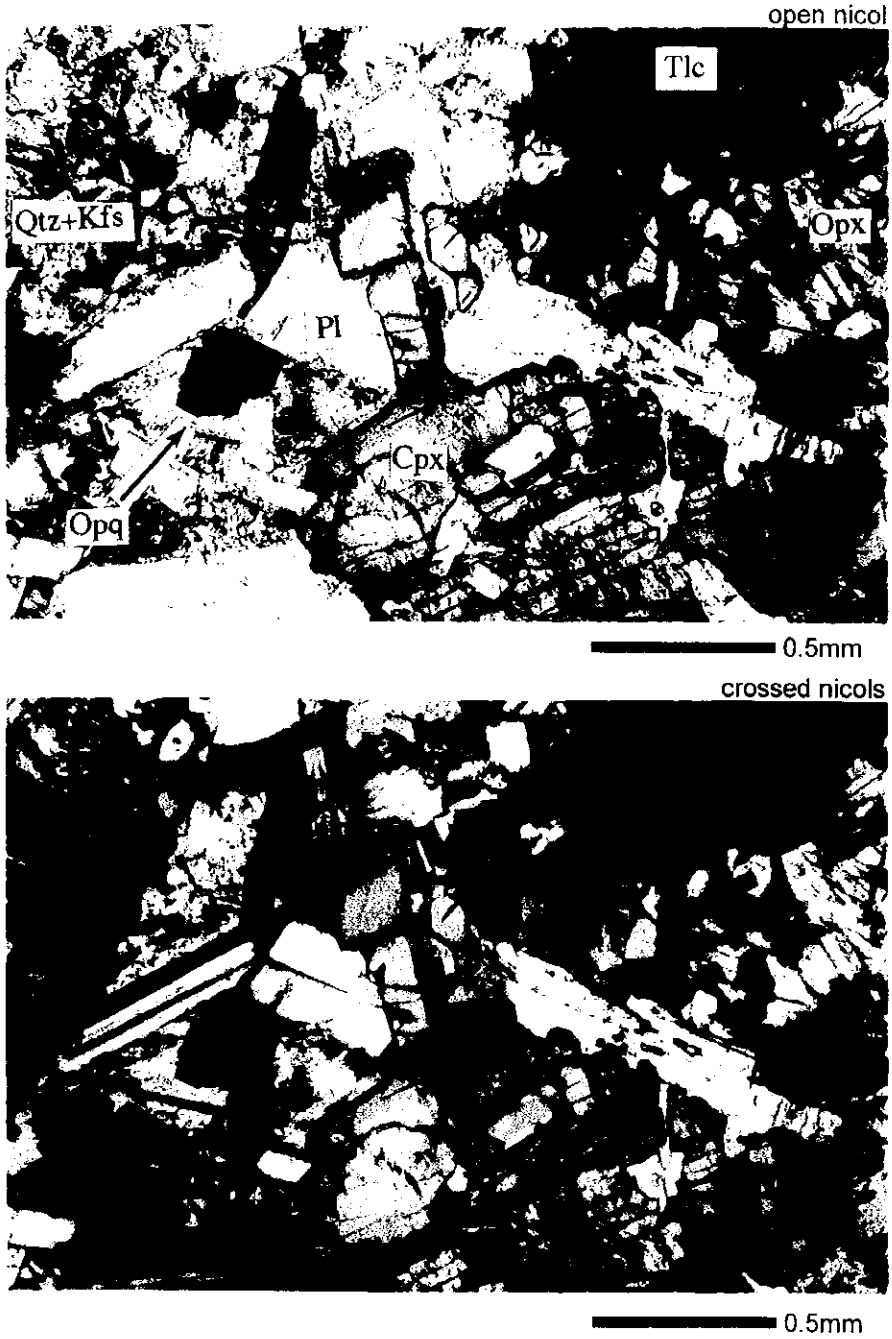
This rock contains blast-porphyritic quartz (Qtz) and plagioclase (Pl: psudomorph). The groundmass is recrystallized into fine-grained granoblastic quartz, albite (Ab), biotite (Bt), muscovite (Ms) and opaque mineral.

