Chapter 3 Drilling Survey

3-1 Objective

The main objective of the survey is to discover a profitable ore deposits by the geophysical survey of this year, in Marrakech Tekna area in the Kingdom of Morocco, through drilling survey, and also to pursue technology transfer to the Moroccan counterpart personnel.

3-2 Survey points and members

The Marrakech Tekna area is located in the central part of the Kingdom of Morocco (Fig.1). It is approximately 330km south of Rabat (capital city), north of the Haut Atlas Mountains, and also southwest of Marrakech. The survey area extends from 31° 19 ' to 31° 38 ' latitude north and from 8° 01 ' to 8° 24 ' longitude west.

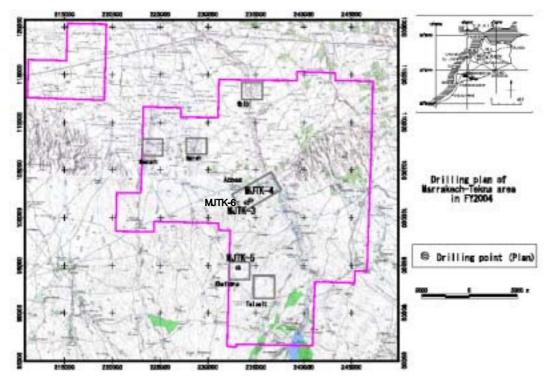


Fig.II-3-1 Locality map of survey area

The survey quantity of this survey is shown in the following table.

· '.) Dinnig						
	No.	Inclination	Declination	Length	Coor	dinates	Altitude
	MJTK-3	-70 °	325 °	701.0m	N31 28 30.5	W08 11 49.8	588m
	MJTK-4	-55 °	325 °	601.2m	N31 28 40.1	W08 11 34.9	570m
	MJTK-5	-70 °	270 °	502.1m	N31 24 59.1	W08 12 22.7	682m
	MJTK-6	-70 °	325 °	301.9m	N31 28 10.2	W08 12 11.0	589m
			Total	2106.2m			

(1) Drilling

(2) Laboratory Tests.

Items	Quantity
Chemical analysis (Ag,Al,As,B,Ba,Be,Bi,Ca,Cd,Co,Cr,Cu,Fe, Ga,Hg,K,La,Mg,Mn,Mo,Na,Ni,P,Pb,S,Sb, Sc,Sr,Ti,Tl,U,V,W,Zn,Au)	16
Microscopic observation (polished sction)	16
X-ray diffraction analysis	40
Resistivity	21
Chargeability	21
Magnetic susceptibility	21
Fluid inclusion (homogenization temp. and Salinity)	1
Isotope (S)	16

The members who participated in the drilling survey is as follows.

Japan		Morocco
Junichi ISHIKAWA (Geotechnos Co., Ltd.)	El Bachir BARODI	(Directeur de l'Exploration, Bureau de Recherches et de Participations Minieres : BRPM)
	M'hamed ANNICH	(BRPM)
	Abdellah MOUTTAQI	(BRPM)
	Mustapha CHAIB	(BRPM)
	Mohamed NAJAHI	(BRPM)
	Ahmed KORCHI	(BRPM)
	Said QASRI	(BRPM)
	Houcine ABARBACH	(BRPM)

Inspector: Nobuaki ISHIKAWA (Japan Oil, Gas and Metals National Corporation Metals Exploration Group)

The survey period is as follows.

Local stay period: From November 20, 2004 to February 15, 2005 Grilling period: From November 28, 2004 to February 9, 2005 Observation of rock core: From November 29, 2004 to February 10, 2005

3-3 Method and Content of Survey

3-3-1 Outlines

The drilling operation was ordered to Bureau de Recherches et de Participations Minieres (BRPM), and the machine parts used the thing which the company owned in principle. The main machine parts were owned by BRPM.

1/200 columnar figure was arranged about the cores extracted, a reduced scale. Colored photographs are taken about all cores. And geological survey around drilling points was executed for the correlation with a geology of the hole and integrated evaluation. Chemical analysis, the observation of polished sections and isotope analysis were executed, and observed a microscope representation. And X-ray diffraction test was executed in order to know the alteration.

3-3-2 Method and Equipments

The drillings were executed by wire-line method, and casings were inserted as responding the geologic situation. The holes were drilled protecting the walls by regulating the concentration of mud water.

Principal equipment, materials, supplies, diamond bits and reamers was indicated by Table II-3-3. The operated rigs were Bonne Esperance, L44/I, L38/13 及び L44n/S owned by BRPM.

3-3-3 Survey Team

The penetration work was taken turns at 8-hours shifts, 3-shifts per day. 1 shift is organized of 27 BRPM engineers and 12 workers who live around this area. And Japanese engineer usually directed them about general instruction. The base camp of drilling workers had stayed in Marrakech and near this area. And they commuted to the drilling sites by car.

3-3-4 Transportation and Preparation

The equipments and materials for drilling survey were carried truck from Rabat, to the drilling sites. Some machines were taken from the Draa Sfar mine.

There is no-pavement road in the Survey area. Therefore the road was repaired by bulldozer. As drilling site were far-off from the occurred roads, roads were built anew.

3-3-5 Withdrawal

After the finish of Survey, equipments and materials owned by BRPM were taken out to Rabat. Whole drilling cores were reserved at the Rabat office of BRPM.

3-3-6 Drilling Water

Drilling water was usually pumped up from a river, and was transported to the sites, by a tanker.

3-3-7 Drilling process

The record and itinerary of penetration were indicated in Table II-3-1 and Table II-3-2. Measured deviations are shown in Table II-3-4. Drilling Equipment and Consumption Goods are indicated in Table II-3-3, and the result of measurement of Hole deviation is indicated in Table II-3-4.

(1) MJTK –3 (Direction: 325, Inclination: 70, Length: 701.00m)

The drilling period is from November 27 to January 13.

Setting up was carried since November 24 until November 26. Tricone drilling was started on Nov. 27.

Percussion drilling (101mm diameter) was carried out from 3m depth to 221.8m depth till Dec.7. And the order of drill pipes was arranged in order to execute HQ wire-line drilling. And also, the order was arranged for NQ wire-line drilling, just after the hole was drilled to 386.55m on Dec.16. the drilling was stopped at 701.00m depth on Jan.13.

The geology is mainly Paleozoic pelitic schist etc. And pyrrhotite – calcite deposits or veins are often observed. The rock core is more friable in deeper part so that rock fragment stuffed the inner tube with reducing the drilling .

(2) MJTK –4 (Direction: 325, Inclination: 55, Length: 601.20m)

The drilling period is from December 5 to January 15.

Setting up was carried since December 2 until December 4. Tricone drilling was started on December 5.

Percussion drilling (101mm diameter) was carried out from 3m depth to 223.70m depth till Dec.16. Cementation was carried out to stop the lost circulation at 37.40m depth on Dec.7. And just after the percussion drilling, the order of drill pipes was arranged in order to execute HQ wire-line drilling. And also, the order was arranged for NQ wire-line drilling, just after the hole was drilled to 348.70m on Dec.24. The drilling was stopped at 701.00m depth on Jan.15.

The geology is mainly Paleozoic pelitic schist. And pyrrhotite – calcite deposits or veins are often observed. Pyrite spots are sometimes observed in the schist.

(3) MJTK –5 (Direction: 270°, Inclination: 70°, Length: 502.10m)

The drilling period is from December 9 to December 31.

Setting up was carried since December 6 until December 8. Tricone drilling was started on December 9.

And the order of drill pipes was arranged in order to execute HQ wire-line drilling at 109.20m depth on Dec.12. Cenozoic conglomerate etc. had been drilled to 142.5m depth. And also, the order was arranged for NQ wire-line drilling at 318.00m depth on Dec.21. The drilling was stopped at 502.10m depth on Dec.31.

The geology is mainly Paleozoic pelitic schist from 142.5 to the bottom hole. And pyrrhotite – calcite deposits or veins are often observed.

(4) MJTK-6 (Direction 325, Inclination 70, Length 301.90m)

The drilling period is from January 7 to February 9. Setting up was carried since January 2 until February 6. Tricone drilling was started on Jan. 24th. HQ wire-line drilling was started at 3m depth. The drilling had a rest from Jan.19 to Jan.25, around Eid Al Adha (Feast of Sacrifice).

After then, the drilling bit was stuck at 273.1m depth in a sheared zone. It was not promising to recover the bit and the drill pipes immediately even though variable methods were executed, therefore BQ drill pipes were inserted into HQ drill pipe, and TBW drilling was started on Feb.5. And then, BQ wire-line drilling was started on Feb.7.

The drilling was stopped at 301.90m depth on Feb.9.

The geology is mainly Paleozoic pelitic schist. And pyrrhotite – calcite deposits or veins are often observed. However the rock was friable under 144.0m depth, and faults were at 204.5m and 211.7m depth. fractured or sheared zones were at 215.0-216.8m and 219.0-229.0m depth. Therefore the drilling had to be slower than ordinary drillings. Fractures appeared even in the deeper part, and a sheared zone was at 270.1-276.6m depth.

Table II-3-1 Drilling Schedule

ľ	TEM	NOV.	DECEMBER	JANUARY	FEBRUARY
Mobilizatio	on				
To the	e sites				—
	Rig up	24-26			
MJTK-3	Drilling	27		13	
	Tear down				20-24
	Rig up		02-04		
MJTK-4	Drilling		05	15	
	Tear down				20-24
	Rig up		06-08		
MJTK-5	Drilling		0931		
	Tear down			11-12	
	Rig up			02-06	
MJTK-6	Drilling			07	09
	Tear down				20-24

			WORKIN	WORKING PERIOD			
21 455	WORKIN	WORKING PERIOD		DAY BREAK DOWN	7		MORKERS
	PE	PERIOD	TOTAL DAYS	ACTUAL WORKING	DAY OFF		
RIG UP	2004/11/21 -	- 2004/11/27	6 days	6 days	0 days	72	72 workers
DRILLING	2004/11/28 - 2005/1/13	2005/1/13	35	DRILLING 33	2	396	
				REPAIR etc. 2	0	24	
TEAR DOWN	2005/2/20 -	2005/2/24	5	5	0	60	
TOTAL	2004/11/21 - 2005/2/24	2005/2/24	46	46	2	552	
	DRILLING DEPTH etc.	PTH etc.		COR	CORE RECOVERY PER EACH 100m	CH 100m	
PLOPOSED DEPTH	500.00 m	500.00 m OVERBURDEN	3.0 m	DEPTH	CORE LENGTH		CORE RECOVERY(%)
ADDITIONAL DEPTH	201.00 m	201.00 m CORE LENGTH	698 m	(m)	(m)	SECTION	CUMULATIVE
INSPECTED DEPTH	701.00 m	701.00 m RECOVERY	99.14 %	0 - 10	100.00 97.00	00.001	97.00
	TIME ANALYSIS	YSIS		100.00 - 20	200.00 100.00	0 100.00	98.50
CATEGORY	(hr.)	(%)	(%)	200.00 - 30	300.00 100.00	00.00	99.00
DRILLING	792	94.3	71.7	300.00 - 40	400.00 100.00	100.00	99.25
TRIP, CORE RECOVER,	48	5.7	4.3	400.00 - 50	500.00 100.00	00.00	99.40
CASING, etc				500.00 - 59:	592.70 100.00	0 100.00	99.50
REPAIR, FISHING	0	0.0	0.0	600.00 - 70	701.00 98.00	0 101.00	99.14
SUB TOTAL	840	100.0		TOTAL DEPTH/TOTAL WORKING DAYS	NORKING DAYS	15.24	m/day
RIG UP	144		13.0	TOTAL DEPTH/ACTUAL WORKING DAYS	. WORKING DAYS	15.24	15.24 m/day
TEAR DOWN	120		10.9	TOTAL DEPTH/ACTUAL DRILLING DAYS	. DRILLING DAYS	21.24	21.24 m/day
TOTAL	1104		100.0	ACTUAL DRILLING WORKERS/TOTAL DEPTH	KERS/TOTAL DEPTH	0.56	worker/m
	CASING	C)					
SIZE	SET DEPTH	B/A X 100	RECOVERY	REMARKS			
	(m)	(%)	(%)	A: TOTAL DEPTH	PTH		
MH	3.00	0.43	100	B: SET DEPTH	Ŧ		
NW	386.55	55.14	100				

Table II-3-2 Drilling summary (MJTK-3)

			WORKI	WORKING PERIOD			
50 ∆CC	WORKIN	WORKING PERIOD		DAY BREAK DOWN	7		MORKERS
	ΡE	PERIOD	TOTAL DAYS	ACTUAL WORKING	DAY OFF		
RIG UP	2004/12/2 -	2004/12/4	3 days	3 days	0 days	30	30 workers
DRILLING	2004/12/5 - 2005/1/15	2005/1/15	33	DRILLING 33	2	330	
				REPAIR etc. 2	0	20	
TEAR DOWN	2005/2/20 -	2005/2/24	5	5	0	50	
TOTAL	2004/12/2 -	- 2005/2/24	41	43	2	430	
	DRILLING DEPTH etc.	PTH etc.		COR	CORE RECOVERY PER EACH 100m	CH 100m	
PLOPOSED DEPTH	600.00 m	600.00 m OVERBURDEN	3.0 m	DEPTH	CORE LENGTH		CORE RECOVERY(%)
ADDITIONAL DEPTH	1.20 m	1.20 m CORE LENGTH	598.2 m	(m)	(m)	SECTION	SECTION CUMULATIVE
INSPECTED DEPTH	601.20 m	601.20 m RECOVERY	99.17 %	0 - 10	100.00 97.00	00.00	97.00
	TIME ANALYSIS	-YSIS		100.00 - 20	200.00 100.00	100.00	98.50
CATEGORY	(hr.)	(%)	(%)	200.00 - 30	300.00 100.00	0 100.00	00.66
DRILLING	744	93.9	77.5	300.00 - 40	400.00 98.00	100.00	98.75
TRIP, CORE RECOVER,	48	6.1	5.0	400.00 - 50	500.00 100.00	100.00	00.66
CASING, etc				500.00 - 60	601.20 101.20	0 101.20	99.17
REPAIR, FISHING	0	0.0	0.0				
SUB TOTAL	792	100.0		TOTAL DEPTH/TOTAL WORKING DAYS	NORKING DAYS	14.66	14.66 m/day
RIG UP	72		7.5	TOTAL DEPTH/ACTUAL WORKING DAYS	. WORKING DAYS	13.98	13.98 m/day
TEAR DOWN	96		10.0	TOTAL DEPTH/ACTUAL DRILLING DAYS	. DRILLING DAYS	18.22	18.22 m/day
TOTAL	960		100.0	ACTUAL DRILLING WORKERS/TOTAL DEPTH	KERS/TOTAL DEPTH	0.55	worker/m
	CASING	(J)					
SIZE	SET DEPTH	B/A X 100	RECOVERY	REMARKS			
	(m)	(%)	(%)	A: TOTAL DEPTH	TH		
ММ	3.00	0.50	100	B: SET DEPTH	Ŧ		
NW	348.70	58.00	100				

Table II-3-2 Drilling summary (MJTK-4)

			WORKIN	WORKING PERIOD				
2000	WORKIN	WORKING PERIOD		DAY BREAK DOWN	1		C/VI	MODIKEDS
0C700	PE		TOTAL DAYS	ACTUAL WORKING	DAY OFF			NNENO
RIG UP	2004/12/6 - 2004/12/8	2004/12/8	3 days	3 days	0 days		30	30 workers
DRILLING	2004/12/9 - 2004/12/31	2004/12/31	18	DRILLING 18	0		180	
				REPAIR etc. 0	0		0	
TEAR DOWN	2005/1/11 -	- 2005/1/12	2	2	0		20	
TOTAL	2004/12/6 -	- 2005/1/12	23	23	0		230	
	DRILLING DEPTH etc.	PTH etc.		COR	CORE RECOVERY PER EACH 100m	EACH	100m	
PLOPOSED DEPTH	500.00 m	500.00 m OVERBURDEN	3.0 m	DEPTH	CORE LENGTH	IGTH	CORE RI	CORE RECOVERY(%)
ADDITIONAL DEPTH	2.10 m	2.10 m CORE LENGTH	598.2 m	(m)	(m)	SE	SECTION	CUMULATIVE
INSPECTED DEPTH	502.10 m	502.10 m RECOVERY	78.17 %	0 - 10	100.00	0.00	100.00	0.00
	TIME ANALYSIS	YSIS		100.00 - 20	200.00	90.40	100.00	45.20
CATEGORY	(hr.)	(%)	(%)	200.00 - 30	300.00 1(100.00	100.00	63.47
DRILLING	552	100.0	82.1	300.00 - 40	400.00 10	100.00	100.00	72.60
TRIP, CORE RECOVER,		0.0	0.0	400.00 - 50	500.00 10	100.00	100.00	78.08
CASING, etc				500.00 - 50	502.10	2.10	2.10	78.17
REPAIR, FISHING	0	0.0	0.0					
SUB TOTAL	552	100.0	-	TOTAL DEPTH/TOTAL WORKING DAYS	VORKING DAYS		21.83 m/day	m/day
RIG UP	72		10.7	TOTAL DEPTH/ACTUAL WORKING DAYS	WORKING DAYS		21.83 m/day	m/day
TEAR DOWN	48		7.1	TOTAL DEPTH/ACTUAL DRILLING DAYS	DRILLING DAYS		27.89	m/day
TOTAL	672		100.0	ACTUAL DRILLING WORKERS/TOTAL DEPTH	KERS/TOTAL DEF	ЪТН	0.36	0.36 worker/m
	CASING	(J)						
SIZE	SET DEPTH	B/A X 100	RECOVERY	REMARKS	0 - 142.5m		:Cenozoic	
	(m)	(%)	(%)	A: TOTAL DEPTH	PTH			
НW	109.20	21.75	100	B: SET DEPTH	Ŧ			
NW	318.03	63.34	100					

Table II-3-2 Drilling summary (MJTK-5)

			WORKIN	WORKING PERIOD			
	WORKIN	WORKING PERIOD		DAY BREAK DOWN		CM	MORKERS
	PE	PERIOD	TOTAL DAYS	ACTUAL WORKING	DAY OFF		
RIG UP	2005/1/2 -	2005/1/6	5 days	5 days	0 days	45	45 workers
DRILLING	2005/1/7 - 2005/2/9	2005/2/9	34	DRILLING 20	7	180	
				REPAIR etc. 7	0	63	
TEAR DOWN	2005/2/10 -	2005/2/13	4	2	0	18	
TOTAL	2005/1/2 -	- 2005/2/13	43	34	7	306	
	DRILLING DEPTH etc.	PTH etc.		CORE	CORE RECOVERY PER EACH 100m	H 100m	
PLOPOSED DEPTH	400.00 m	400.00 m OVERBURDEN	3.0 m	DEPTH	CORE LENGTH	CORE RI	CORE RECOVERY(%)
ADDITIONAL DEPTH	Е	m CORE LENGTH	598.2 m	(m)	(m)	SECTION	SECTION CUMULATIVE
INSPECTED DEPTH	301.90 m	301.90 m RECOVERY	0.00 %	0 - 100.00	00 97.00	100.00	97.00
	TIME ANALYSIS	-YSIS		100.00 - 200.00	00 100.00	100.00	98.50
CATEGORY	(hr.)	(%)	(%)	200.00 - 300.00	00 100.00	100.00	99.00
DRILLING	552	100.0	82.1	300.00 - 301.90	90 1.90	100.00	74.73
TRIP, CORE RECOVER,		0.0	0.0				
CASING, etc							
REPAIR, FISHING	0	0.0	0.0				
SUB TOTAL	552	100.0	-	TOTAL DEPTH/TOTAL WORKING DAYS	ORKING DAYS	7.02	7.02 m/day
RIG UP	72		10.7	TOTAL DEPTH/ACTUAL WORKING DAYS	WORKING DAYS	8.88	8.88 m/day
TEAR DOWN	48		7.1	TOTAL DEPTH/ACTUAL DRILLING DAYS	DRILLING DAYS	15.10 m/day	m/day
TOTAL	672		100.0	ACTUAL DRILLING WORKERS/TOTAL DEPTH	(ERS/TOTAL DEPTH	0.60	worker/m
	CASING	(J					
SIZE	SET DEPTH	B/A X 100	RECOVERY	REMARKS			
	(m)	(%)	(%)	A: TOTAL DEPTH	Ŧ		
НW	3.00	0.99	100	B: SET DEPTH			
BW	270.00	89.43	100				

Table II-3-2 Drilling summary (MJTK-6)