Sample: RS039
Rock name: Muscovite granite



Leucocratic, very coase-grained equigranular rock. Large K-feldspar grains are rarely contained.

Sample: RS050
Rock name: Noritic gabbro



Coase-grained equigranular rock. Subhedral plagioclase (Pl) and anhedral augite partly form ophitic texture. Orthopyroxene (Opx) also occurs as coase-grained porphyritic crystal. Quartz (Qtz) and K-feldspar (Kfs) show graphic texture in the interstitial spaces.

Polished section

No.	Sample	As	Cc	Co	Cpy	Elm	Goe	Hm	Ilm	Mc	Po	Py	Ru	Sph
1	MDDH-1 53.1m												+	
2	MDDH-1 53.5m												+	
3	MDDH-1 53.7m				+		△	+					+	
4	MDDH-1 77.6m		△		+							△		+
5	MDDH-1 82.1m											+	+	
6	MDDH-1 82.7m						(+)	+					(+)	
7	MDDH-1 82.9m					+		+					+	
8	MDDH-1 83.8m						△	△				+	+	
9	MDDH-1 84.4m						△	△				+	+	
10	MDDH-1 113.7m											△	+	
11	MDDH-3 86.7m				+							△	+	
12	MDDH-3 94.8m							+				+		
13	MDDH-3 134.8m		○		+					+		◎	+	
14	MDDH-3 138.45m				+							△	+	
15	MDDH-3 139.7m	+			+							○		(+)
16	MDDH-3 140.2m				+							△	+	
17	MDDH-3 149.1m			(+)	(+)					(+)	○	+	(+)	
18	MDDH-4 121.1m											△	+	
19	MDDH-5 110.6m	(+)			(+)						+	+		
20	MDDH-5 111.3m	+			(+)				(+)		○	+		(+)
21	Morila	+			+	+			+	(+)		+		

As:arsenopyrite, Cc:calcite, Co:cobaltite, Cpy:chalcopyrite, Elm:electrum, Goe:goethite, Hm:hematite, Ilm:ilmenite, Mc:marcasite, Po:pyrrhotite, Py:pyrite, Ru:rutile, Sph:sphalerite

No.1; MDDH-1 53.1m

There is no sulfide mineral except small amount of rutile. Rutile occurs as tiny flakes or as irregular subhedral to anhedral shapes with 10 to 20 μm in average diameter. The grains show strongly controlled distribution along with schistosity (?). Some grains show semi-euhedral and bigger crystals (max 100 μm) in quartz veinlets.

No.2; MDDH-1 53.5m

Quartz (?) veinlets with 2mm in width are developed. They include no opaque mineral except very small amount in peripheral zone of veinlets. Opaque mineral is mainly composed of rutile with 10 to 50 μm in size, and it shows flaky and/or irregular anhedral crystals in the host rock as dissemination. Some tend to occur intimately with micaceous (?) mineral in host rock of the vein.

No.3; MDDH-1 53.7m

Rutile occurs as dissemination with tiny subhedral to anhedral crystal with 10 to 40 μm in diameter in host rock. Some show prismatic to flaky in shape. Extremely small amount of hematite occurs in irregular shape chalcopyrite anhedral grain (only one grain) with about 50 μm in diameter. Goethite occurs as strain along the vein.

No.4; MDDH-1 77.6m

Anhedral to subhedral pyrite occurs as dissemination in the host rocks with 10 to 100 μm in diameter. Some pyrite are intimately associated with anhedral sphalerite with maximum 100 μm in diameter. Prismatic to flaky rutile with maximum 200 μm in diameter are also disseminated in host rock as dissemination. Quartz-calcite (?) veinlets also include small amount of anhedral to subhedral pyrite with 30 to 50 μm in diameter. Goethite occurs as stain along the vein.

No.5; MDDH-1 82.1m

Tiny (10 to 20 μm in size) pyrite occurs as dissemination and/or weak seam or network veinlets filling fracture of silicate grains. The distribution of pyrite is irregular like as dissemination. Smaller amounts of tiny rutile (10 to 20 μm in size) are also impregnatedly distributed in the host rock with pyrite.

No.6; MDDH-1 82.7m

Rutile occurs as euhedral to subhedral tiny (10 to 30 μm) crystals in dissemination of host rock. Hematite occurs as secondary mineral as veinlets and/or cavity filling with small amounts of ultra fine-grained goethite (submicron in size). No sulfide mineral is found in the polished section.

No.7; MDDH-1 82.9m

Few grains of electrum (gold?) are found as tiny (10 to 20 μm in diameter) in the host rock without regularity in the shapes of flaky to film and granular crystal. Rutile occurs as tiny (maximum 10 μm in diameter) prismatic to anhedral grains sporadically in host rock. Hematite occurs as pool in the host rock in aphyric to colloform texture.

No.8; MDDH-1 83.8m

Hematite occurs as networks filling grains (quartz?) of vein in size of 10 to 100 μm in width. Goethite occurs as strain surrounded hematite in the veinlets. Rutile occurs as dissemination in the host rock with prismatic to granular shapes of 10 to 30 μm in size.

No.9; MDDH-1 84.4m

Hematite and goethite occur as intimate association with texture of colloform and/or alternatively layered in the veinlets and pool-filling pore of host rock. They are composed of extremely tiny (sub-micron in size) intimate aggregate in the host rock.

No.10; MDDH-1 113.7m

Pyrite shows following modes of occurrences in the host rock;

1) Impregnated euhedral large size of grains in the host rock where pyrite occur as euhedral to subhedral crystals with 50 to 200 μm in diameter.
2) Sulfide veinlets or seams with 10 to 100 μm in width in the host rock where pyrite crystal pools tend to be developed in the end of the vein or seam with size of 100 to 200 μm in diameter. These veinlets and seams are controlled by the schistosity (?) in their distribution.

No.11; MDDH-3 86.7m

Pyrite occurs as following modes of occurrences;

1) Euhedral to subhedral independent single crystals are disseminated in the host rock with 20 to 150 μm in diameter.
2) Polycrystalline aggregates reaching maximum 1mm in size occurs as veinlets in mono-mineral or quartz vein.

Chalcopyrite occurs as filling pyrite vein in the central part and/or as inclusions of pyrite. Size of chalcopyrite is about 100×300 μm which shows anhedral and filling pyrite grain after its crystallization. Some chalcopyrite shows filling products after pyrite brecciation. Very small amounts of rutile are also occurred as dissemination in the host rock.

No.12; MDDH-3 94.8m

Pyrite occurs as subhedral to anhedral crystal aggregates filling silicate minerals of host rock. Some aggregates reach 300 μm in size of pools in the host rock. Pyrite stringers are also developed filling small cracks with 10 μm in width.

Hematite after pyrite (?) are also well distributed in the matrix with similar mode of occurrence with pyrite. Hematite tends to show fine-grained submicron in size aggregates.

No.13; MDDH-3 134.8m

Pyrite occurs as main constituent of quartz-calcite (?) vein with 2cm or more in width. Pyrite shows following two types of crystal features in the vein;

1) Euhedral to subhedral big size (max 500 μm) of crystals. They form aggregate in the vein with the other type of pyrite.
2) Barrel to clearable prismatic crystals of pyrite occur intimately with type 1) pyrite. It may be crystallized as marcasite or pyrrhotite initially in the crystallization, then changed to pyrite in present.

Very small amounts of anhedral chalcopyrite are found in the peripheral part of pyrite vein with prismatic to tabular pyrite in size of 20 μm. In the host rock, tiny rutile (10 to 20 μm in diameter) are also found in the host rock sporadically.