Item	Specifications	Qua	ntity	Unit
Itelli	specifications	MJTK-3	MJTK-4	Unit
Drilling Machine	Bonne Esperance	1		
	L44/I		1	
Drilling rod HQ	3.05m	129	116	u
Drilling rod NQ	3.05m	232	196	u
Swivel head	25 / 8	1	1	
Core barrel	HQ	1	1	
Core bit	HQ	1	1	
Core bit	NQ	2	1	
Reaming Shell	HQ	1	1	
Outer tube	HQ	1	2	
Inner tube	HQ	1	1	
Core barrel	NQ	1	1	
Reaming Shell.	NQ	1	1	
Inner tube	NQ	1	1	
Inner tube head	HQ	1	1	
Inner tube head	NQ	1	1	
Inner tube head	BQ			
Overshot	HQ	1	1	
Overshot	NQ	1	1	
Wireline rope	Diameter: 6mm	300	300	m
Casing pipe (HW)	3.05m	1	1	u
Casing pipe (NW)	3.05m	128	116	u
Casing pipe (BW)	3.05m			u
Core lifter case	HQ	3	2	
Core lifter case	NQ	2	3	kg
Core lifter case	BQ			
Bentonite	GS550	104	74	kg
Polymer		100	90	kg
Cement	GS550	100	950	kg
Diesel oil	05550	12520	2470	ℓ
Engine oil	HDI40	92	76	ℓ
Gear oil	EP-90 AZ32	56	58	ℓ
Hydraulic oil	AL32	120	45	ℓ
Core box	5.6-6.4m	146	110	u

Table II-3-3 List of Drilling Equipment and Consumption Goods

Item	Specifications		ntity	Unit
Itelli	specifications	MJTK-5	MJTK-6	Unit
Drilling Machine	L38/13	1		
	L44/5		1	
Drilling rod HQ	3.05m	106	91	u
Drilling rod NQ	3.05m	167	-	u
Drilling rod BQ	3.05m		101	u
Swivel head	25 / 8	1	1	
Core barrel	HQ	1	1	
Core bit	HQ	3	1	
Core bit	TBW		1	
Core bit	NQ	3	1	
Reaming Shell	HQ	1	1	
Outer tube	HQ	1	-	
Inner tube	HQ	1	1	
Core barrel	NQ	1	1	
Reaming Shell.	NQ	1	1	
Inner tube	NQ	1	1	
Inner tube head	HQ	1	1	
Inner tube head	NQ	1		
Inner tube head	BQ		1	
Overshot	HQ	1	1	
Overshot	NQ	.1		
Wireline rope	Diameter: 6mm	600	300	m
Casing pipe (HW)	3.05m	36	1	u
Casing pipe (NW)	3.05m	106		u
Casing pipe (BW)	3.05m		91	u
Core lifter case	HQ	2		
Core lifter case	NQ	1		
Core lifter case	BQ			
Bentonite		52	35	kg
Polymer		90	60	kg
Cement	GS550	200	250	kg
Diesel oil		1925	1770	
Engine oil	HDI40	19	38	
Gear oil	EP-90	10	15	
Hydraulic oil	AZ32		55	
Core box	5.6-6.4m	73	71	u

MJTK-3		
	deg	ree
depth(m)	inclination	direction
0	70	0
20	71	30
50	70.5	50
100	68.25	100
150	66	150
200	65.5	200
250	64	250
300	63	300
350	63	350
400	63	400
450	61	450
500	60	500
550	59	550
600	59	600
650	59	too magnetic
700	colla	apse

Table II-3-4 Result of measurement of Hole deviation
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MJTK-4									
	degree								
depth(m)	inclination	direction							
0	55	325							
20	54	325							
50	53	325							
100	52	322							
150	52	320							
200	52	317							
250	51.5	315							
300	51	313							
350	50	too magnetic							
400	50	too magnetic							
450	49	too magnetic							
500	49	too magnetic							
550	49	311							
600	47	313							

MJTK-5

	degree						
depth(m)	inclination	direction					
0	70	175					
50	66	too magnetic					
120	67	272					
150	67	272					
200	66	270					
250	65	268					
300	63	270					
350	61.5	266					
400	61	270					
450	59	266					
500	58	268					

MJTK-6

	degree					
inclination	inclination	direction				
0	70	328				
50	69	330				
100	69	330				
150	68	329				
200	67	329				
250	67.5	327				
300	67.5	too magnetic				

3-4 Result of Drilling

3-4-1 Geology, Mineralization and Alteration

The result of this survey (MJTK-3, 4,5 and MJTK-2) is as follows, with Fig.II-3-2 Geological Section, and Fig.II-3-3 Geological Columnar Figures (appendix).

(1)MJTK –3 (Direction: 325, Inclination: 70, Length: 701.00m)

The geology consists of Calcareous schist, with pelitic schist layers, foliation ($40-50^{\circ}$ dip), , lamination ($0-50^{\circ}$ dip) and carbonate veinlet. And also with fractures and calcite -dolomite (?) - quartz veinlets are dominant.

Fine tuff thin layer (40° dip) is 31.7 -32.0m depth. Quartz (- calcite) vein is 39.1 -39.55m depth, with 45° dip, A fine tuff thin layer is 40.0m depth, with 40° dip and 1.5cm thickness.

Calcite (- quartz) vein, with pyrrhotite, sphalerite and chalcopyrite, is 40.4m depth. It has 30 -

50° dip and 4cm width, partly with pyrite? A calcite vein has 55° dip and 10cm width at 40.5m depth. A calcite (- pyrite - pyrrhotite - chalcopyrite - sphalerite) vein is at 41.0 -41.1m depth, with

 25° dip and 11cm width. It is with barren calcite veins under. Calcite (- chlorite) vein, with 40° dip is at 42.7 -43.1m depth. Pale greenish gray fine sandy tuff is at 43.4 -44.3m depth, with 40° dip,

Calcareous schist and black pelitic schist include quartz (- calcite) network- veinlets discordant with foliation, partly with fine sandy schist layers (lamination. $20 - 40^{\circ}$ dip). Calcite - pyrrhotite vein, 40° dip and 15cm width is at 52.9m in black calcareous- pelitic schist. The rock core is not so fragile as MJTK-1, even though the color is due to graphite. And calcite is dominant.

Calcite veins are 56.2 -56.6m depth. with 45° dip and 3 -20mm width. Calcite (-dolomite?) vein is at 63.0m depth, with sphalerite with parallel calcite veins and calcite veins along foliation.

5 chalcopyrite - pyrrhotite - calcite veins along foliation are under 72.4m depth, with 6 -10cm intervals and 6 -15mm widths. Calcareous schist, with foliation (30 -40° dip) is bedded or lamination micro-folded. Pyrrhotite - calcite (- chalcopyrite) veins along foliation are at 70.0, 70.15, and 73.35m with 45° dip and 3-30mm width. And pyrrhotite - calcite veins (width :12 -110mm 40° dip) under. Pyrrhotite - calcite vein with 40° dip and 35 -40cm width is at 80.0 depth. -80.6m depth. It may be in a fault, and it is with chalcopyrite, sphalerite and galena (rare). The schist is micro-folded at 84m ± depth. Calcite veins are under there along foliations, with 40cm intervals, 40° dip, and 2 -9mm width. Some vein is in small faults (reverse faults). Pyrrhotite - calcite with vein is under 95.5m depth. It is concordant with foliation (40° dip, 40-80m width) and with sphalerite and chalcopyrite. And it also has 80cm length accessory network. Pyrrhotite - calcite vein (40° dip, width :10mm) is at 99.1m depth. Calcite - pyrrhotite vein is at 99.6m depth, (40° dip, width :130mm). It is with chalcopyrite and brecciated at edges. Pyrrhotite - calcite vein (40° dip and 20mm width) is at 100.4m depth. (Pyrrhotite -) calcite vein (30 - 40° dip,13 - 40mm width) is at 100.7m depth. It is with irregular pyrrhotite - chlorite - calcite vein (50° dip,160mm). Pyrrhotite - chlorite - calcite vein is under 101.2mdepth, with 50° dip and 160mm width. Chalcopyrite pyrite - pyrrhotite vein (30° dip) is at 101.6m depth. Calcite and chlorite replace the upper rock. Dark gray calcareous schist is with calcite veinlets along foliation (25° dip -40° dip). Lamination and bedding are micro-folded and have different dip to foliation. Chlorite - calcite - quartz vein (30° dip, width :35cm) is at 113.65 -114.10m depth. It is with pyrrhotite (p) and breccia-like with schist and tuff fragments.

Calcareous- pelitic schist, more altered (chlorite, silicified) has foliation($40-45^{\circ}$ dip) and is partly black with graphite. Pyrrhotite vein (25° dip, width 7mm) is at 140.5m depth. Calcite - pyrrhotite vein (40° dip, width 30mm) at 140.9m depth. Pyrrhotite –clay mineral - calcite vein is along foliation with 40° dip and width 110mm. (Pyrrhotite -) calcite vein (40° dip, width 30mm) is at 142.1 -142.3m depth, with white fine calcite at 143.5 -143.9m depth. Pyrrhotite - calcite network is at 144.6 -144.7m depth. Pyrrhotite - calcite vein (140° dip is at 145.0 -150.6m depth. It is along foliation, with chlorite. For example, chalcopyrite - sphalerite - pyrite - pyrrhotite - chlorite - calcite vein is at 147.8 -148.0m depth with

 45° dip and 80 -100mm width. Most sulfides are at edges. depth. pyrrhotite - chlorite - quartz - calcite vein at 148.2 -148.5m depth , with chalcopyrite. It has 45° dip and 210mm width. sphalerite - pyrrhotite - calcite vein is at 148.8 -149.0m depth, with chalcopyrite and 45° dip, Pyrrhotite - calcite vein. With 40° dip and sphalerite and rock fragments is at 149.3 -149.6m depth. Pyrrhotite - calcite vein (45° dip, width 130mm) 154.7 -154.8m depth. Mineralization weakens under.

Black-pale gray, pelitic- calcareous schist is partly dominant with graphite (foliation: 20° - 40° dip). Quartz - calcite vein is at 171.9m depth (25° dip, width 30mm). It is with pyrrhotite (p) and pyrite dissemination along foliation. Pyrite has colloform structure even though it is in a fracture. Calcite replaces host rock with chlorite and pyrite (p) at 176.7m depth. Pyrrhotite - (quartz -) calcite vein with sphalerite (20° dip, width 9 -20mm) is at 177.6m depth.

Pelitic (partly calcareous) schist (foliation: $15^{\circ}-40^{\circ}$ dip, Lamination $0^{\circ}-30^{\circ}$ dip) is at 183m depth. Pyrite - chlorite veinlet (65° dip, width <1mm) is at 182.6m depth. Calcite veinlets along foliation with pyrrhotite (30° dip, width <10mm) is at 184.8m depth. Pyrite - calcite vein (40° dip, width <3mm) is at 187.0m depth. Pyrite crystallized after calcite. Chalcopyrite - pyrrhotite - calcite vein (30° dip, 3mm width) is at 188.3m depth. Calcite - pyrite - pyrrhotite veinlet (40° dip, width <3mm) is at 195.5 -195.7m depth. Calcite - pyrrhotite vein (15° dip, width 16mm) is at 196.75m depth. Calcite and chlorite replaces rock is at 196.9m depth. Pelitic-calcareous schist (lamination $10-30^{\circ}$ dip, foliation 20-40° dip) at 205m depth with graphite. Pyrrhotite - calcite veinlet (75° dip,2mm) is at 206.3m depth.

Pyrite - chlorite veinlet (45° dip, width <1mm) is at 217.1m depth. pyrite - calcite network in small fault (width 40mm), generally 30° dip, is at 218.5m depth. Pelitic- sandy- calcareous schist has lamination, $0-30^{\circ}$ dip, foliation $10-40^{\circ}$ dip, and is partly with graphite. Bedded (sandy-pelitic) schist is at 222.5m depth, and 20° dip, sorted (Not reversed?). Pale greenish gray fine tuff that is silicified with chlorite is at 229.7m-231.9m depth. Sphalerite - chalcopyrite - pyrrhotite (- quartz) - calcite vein. in tuff is at 230.1m depth (with galena?, 40° dip,10-40mm). pyrrhotite - chlorite - calcite veinlet (50° dip,3mm) is at 231.4m depth. Barren calcite veins are dominant. Pyrite - calcite veinlet. 20° dip,1mm is at 235.0m depth. Black-pale gray, pelitic- sandy-calcareous schist is with graphite (bedded : $20-30^{\circ}$ dip, foliation: $10-30^{\circ}$ dip). The formation is

sorted. is at 258m depth, (Not reversed?). Barren calcite (vein.5° dip) with rock fragments is at 259.7-259.9m depth. Pelitic- sandy- calcareous schist with graphite is at 262m depth (Foliation 20-40° dip). Chalcopyrite - pyrite - calcite vein (35-40° dip,11mm) is at 20-30° dip, bedded 272.1m depth. Fault is at 277.3-281.3m depth, also sheared under. Pelitic- (sandy-) calcareous schist is with graphite. Foliation 30-45° dip, bedded 30-50° dip, Pyrite and chalcopyrite in fault is at 277.3-281.3m depth., and sheared. Calcite network is at 293.7m depth with pyrite. Chlorite (-dolomite?) - calcite - quartz vein (35° dip, 20cm) is at 307.0-307.3m depth. Fine tuff thin layer (30° dip, chlorite) is at 307.3-307.4m depth with pyrite dissemination. Pelitic- calcareous schist (foliation 40° dip, bedded 10- 30° dip, partly calcite network) is at 309m depth. Pyrrhotite calcite vein, with chalcopyrite, along foliation, is at 317.5-319.9m depth. Fractured zone is under 322.3m depth. Pelitic- calcareous schist (foliation 15-50° dip, bedded 15-40° dip, partly vertical by micro - folding) is at 327m depth. Pyrrhotite vein. 35° dip (width :7-16mm. with calcite and pyrite along foliation along foliation) is at 326.85m depth. Pyrrhotite – pyrite dissemination with calcite is at 327.05m depth (Lens like). Pyrrhotite - calcite veinlet (with chalcopyrite. 15° dip, width 6mm) is at 327.18m depth. Pyrrhotite - calcite veinlet. 25° dip,4mm is at 327.60m depth.

Pyrrhotite - calcite veinlet (20° dip,4mm) is at 328.00m depth. Chalcopyrite - pyrrhotite - calcite network. (width <8mm) is at 332.5-332.75m depth. Chalcopyrite - (sphalerite -) pyrrhotite veinlet (65° dip, width <5mm) is around 333.5m, and pinch out, with micro-faults (normal fault? 65° dip). (Marcasite? -) pyrite - pyrrhotite - calcite vein (65° dip,30mm) is at 337.65m depth.

Chalcopyrite - pyrrhotite vein. 30° dip,40mm.is at 339.8m depth. Chalcopyrite - pyrrhotite network is at 340.2m-340.4m depth, and partly replaces schist. (sphalerite? -) chalcopyrite - calcite - pyrrhotite vein is at 341.1m depth, with 45° dip and 30mm width. Calcite network and chalcopyrite – pyrrhotite lens are under. chalcopyrite - sphalerite - calcite - pyrrhotite vein (40° dip,20-30mm) is at 342.0m depth. Pelitic- calcareous schist has. 5-40° dip foliation. bedded 30-50° dip, micro-folded. Chalcopyrite - pyrite - calcite vein (5° dip,20mm) is at 354.6m depth. Pelitic (partly sandy) schist has foliation20- 30° dip, It is bedded (almost 20° dip) and with. graphite. Chlorite - calcite vein (35° dip,30mm) is at 377.1-377.2m depth, with pyrrhotite.

Pyrrhotite -Chlorite - calcite vein with 20° dip and 10mm width is at 377.6m depth. Pale greenish gray fine tuff is at 378.6-379.3m depth (compact. 20° dip?). It replaces to chlorite and calcite by half. Graphite decreases is under 382.3m. Pyrrhotite - calcite vein with 15cm interval (20° dip, width <16mm) is at 382.4-386.0m depth. Sandy (-pelitic) schist is partly with graphite, and with foliation (p) 30-45° dip, It is bedded 20° dip and dominant with graphite. Pyrrhotite - calcite vein (10° dip,40mm) is at 386.85m depth. Pyrrhotite – calcite dissemination is at 390.10m depth. Calcite – pyrrhotite dissemination (striped along lamination? 10° dip) is at 390.20m depth. Pelitic schist is dark gray-black with graphite, and friable. It has 20° of p, however unstable.

Pelitic schist is with graphite, dark gray-black and friable. It is with 10-30° dip foliation and 20° dip lamination (p). (Galena? -) sphalerite veinlet (25° dip,2mm) is at 404.3m - 404.5m depth. it is surrounded by pale gray rock (tuff?) and friable by graphite lower. Dark gray - black

pelitic schist is with graphite and friable (foliation 10-20° dip, Lamination(p)). Dark gray-black Pelitic schist is with graphite. Sheared zone (fault?) is at 449.5-459.4m depth. The schist is brecciated, with dolomite? Pyrite, calcite and quartz in matrix at 459.4-460.0m depth. Carbonate vein is under.

Calcareous -silty schist (foliation (p). with lamination-bedding 35° dip) is under 464.6m. Fine sandy schist layer is at 468.6-469.8m depth, often with calcite vein, hard and with quartz and pyrrhotite. Chalcopyrite-sphalerite-pyrrhotite-calcite vein (20° dip, 23mm) is at 471.0m depth. It is with parallel pyrrhotite-calcite veinlet. pyrrhotite-(dolomite ? -) calcite vein (20° dip, 70mm) is at 472.4m depth. Galena-sphalerite-chalcopyrite-pyrrhotite-quartz vein is at 473.2m-473.8m depth. It has cavities without calcite, 25° dip 500mm and parallel chalcopyrite-pyrrhotite-quartz veinlets. Pyrrhotite-quartz vein (30° dip, 20mm) is at 475.6m depth. Pyrrhotite-calcite vein (30° dip, 25mm) is at 476.4m depth.

Pelitic -silty -sandy schist has $10-20^{\circ}$ dip foliation, lamination-bedding, and 40° dip (average). Pyrite-calcite network is at 487.6m depth. Sandy tuff is at 497.45-498.5m depth, with calcite veinlet. Silty -fine sandy schist has $20-40^{\circ}$ dip foliation and lamination 40° dip, It is partly friable with graphite. Silty tuff (tuffaceous schist) thin layers is at 519.4-519.6m depth, with 30° dip, Pelitic schist is at -532.2m depth. Silty -finely sandy schist. Foliation (40° dip,

lamination 35° dip) is at 523.2m depth. Pelitic schist with graphite is under 533.1m. Fine sandy schist (lamination 30° dip) is at 534.9m. pelitic schist has foliation $40-50^{\circ}$ dip and lamination 45° dip, Partly it is friable with graphite.

Pelitic -silty schist has 30° dip foliation and 45° dip lamination, with calcite veinlet and graphite. Small fault is 545.45m depth. Pelitic schist has 45° dip foliation and 45° dip(?) lamination. It is calcareous and with graphite. pelitic schist with foliation 30° dip, even though bedding and lamination are unclear. It is with graphite and fracture zone. Silty schist (foliation 20° dip, lamination 55° dip) is under 576.4m. Galena-chalcopyrite-sphalerite-pyrrhotite-calcite vein(35° dip, 150mm) is at 581.3-581.5m depth. Chalcopyrite-galena-pyrrhotite vein (35° dip, 10mm) is at 581.7m depth.

Sandy (tuffaceous ?) schist thin layer (35° dip) is at 582.0m-582.15m depth. And silty schist has 40° dip foliation and 35° dip lamination. Fault is at 584.7m depth, with 60° dip and 10cm width. Silty-pelitic schist alternation has 40° dip foliation and 45° dip bedding. Galena-chalcopyrite-sphalerite-pyrrhotite-calcite vein is at 581.3-581.5m depth. Pyrite dissemination is at 593.9m depth with calcite. Silty-pelitic schist has 35° dip foliation and 40° dip bedding. Silty-fine sandy schist alternation is around 607m (foliation 30° dip , bedding 40° dip). Silty-fine sandy schists have alternation (foliation 40° dip, bedding 45° dip). Silty-pelitic schist alternation is under 609m (foliation 40° dip , bedding 50-40° dip). Calcite vein (10° dip, 100mm) is at 619.9m depth. Pelitic schist with graphite is friable under 621.2m.

Pelitic-silty schists have 45 ° dip Foliation(p) and bedding with calcite veinlet. It is at 621.5-628.3m depth and friable with graphite. Pelitic-silty. foliation 30° dip, lamination 45° dip, It is at 650.20-650.65m depth, with sheared zone, calcite network and friable zone.

Pelitic-silty schist (foliation 40- 50° dip, lamination 45° dip) is calcareous, and it is at

664.0-664.1m depth. Calcareous tuff? Is at 665.0-665.8m depth. Pelitic schist (foliation30-40° dip, lamination 45° dip) is with graphite. Sandy schist (70° dip?, Folded) is at 674.80m. Sheared zone is at 676.70m. Pelitic schist (foliation 45° dip? (p). lamination 50-80° dip (p)) is with calcareous. pelitic-silty schist (foliation 25° dip, lamination 20° dip). Calcite vein (10° dip) is at 694.3-695.1m depth, with specularite. (Drilled to 701.1m depth.)

(2) MJTK –4 (Direction: 325 , Inclination: 55 , Length: 601.20m)

-2.10m depth. Tricon. Calcareous schist.

Calcareous schist -5.45m depth. weathered and friable is at 2.10m depth (foliation 45° dip, limonite along foliation).

Calcareous schist is with $30-45^{\circ}$ dip lamination and $40-45^{\circ}$ dip foliation. Oxidized zone is under 20.3m depth. calcite veinlet is along foliation. Pyrite (euhedral - subhedral) spots are under 31.5m depth. Calcite vein (45° dip,10mm. with pyrite spots) is at 32.3m depth. Pyrite - calcite network, with chalcopyrite, is at 36.4m depth.