Euhedral prismatic to flaky tiny crystals of marcasite are also found in the carbonate of the vein.

No.14; MDDH-3 138.45m

Pyrite occurs as veinlets, seams and independent impregnated crystals in the host rock;

1) Veinlets: 200 μm$\times$3mm veinlets composed of pyrite aggregates. Some shows an euhedral or subhedral crystal aggregates accompanying anhedral chalcopyrite.
2) Seam: Narrow seams with about 50 μm in width are developed. They are characterized by strong shears and brecciation which suggest the effect of tectonic event in some kind of metamorphism (?). These seams cross-cut the original schistosity, so it suggest the polymetamorphic events before and after pyrite mineralization.
3) Euhedral to subhedral pyrite crystals with 10 to 100 μm in diameter are also distributed as dissemination.

Chalcopyrite tends to be accompanied with not only type 1) pyrite vein, but also isolated anhedral grains with maximum 100 μm in diameter. Rutile occurs as minor constituents of mineral in the host rock with tiny (10 μm in diameter) tabular crystals as impregnation.

No.15; MDDH-3 139.7m

Pyrite occurs as main constituent of the wide vein (maximum 5mm in width). Averaged grain size is about 500 μm in the vein, showing subhedral or anhedral crystals. Extension of vein tends to show strong shearing and two stages of pyrite mineralization is recognizable based on the cross-cut relationships. Tiny sphalerite (10 μm in diameter) is included in pyrite as droplet or grobule. Euhedral arsenopyrite with 300 μm in diameter occurs in pyrite and its crack is filled with later chalcopyrite. Chalcopyrite also occurs as small inclusions (10 to 20 μm) in pyrite besides this occurrence.

Impregnated pyrite is also distributed in host rock in euhedral to subhedral crystals with 10 to 50 μm in size.

No.16; MDDH-3 140.2m

Pyrite occurs as veinlets, seams and large aggregates of crystals with small amounts of chalcopyrite.

1) Veinlets: subhedral crystals with 50 to 100 μm in diameter are linked to the veinlets.
2) Large aggregate reaching 500 μm in size are composed of subhedral to anhedral pyrite, some of which are accompanying closely small amounts of anhedral chalcopyrite (max 100 μm in diameter).

Some of chalcopyrite occurs as isolated single crystals in the host rock sporadically. Very small amounts of anhedral rutile are also founded, but their single are under 10 μm in diameter.

No.17; MDDH-3 149.1m

Pyrrhotite occurs as impregnated crystals with anhedral shape (maximum 300 μm). It coexists intimately with euhedral to subhedral pyrite and with anhedral chalcopyrite in peripheral zone of pyrrhotite. Sometime it includes unidentified mineral (cobaltite-like?) in small amount.

Pyrite occurs euhedral to subhedral small grains with 20 to 60 μm in diameter impregnatedly. Prismatic rutile is also occurred impregnatedly in associated with pyrite.

No.18; MDDH-4 121.1m

Pyrite occurs as following two kinds of mode of occurrence:

1) Pyrite vein or seam along with original structure of host rock (schistosity?) shows symmetrical vein with 400 to 500 μm in width. Central part of the vein is composed of gangue mineral and attaching pyrite tends to be sheared. Characteristic feature of this vein is to show idiomorphic shape towards out side of vein. It may suggest of this vein (?) formation in simultaneous stage of the metamorphism (not later stage mineralization). Some of pyrite show characteristic prismatic aggregate with 10×100 μm in shape.

2) Sporadic distribution of subhedral to anhedral pyrite in the host rock with 20 to 200 μm in elongated shape or single grains.

Tiny subhedral grains (10 to 30 μm in diameter) of rutile are also distributed in disseminated occurrence which is strongly controlled by the original structure of host rock.

No.19; MDDH-5 111.3m

Anhedral pyrrhotite (maximum 1mm in size) occurs as host mineral of euhedral arsenopyrite (50 to 200 μm) and subhedral to euhedral pyrite (50 to 100 μm) in shape of vein. Both arsenopyrite and pyrite occurs as impregnated minerals in the host rock with maximum 500 μm in diameter of euhedral crystals.

Small anhedral chalcopyrite (maximum 50 μm) is replaced in pyrrhotite and is closely coexisting with both minerals described above.

Very small amount of sphalerite is also found with pyrrhotite and arsenopyrite in anhedral shape. Ilmenite also occurs with arsenopyrite and pyrite.

No.20; MDDH-5 110.6m

Pyrite occurs as aggregates of small subhedral grains (20 to 70 μm in diameter), narrow stringers (10 μm in width), and disseminated euhedral to subhedral crystals with 50 to 100 μm in diameter. Tiny pyrrhotite (maximum 50 μm) also occurs intimately with chalcopyrite (maximum 10 μm, anhedral) and arsenopyrite (maximum 20 μm, anhedral). Some arsenopyrite contains pyrrhotite (maximum 10 μm, anhedral).

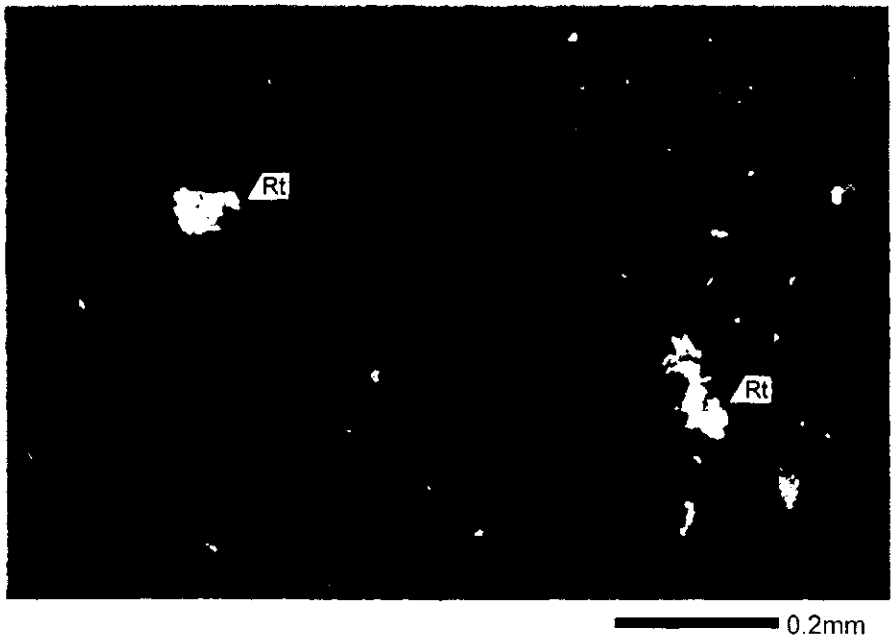
No.21; Morila sample

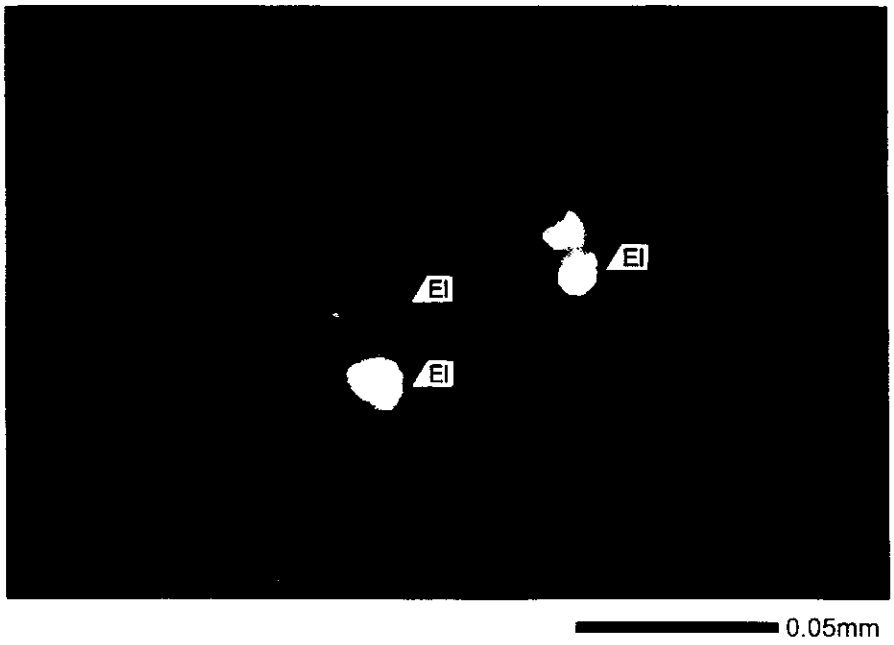
Electrum (?) occurs as subrounded or irregular isolated grains in shape with 30 to 100 μm in diameter.

Pyrite shows subhedral to euhedral in shape with 50 to maximum 700 μm in diameter. Anhedral with rounded shape of ilmenite (20 to 40 μm, maximum 120 μm) occurs as impregnated in the host rock and intimately associated with tiny anhedral chalcopyrite with 30 μm in size.

Idiomorphic small amounts of arsenopyrite (?) are also sporadically occurred, some are distributed near electrum grains.

Sample: MDDH-1 82.9m

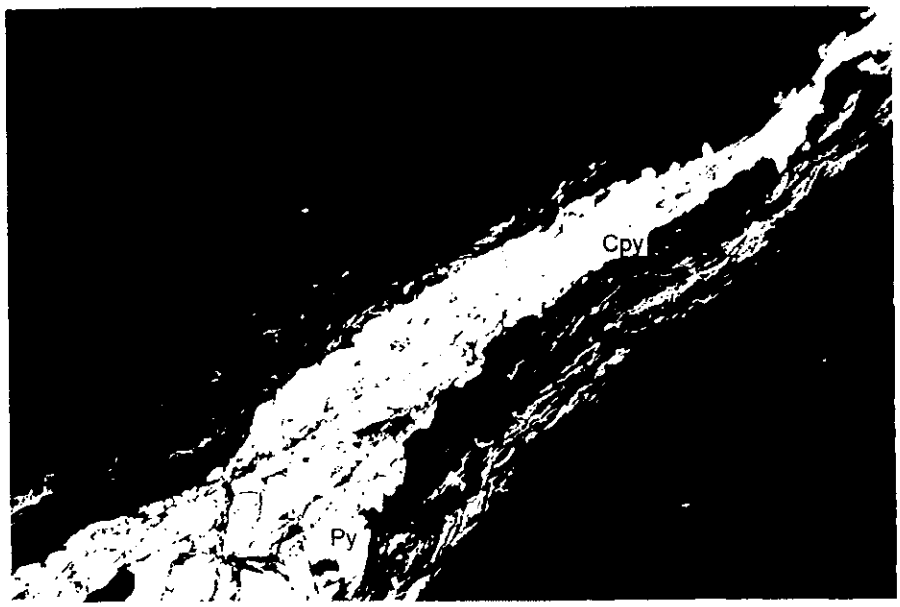




Few grains of electrum (El) are found as tiny (10 to 20 μ m in diameter) in the host rock without regularity in the shapes of flaky to film and granular crystal. Rutile (Rt) occurs as tiny (maximum 10 μ m in diameter) prismatic to anhedral grains sporadically in host rock. Hematite occurs as pool in the host rock in aphyric to colloform texture.