Dark gray-black calcareous schist is with foliation:15-45 \degree dip and micro-folded, and often with calcite veinlets and networks. Pyrite (<2mm) spots in calcareous schist (foliation 40-50 \degree dip, lamination 20-45 \degree dip). Calcite vein (55 \degree dip, width 30cm+. pyrite and pyrrhotite are at edges) is at 85.9-86.55m depth. Sheared zone is under. Pyrite - calcite vein (55 \degree dip, width 4-20mm. and calcite network) is at 87.1m depth.

Calcareous- pelitic schist is with foliation ($40-50^{\circ}$ dip, bedded $15-45^{\circ}$ dip). Calcite vein (30° dip, width 40cm+) is at 98.5-99.1m depth, with pyrrhotite and sphalerite (?). Chlorite - calcite vein ($30-45^{\circ}$ dip) is at 99.7-100.3m depth, with sphalerite, chalcopyrite and pyrite. It is surrounded by calcite veinlets.

Fault is at 105.65-105.75m depth (with clay. 65° dip, Sheared).

Calcite vein (40° dip, with pyrite and rock fragments) is at 108.2-108.9 depth. Foliation is almost 30° dip,

Calcareous- pelitic schist has foliation and bedding (40° dip), partly with calcite network. Pyrrhotite - calcite vein along foliation (alternating with several cm intervals) is at 124.7-126.0m depth, and with averaging calcite veinlet with averaging 1m interval. Calcareous - sandy - pelitic schist (foliation 35-40° dip, bedded $15-40^{\circ}$ dip) is often with calcite veinlets. Chlorite - calcite vein (40° dip, 50cm) is at 143.75-144.40m depth. Calcite vein is at 151.05m depth, with pyrrhotite and sphalerite (30° dip,30-40mm). Chlorite - calcite vein, (with pyrrhotite, sphalerite 25-30° dip,180mm) is at 152.3m-152.5m depth. Calcite veinlet – network and chalcopyrite. dominant is under158.7m depth, in calcareous schist (foliation20-45° dip, bedded 25-40° dip). Calcite vein (25° dip,40mm) is at 171.3m depth. Calcite vein. 55° dip,15-35mm is at 174.4m depth. Calcite vein (20-40° dip,<40mm depth. with averaging 15cm interval) is at 175.3-176.2m depth in calcareous schist (foliation 35-45° dip, bedded 25-45° dip). Chlorite - calcite vein.30-45° dip,250mm is at 213.00-216.00m depth. Calcite vein (45 ° dip,10mm) is at 215.9m depth. Pelitic-silty - calcareous schist (foliation 40° dip, Lamination) is micro-folded. Sphalerite pyrrhotite veinlet (.0- 20° dip,5mm, with calcite) is at 229.9-230.0m depth. Calcite vein.(40°

dip,30mm, with pyrrhotite) is at 233.1m depth. Calcite- chlorite- pyrrhotite veinlet (40° dip, along foliation) is at 233.3m-233.5m depth, partly with sphalerite, chalcopyrite.

Pelitic- sandy- calcareous schist has foliation ($40-60^{\circ}$ dip). Lamination is unclear. And it is partly with calcite veinlet along foliation and with graphite, and also partly sheared.

The schist is with calcite veinlet along foliation at 241.1-246.2m depth, with pyrrhotite vein (

60° dip,4mm). pyrrhotite veinlet (65° dip,3mm) penetrates across foliation at 246.3m depth. Foliation becomes 20° dip at 247m depth.

Pelitic-silty - sandy- calcareous schist (foliation $40-50^{\circ}$ dip, Lamination vague, friable and partly with graphite) is with calcite veinlet along foliation. Pyrrhotite - calcite dissemination along foliation is at 246m depth. Pelitic- calcareous schist, with 30° dip foliation and vague lamination, is at 266.9-269.6m depth and friable by graphite. It is harder with calcite veinlets along foliation.

Sheared zone is at 279.9-280.1m depth.

Pyrrhotite - calcite vein, 30° dip, 30mm, is at 280.69m-280.73m depth. Pelitic -silty -calcareous schist (foliation 40- 50° dip, lamination20- 30° dip) is with calcite network dominant. Calcite along foliation is at 285.8-285.95m depth.

(Galena-)sphalerite-chalcopyrite-pyrrhotite-pyrite-calcite vein is at 287.3-287.8m depth, with 50° dip and 30mm width. Pyrrhotite is at the upper edge, and pyrite is at the lower edge. And calcite veinlet is near it. Chalcopyrite-pyrrhotite-calcite vein (50° dip, 8mm) is at 288.4m depth. It is calcareous under 299.9m depth.

It has clay and pyrite at 299.9-300.3m depth, with fault fragments and in silty -calcareous schist (foliation 25° dip, Lamination is vague.).

Calcite network-veinlet is with graphite in Pelitic -silty -calcareous schist (foliation 50° dip, bedding $10-30^{\circ}$ dip).

Sandy schist, 10° dip bedded, is at 305.25-305.45m depth.

Sheared zone is at 306.6m. Sheared zone is at -312.3m depth in pelitic -silty schist.

Tuffaceous-sandy schist. Calcite is at 312.4-313.8m depth, and silicified. Pelitic -calcareous schist is at 313.8 depth. foliation 30° dip, lamination 25° dip,

Calcite vein (70° dip, 10mm) is at 317.85m depth, with pyrite.

Dark gray pelitic -silty schist has foliation ($15-20^{\circ}$ dip) and lamination(unclear, 10° dip?) with graphite, and often with calcite networks.

It has foliation, 35° dip, at 335.3m depth.

In pelitic -silty schist, foliation has $45^{\circ} \operatorname{dip}(p)$ and the lamination has averaging $10^{\circ} \operatorname{dip}$, with graphite.

Fine tuff-silty tuff layer (25° dip, Calcite dominant) is at 343.3-343.5m depth.

Pelitic -silty schist (foliation 20° dip, lamination 20° dip) is under 370.6m depth.

Calcite partly replaces fine tuffaceous schist.

Pelitic -sandy schist is under 374.2m, with graphite.

Pyrite is disseminated along fracture at 374.7-375.0m depth.

chalcopyrite – pyrrhotite - calcite vein (40° dip, 30mm) is at 378.95m depth in pelitic -sandy (-calcareous) schist (foliation 40° dip, lamination, generally 30° dip).

And graphite becomes dominant. Foliation is nearly vertical. pyrite dissemination is at 387.7m depth.

Calcite-pyrrhotite vein (65° dip, 4-11mm) is at 394.5m depth.

Lamination is folded at 406-407m depth, partly with 70° dip (45° dip) in pelitic -silty schist (foliation(p), lamination 45° dip?, calcareous, with graphite).

Calcareous-pelitic schist (foliation bedding: 40° dip) is with dominant calcite and partly with calcite network.

Pyrrhotite-calcite vein along foliation is at 424.7-426.0m depth. Pelitic-calcareous schist is partly with graphite (foliation 40° dip, Lamination generally 25° (folded)). Calcite-chlorite vein (45° dip, 90mm) is at 440.75m depth.

Pyrrhotite dissemination and concentration is at 454.2m depth, in medium sandy schist (tuffaceous ?). Galena-chalcopyrite-sphalerite-pyrrhotite-chlorite-calcite vein (35° dip, 200cm) is at 455.30m-455.60m depth.

Fault (30° dip) is at 456.5m depth between silty schist (foliation(p). lamination 45° dip) and pelitic schist. Sheared zone is at 464.0-464.9m depth.

Silty-pelitic schist is partly sandy and calcareous (foliation $30-50^{\circ}$ dip, lamination $20-60^{\circ}$ dip).

Chalcopyrite-sphalerite-pyrrhotite-calcite vein (50° dip, 160mm) along foliation is at 501.8-502.2m depth, with parallel veinlets.

Sulfides are anhedral to calcite. Chalcopyrite-sphalerite-pyrite-pyrrhotite-calcite vein (w: 30mm) along foliation is at 511.3m depth in silty-pelitic schist (foliation 50° dip, lamination 35° dip). Chalcopyrite-sphalerite-pyrrhotite-pyrite-chlorite-calcite vein (40° dip, 35mm) is at 511.55m depth. Sphalerite-pyrrhotite-calcite vein (25° dip, 20mm) is at 511.7m depth.

Fault (45° dip ?) is at 514.0-514.5m depth, with pyrite dissemination.

The geology becomes silty-fine sandy schist (foliation 30° dip (p), lamination $10-70^{\circ}$ dip) and partly friable. Chlorite-calcite vein (40° dip, 200mm) is at 553.9m depth. Silty-pelitic schist (foliation 35° dip, lamination $10-60^{\circ}$ dip) is calcareous. Chlorite-calcite vein (40° dip, 200mm) is at 553.9m depth.

Pelitic-sandy schist (calcareous, foliation 30° dip, lamination 25° dip) is partly friable. Fine and calcareous tuff ? layer is at 583.85-584.15m depth. Pyrrhotite-calcite vein (25° dip, 20mm) is at 586.65m depth. Pyrrhotite-calcite veinlet (30° dip, 6mm, along foliation) is at 588.0m depth. Pyrrhotite-chlorite-calcite vein (45° dip, 200m depth) is at 588.5-589.1m depth. Pelitic schist is partly alternated with silty schist (foliation 25° dip, lamination 30° dip). Fine tuff layer (30° dip) is at 594.2-594.35m depth. (Drilled to 601.20m depth.)

(3) MJTK –5 (Direction 270°, Inclination 70°, Length 502.10m)

The geology of the shallow layer is the Cenozoic sediments, that consist of Sand and gravels (–conglomerate) with soil and limonite (Gravels consist of pelitic schist, sandy schist and tuffaceous schist (<35mm), Matrix is sandy and includes limonite.). And weathered basic igneous rock gravels are dominant at 120.3m-142.5m depth. They are brown, partly, dark greenish gray (gabbro or

diorite?) and partly magnetic or foliated. The matrix consists of limonite, calcite and clay.

Pelitic-silty schist (foliation: $60-70^{\circ}$ dip) is under 142.5m, and bedded and laminated unclearly. It is weathered to 148.6m depth. Pyrrhotite - calcite veinlet (55° dip, width <5mm) is at 149.05m depth. Chalcopyrite - pyrrhotite - pyrite - calcite network along foliation is at 151.20m depth. Chalcopyrite - pyrrhotite - pyrite network is at 151.60m depth. Quartz - calcite - pyrite - pyrrhotite veinlet (60° dip, 6mm) is at 154.45m depth. And the parallel calcite veinlets have 15 cm interval under. Pyrite - pyrrhotite veinlet (60° dip,5mm, with branch veinlets) is at 162.3m, 162.4m, 162.8m and 162.9m depth. Pyrite dissemination along foliation is at 163.5m-164.0m depth. Chalcopyrite - pyrite vein (50° dip,6mm. with chlorite) is at 164.7m depth.165.0m depth. Pyrite - calcite veinlet (60° dip, width <3mm) is at 165.7. And similar veinlets with almost 30cm interval are with chlorite.

Pelitic-silty schist (foliation 45° dip (p), lamination (p) 45-65° dip) is partly sheared. Pyrite - calcite vein (75° dip,15mm) is at 177.0m depth. Pyrrhotite - calcite vein (60° dip,3mm) is at 178.4m depth. Pyrrhotite - calcite vein (55° dip, <4mm) is at 181.8m depth.

Pelitic- calcareous schist has foliation(50° dip) and Lamination (unclear, 60° dip) at 186.7m-196.7m depth. It is altered (calcite, silicified) and dominant with calcite network. Pyrrhotite - calcite network is at 188.3m depth. Quartz vein (10° dip,11mm) is at 188.9m depth. 3 pyrrhotite - calcite veinlets (65° dip,3mm) are around 189.15m depth. Pyrrhotite - calcite vein (65° dip, 3mm) are around 189.15m depth. Pyrrhotite - calcite vein (65° dip, w<6mm) is at 190.0m depth. Pyrrhotite - calcite vein (70° dip,1-12mm) is at 191.1m -191.3m depth. Pyrrhotite - calcite vein (90° dip,10-40mm) is at 194.8m-195.6m depth and 195.7m depth.

Pyrrhotite - calcite vein $(90^{\circ} \text{ dip}, 20\text{-}40\text{mm})$ is at 196.1m depth. Pyrrhotite dissemination (f) is at 196.6m depth. Pyrrhotite - calcite vein $(5^{\circ} \text{ dip}, 23\text{mm})$ is at 201.2m depth, with lamination (70° dip). Pyrrhotite - calcite veinlet (60° dip,5mm) is at 205.1m depth.

It is in calcareous- silty schist (partly tuffaceous. Foliation (p) 45° dip,lamination20- 70° dip) and partly with graphite. Chalcopyrite – pyrrhotite dissemination (with calcite and silicified?) is along foliation at 210.7m depth. Chalcopyrite - pyrrhotite - calcite network is at 213.0-213.3m depth.

Tuffaceous-sandy schist is at 220.5m-224.0m depth. The foliation and lamination are unclear. Calcite vein (55° dip, 12mm) is at 220.6m depth. Chalcopyrite - pyrrhotite - calcite vein (40° dip, 40mm) is at 221.0m depth. Chalcopyrite - pyrite - calcite vein (65° dip, 40mm) is at 222.5m depth. Chalcopyrite - sphalerite - pyrrhotite - calcite vein (50° dip, 90mm) is at 222.8m-222.9m depth. Pyrite dissemination and sphalerite - chalcopyrite - pyrrhotite network. are under it. Pyrrhotite dissemination is at 223.5-223.9m depth with Dolerite dyke (60° dip nonmagnetic). Silty - fine sandy schist (tuffaceous? with chlorite) is under 224.0m depth. Pyrite - pyrrhotite network is at 224.7m depth. Pyrite - calcite veinlet along foliation (50° dip) is at 234.0m depth. Pyrite - calcite vein (50° dip, w<30mm) is at 234.50m depth, with pyrite - calcite network under.

The geology is calcareous-silty - sandy schist (foliation 50° dip, lamination $40-90^{\circ}$ dip) with calcite veinlets along foliation. Pyrite - calcite veinlets with 20cm interval (60° dip,1mm) is under 244.0m depth. Pyrrhotite - calcite network parallel to foliation is at 246.5-246.7m depth. Calcite - pyrite vein (65° dip, 5mm) is at 247.4m depth.

Small fault (60° dip, 20mm) is at 248.55m depth, with breccia.

Pyrite - calcite veinlets, with 60° dip and 10cm interval, is to 250.3m depth. Chalcopyrite - pyrrhotite - calcite vein (40° dip, 50mm) is at 252.9m depth. Chalcopyrite - pyrrhotite vein (60° dip, width <6mm) is at 253.5m depth, and pinch out. Pyrite - pyrrhotite - calcite network is at 255.1m depth, and also, pyrrhotite - calcite veinlets (60° dip, width <1mm, 10cm interval). Pyrrhotite dissemination (f), with chalcopyrite and silicified, is at 256.2m-257.9m depth. Chalcopyrite - pyrrhotite - calcite network silicified is under 259.1m, partly with a slight chlorite. The schist is more silicified, and more calcite network.

Calcareous -silty schist (foliation $50-65^{\circ}$ dip(p)) is hard with unclear lamination and with calcite network-veinlet. Chalcopyrite-calcite-pyrrhotite vein-network (90° dip, width<70mm, with cavities) is at 285.8m-287.4m depth. Pyrrhotite network is to 288.3m depth, partly with chlorite. (Chalcopyrite-) pyrite-chlorite-calcite veinlet along foliation is in silty -calcareous schist, that is silicified, with calcite veinlets, foliation $50-70^{\circ}$ dip(p) and inconstant lamination(p). Pyrrhotite-calcite-quartz vein (60° dip, 40mm) is at 292.85-292.95m depth. Calcite-quartz vein (65° dip, 120mm) is at 293.1-293.3m depth.

Calcite-pyrite-quartz vein (55° dip, 80mm) is at 293.35-293.45m depth. Pyrite-chlorite-calcite vein (55° dip, 40mm) is at 294.1-294.15m depth. 2 parallel calcite-pyrrhotite veinlets, with 10 cm interval, are at -294.8m depth.

Fine sandy schist, bedding 70 ° dip, is under 295.00m, with calcite-pyrite network. Pyrite-calcite-quartz vein (60 ° dip, 10mm) is at 297.8m depth, with branch veinlets. Calcite-pyrrhotite vein (-network) (50 ° dip, width<11mm) is at 303.1m depth. Pyrrhotite vein (10 ° dip, 6mm) is at 303.75m depth. Pyrrhotite vein (50 ° dip, width<4mm) is at 303.9m depth and pinches out. Pyrrhotite vein (40 ° dip, 3mm) is at 304.75m depth. Calcite-pyrrhotite vein (30 ° dip, 4mm) is at 307.65m depth. Pyrrhotite – pyrite dissemination along foliation(50 ° dip) in sandy schist is under 308.5m depth. The schist is silicified with very slight calcite. Calcite-pyrrhotite vein (40 ° dip, 3-10mm) is at 311.0m depth. Pyrite-calcite vein is at 311.05m depth, with 45 ° dip and width10mm(changeable).

Silty schist has foliation (65° dip) and lamination (55° dip). It is with chlorite and tuffaceous ? Calcite-pyrrhotite vein ($30-50^{\circ}$ dip, 10mm) is at 315.5-315.9m depth with pyrrhotite vein, 50° dip and 8mm width. Pyrrhotite-chlorite-calcite network is at 316.75m depth. with pyrite-pyrrhotite networks under. Chalcopyrite-pyrite vein (50° dip, 4mm) is at 318.0m depth. Sheared zone is at 318.2-319.1m depth. Silty schist (foliation 50° dip, lamination 60° dip, partly chlorite) is under 319.1m depth. Calcite vein (70° dip, 32mm. with dolomite ?) is at 321.8m depth. Pyrite-calcite network is at 325.5m depth.

Pyrite-calcite veinlet (60° dip, 7mm) is at 329.7m depth, with pyrite dissemination along foliation. Foliation is steeper (65° dip). (Pyrite-) pyrrhotite vein (60° dip, 8mm) is at 334.9m depth. Pyrrhotite veinlet, along foliation (60° dip, 3mm) is at 337.75m depth. Pyrrhotite-calcite vein (50° dip, 9mm) is at 339.1m depth. Pyrite vein (50° dip, 8mm, chlorite) is at 340.5m depth. Pyrite-pyrrhotite vein (50° dip, 6mm) is at 342.3m depth, with calcite and chlorite.

Silty -fine sandy schist has foliation (50 ° dip) and lamination (70 ° dip)? 2 calcite-pyrrhotite-pyrite veins (50 ° dip, 6mm) are at 343.25m-343.30m depth.

Pyrrhotite-pyrite-calcite vein (50° dip, 8mm) is at 344.4m depth. (Sphalerite-chalcopyrite-) pyrrhotite-pyrite vein (55° dip, 12mm) is at 345.1m depth. Pyrite vein (50° dip, 6mm) is at 346.5m depth. Calcite-pyrrhotite vein (55° dip, 30mm and network-like) is at 346.7m depth.

Chalcopyrite-calcite-pyrrhotite vein (50° dip, 10mm, network-like) is at 355.1m depth. Chalcopyrite-calcite-pyrrhotite network (width:6mm ±) is at 355.3m depth. Calcite-pyrrhotite network (65° dip, 10mm) is at 356.9m depth. Chalcopyrite-pyrrhotite vein (60° dip, 4mm, with calcite) is at 357.3m depth. Pyrrhotite vein (with calcite, 65° dip, 5mm) is at 357.6m depth. (Chalcopyrite-pyrite-) pyrrhotite vein, with calcite, is at 358.0m depth (65° dip, 9mm, with branch veinlets). Silicified fine sandy schist is at 358.75-362.0m depth, with mineralization zone. (Sphalerite-) chalcopyrite- pyrite- pyrrhotite network- dissemination has pyrite, pyrrhotite, chalcopyrite and quartz are euhedral in cavities.

Silty -fine sandy schist has foliation (50° dip) and lamination (60° dip?). White altered chlorite-pyrrhotite-calcite network is to -373.5m).

Micro-diorite dyke (70° dip) is at 382.3m-386.0m depth (Green- white alteration, Nonmagnetic). Calcite-chlorite veins dominant in fine sandy schist -pelitic schist alternation, (foliation 65° dip- 70° dip, Bedding unclear). Fine secondary quartz is along foliation.

Silty -tuffaceous schist (foliation 45° dip, lamination 50° dip?) Is with calcite and chlorite. Tuffaceous schist (coarse tuff- lappili tuff) is under 392.4m, with chlorite. Dolomite vein (30° dip? 190mm?) is at 398.4-398.6m depth. Silty schist is at 398.6-399.4m depth. Tuffaceous schist is under 399.4m. Pyrite-calcite vein is at 406.2-406.3m depth (70° dip, 100mm). It is with foliation(60° dip) and (lamination 70° dip). Silty -tuffaceous schist alternation is at 406.3m, and silty schist is dominant. It includes Dolomite-calcite veinlet. Chalcopyrite-pyrrhotite-calcite vein (65° dip, 100mm) is under 421.4m. Tuffaceous schist (lamination 55-60° dip), silty schist , and pelitic schist thin layer are under 423.7m depth.

Fine sandy schist is at -431.7m depth in tuffaceous schist. Silty -fine sandy schist (foliation 45° dip, bedding 45° dip) is under 431.7m. (Calcite-dolomite-)quartz vein (10° dip, with pyrite and chlorite) is at 443.35-443.45m depth. Lamination is steeper as deeper ($60-65^{\circ}$ dip). Pyrite dissemination-network is at 446.7m depth. Calcite-quartz vein (10° dip) is at 448.2-448.8m depth in silty -fine sandy schist with foliation(60° dip), lamination(45° dip), and it may be Reverse-bedded under it. Pyrite dissemination is at 451.2m depth. Chlorite-calcite vein (20° dip, 60mm) is at 459.35m depth.

silty -fine sandy schist has foliation (55° dip), unclear bedding-lamination. Pyrrhotite dissemination with calcite along foliation is at 463.4-468.6m depth. Chlorite is concentrated at 472.3m depth. Chalcopyrite-pyrrhotite veinlet is at 473.35m-473.80m depth (50° dip, width<20mm, with calcite and chlorite). Pyrrhotite dissemination-network is dominant at 475.5m depth (lamination 65° dip).

For example, pyrrhotite network is at 478.4-478.6m depth. pyrrhotite dissemination-network is at 479.2m depth. (chalcopyrite-)pyrrhotite veinlet-network is at 479.4-480.8m depth, with averaging 15cm interval. (chalcopyrite-)pyrrhotite network is at 480.15-480.80m depth. pyrrhotite network is at 481.4-481.6m depth with averaging 10cm interval. pyrrhotite dissemination-network is under

482.2m depth, and silicified with calcite and chlorite. Quartz vein (10° dip, 40mm) is at 482.3m depth, with pyrite, calcite and dolomite(?).

Silty - fine sandy schist has foliation(p), lamination ($50-80^{\circ}$ dip), (chalcopyrite-)pyrrhotite dissemination, network and veinlet with calcite. Pyrite veinlet (> 75° dip, 2mm) is at 483.30m depth. it passes across quartz vein(10° dip, 40mm) with pyrrhotite dissemination(f).

Dolomite-calcite vein (20° dip, 70mm) is at 484.80m depth. Chlorite is concentrated at the edges. Calcite vein (35° dip, 250mm) is at 486.0-486.3m depth. Pyrrhotite and chlorite are at edges. Pyrrhotite network is dominant around 493.3m. Pyrrhotite-calcite irregular vein is at 501.25m depth. pyrrhotite-calcite vein (55° dip, 9-15mm) is at 501.90m depth. (Drilled to 502.1m depth.)

(4) MJTK-6 (Direction: 325[°], Inclination: 70[°], Length: 301.90m)

The geology is pelitic schist (foliation $35\degree$ dip, lamination $20\degree$ dip).

Calcite vein with galena and sphalerite is at 34.0m depth (35° dip, 40mm).

Pelitic-silty schist is calcareous (foliation 35° dip, lamination 10- 25° dip) is at 28.5m depth, with calcite vein. 35° dip, 140mm. calcite vein (35° dip, 50mm) is at 30.5m depth, with specularite. Sandy schist thin layer is at 50.2m depth (10° dip, 50mm).

Coarse sandy schist layer is at 56.5-56.7m depth (20° dip, pyrite dissemination). Calcite vein (35° dip, 15mm. with specularite, sphalerite?) is at 59.0m depth.

Chalcopyrite-galena-sphalerite-pyrrhotite-calcite vein is at 69.55m depth (30° dip, 50mm). Sheared zone is at 78.7-79.4m depth. Pelitic-silty schist. Alternation has foliation ($45-25^{\circ}$ dip). bedding ($45-25^{\circ}$ dip). Pyrrhotite -calcite vein (25° dip, 12mm) is at 90.25m depth.

Chalcopyrite-galena-sphalerite-pyrrhotite-calcite vein (35° dip, 200mm) is at 91.1m depth. Pyrite-calcite vein (20° dip, 40mm) is at 92.0m depth.

Chalcopyrite-sphalerite-pyrite-chlorite-pyrrhotite-calcite vein is at 99.7-101.45m depth and it is with $35-40^{\circ}$ dip and dolomite-quartz ? Pyrrhotite network in silty schist is under.

Pelitic-silty schist with foliation (25-40 \degree dip) and unclear lamination.

(Chalcopyrite-sphalerite-)pyrite-pyrrhotite-Calcite vein is under 111.6m depth with 3cm-50cm interval (15-25° dip, 2-30mm). Pelitic schist is friable by foliation under 111.6m depth (Foliation=lamination=30° dip). Pyrrhotite-calcite vein is at 133.95m depth, in silty - calcareous schist (foliation 20° dip, lamination 25° dip,).

Chalcopyrite-galena-sphalerite-pyrite-pyrrhotite-calcite vein (20° dip) is at 134.25-134.80m depth.

It is continuously changed to silty schist . (calcareous. foliation 25° dip, lamination 25° dip : parallel with foliation). Pyrrhotite-calcite vein is at 137.9m depth (25° dip, 9mm). Calcite vein with pyrrhotite is at 138.5m depth (25° dip, 30mm). Calcite vein with pyrrhotite is at 143.5m depth(35° dip, 25mm).

Silty-pelitic schist is calcareous with 25° dip foliation (lamination 25° dip (=foliation) with calcite veins along foliation).

Small fault (80° dip) is at 204.50m depth with pyrite-calcite vein (w:9-18mm). Fault is at 211.7m (40° dip).

Tuff layer is at $211.3 \sim 211.7$ m depth(15°). Sheared zone is at $215.0 \sim 216.8$ m depth.

Pelitic schist is with foliation 20° and bedded (20°).

Fractured zone-sheared zone is at 219.0-229.0m depth with quartz vein fragments.

Pelitic-sandy schist is with foliation 30° and lamina ~ bed 10° .

Chlorite - calcite network is along fractures, with pyrite dissemination.

(Pyrite-) chlorite- quartz- calcite vein(35° .120mm) is at 226.70 ~ 226.85m depth, and pyrite is at edges.

Pyrite- calcite vein is at 230.90m depth.(30° .8mm.). pelitic ~ silty schist. foliation 45° .bedded 45° .

pelitic(~ sandy) schist is friable with foliation $30 \sim 45^{\circ}$ and bedded 45° . Fault(?) is at 243.6 ~ 256.5m depth(35°). Pyrite - pyrrhotite dissemination and replacement along foliation is

at 257.1 ~ 257.85m depth. (Silicified in the upper zone, and calcite network in the lower zone)

Sulfides are disseminated along foliation(p).

pelitic ~ sandy schist is with foliation 25° and bedded 25° .

Chalcopyrite- pyrite- quartz- calcite network is at 260.65 ~ 260.70m depth.

It is friable, and partly sheared.

The geology is pelitic ~ silty schist with foliation (60°) and bedding (60°).

Sheared zone is at 270.1m (sheared pelitic schist, calcareous with graphite) and partly spotted pyrite. Pyrrhotite vein is at $276.85 \sim 277.40$ with chalcopyrite (p), silicified(p) and pyrrhotite network for 25cm.

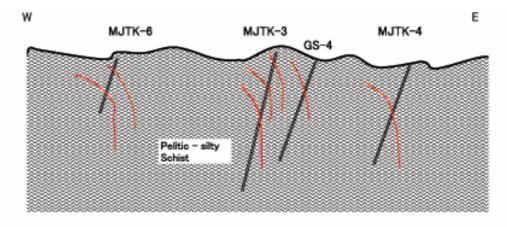
Silty - fine sandy schist has foliation (30°) and bedding $(0 \sim 50^{\circ})$.

Calcite veins are with chlorite at $280.6 \sim 281.2$ m depth with dominant pyrrhotite in the lower part ($281.0 \sim 281.2$ m), and with chalcopyrite, pyrite and chlorite. The schist is sorted to sandy schist (calcareous).

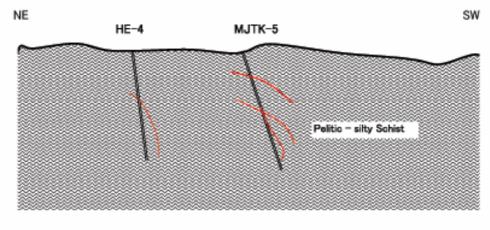
Calcite veins (w: $8 \sim 40$ mm) are with averaging 25cm interval.

Silty schist is at 283.9m depth (foliation = bedding $20 \sim 30^{\circ}$). Sphalerite - pyrite - calcite vein is at 285.5m depth.(35° . 20mm).

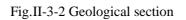
Fractured and friable is at 286.95m depth. (Drilled to 301.9m depth.)



Azzouz Area



Khefawna Area



3-4-2 Analysis and Tests

3-4-2-1 Selection of samples

The samples for analysis were chosen into the following 16 parts with typical mineralization of sulfide among each rock cores. Such sulfides have not only vein structure but also stratified structure; therefore they are regarded as "sulfide concentration"

SP-1: MJTK-3 62.70-62.75m

Sulfides of around 1mm thickness are included in stratified formation. Sulfides of the stratified formation continue from 62.7m to 63.7m. Pyrrhotite, sphalerite, galena and pyrite are seen with the naked eye.

SP-2: MJTK-3 76.30-76.40m

Vein-like or stratified sulfide concentration with calcite, sphalerite, pyrrhotite, pyrite and chalcopyrite with mainly 10cm wide in pelitic schist. Alteration is not observed in border with host rock.

SP-3: MJTK-3 80.50-80.60m

Vein-like or stratified sulfides (mainly pyrrhotite) concentrate in pelitic schist with 50cm wide. The sulfides contain chalcopyrite, sphalerite, galena and pyrite. Calcite is smashed irregularly. Wedge-shaped or irregularity-like fragments of non-altered pelitic rock and tuff are in pyrrhotite.

SP-4 : MJTK-3 99.50-99.60m

Turbidite-like sulfide of around 1mm (partly 1cm) is mainly included in pelitic schist. It mainly consists of pyrrhotite, sphalerite, chalcopyrite and galena. The stratified sulfide continues from 96.6m to 103.3m.

SP-5: MJTK-3 99.60-99.70m

10cm wide vein-like or stratified sulfides (mainly pyrrhotite) concentrate in pelitic schist. It mainly consists of chalcopyrite, sphalerite, galena and pyrite. Calcite is smashed irregularly. Wedge-shaped or irregularity-like fragments of non-altered pelitic rock and tuff are in pyrrhotite, with same direction with boundary.

SP-6: MJTK-3 148.20-148.30m

Vein-like or stratified sulfides concentrate in pelitic schist. The sulfides continue from 148.20m to 150.20m. Pyrrhotite, sphalerite, chalcopyrite and galena are seen with the naked eye.

SP-7: MJTK-3 340.30-340.40m

Pyrrhotite concentrates in pelitic schist. sulfides concentrate into the matrix of brecciated pelitic rock like hydrothermal breccia. It consists of sphalerite, galena in pyrrhotite. The concentration is from 340.00 to 341.00m.

SP-8: MJTK-3 319.20-319.40m

Vein-like sulfides of 100cm wide concentrate from 318.90 to 319.40m. Pyrrhotite, chalcopyrite, sphalerite, galena and pyrite seem to fill up in calcite.

SP-9: MJTK-3 473.40-473.60m

Vein-like sulfides of 100cm wide concentrate between 473.40-474.50m. It consists of pyrrhotite, chalcopyrite, sphalerite, galena and pyrite. The sulfide fill up in quartz and they are sometimes with cavities.

SP-10: MJTK-6 90.70-90.80m

Stratified or vein-like sulfides concentrate into 90.70-93.00m. they consist of pyrrhotite, chalcopyrite, sphalerite, galena and pyrite. Calcite is smashed irregularly. Wedge-shaped or irregular fragments of non-altered pelitic rock and tuff are in calcite.

SP-11:101.10-101.30m

Stratified or vein-like sulfides concentrate into 99.60-111.50m. They consist of idiomorphic pyrite, pyrrhotite and chalcopyrite.

SP-12: 125.20-125.30m

Stratified or massive sulfides concentrate into 125.20-127.00m. They consist of idiomorphic pyrite and chalcopyrite. Wedge-shaped or irregular fragments of non-altered pelitic rock and tuff are in sulfides.

SP-13:134.60-134.70m

Stratified or massive sulfides concentrate into 134.60-135.00m. They consist of idiomorphic chalcopyrite, sphalerite, galena and chalcopyrite. Calcite is smashed irregularly. Wedge-shaped or irregular fragments of non-altered pelitic rock and tuff are in pyrrhotite.

SP-14 : MJTK-5 256.70-256.80m

Filling up-shaped sulfides concentrate into sheared pelitic between 255.50-258.20m. They consist of pyrrhotite and chalcopyrite.

SP-15: MJTK-5 358.90-359.00m

Stratified or lamina-shaped sulfides concentrate between 355.00-372.40m. They consist of pyrrhotite and chalcopyrite.

SP-16: MJTK-5 466.60-466.70m

Disseminated sulfides concentrate into 466.60-466.70m. They consist of pyrrhotite and chalcopyrite.

The conditions of these sulfides can be divided into following types.

massive stratified thin-layered

These types are probably due to a series of mineralization.

3-4-2-2 Results of laboratory test

The result of Chemical analysis of rock samples is indicated to Table II-3-5. Result of Chemical analysis of rock samples

(1) Chemical analysis

The results of chemical analysis (SP-1 - SP-16) are indicated to Table II-3-5 Result of Chemical analysis of rock samples. The samples for analysis are chosen 10cm length samples homogeneous as possible among each 10cm sections.

SP-1 indicates typical analyzed values between 62.70-62.75m of thin-layered sulfides with high zinc content. SP-4 also indicates analysis of thin-layered sulfides between 96.5m - 96.6m of MJTK-3, with high zinc content.

SP-5, SP-6 and SP-7 show contents of typical parts among stratified or vein-shaped sulfide concentrations (MJTK-3: 96.6m - 103.3m, 148.20m - 150.20m, 340.00-341.00m), and indicate high lead contents.

SP-9 shows contents of 473.40-473.60m of the vein-like sulfide concentration (MJTK-3 : 473.40-474.50m), and indicates high zinc and lead contents.

SP-10 shows contents of 90.70-90.80m of stratified or vein-like sulfide concentrations formation of MJTK-6 - 90.70-9300m, and indicates high zinc and lead contents.

These ores contain so much lead and zinc as (Cu:1%, Pb:3%, Zn:10%) Hajar deposit, that is around the survey area, despite the shortage of Cu.

Zn- AA46	Z	%	8.45			8.07	2.15	6.96	2.58		3.22	1.65							
Pb- AA46	Pb	%	-			-		_	1.51		1.07	2.41							
ME- ICP41	Zn	bpm	>10000	5820	4050	>10000	>10000	>10000	-10000	2260	-10000	>10000	3300	993	3460		218	182	106
ME- ICP41	Μ	bpm I	10 >	<10 5	<10 4	<10 >	40 >	<10 >	30 >	<10 2	20 >	<10 >	<10 3	<10	<10 3		<10	<10	<10
ME- ICP41	>	bpm	7	3	8	13	10	2	5	9	2	5	5	7	5		18	58	24
ME- ICP41	n	bpm	10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10
ME- ICP41	F	ppm	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10
ME- ICP41	F	%	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		0.03	0.1	0.08
ME- ICP41	Sr	ppm	94	566	86	64	17	189	169	27	7	428	10	20	434		10	26	11
ME- ICP41	Sc	ppm	1	1	1	1	۱	1	1	1	<1	1	1	1	3		3	6	4
ME- ICP41	Sb	ppm	<2	26	4	<2	<2	4	10	5	30	10	3	3	2		4	<2	2
ME- ICP41	S	%	4.3	3.6	8.83	7.26	7.75	>10.0	9.32	7.12	>10.0	>10.0	>10.0	>10.0	>10.0		8.76	7.25	7.57
ME- ICP41	Pb	bpm	205	2580	3180	470	586	769	>10000	1450	>10000	>10000	2410	452	8400		257	211	70
ME- ICP41	٩	bpm	420	110	<10	230	20	140	80	40	10	350	180	40	10		160	360	280
ME- ICP41	ī	bpm	16	12	27	34	88	56	158	26	50	34	24	44	28		76	55	219
ME- ICP41	Na	%	<0.01	0.02	0.02	<0.01	0.01	0.01	0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01		<0.01	0.04	0.01
ME- ICP41	Мо	bpm	1	<1	١	١	١	1	١	١	<1	<1	١	١	<1		١	1	1
ME- ICP41	Mn	bpm	1350	24100	4620	1425	635	6520	4830	952	409	3690	1960	8230	13050		2050	1600	637
ME- ICP41	Mg	%	0.35	0.34	0.07	0.61	0.03	0.17	0.06	0.02	0.04	0.53	0.16	0.3	0.28		0.48	1.42	0.45
ME- ICP41	La	bpm	10	30	<10	50	30	10	10	<10	40	20	<10	<10	<10		10	10	10
ME- ICP41	¥	%	0.15	0.04	0.01	0.1	0.02	0.04	0.03	0.02	0.01	0.01	0.09	0.03	0.02		0.08	0.14	0.29
ME- ICP41	Hg	bpm	2	7	٢	7	7	7	٢	7	7	7	7	7	7		7	7	7
ME- ICP41	Ga	bpm	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	10	<10
ME- ICP41	Fe	%	5.1	4.45	>50	19.8	>50	20.3	38.3	>50	31.8	23.9	18.3	42.1	25.7		38	29.6	25.5
ME- ICP41	С	bpm	202	91	787	6460	2470	483	1210	792	1530	4900	429	2900	3210		5770	2160	2020
ME- ICP41	່ວ	bpm	6	2	7	7	$\overline{\mathbf{v}}$	Ý	$\overline{\mathbf{v}}$	7	v	$\overline{\mathbf{v}}$	З	Ŷ	7		9	39	20
ME- ICP41	ပိ	bpm	27	21	45	43	176	89	61	52	43	49	25	171	67		168	95	228
ME- ICP41	Cq	bpm	173	11.7	7.3	206	51.1	136	48.6	2.4	53.6	29.3	6.3	<0.5	5.7		<0.5	<0.5	<0.5
ME- ICP41	Ca	%	3.45	24.1	6.58	2.46	1.32	8.07	7.59	1.66	0.71	14.6	0.37	1.02	14.2		0.41	0.63	0.64
ME- ICP41	ā	bpm	<2	15	6	42	6	6	6	21	4	33	9	3	33		2	28	5
ME- ICP41	Be	ppm	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	0.6	<0.5
ME- ICP41	Ba	ppm	20	10	<10	20	<10	10	<10	<10	<10	10	20	<10	<10		40	50	06
ME- ICP41	ш	ppm	<10	0 <10	s <10	<10	<10	<10	<10	<10	<10	<10	<10	<10	s <10		10	<10	<10
ME- ICP41	As	ppm	₽	>10000	1605	287	1795	1095	1380	5510	1075	47	. 695	338	19.7 0.22 1055		40	19	2
ME- ICP41	A	%	0.72	0.28	0.03	1.09	0.08	0.21	18.7 0.14	0.06	10.3 0.02	0.38	0.34	0.22	0.22		1.19	3.28	1.27
ME- ICP41	Ag	mdd	2.4	9	6.8	6.1	9	7.4	18.7	8.8	10.3	18.2	З	3.5	19.7		٢	-	0.5
Au- ICP21	Au	ppm	0.035	0.73	0.022	0.038	0.146	0.114	0.033	NSS	0.101	0.042	0.096	0.112	0.087		0.15	0.322	0.03
	SAMPLE	DESCRIPTION	MJTK 3 62.7-62.75	MJTK 3 76.3-76.4	MJTK 3 80.5-80.6	MJTK 3 99.5-99.6	MJTK 3 99.6-99.7	MJTK 3 148.2-148.3 0.114 7.4	MJTK 3 319.2-319.4	MJTK 3 340.3-340.4	MJTK 3 473.4-473.6	MJTK 6 90.7-90.8	MJTK 6 101.2-101.3	MJTK 6 125.2-125.3 0.112	MJTK 6 134.6-134.7 0.087	MJTK 6 146.6-146.7	MJTK 5 256.7-256.8	MJTK 5 358.9-359.0	MJTK 5 466.6-466.7

Table II-3-5 Result of Chemical analysis of rock samples

(2) Polished section

The result of observation of Polished sections shown in Table II-3-6. Result of microscopic observation of polish section of above mentioned SP-1 - SP-16.

						MIN	IER.	ALS							
NO.	DRILLING NO.	Depth (m)	Chalcopyrite	Pyrite	Marcasite	Galena	Sphalerite	Electrum	Pyrrhotite	Rutile	Arsenopyrite	Carbonate	Quartz	Remarks	
1	MJTK-3	62.70	•											Veinlet-network	
2	MJTK-3	76.30	•	•	•			•						Network	
3	MJTK-3	80.30		•										Veinlet, dissemination.	
4	MJTK-3	99.50				•					•			Veinlet, dissemination.	
5	MJTK-3	99.60		•										Massive	
6	MJTK-3	148.20	•		•	•								Veinlet-network	
7	MJTK-3	319.20	•	•										Veinlet	
8	MJTK-3	340.30		•		•								Massive	
9	MJTK-3	340.30				•									
10	MJTK-6	90.70			•	•	•		•					Sheared	
11	MJTK-6	101.20	•			•	•		•					Banded	
12	MJTK-6	125.20	•			•	•		•					Massive	
13	MJTK-6	146.60				•	•							Massive	
14	MJTK-6	256.70	•	•										Massive, with pelitic fragments	
15	MJTK-5	358.90		•			•							Banded	
16	MJTK-5	466.60	•											Banded?	
	Legend	:Abu	ndant		:Mec	lium		:Mino	r	• :Rar	e				

Table II-3-6 Result of microscopic observation of polish section

The samples are chosen as homogeneously as possible among each sections.