Sample: MDDH-3 86.7m

0.2mm



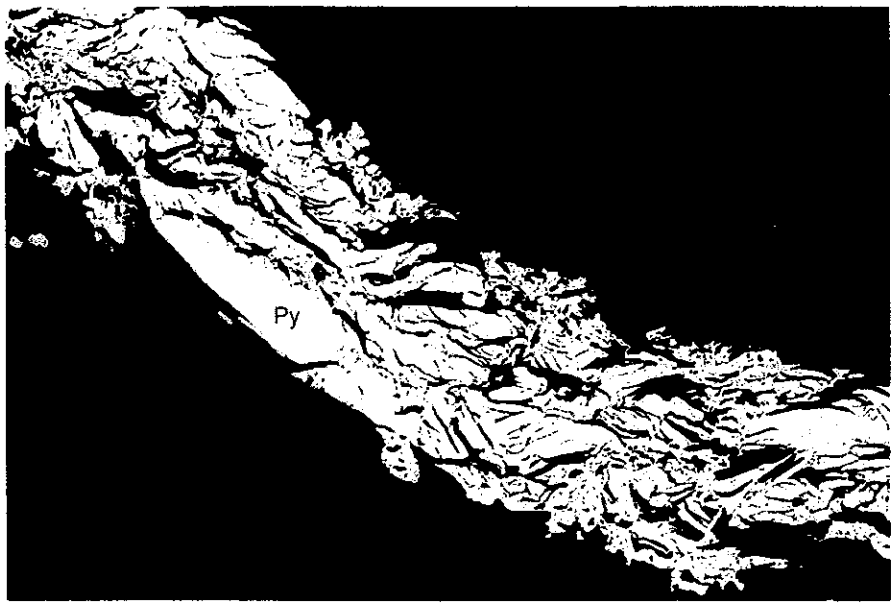
0.2mm

Pyrite (Py) occurs as following modes of occurrences;

1) Euhedral to subhedral independent single crystals are disseminated in the host rock with 20 to 150 μ m in diameter.
2) Polycrystalline aggregates reaching maximum 1mm in size occurs as veinlets in mono-mineral or quartz vein.

Chalcopyrite (Cpy) occurs as filling pyrite vein in the central part and/or as inclusions of pyrite. Size of chalcopyrite is about 100×300 μ m which shows anhedral and filling pyrite grain after its crystallization. Some chalcopyrite shows filling products after pyrite brecciation. Very small amounts of rutile are also occurred as dissemination in the host rock.

Sample: MDDH-3 139.7m



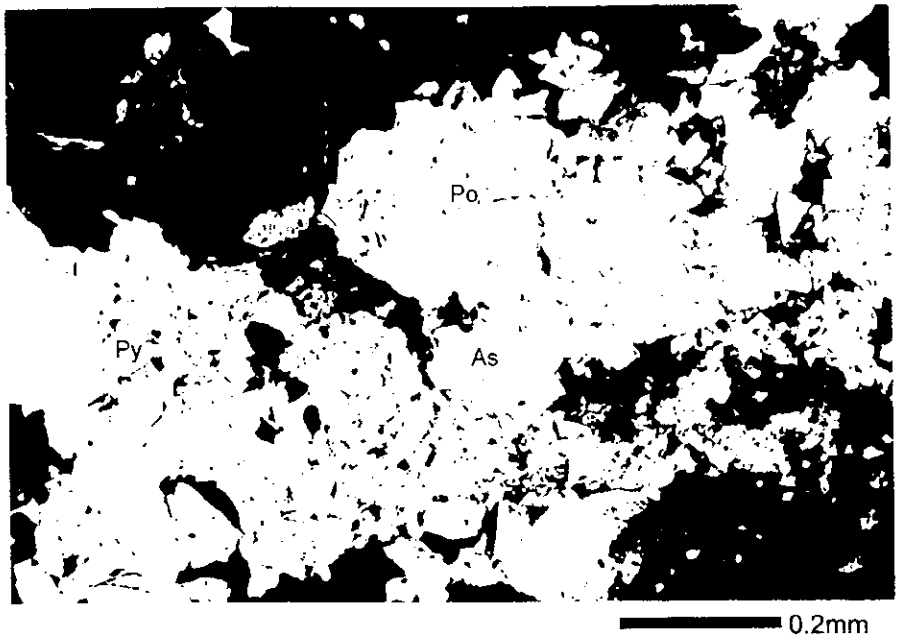
0.2mm

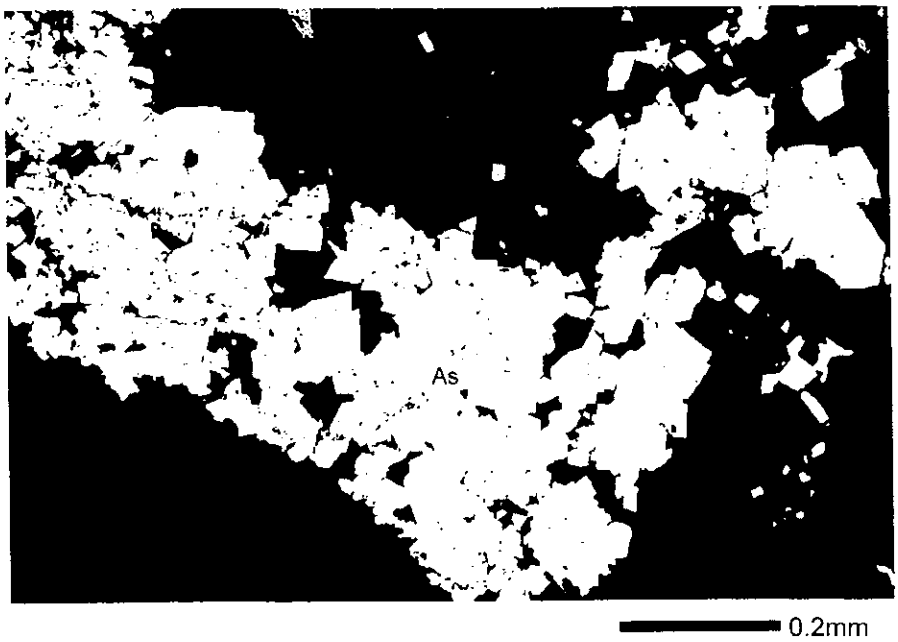
0.2mm

Pyrite (Py) occurs as main constituent of the wide vein (maximum 5mm in width). Averaged grain size is about 500 μ m in the vein, showing subhedral or anhedral crystals. Extension of vein tends to show strong shearing and two stages of pyrite mineralization is recognizable based on the cross-cut relationships. Tiny sphalerite (Sph) 10 μ m in diameter) is included in pyrite as droplet or grobule. Euhedral arsenopyrite (As) with 300 μ m in diameter occurs in pyrite and its crack is filled with later chalcopyrite (Cpy). Chalcopyrite also occurs as small inclusions (10 to 20 μ m) in pyrite besides this occurrence.

Impregnated pyrite is also distributed in host rock in euhedral to subhedral crystals with 10 to 50 μ m in size.

Sample: MDDH-5 111.3m





Anhedral pyrrhotite (Po: maximum 1mm in size) occurs as host mineral of euhedral arsenopyrite (As: 50 to 200 μ m) and subhedral to euhedral pyrite (Py: 50 to 100 μ m) in shape of vein. Both arsenopyrite and pyrite occurs as impregnated minerals in the host rock with maximum 500 μ m in diameter of euhedral crystals.

Small anhedral chalcopyrite (maximum 50 μ m) is replaced in pyrrhotite and is closely coexisting with both minerals described above.

Very small amount of sphalerite is also found with pyrrhotite and arsenopyrite in anhedral shape. Ilmenite also occurs with arsenopyrite and pyrite.