Pyrrhotite is dominant with sphalerite, galena, chalcopyrite and pyrite. Pyrrhotite seems to be vein-like or network-like, however it can be thin-layered texture.

(3) X-ray diffraction analysis

The result is shown in Table II-3-7. Every sample are altered with sericite and chlorite. And some samples are silicified. Calcite is the main carbonate.

			Silicate Minerals							Carbonate Other Minerals Minerals						
No.	孔名	深度(m)	Quartz	Plagioclase	Albite	K-feldspar	Smectite	Sericite/Smectite	Sericite	Chlorite	Calcite	Dolomite		Pyrite	Pyrrhotite	Remarks
1	MJTK-3	50.00	16	2		<1			6	7	11					With 3T sericite
2	MJTK-3	100.00	13	2		<1			7	5	8					With 3T sericite
3	MJTK-3	149.30	30			<1			3	1	4			<1	1	With 3T sericite
4	MJTK-3	150.00	25			<1			14	6	<1					With 3T sericite
5	MJTK-3	200.00	23	3		<1			6	10				<1		With 3T sericite
6	MJTK-3	250.00	16	2		<1			13	15	<1			<1		With 3T sericite
7	MJTK-3	300.00	18	2		<1			6	>17	<1			<1		With 3T sericite
8	MJTK-3	350.00	22	3		<1			6	11	<1					With 3T sericite
9	MJTK-3	400.00	17	2		<1			6	9	2					With 3T sericite
10	MJTK-3	450.00	21	2		<1			9	11	4					With 3T sericite
11	MJTK-3	473.70	23						<1					1	2	
12	MJTK-3	500.00	17	2					7	13	1			<1		With 3T sericite
13	MJTK-3	550.00	26	2		<1			9	11	<1			<1		With 3T sericite
14	MJTK-3	600.00	28	2		<1			5	6	5					With 3T sericite
15	MJTK-3	650.00	22	3		<1			4	6	8					With 3T sericite
16	MJTK-3	700.00	32	2		<1			7	7	1					With 3T sericite
17	MJTK-4	50.00	20	2		<1			8	8	7			<1		With 3T sericite
18	MJTK-4	100.45	4	<1		<1			7	8	>17			<1		With 3T sericite
19	MJTK-4	150.00	66	1		<1			5	5	10			<1		With 3T sericite
20	MJTK-4	200.00	22	2		<1			13	12	<1					With 3T sericite
21	MJTK-4	250.00	37	<1		<1			2	2	12					With 3T sericite
22	MJTK-4	300.00	16	2		<1			7	8	9					With 3T sericite
23	MJTK-4	350.00	19	2		<1			12	9						With 3T sericite
24	MJTK-4	379.00	14	<1		<1			3	5	10				1	With 3T sericite
25	MJTK-4	400.00	17	4		<1			14	10	<1			<1		With 3T sericite
26	MJTK-4	450.00	21	2					10	>17	<1					With 3T sericite
27	MJTK-4	500.00	50	2		<1			2	4	<1			<1		
28	MJTK-4	514.40	11			<1			6	2	<1	7		4		With 3T sericite. 25.9°(?),38.8°(?)
29	MJTK-4	550.00	41	5					4	5	<1					With 3T sericite
30	MJTK-4	600.00	18	2					6	12				<1		With 3T sericite
31	MJTK-5	150.00	14	4					2	6	2			<1		With 3T sericite
32	MJTK-5	180.20	3	<1					<1	1	<1	5		6		30.6°Dolomite(?)
33	MJTK-5	200.00	17	5					6	2	<1				1?	33.9°Pyrrhotite(?)
34	MJTK-5	250.00	27	2		<1			5	9	<1			<1		With 3T sericite
35	MJTK-5	300.00	35	7					<1	6						
36	MJTK-5	350.00	13	3					5	<1	12					
37	MJTK-5	359.00	13	2		<1			1	8				1		With 3T sericite
38	MJTK-5	400.00	9	8		2			2	5	<1					With 3T sericite
39		450.00	30						5	7	<1					With 3T sericite
40	MJTK-5	500.00	18	3		<1			6	9	<1					With 3T sericite

Table II-3-7 Result of mineral determination of X-ray diffraction test

(4) measurement of resistivity and chargeability and magnetic susceptibility

The resistivity, chargeability and magnetic susceptibility of the core samples from MJTK-3,4 and 5 were measured. was the sample were immersed in 90 • m resistivity water for 48 hours, and became filled with water. The number of the samples is 21. The resistivity and the chargeability were measured by TDIP method.

The result of the measurement is shown in Table II-3-8. And related figures are shown in Fig.II-3-5 and Fig.II-3-6.

					Resistivity	Chargeability	Magnetic susceptibility
Num	S.Num.	Bor. Num.	Depth(m)	Rock name	Rho[Ω·m]	[mV/V]	*10^-3 SI
1	1	MJTK-3	50.00	Pelitic-silty schist	9856.1	2.91	0.32
2	2	MJTK-3	150.00	Pelitic-silty schist	614.5	111.07	2.21
3				*	867.1	5.20	
4	3	MJTK-3	200.00	Pelitic-silty schist	14755.2	0.85	1.10
5					1579.5	3.49	
6	4	MJTK-3	250.00	Pelitic-silty schist	1396.4	282.59	1.10
7				*	10894.0	32.41	
8	5	MJTK-3	300.00	Pelitic-silty schist	27440.9	2.37	0.97
9				*	25320.3	1.90	
10	6	MJTK-3	325.00	Pelitic-silty schist	2226.4	39.17	2.44
11	7	MJTK-3	350.00	Pelitic-silty schist	9584.5	18.71	1.40
12	8	MJTK-3	375.00	Pelitic-silty schist	24639.9	6.95	0.88
13	9	MJTK-3	400.30	Pelitic-silty schist	14436.0	2.00	1.34
14	10	MJTK-3	425.10	Pelitic-silty schist	10591.3	1.18	1.48
15	11	MJTK-3	459.45	Pelitic-silty schist	232.1	54.06	2.80
16				*	223.2	22.80	
17	12	MJTK-3	460.20	Pelitic-silty schist	5991.4	15.41	0.91
18	13	MJTK-4	103.00	Pelitic-silty schist	12290.7	9.19	1.60
19				*	984.8	15.07	
20	14	MJTK-4	207.40	Pelitic-silty schist	11167.2	27.24	0.71
21				*	2502.0	16.16	
22	15	MJTK-4	301.90	Pelitic-silty schist	10115.8	8.99	0.19
23				*	2402.0	8.05	
24	16	MJTK-5	120.30	Tuffaceous schist (calcareous)	151.2	5.64	10.16
25				*	178.6	3.72	
26	17	MJTK-5	156.00	Pelitic-silty schist	7041.3	10.61	1.08
27				*	7273.6	7.70	
28	18	MJTK-5	200.00	Pelitic-silty schist	14257.3	1.18	0.58
29	19	MJTK-5	250.00	Pelitic-silty schist	1274.9	29.07	3.32
30	20	MJTK-5	299.90	Pelitic-silty schist	16818.8	4.48	1.02
31	21	MJTK-5	324.50	Pelitic-silty schist	15401.6	2.33	0.54

Table II-3-8 Result of measurement of resistivity and chargeability and magnetic susceptibility

* : an isotropic measurement or same position sample

The resistivity is generally high even though the pelitic - silty schist samples from MJTK-3,4 and 5 consist of graphite. The chargeability is higher in the samples that include foil-like sulfide, and the maximum is 280mV/V. However it is changeable with the kind of method. The magnetic susceptibility is high in the calcareous tuff in MJTK-5 (max:10 x 10⁻³ Si unit).

The resistivity inversely correlates with the chargeability in general. And the chargeability slightly correlates with the magnetic susceptibility. Therefore the chargeability is due to pyrrhotite more than graphite.

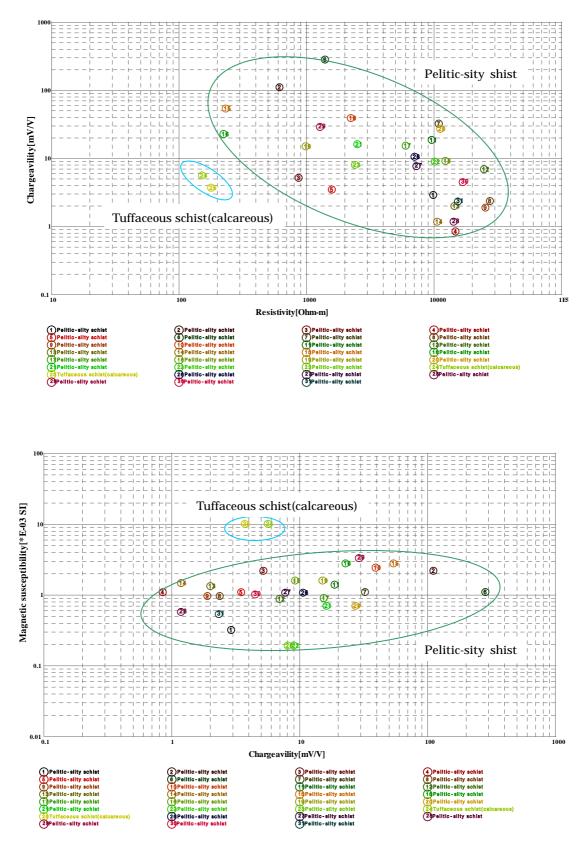


Fig.II-3-6 Chargeability and magnetic susceptibility of rock core

(5) Fluid inclusion (homogenization temperature and Salinity)

The measurement of fluid inclusion was carried out about a sample (MJTK-3, 473.4-473.6m). the result is shown in Table II-3-9.

Most of fluid inclusions are with necking down. And gaseous phase is generally dominant. Homogenization temperature is higher and Salinity is lower than Hajar deposit.

		Size	Homogenization	Melting	Salinity	
Mineral	Shape	Size	temperature	temperature	Samily	
		μm			NaCl eq.%	
Quartz	Irregular	27	373	-5.2	9.2	
Quartz	Irregular	15	341	-4.9	8.7	
Quartz	Anhedral-	45		-5.1	9.0	
Quartz	Irregular	43	_	-3.1	9.0	
Quartz	Irregular	5	310			
Quartz	Anhedral	5	290			
Quartz	Irregular	12	313			
Quartz	Irregular	6	324	-2.5	4.4	
Quartz	Irregular	9	372			
Quartz	Anhedral	12	198	-2.8	5.0	

Table II-3-9 The result of measurement of fluid inclusion

(6) Isotope(S)

The result of measurement of sulfur isotope is shown in Table II-3-10 Result of measurement of S Isotope.

Sample ID	Approx%S	d34S(CDT)
1	26	-1.5
2	45	-1.5
3	38	-0.9
4	51	-0.3
5	41	-1.0
6	42	-2.4
7	35	-0.8
8	40	-0.4
9	40	-2.4
10	30	-0.1
11	54	-0.7
12	35	-0.4
13	51	-0.3
14	29	-3.1
15	34	-4.0
16	31	-2.5

Table II-3-10 Result of measurement of S Isotope

The samples were chosen from homogeneous part as possible, among each 5cm sections.

The values are generally as follows

MJTK-6:-0.1 ~ -0.7‰ MJTK-3: -0.3 ~ -2.4‰ MJTK-5: -2.5 ~ -4.0‰

Sulfur is comparatively heavy in MJTK-6, and light in MJTK-3 and MJTK-5.

The sulfur isotope ratio of sulfide in massive sulfide deposits is heavier near the hydrothermal deposit originated from volcanic rocks, and is lighter at distant place (JICA/MMAJ, 2002).

Therefore MJTK-6 is probably closer to a hydrothermal deposit originated from volcanic rocks than MJTK-3. MJTK-3 may be farther from it, and may contain more sedimentary (probably biological) sulfur isotope. These values are similar to Hajar deposit.

3-5 Discussions

MJTK-3,4,5 and 6 captured many concentrations of pyrrhotite and calcite with Sphalerite, chalcopyrite, arsenopyrite, and galena.

The magnetic anomaly around MJTK-5 (Khefawna-N district) is due to pyrrhotite in such a mineralization zone.

The magnetic anomalies around MJTK-3,4 and 6 are also probably due to such zones in Azzouz district.

The concentration of pyrrhotite seems to affect the distribution of resistivity and chargeability more than graphite in the survey area.

Chapter 4 Integrated Interpretation

4-1 Survey result

1) Airborne magnetic and ground magnetic survey

The result of the airborne magnetic survey and ground magnetic survey previously performed by BRPM has revealed that the anomalies in the Hbibi, Harch, Maouch, Khefawna, and Talzelt districts are of relatively monotonous magnetic variation, but the anomaly in the Azzouz district is of complicated variation.

In the Azzouz district, a tectonic line presumably exists in the northern a eastern district where great magnetic variation is seen.

No direct relation between the magnetic anomalies and mineralized zones has been found in the previously performed ground magnetic analysis.

2) Resistivity

The resistivity for the young sediments distributed the whole area of the districts is presumably lower than 50 · m. The sediments generally shows a horizontal stratiform structure, based on the resistivity structure analysis, and that of the Hbibi, Harch, Maouch, Khefawna, and Talzelt districts is more than 150 meters in thickness, and That of the Azzouz district is presumably thicker in the eastern part.

Other low resistivity structures, lower than 50 \cdot m, in the Azzouz are recognized in the northern district around the survey lines (i,j,k), g(No.7), h(No.10), I(No.13), j(No.16), and k(No.16). The resistivity structure in the northern district is presumably correlated with the tectonic line, probably extending to the depth.

The low resistivity structure in the survey lines g(No.7), h(No.10), I(No.13), j(No.16), and K(no.16) is presumably of a plate shape, extending northeast to southwest and dipping almost vertically to the depth.

3) Chargeability

The chargeability measured is maximum 20 mV/V in the Hbibi, Harch, Maouch, Khefawna, and Talzelt districts, and no anomaly exists here. The chargeability is maximum 78 mV/V in the Azzouz district.

The relatively high chargeability structure is clearly seen around the No.14 of the survey lines j and k at the depth of 50 meters and in the survey lines d to r at the depth of 80 meters, extending northeast to southwest. In deeper part below 110 meters, it tends to show higher value to the depth, and divided by complicated tectonic lines.

4) Metal factor

The low resistivity and high chargeability zone extracted in the area below 110 m level show the maximum value around the survey lines g(No.7), h(No.10), i(No.13), j(No.16), and k(No.16), trending its structure northeast to southwest.

The highest metal factor 1,222 is around seen around the survey line k, points

No.15 and 16. The low resistivity and high chargeability zone is corresponded with a part of the northeast to southwest trending ground magnetic anomaly zone.

4) TEM

The target districts for the TEM survey are the Azzouz and Khefawna.

Azzouz district

In the district, the magnetic field inversion has been observed in the central and southern parts, simultaneously some data indicating some affection of the IP effect has been observed. Based on the result of the one dimensional analysis, it has revealed that the resistivity structure in the district is different in the northern side and southern side of the survey line 1000N. The three continuous layer structure, the medium resistivity layer (around 150 \cdot m), high resistivity layer (1,000 \cdot m), and slightly low resistivity layer (100 \cdot m) from the surface, exists in the northern side. The horizontally discontinuous structure, 200 \cdot m in the northwestern side and 100

• m in the southeastern side, is recognized below 400 meters depth. In the southeastern side of the cross sections 400N and 300N, the low resistivity zone below 50

• m has been analyzed around the level 300 m in altitude. The conductive plate has been analyzed at the point, where the polarity inversion was observed.

Khefawna district

The gentle dome-like high resistivity layer higher than several hundreds \cdot m has been detected by the survey, and its extension to the southeast has been confirmed. The low resistivity layer lower than 50 \cdot m broadly overlies the high resistivity layer. The high resistivity layer is presumably correlated to the syncline folding structure trending east to west, however further investigation is needed to verify the hypothesis.

5) Drilling survey

Mineralization of calcite and pyrrhotite was mainly found at MJTK-3,4,5 and 6. Pyrrhotite is usually along schistosity (foliation).

Pelitic and silty schist is friable with graphite even though the schist is with calcareous and sandy schist.

However, the lithofacies do not change so much, and sometimes alternate with several mm unit. Therefore it is difficult to simply divide the lithofacies by the repetition of same lithofacies.

The schistosity (foliation) sometimes has a different direction from bedding. the schistosity was formed by structural movement metamorphism, and schistosity usually has similar direction to axis of a fold. Therefore bedding is often different to schistosity near anticline or syncline.

Pyrrhotite was metamorphosed from pyrite, however it is often along foliation. Metamorphism was not at a time.

Pyrite was formed more than twice, and the latter mineralization was much weaker.

In other words, most pyrite were brought by early mineralization. The earlier mineralization is with sphalerite, and a considerable part of pyrite changed to pyrrhotite through metamorphism.

The resistivity inversely correlates with the chargeability in general. And the chargeability slightly correlates with the magnetic susceptibility. Therefore the chargeability is due to pyrrhotite more than graphite.

Pyrrhotite concentrate at 360m depth in MJTK-5 and this mineralization zone probably form the magnetic anomaly. The chargeability may be due to pyrrhotite even around other drilling holes. It is likely that there are a wide pyrrhotite zone around MJTK-3,4 and 6. Pyrrhotite is dominant with sphalerite, galena, chalcopyrite and pyrite in microscope. It can be regarded not only as vein-like and network-like but also as thin layered type. The ratio of sulfur isotope is similar to Hajar mine. Probably, MJTK-6 is near a volcanic hydrothermal ore deposit, and MJTK-3 is affected by biological isotope circulation.

4-2 Summary

Azzouz district

The IP anomaly, low resistivity and high chargeability, shows the highest value around the survey lines g(No.7), h(No.10), i(No.13), j(No.16), and k(No.16), trending northeast to southwest. The magnetic field inversion is observed by the TEM survey around in this area, furthermore, the data reflecting the IP effect is also seen. In the plate model analysis, the conductive plate is analyzed in the point where the magnetic field inversion is observed.

The conductive plate is situated in the central district 090N050E, southern district 040N055E and 030N060E. The plate is apparently surrounded by the IP anomaly zone. Figure II-4-1 shows the summary of the ground magnetic, IP, and TEM anomaly zones.

The trend of the detected IP anomaly zone, the direction of the conductivity zone, and some part of magnetic anomaly distribute concordantly. The existence of some complicated tectonic lines have presumed in the analyzed resistivity and chargeability structure that distribute deep underground.

Khefawna district

The resistivity structure obtained by the IP and TEM surveys is the gentle dome-like structure in the deep part of the central district. The TEM survey has revealed the southeast extension of the resistivity structure to the depth. It is thought that the magnetic anomaly is related with the high resistivity structure. The high resistivity layer is supposed to be the anticline holding structure extending east to west, however further investigation is necessary to verify it.

The low resistivity layer lower than 50 \cdot m broadly overlies the high resistivity layer.

The known existing ore deposits in the surrounding area of the districts are mainly composed of pyrrhotite, chalcopyrite, arsenopyrite, and accompanied, therefore both the high magnetism and the low resistivity-high chargeability should be considered for the prospecting.

The magnetic anomaly, IP anomaly, and TEM anomaly zones exist concordantly each other, therefore it is hard to think that graphite is associated with the IP and TEM anomalies. However, the existence of graphite is not negligible due to the surrounding geological environment.

It is necessary to perform a drilling program to verify the geological setting in the area around the IP and TEM anomaly zone.

Drilling survey

Sulfide concentrations that contain pyrrhotite, calcite, sphalerite, chalcopyrite and galena are observed in the rock cores. They are vein-like or secondary sediment like ore deposits in the surrounding area.

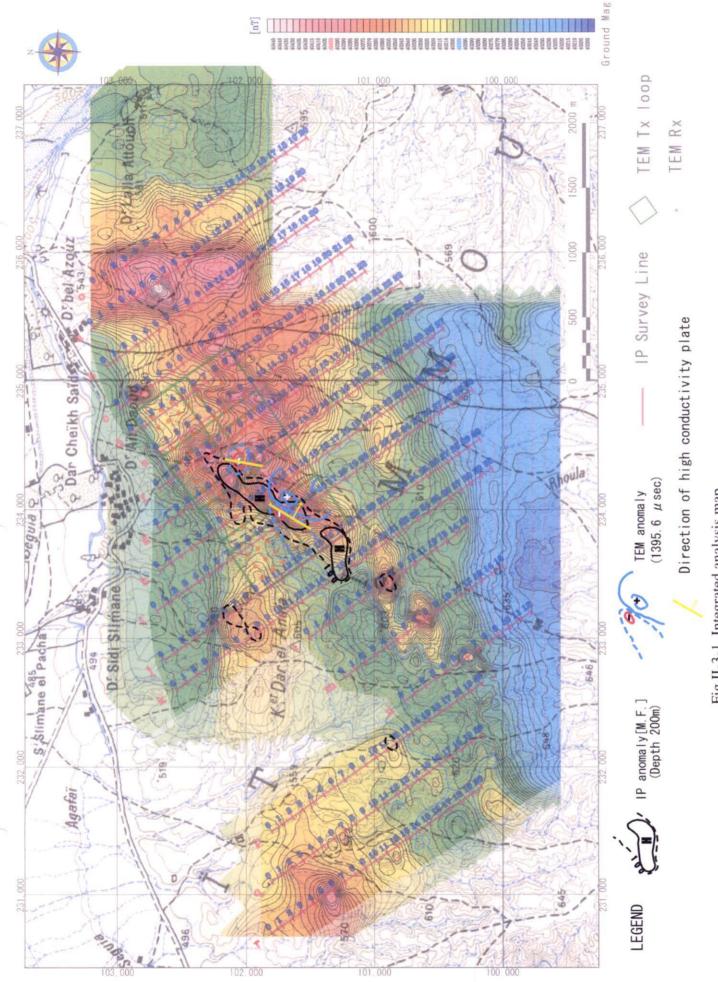


Fig.II-3-1 Integrated analysis map

Part III Conclusion and Recommendation

Chapter 1 Conclusion

1-1 Geophysical survey

The distributions of the shallow stratigraphic formation and magnetic rocks near the surface have been revealed by the first year's airborne magnetic and electromagnetic surveys.

The second and third year's programs have aimed to chose potential zones for strongly magnetic ores such as pyrrhotite ore within the airborne magnetic anomaly zones. Furthermore, the electric prospecting IP method has been applied for the magnetic anomaly zones detected by the detailed ground survey, then the resistivity and chargeability structures have been made clear, and low resistivity-high chargeability IP anomaly zones have been extracted. The electromagnetic prospecting TEM method has been successfully applied for the IP anomaly zones to clarify their conductivity, to narrow down anomaly zones, and to make clear their forms. The TEM method has been able to clarify the deep sitting low resistivity structure by the adoption of the adequate loop.

In the Azzouz district, a conductivity anomaly zone has been detected in the IP anomaly zone by the TEM survey, and the distribution of these anomaly zones are duplicated in the same part. The IP anomaly zone is coincident with a part of the magnetic anomaly zone detected by the ground survey, continuously extending northeast to southwest.

Azzouz district

The IP anomaly, low resistivity and high chargeability, shows the highest value around the survey lines such as g(No.7), h(No.10), i(No.13), j(No.16), and k(No.16), trending northeast to southwest. The magnetic field inversion is observed by the TEM survey in this area, furthermore, the data reflecting the IP effect is also seen. In the plate model analysis, the conductive plate is analyzed in the point where the magnetic field inversion is observed.

The conductive plate is situate in the central district 090N050E, southern district 040N055E and 030N060E. The plate is apparently surrounded by the IP anomaly zone.

The trend of the detected IP anomaly zone, the direction of the conductivity zone, and some part of magnetic anomaly distribute concordantly. The existence of some complicated tectonic lines have presumed in the analyzed resistivity and chargeability structure that distribute deep underground.

Khefawna district

The resistivity structure obtained by the IP and TEM surveys is the gentle dome-like structure in the deep part of the central district. The TEM survey has

revealed the southeast extension of the resistivity structure to the depth. It is thought that the magnetic anomaly is related with the high resistivity structure. The high resistivity layer is supposed to be the anticline holding structure extending east to west, however further investigation is necessary to verify it.

The low resistivity layer lower than 50 $\,$ \cdot m broadly overlies the high resistivity layer.

The known existing ore deposits in the surrounding area of the districts are mainly composed of pyrrhotite, chalcopyrite, arsenopyrite, and accompanied, therefore both the high magnetism and the low resistivity/high charge rate should be considered for the prospecting.

The magnetic anomaly, IP anomaly, and TEM anomaly zones exist concordantly each other, therefore it is hard to think that graphite is associated with the IP and TEM anomalies. However, the existence of graphite is not negligible due to the surrounding geological environment.

It is necessary to perform a drilling program to verify the geological setting in the area around the IP and TEM anomaly zone.

1-2 Drilling Survey

(1) Drilling points

Judging from the various geophysical prospecting results, the geological structure and the status of the mineralized zones in the Azzouz and Khefawna districts would be as follows.

In the Azzouz district, it is possible that pyrrhotite rich massive sulfide ore bodies exist underneath the anomaly zones of the high chargeability parts of the electric prospecting IP method, the high conductivity parts of the electromagnetic prospecting TEM method, and magnetic anomaly zone. If it is of the kuroko type, acidic volcanic rocks such as rhyolite could be the foot wall side of those ores (Figure I-5-1 Concepts).

In the Khefawna-N district, some indications for metallic mineral potential has been obtained, however no magnetic body was found in the past drill hole HE1 conducted by BRPM. No evidence has been found telling the cause of the magnetic anomaly. There is some limitation for depth of prospecting ability because of the covered thick young sediments, therefore the potential for massive sulfide ores in the deep part is not negligible.

The intensity and scale of the IP anomalies and the high conductivity of the TEM method in the Azzouz district exceeds those of small scale dissemination.

Therefore, it is indicated that there is some potential for sulfide ores in the district. Several drill holes program is recommended to confirm the potential.

From the above mentioned reason, the following drilling survey was carried out

District	Hole	Drilling length	Dipping	Direction	Target
Azzouz	MJTK-3	701.0m	-70 deg	325 deg	Mg., H- cond. H.C.R
	MJTK-4	601.2m	-55 deg	325 deg	Mg., H-cond. H.C.R
	MJTK-6	301.9m	-70 deg	325 deg	Mg., H.C.R
Khefawna	MJTK-5	502.1m	-70 deg	270 deg	Mg

Table III-2-1The scheme of the drilling

Whereas Mg: magnetic anomaly H-cond: high conductivity H.C.R: high charge rate

MJTK-3 and MJTK-4 are to confirm the potential zones of highly concentrated pyrrhotite because of high conductivity, and high charge rate, accompanied with magnetic anomaly.

MJTK-5 is to confirm the potential zone for pyrrhotite rich ores interpreted by BRPM.

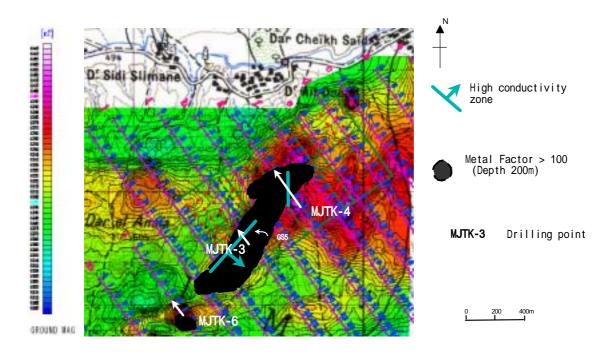


Fig.III-2-1 Concepts of MJTK-3 and MJTK-4 (Azzouz)

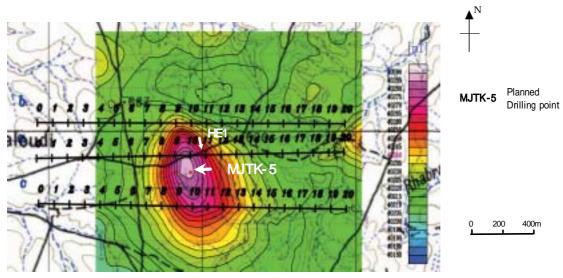


Fig.III-2-2 Concepts of MJTK-5 (Khefawna)

(2) Result

Metamorphic sedimentary rocks are distributed over the surface and in the drilling cores. The sedimentary rocks are mainly pelitic - silty, partly sandy and also calcareous. They are alternated with several mm unit layers and repeated.

The schistosity (foliation) sometimes has a different direction from bedding. the schistosity was formed by structural movement metamorphism, and schistosity usually has similar direction to axis of a fold. Therefore bedding is often different to schistosity near anticline or syncline.

As a result of drilling survey, sulfide concentration that mainly consist of pyrrhotite, calcite, sphalerite, chalcopyrite and galena was found in sedimentary rocks (pelitic – silty schist. The ore minerals may be secondary sediments or vein-like. Although they are similar to surrounding ore deposits, the process of mineralization is not known well even now.

Wedge-shaped and irregular-shaped fragments (heterogeneous; pelitic rock, tuffaceous rock) are in concentrated sulfide.

Sulfide concentrations are linearly distributed or like trailing. And there are many parts where sulfides are observed in thin-layer in turbidite-like mudstone. This situation indicates the re-sedimentation of the host rock and mineralization may several secondary sediments. Sulfide concentrations are apt to be in firm rocks with plane fractures. And some sulfide is along foliation. Some pyrite was metamorphosed to pyrrhotite, as some mineralization preceded metamorphism.

Pyrrhotite is dominant with sphalerite, galena, chalcopyrite and pyrite. Pyrrhotite seems to be vein-like or network-like, however it can be thin-layered texture.

Sulfur isotope ratio in the survey area resembles to Hajar deposit. MJTK-6 is probably closer to a hydrothermal deposit originated from volcanic rocks than MJTK-3 in Azzouz district.

And the resistivity of rock cores inversely correlates with the chargeability in general. And the chargeability correlates with the magnetic susceptibility. Therefore the chargeability is due to the quantity of pyrrhotite. Pyrrhotite concentration around 360m of MHTK-5 is regarded as the cause of the regional magnetic anomaly. Other mineralization zones probably occur IP anomalies. Low resistivity zone in deeper part of MJTK-3 is due to the sequence of sheared zones.

Therefore the characters of mineralization in MJTK-3,4,5 and 6 can be summarized as follows.

- Mineralization zones dominant in pelitic silty schist consist of second sedimentary or vein-like sequence of concentrated sulfide of pyrrhotite, calcite, sphalerite, chalcopyrite and galena
- 2. Alterations of the host rocks indicate that the rocks are hanging wall and surrounding parts.
- 3. Sulfur isotope ratio indicates the possibility hydrothermal activity originated from Volcanism. And blind volcanic massive sulfide deposits may be near this survey area.

4. Magnetic, resistivity and chargeability anomalies mean the concentration of sulfide and mineralization zones.

Chapter 2 Recommendation for the future

It is difficult to distinguish the main ore deposit and surrounding sulfide concentration only by magnetic anomalies. The existence of the volcanic rocks as the footwall may indicate main ore body, therefore it is necessary to know the underground structure by gravity survey. And the method of sulfide isotope is effective to consider the drilling survey method of the part under the Cenozoic sediments.

Isotope ratio indicates some past hydrothermal activity with volcanism in Azzouz area (MJTK-6). Some magnetic anomalies distribute even in west area from the Azzouz area, therefore the gravity survey in the expanded area may indicate volcanic rocks as the footwall of volcanic massive sulfide deposit.

The magnetic anomaly in Khefawna area is not large and the pyrrhotite concentration in MJTK-5 can be regarded as the cause of the anomaly. Therefore Khefawna area can hardly have any more promising part.

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Appendix

IP Survey Line Data

azz alt_a	.dat			
0.00	ALT(m)	LAMBEF	RT E(X)	N(Y)
	525.00	0	235415.50	103176.20
100.00 200.00	537.00	1	235472.98	103094.38
	542.00	2	235530.48	103012.55
300.00	545.00	3	235587.97	102930.73
400.00	551.00	4	235645.45	102848.91
500.00	550.00	5	235702.94	102767.09
600.00	544.00	6 7	235760.44	102685.26
700.00	549.00	8	235817.92	102603.44
800.00	561.00		235875.41	102521.62
900.00	569.00	9	235932.89	102439.79
1000.00	578.00	10	235990.39	102357.97
1100.00	564.00	11	236047.88	102276.14
1200.00	552.00	12	236105.36	102194.32
1300.00	558.00	13	236162.84	102112.50
1400.00	560.00	14	236220.34	102030.67
1500.00	566.00	15	236277.83	101948.85
1600.00	564.00	16	236335.31	101867.02
1700.00	568.00	17	236392.80	101785.20
1800.00	562.00	18	236450.30	101703.38
1900.00	566.00	19	236507.78	101621.55
2000.00	574.00	20	236565.27	101539.73
azz alt_b 0.00		0	235113.09	103075.90
100.00	515.00	1	235170.48	102994.01
200.00	519.00	2	235227.89	102912.13
300.00	524.00	3	235285.28	102830.23
400.00	530.00	4	235342.67	102748.34
500.00	538.00	5	235400.08	102666.45
600.00	542.00	6	235457.47	102584.57
700.00	547.00	7	235514.86	102502.68
800.00	545.00	8	235572.27	102420.79
900.00	553.00	9	235629.66	102338.90
1000.00	552.00	10	235687.05	102257.02
1100.00	544.00	11	235744.44	102175.12
1200.00	550.00	12	235801.84	102093.23
1300.00	555.00	13	235859.23	102011.34
1400.00	563.00	14	235916.62	101929.46
1500.00	559.00	15	235974.03	101847.57
1600.00	564.00	16	236031.42	101765.68
1700.00	567.00	17	236088.81	101683.79
1800.00	570.00	18	236146.22	101601.91
1900.00	568.00	19	236203.61	101520.02
2000.00	575.00	20	236261.00	101438.13
azz alt_c	.dat			
0.00	512.00	0	234788.41	102972.00
100.00	503.00	1	234845.72	102890.05
200.00	519.00	2	234903.05	102808.12
300.00	515.00	3	234960.36	102726.17
400.00 500.00	522.00	4	235017.69	102644.23
	529.00	5	235075.00	102562.29
600.00	535.00	6	235132.33	102480.35
700.00	538.00	7	235189.64	102398.41
800.00	533.00	8	235246.97	102316.47
900.00	534.00	9	235304.28	102234.52
1000.00	531.00	10	235361.61	102152.59
1100.00	534.00	11	235418.92	102070.64
1200.00	539.00	12	235476.25	101988.70
1300.00	540.00	13	235533.56	101906.76
1400.00	548.00	14	235590.89	101824.82
1500.00	552.00	15	235648.20	101742.88
1600.00	563.00	16	235705.53	101660.94
1700.00	567.00	17	235762.84	101578.99
1800.00	568.00	18	235820.16	101497.05
1900.00	576.00	19	235877.48	101415.11
2000.00	579.00	20	235934.80	101333.16
2100.00	582.00	21	235992.13	101251.23
2200.00	584.00	22	236049.44	101169.28
azz alt_d	.dat			
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100.00	539.00	1	234647.20	102783.25
200.00	543.00	2	234704.50	102701.29
300.00	529.00	3	234761.81	102619.34
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500.00	522.00	6	234876.41	102455.43
600.00	536.00		234933.70	102373.47
700.00	529.00	7	234991.02	102291.52
800.00	542.00	8	235048.31	102209.56
900.00	541.00	9	235105.61	102127.60
1000.00	541.00	10	235162.91	102045.65
1100.00	545.00	11	235220.20	101963.70
1200.00	544.00	12	235277.52	101881.74
1300.00	544.00	13	235334.81	101799.78
1400.00	551.00	14	235392.11	101717.83
1500.00	552.00	15	235449.41	101635.88
1600.00	552.00	16	235506.70	101553.91
1700.00	558.00	17	235564.02	101471.96
1800.00	558.00	18	235621.31	101390.01
1900.00	557.00	19	235678.61	101308.05
2000.00	569.00	20	235735.91	101226.09
		_0		

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$0.0\overline{0}$ 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 1000.00 1200.00 1200.00 1500.00 1600.00 1600.00 1700.00 1800.00 2000.00 2100.00 2200.00 2300.00 2400.00 2500.00	550.00 558.00 570.00 574.00 566.00 571.00 569.00 559.00 569.00 562.00 569.00 569.00 569.00 571.00 571.00 571.00 574.00 575.00 571.00 574.00 578.00 578.00	0 1 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 10 10 10 10 10 10 10 10 10 10 10 10 10	$\begin{array}{c} 234164.09\\ 234221.41\\ 234278.72\\ 234336.03\\ 234393.34\\ 234450.66\\ 234507.98\\ 234565.30\\ 234622.61\\ 234679.92\\ 234737.23\\ 234794.55\\ 234851.86\\ 234909.17\\ 234909.17\\ 234966.48\\ 235023.80\\ 235081.13\\ 235138.44\\ 235195.75\\ 235253.06\\ 235310.38\\ 235367.69\\ 235425.00\\ 235482.31\\ 235539.62\\ 235596.94\\ \end{array}$	$\begin{array}{c} 102668.40\\ 102586.45\\ 102504.51\\ 102422.56\\ 102340.62\\ 102258.67\\ 102176.73\\ 102094.78\\ 102012.84\\ 10130.89\\ 101848.94\\ 101766.99\\ 10185.05\\ 101603.10\\ 101521.16\\ 101439.21\\ 101357.27\\ 101275.32\\ 101193.38\\ 101111.43\\ 101029.48\\ 100947.54\\ 100865.59\\ 100703.65\\ 100701.70\\ 100619.76\end{array}$
azz alt_g.0 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 1000.00 1200.00 1200.00 1300.00 1400.00 1500.00 1600.00 1700.00 2000.00 2100.00 2200.00 2300.00 2400.00 2500.00 2500.00 2500.00 2600.00 2700.00 azz alt_h.0	524.00 542.00 531.00 557.00 563.00 567.00 558.00 566.00 568.00 568.00 567.00 568.00 567.00 568.00 567.00 580.00 581.00 585.00 585.00 584.00 584.00 584.00 584.00 585.00 585.00 584.00 585.00 585.00 585.00 585.00 584.00 584.00 584.00 585.00 580.00 585.00 580.00 58	0 1 2 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 3 4 5 6 7 8 9 10 112 112 112 112 112 112 112 112 112	233856.09 233913.45 233970.81 234028.17 234085.53 234142.89 234200.25 234257.61 234314.97 234372.33 234429.69 234487.05 234544.41 234601.77 234659.11 234716.47 234659.11 2347716.47 234773.83 234831.19 234888.55 234945.91 235003.27 235006.62 235117.98 235175.34 235232.70 235290.06	102668.70 102586.79 102504.88 102422.96 102341.05 102259.13 102177.22 102095.30 102013.39 101931.48 101849.56 101767.65 101685.73 101603.81 101521.90 101439.98 101358.07 101276.16 101194.24 101112.33 101030.41 100948.50 100866.59 100764.67 100620.84 100528.93 100457.02
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$\begin{array}{c} 700.00\\ 800.00\\ 900.00\\ 1000.00\\ 1100.00\\ 1200.00\\ 1300.00\\ 1400.00\\ 1500.00\\ 1600.00\\ 1600.00\\ 1700.00\\ 1900.00\\ 2000.00\\ 2100.00\\ 2200.00\\ 2300.00\\ 2400.00\\ 2500.00\\ 2600.00\\ 2600.00\\ 2800.00\\$	550.00 571.00 579.00 577.00 572.00 583.00 586.00 586.00 586.00 590.00 590.00 593.00 593.00 593.00 593.00 593.00 595.00 595.00 592.00 594.00 594.00	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 22 22 22 22 22 22 22 28	$\begin{array}{c} 233929.61\\ 233987.00\\ 234044.38\\ 234101.77\\ 234159.16\\ 234216.53\\ 234273.92\\ 234331.31\\ 234388.70\\ 234436.08\\ 234503.47\\ 234560.86\\ 234618.23\\ 234675.63\\ 234790.39\\ 234847.78\\ 234905.17\\ 234905.17\\ 234905.56\\ 235019.94\\ 235077.33\\ 235134.72\end{array}$	$\begin{array}{c} 102092.73\\ 102010.84\\ 101928.95\\ 101847.05\\ 101765.15\\ 101683.26\\ 101601.36\\ 101519.47\\ 101437.57\\ 101355.67\\ 101273.78\\ 101191.88\\ 101109.99\\ 100946.20\\ 100864.30\\ 100782.41\\ 100700.51\\ 100618.62\\ 100536.72\\ 100454.83\\ 100372.93\\ \end{array}$
azz alt_i. 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 1000.00 1200.00 1200.00 1400.00 1500.00 1600.00 1700.00 1800.00 1900.00 2000.00	529.00 526.00 514.00 523.00 542.00 535.00 554.00 585.00 574.00 575.00 564.00 588.00 588.00 588.00 588.00 588.00 588.00 588.00 588.00 588.00 588.00	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20	$\begin{array}{r} 233213.20\\ 233270.55\\ 233327.91\\ 233385.25\\ 233342.61\\ 233499.95\\ 233557.31\\ 233614.66\\ 233672.00\\ 233729.36\\ 233786.70\\ 233844.06\\ 233901.41\\ 233901.41\\ 233958.75\\ 234016.11\\ 234073.45\\ 234130.81\\ 234188.16\\ 234245.52\\ 234302.86\\ 234302.86\\ 234360.20\\ \end{array}$	$\begin{array}{c} 102688.30\\ 102606.38\\ 102524.45\\ 102442.54\\ 102360.62\\ 102278.70\\ 102196.77\\ 102114.85\\ 102032.94\\ 101951.02\\ 101869.09\\ 101787.17\\ 101705.25\\ 101623.34\\ 101541.41\\ 101459.49\\ 101377.57\\ 101295.65\\ 101213.73\\ 101131.81\\ 101049.89 \end{array}$
$\begin{array}{c} 2100.00\\ 2200.00\\ 2300.00\\ 2400.00\\ 2500.00\\ 2600.00\\ 2700.00\\ 2800.00\\ 2900.00\\ 3000.00\\ \end{array}$	$\begin{array}{c} 606.00\\ 608.00\\ 614.00\\ 606.00\\ 605.00\\ 614.00\\ 614.00\\ 612.00\\ 613.00\\ 617.00 \end{array}$	21 22 23 24 25 26 27 28 29 30	234417.56 234474.91 234532.27 234589.61 234646.97 234704.31 234761.66 234819.02 234876.36 234933.72	$\begin{array}{c} 100967.97\\ 100886.05\\ 100804.13\\ 100722.21\\ 100640.29\\ 100558.37\\ 100476.45\\ 100394.53\\ 100312.61\\ 100230.69 \end{array}$
azz alt_j. 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 1000.00 1200.00 1200.00 1200.00 1400.00 1500.00 1600.00 1700.00 1800.00 2200.00 2300.00 2400.00 2500.00 2500.00 2600.00 2700.00 280	527.00 521.00 519.00 516.00 515.00 520.00 549.00 565.00 542.00 546.00 574.00 569.00 569.00 569.00 569.00 569.00 605.00 603.00	0 1 2 3 4 5 6 7 8 9 10 11 23 4 5 6 7 8 9 10 11 23 4 5 6 7 8 9 10 11 23 4 5 6 7 8 9 10 11 23 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 0 11 12 3 4 5 6 7 8 9 0 11 12 3 4 5 6 7 8 9 0 11 12 3 4 5 6 7 8 9 0 11 12 3 4 5 6 7 8 9 0 11 12 3 14 5 6 7 8 9 0 11 12 3 14 5 6 6 7 8 9 0 11 12 3 14 5 6 6 7 8 9 0 11 1 2 8 9 0 11 1 2 8 9 0 11 1 2 8 9 0 11 1 2 8 9 0 11 1 2 2 3 4 5 6 7 8 9 0 11 1 2 2 3 4 5 1 1 1 1 2 2 3 4 5 1 1 1 1 2 2 3 4 5 1 1 1 1 1 1 1 2 2 3 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	232826.80 232884.17 232941.55 232998.92 233056.30 233113.67 233171.05 233228.42 233285.80 233343.17 233400.55 233457.92 233515.30 233572.67 233630.03 233687.41 233744.78 233802.16 233859.53 233916.91 233974.28 234031.66 234089.03 234146.41 234203.78 234203.78 234261.16 234318.53 234375.91 234433.28 234430.66 234548.03	102630.90 102548.99 102467.09 102385.19 102303.28 102221.38 102257.58 101975.67 101893.77 101811.87 101729.96 101648.05 101566.16 101484.25 101484.25 101482.34 101238.54 10174.73 10092.83 100910.93 100829.02 100747.12 100665.22 100501.41 100419.51 10037.60 100255.70 100173.80
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300.00 400.00 500.00 600.00 700.00 800.00 1000.00 1200.00 1300.00 1400.00 1500.00 1600.00 1700.00 1600.00 1700.00 2000.00 2200.00 2200.00 2300.00 2400.00 2500.00 2500.00 2600.00 2700.00 2800.00 2900.00 3000.00 3000.00	530.00 536.00 546.00 545.00 555.00 577.00 586.00 540.00 540.00 540.00 540.00 540.00 594.00 600.00 584.00 594.00 600.00 586.00 594.00 602.00 604.00 607.00 604.00 607.00 615.00 614.00 614.00 614.00	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 12 23 24 25 26 27 28 29 30	232772.92 232830.30 232887.67 232945.05 233002.42 233059.80 233174.55 233289.30 233346.67 233461.42 233518.80 233576.17 233690.92 233748.30 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.69 233805.519 234092.56 23419.94 234092.56 23419.94	$\begin{array}{c} 102292.69\\ 102210.79\\ 102128.88\\ 102046.98\\ 101965.08\\ 101883.18\\ 101801.27\\ 101719.37\\ 101637.47\\ 101555.56\\ 101473.66\\ 101391.76\\ 101399.86\\ 101227.95\\ 101146.05\\ 101064.15\\ 100982.24\\ 100900.34\\ 100818.44\\ 100736.54\\ 100654.63\\ 100572.73\\ 100490.83\\ 100572.73\\ 100490.83\\ 100408.93\\ 100327.02\\ 100245.12\\ 100163.22\\ 100081.31\\ \end{array}$
$\begin{array}{c} 0.0\overline{0} \\ 100.00 \\ 200.00 \\ 300.00 \\ 400.00 \\ 500.00 \\ 600.00 \\ 700.00 \\ 800.00 \\ 900.00 \\ 1000.00 \\ 1100.00 \\ 1200.00 \\ 1300.00 \\ 1400.00 \\ 1500.00 \end{array}$	$\begin{array}{c} 581.00\\ 578.00\\ 552.00\\ 552.00\\ 567.00\\ 562.00\\ 567.00\\ 576.00\\ 576.00\\ 576.00\\ 585.00\\ 608.00\\ 588.00\\ 590.00\\ 600.00\\ 609.00\\ 609.00\\ 608.00\\ 612.00\\ \end{array}$	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 5	$\begin{array}{c} 233006.80\\ 233064.16\\ 233121.53\\ 233178.89\\ 233293.61\\ 233293.61\\ 233350.98\\ 233408.34\\ 233465.70\\ 233523.08\\ 233580.44\\ 233637.80\\ 233695.16\\ 233752.53\\ 233809.89\\ 233809.89\\ 233867.25\\ \end{array}$	$\begin{array}{c} 101500.30\\ 101418.38\\ 101336.48\\ 101254.56\\ 101172.66\\ 101090.74\\ 101008.84\\ 100926.92\\ 100845.01\\ 100763.10\\ 100681.19\\ 100599.28\\ 100517.37\\ 100435.45\\ 100353.55\\ 100271.63\\ \end{array}$
azz alt_m. 0.00 100.00 200.00 300.00 400.00 600.00 600.00 800.00 900.00 1000.00 1100.00 1200.00 1300.00 1400.00 1500.00 azz alt n.	$\begin{array}{c} 534.00\\ 523.00\\ 544.00\\ 542.00\\ 552.00\\ 553.00\\ 563.00\\ 549.00\\ 559.00\\ 559.00\\ 551.00\\ 548.00\\ 544.00\\ 554.00\\ 553.00\\ \end{array}$	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 5	$\begin{array}{r} 232700.80\\ 232758.23\\ 232815.66\\ 232873.09\\ 232930.52\\ 232937.95\\ 233045.37\\ 233102.81\\ 233102.81\\ 233160.23\\ 233217.67\\ 233275.09\\ 23332.53\\ 233389.95\\ 233447.39\\ 233504.81\\ 233562.25\\ \end{array}$	$\begin{array}{c} 101227 & 10 \\ 101145 & 23 \\ 101063 & 37 \\ 100981 & 51 \\ 100899 & 64 \\ 100817 & 78 \\ 100735 & 91 \\ 100654 & 05 \\ 100572 & 19 \\ 100490 & 32 \\ 100408 & 45 \\ 100326 & 59 \\ 100244 & 73 \\ 100162 & 86 \\ 100080 & 99 \\ 99999 & 13 \\ \end{array}$
$\begin{array}{c} 0.0\overline{0} \\ 100.00 \\ 200.00 \\ 300.00 \\ 400.00 \\ 500.00 \\ 600.00 \\ 700.00 \\ 800.00 \\ 900.00 \\ 1000.00 \\ 1000.00 \\ 1200.00 \end{array}$	$\begin{array}{c} 556.00\\ 564.00\\ 556.00\\ 571.00\\ 571.00\\ 554.00\\ 569.00\\ 569.00\\ 565.00\\ 566.00\\ 566.00\\ 573.00\\ 580.00\\ \end{array}$	0 1 2 3 4 5 6 7 8 9 10 11 12	232512.30 232569.69 232627.08 232684.45 232741.84 232799.23 232856.63 232914.00 232971.39 233028.78 233028.78 233028.17 233143.55 233200.94	$\begin{array}{c} 100763.40\\ 100681.50\\ 100599.61\\ 100517.71\\ 100435.82\\ 100353.92\\ 100272.03\\ 100190.13\\ 100108.24\\ 100026.24\\ 100026.25\\ 99842.55\\ 99780.66 \end{array}$
azz alt_o. 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 1000.00 1200.00 1300.00	dat 535.00 526.00 528.00 536.00 543.00 543.00 544.00 543.00 543.00 544.00 542.00 542.00 544.00	0 1 2 3 4 5 6 7 8 9 10 11 12 3	$\begin{array}{r} 235735.02\\ 235792.38\\ 235849.73\\ 235907.09\\ 235964.44\\ 236021.80\\ 236079.16\\ 236136.52\\ 236193.88\\ 236251.23\\ 236308.59\\ 236365.94\\ 236423.30\\ 236480.66\end{array}$	$\begin{array}{c} 103155.80\\ 103073.88\\ 102991.97\\ 102910.05\\ 102828.13\\ 102746.22\\ 102664.30\\ 102582.39\\ 102500.48\\ 102418.52\\ 102336.64\\ 102254.73\\ 102172.81\\ 102090.90\\ \end{array}$

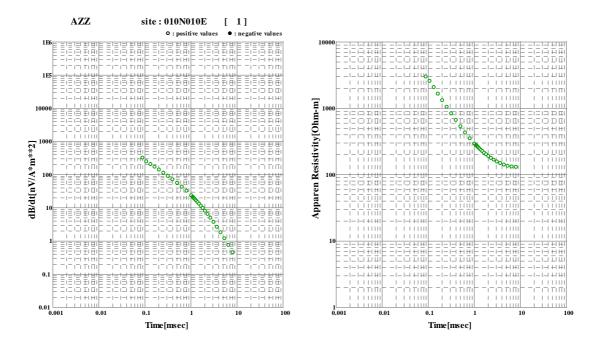
1400.00 1500.00 1600.00 1700.00 1900.00 2000.00 azz alt_p	553.00 547.00 551.00 554.00 569.00 566.00 559.00	14 15 16 17 18 19 20	236538.02 236595.37 236652.73 236710.09 236767.45 236824.80 236882.16	102008.98 101927.06 101845.15 101763.23 101681.32 101599.41 101517.48
$\begin{array}{c} 0.00\\ 100.00\\ 200.00\\ 300.00\\ 400.00\\ 500.00\\ 600.00\\ 700.00\\ 800.00\\ 900.00\\ 1000.00\\ 1200.00\\ 1300.00\\ 1300.00\\ 1400.00\\ 1500.00\\ 1600.00\\ 1700.00\\ 1800.00\\ 1800.00\\ 2000.00\\ 2000.00\\ \end{array}$	534.00 537.00 542.00 547.00 558.00 560.00 567.00 566.00 576.00 598.00 598.00 598.00 598.00 597.00 594.00 605.	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	231500.00 231557.36 231614.72 231672.08 231729.44 231786.80 231844.14 231901.50 231958.86 232016.22 232073.58 232130.94 232245.66 232303.02 232245.66 232303.02 232245.68 232247.73 232247.68 232247.68 232247.16	$\begin{array}{c} 101800.00\\ 101718.09\\ 101636.17\\ 101554.26\\ 101472.34\\ 101308.51\\ 101226.59\\ 101144.67\\ 10126.59\\ 101144.67\\ 100980.85\\ 100898.94\\ 100817.02\\ 100735.10\\ 100653.19\\ 100571.27\\ 100489.36\\ 100407.45\\ 100325.53\\ 100243.62\\ 100161.70\\ \end{array}$
azz alt_q 0.00 100.00 200.00 300.00 600.00 600.00 700.00 800.00 1000.00 1200.00 1200.00 1300.00 1400.00 1500.00 1600.00 1600.00 1700.00 2000.00 azz alt_r	534.00 542.00 549.00 549.00 549.00 559.00 571.00 574.00 590.00 575.00 566.00 576.00 576.00 582.00 605.00 623.00 613.00 631.00 618.00	0 1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20	231100.00 231157.36 231214.72 231272.08 231329.44 231386.80 231444.14 231501.50 231558.86 231616.22 231673.58 231730.94 231788.30 231845.66 231903.02 231960.38 232017.73 232075.08 232132.44 232189.80 232247.16	$\begin{array}{c} 101800.00\\ 101718.09\\ 101636.17\\ 101554.26\\ 101472.34\\ 101308.51\\ 101226.59\\ 101144.68\\ 101062.77\\ 100980.85\\ 100898.94\\ 100817.02\\ 100735.10\\ 100653.19\\ 100571.27\\ 100489.36\\ 100407.45\\ 100325.53\\ 100243.62\\ 100161.70\\ \end{array}$
$\begin{array}{c} 0.00\\ 100.00\\ 200.00\\ 300.00\\ 400.00\\ 500.00\\ 600.00\\ 700.00\\ 800.00\\ 900.00\\ 1000.00\\ 1200.00\\ 1300.00\\ 1300.00\\ 1400.00\\ 1500.00\\ 1600.00\\ 1700.00\\ 1800.00\\ 1900.00\\ 2000.00\\ \end{array}$	$\begin{array}{c} 526.00\\ 534.00\\ 546.00\\ 552.00\\ 560.00\\ 560.00\\ 572.00\\ 572.00\\ 575.00\\ 566.00\\ 567.00\\ 566.00\\ 567.00\\ 568.00\\ 581.00\\ 606.00\\ 595.00\\ 588.00\\ 588.00\\ 588.00\\ 622.00\\ 624.00\\ 621.00\\ \end{array}$	0 1 2 3 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20	$\begin{array}{c} 230700.00\\ 230757.36\\ 230814.72\\ 230872.08\\ 230929.44\\ 230986.80\\ 231044.14\\ 231101.50\\ 231128,.86\\ 231216.22\\ 231273.58\\ 231330.94\\ 231388.30\\ 231484.56\\ 231503.02\\ 231560.38\\ 231617.73\\ 231675.08\\ 231732.44\\ 231789.80\\ 231847.16\\ \end{array}$	$\begin{array}{c} 101800.00\\ 101718.09\\ 101636.17\\ 101554.26\\ 101472.34\\ 101308.51\\ 101226.59\\ 101144.68\\ 101062.77\\ 100980.85\\ 100898.94\\ 100817.02\\ 100735.10\\ 100653.19\\ 100571.27\\ 100489.36\\ 100497.45\\ 100325.53\\ 100243.62\\ 100161.70\\ \end{array}$
khe alt_a 0.00 100.00 200.00 300.00 600.00 600.00 700.00 800.00 1000.00 1100.00 1200.00 1300.00 1400.00 1500.00 1600.00	647.00 643.00 654.00 659.00 663.00 677.00 683.00 686.00 684.00 689.00 689.00 689.00 691.00 692.00 692.00	1 2 3 4 5 6 7 8 9 10 11 2 13 14 15	231921.55 232021.53 232121.52 232221.48 232321.47 232421.45 232521.44 232621.42 232721.41 232821.37 232921.36 233021.34 233121.33 233221.31 233321.30 233421.27 233521.25	94836.12 94838.03 94839.95 94841.86 94843.77 94845.70 94847.61 94849.52 94851.44 94853.35 94855.27 94855.27 94857.18 94859.09 94861.01 94862.92 94864.84 94866.76

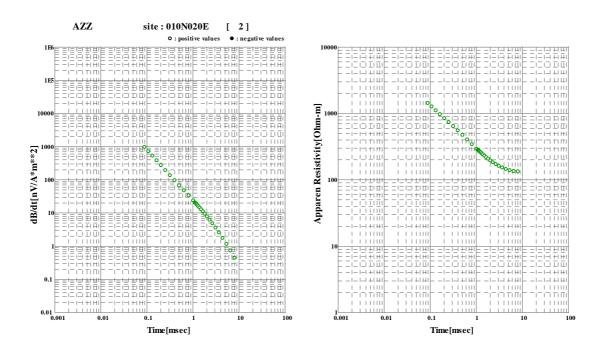
1700.00 1800.00 1900.00 2000.00	686.00 686.00 687.00 681.00	17 233621.23 18 233721.22 19 233821.20 20 233921.19	94868.67 94870.59 94872.50 94874.41
khe alt_b.c 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 1000.00 1100.00 1200.00 1400.00 1500.00 1600.00 1700.00 1800.00 1900.00 khe alt c.c	$\begin{array}{c} 628.00\\ 628.00\\ 627.00\\ 627.00\\ 630.00\\ 633.00\\ 645.00\\ 632.00\\ 622.00\\ 624.00\\ 625.00\\ 640.00\\ 637.00\\ 640.00\\ 637.00\\ 640.00\\ 636.00\\ 611.00\\ 612.00\\ 608.00\\ 598.00\\ \end{array}$	$\begin{array}{c} 0 & 231927 & 00 \\ 1 & 232027 & 00 \\ 2 & 232127 & 00 \\ 3 & 232227 & 00 \\ 4 & 232327 & 00 \\ 5 & 232427 & 00 \\ 6 & 232527 & 00 \\ 7 & 232627 & 00 \\ 9 & 232827 & 00 \\ 9 & 232827 & 00 \\ 10 & 232927 & 00 \\ 10 & 232927 & 00 \\ 11 & 233026 & 98 \\ 12 & 233126 & 98 \\ 13 & 233226 & 98 \\ 14 & 233326 & 98 \\ 15 & 233426 & 98 \\ 16 & 233526 & 98 \\ 17 & 233626 & 98 \\ 18 & 233726 & 98 \\ 19 & 233826 & 98 \\ 20 & 233926 & 98 \\ 20 & 233926 & 98 \\ \end{array}$	95052.00 95051.62 95051.23 95050.85 95050.47 95050.09 95049.71 95049.33 95048.56 95048.56 95048.18 95047.80 95047.80 95047.41 95047.03 95046.65 95046.27 95045.89 95045.51 95045.13 95044.74
0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 1000.00 1200.00 1300.00 1400.00 1500.00 1600.00 1700.00 1800.00 1900.00 mao alt_a.c	$\begin{array}{c} 621.00\\ 629.00\\ 633.00\\ 636.00\\ 637.00\\ 640.00\\ 629.00\\ 624.00\\ 605.00\\ 618.00\\ 621.00\\ 624.00\\ 632.00\\ 615.00\\ 617.00\\ 617.00\\ 611.00\\ 616.00\\ 603.00\\ 608.00\\ 612.00\\ 612.00\\ \end{array}$	$\begin{array}{c} 0 & 231935.00 \\ 1 & 232034.98 \\ 2 & 232134.97 \\ 3 & 232234.95 \\ 4 & 232334.95 \\ 5 & 232434.94 \\ 6 & 232534.92 \\ 7 & 232634.91 \\ 8 & 232734.89 \\ 9 & 232834.87 \\ 10 & 232934.86 \\ 11 & 233034.84 \\ 12 & 233134.84 \\ 13 & 233234.83 \\ 14 & 233334.81 \\ 15 & 233434.80 \\ 16 & 233534.78 \\ 17 & 233634.77 \\ 18 & 233734.75 \\ 19 & 233834.73 \\ 20 & 233934.73 \\ \end{array}$	94564.00 94562.35 94560.70 94557.41 94555.76 94554.11 94552.47 94550.82 94540.82 94545.88 94544.23 94542.58 94542.58 94542.58 94542.58 94542.58 94539.28 94537.63 94535.98 94534.34 94532.69 94531.04
400 00 500.00 500.00 600.00 700.00 800.00 900.00 1000.00 1200.00 1200.00 1400.00 1500.00 1600.00 1700.00 1800.00 1900.00 har alt_a.c	$\begin{array}{c} 417.00\\ 417.00\\ 417.00\\ 417.00\\ 417.00\\ 419.00\\ 415.00\\ 415.00\\ 415.00\\ 415.00\\ 415.00\\ 415.00\\ 415.00\\ 415.00\\ 415.00\\ 412.00\\ 412.00\\ 422.00\\ 422.00\\ 422.00\\ \end{array}$	$\begin{array}{c} 4 \\ 223660.00 \\ 5 \\ 223760.00 \\ 6 \\ 223860.00 \\ 7 \\ 223960.00 \\ 8 \\ 224060.00 \\ 9 \\ 224160.00 \\ 10 \\ 224260.00 \\ 11 \\ 224359.98 \\ 12 \\ 224459.98 \\ 13 \\ 224559.98 \\ 14 \\ 224659.98 \\ 15 \\ 224759.98 \\ 16 \\ 224859.98 \\ 17 \\ 224959.98 \\ 18 \\ 225059.98 \\ 19 \\ 225159.98 \\ 20 \\ 225259.98 \\ 20 \\ 225259.98 \end{array}$	107282.00 107282.50 107283.00 107283.50 107284.00 107285.00 107285.50 107286.50 107286.50 107286.50 107287.50 107288.50 107288.50 107288.50 107289.00
nan a n a n a n a n a n a n a n a n a n	$\begin{array}{c} 412.00\\ 412.00\\ 382.00\\ 406.00\\ 386.00\\ 409.00\\ 386.00\\ 406.00\\ 379.00\\ 406.00\\ 351.00\\ 372.00\\ 394.00\\ 392.00\\ 395.00\\ 395.00\\ 395.00\\ 395.00\\ 395.00\\ 395.00\\ 395.00\\ 395.00\\ \end{array}$	0 227983.00 1 227883.00 2 227783.00 3 227683.00 4 227583.00 5 227483.00 6 227383.00 7 227283.00 7 227283.00 10 226983.00 11 226883.00 12 226783.00 12 226783.00 13 226683.00 14 226583.00 15 226483.00 16 226383.00 17 226283.00 18 226183.00 19 226083.00 20 225983.00 20 225983.00 0 233539.00	107519.00 107519.00

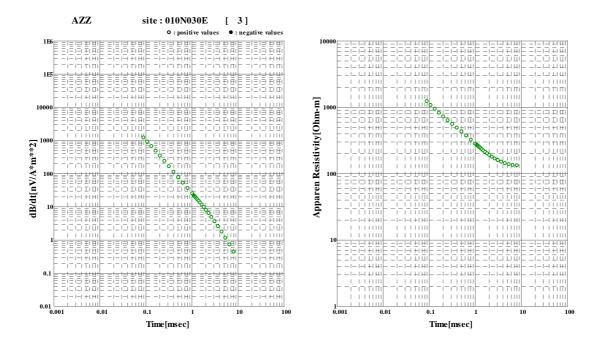
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tal alt_a. 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 1000.00 1100.00 1300.00 1400.00 1500.00 1600.00 1700.00 1800.00 1900.00 2000.00 tal alt b.	$\begin{array}{c} 631.00\\ 641.00\\ 649.00\\ 643.00\\ 656.00\\ 659.00\\ 659.00\\ 639.00\\ 643.00\\ 637.00\\ 633.00\\ 626.00\\ 624.00\\ 614.00\\ 628.00\\ 604.00\\ 593.00\\ 604.00\\ 593.00\\ 604.00\\ 593.00\\ 604.00\\ 593.00\\ 604.00\\ 593.00\\ 605.00\\ 606.00\\ \end{array}$	$\begin{array}{ccccccc} 0 & 234332.00 & 93354.00 \\ 1 & 234432.00 & 93355.16 \\ 3 & 234632.00 & 93355.73 \\ 4 & 234732.00 & 93356.89 \\ 6 & 234931.98 & 93356.89 \\ 6 & 234931.98 & 93357.47 \\ 7 & 235031.98 & 93358.05 \\ 8 & 235131.98 & 93358.62 \\ 9 & 235231.98 & 93359.20 \\ 10 & 235331.98 & 93359.20 \\ 10 & 235331.98 & 93359.78 \\ 11 & 235431.98 & 93360.36 \\ 12 & 235531.98 & 93360.36 \\ 12 & 235531.98 & 93361.52 \\ 14 & 235731.98 & 93362.09 \\ 15 & 235831.97 & 93363.25 \\ 17 & 236031.97 & 93363.83 \\ 18 & 236131.97 & 93364.41 \\ 19 & 236231.97 & 93364.98 \\ 20 & 236331.97 & 93365.56 \\ \end{array}$
0.00 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 1000.00 1200.00 1300.00 1400.00 1500.00 1600.00 1700.00 1800.00 1900.00 2000.00 tal	$\begin{array}{c} 651.00\\ 645.00\\ 645.00\\ 652.00\\ 653.00\\ 655.00\\ 655.00\\ 638.00\\ 641.00\\ 637.00\\ 639.00\\ 639.00\\ 639.00\\ 631.00\\ 631.00\\ 627.00\\ 620.00\\ 610.00\\ 617.00\\ 623.00\\ 623.00\\ 623.00\\ 630.00\\ \end{array}$	$\begin{array}{ccccccc} 0 & 234339.00 & 93135.00 \\ 1 & 234439.00 & 93136.02 \\ 2 & 234538.98 & 93137.02 \\ 3 & 234638.98 & 93139.05 \\ 5 & 234838.97 & 93140.07 \\ 6 & 234938.97 & 93140.07 \\ 6 & 234938.97 & 93141.08 \\ 7 & 235038.97 & 93142.09 \\ 8 & 235138.95 & 93144.13 \\ 10 & 235238.95 & 93144.13 \\ 10 & 235338.95 & 93145.13 \\ 11 & 235438.94 & 93146.15 \\ 12 & 235538.94 & 93146.15 \\ 12 & 235538.94 & 93147.16 \\ 13 & 235638.94 & 93148.17 \\ 14 & 235738.92 & 93151.22 \\ 17 & 236038.91 & 93152.23 \\ 18 & 236138.91 & 93153.24 \\ 19 & 236238.91 & 93155.27 \\ \end{array}$
0.00 0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00 800.00 900.00 100.00 100.00 100.00 1200.00 1300.00 1400.00 1500.00 1700.00 1800.00 1900.00 2000.00	$\begin{array}{c} 683.00\\ 695.00\\ 705.00\\ 697.00\\ 690.00\\ 698.00\\ 698.00\\ 699.00\\ 683.00\\ 675.00\\ 681.00\\ 677.00\\ 677.00\\ 677.00\\ 674.00\\ 665.00\\ 665.00\\ 665.00\\ 665.00\\ 669.00\\ 669.00\\ 666.00\\ 666.00\\ 646.00\\ \end{array}$	0 235180.70 92502.50 1 235280.70 92502.52 2 235380.70 92502.55 3 235480.70 92502.57 4 235580.70 92502.57 4 235580.70 92502.61 6 235780.70 92502.63 7 235880.70 92502.63 7 235880.70 92502.64 8 235980.70 92502.63 9 236080.70 92502.63 9 236080.70 92502.73 10 236180.70 92502.73 11 236280.70 92502.74 12 236380.70 92502.74 12 236380.70 92502.77 13 236480.70 92502.79 14 236580.70 92502.79 14 236580.70 92502.84 16 236780.70 92502.86 17 236880.70 92502.80 17 236880.70 92502.90 19

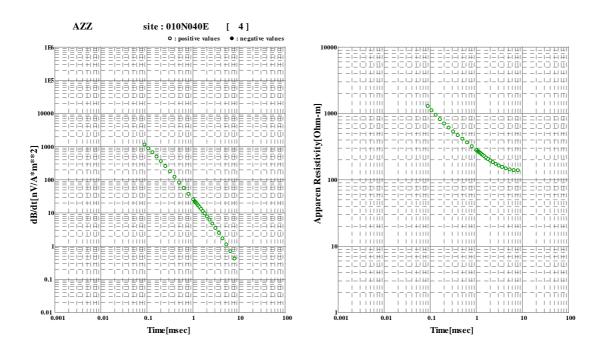
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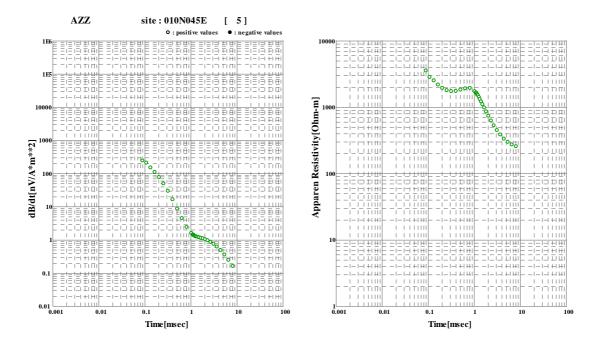
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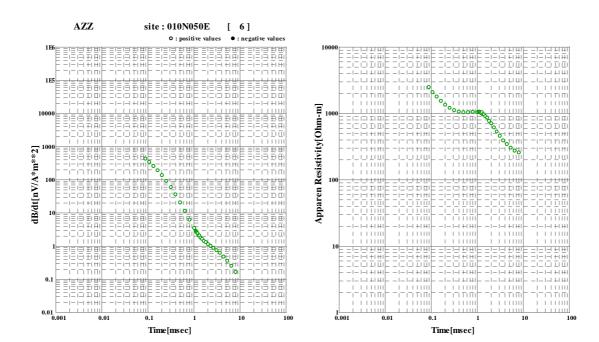


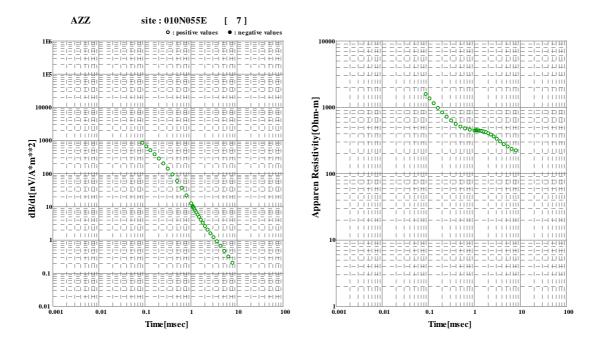


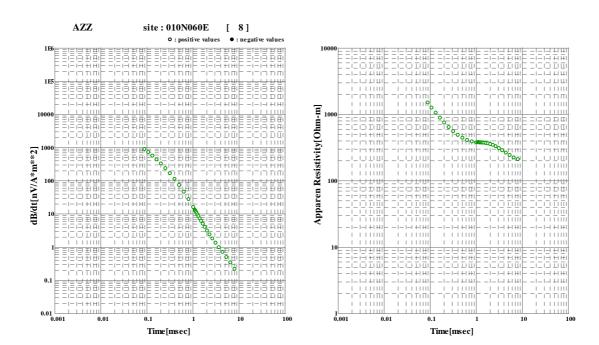


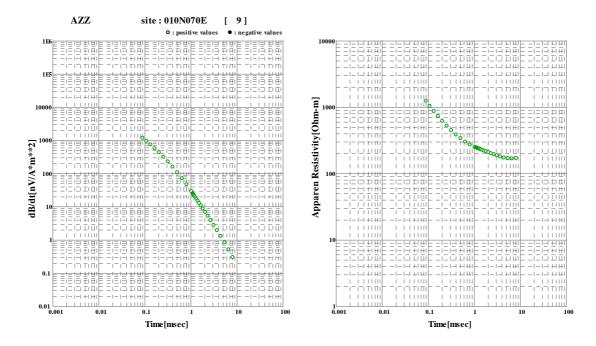


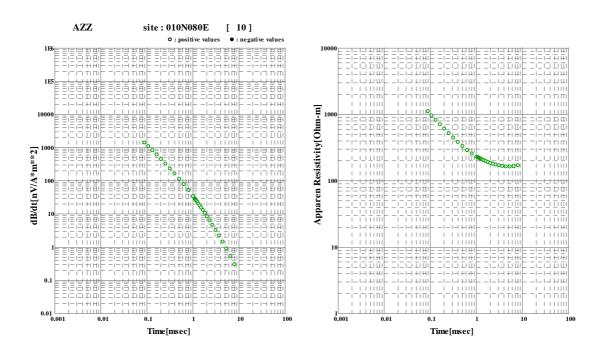


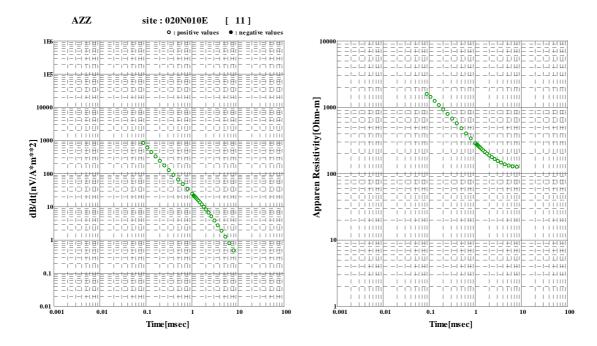


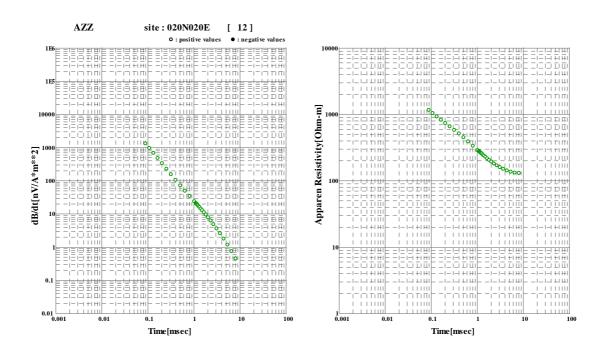


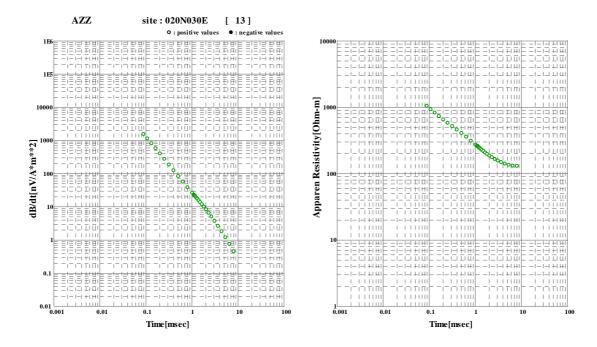


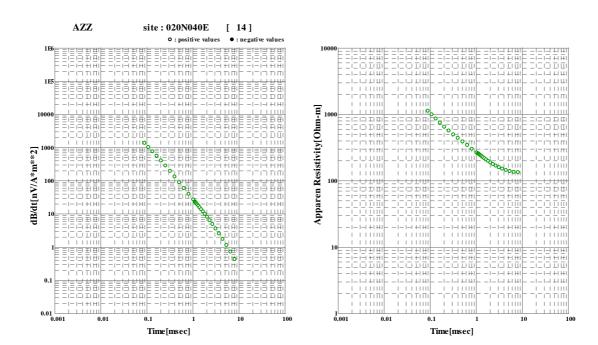


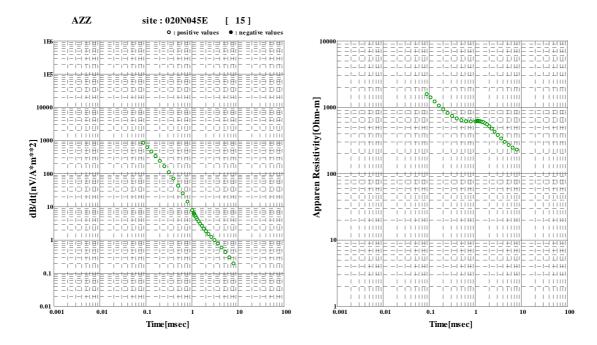


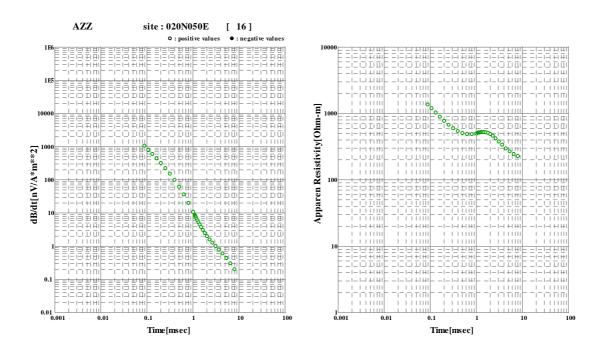


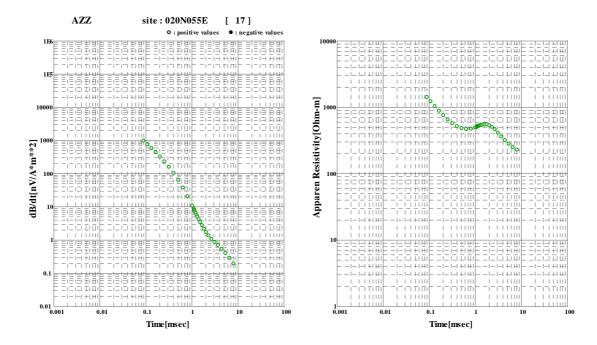


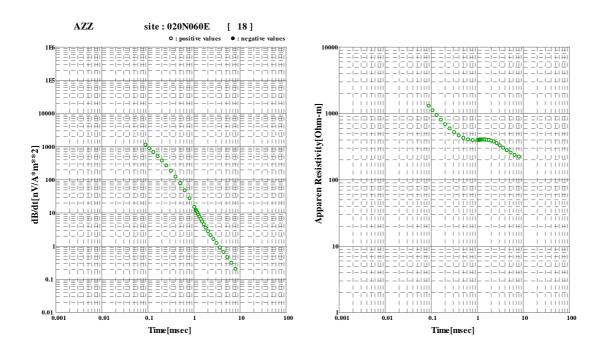


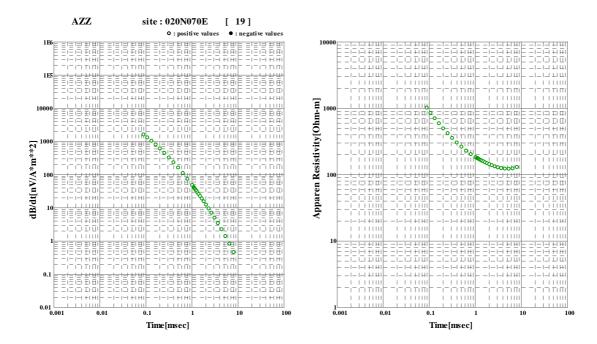


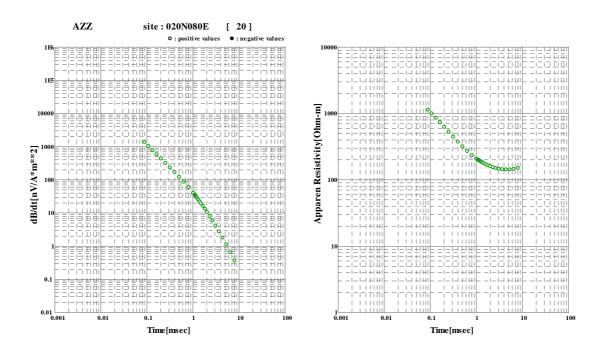


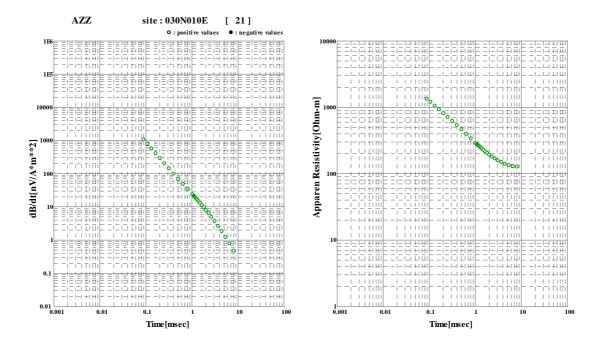


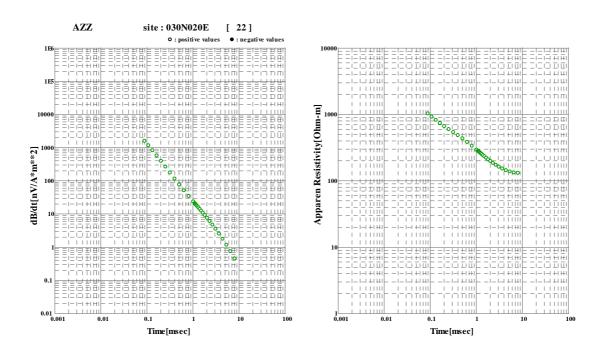


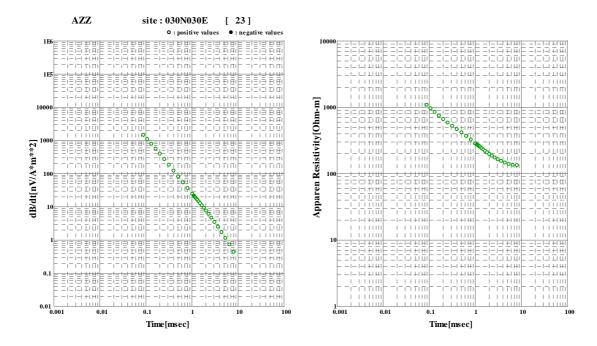


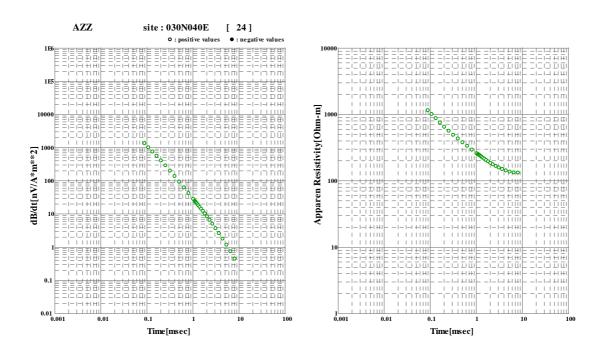


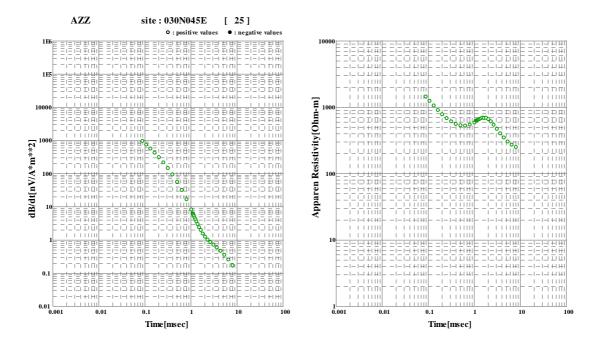


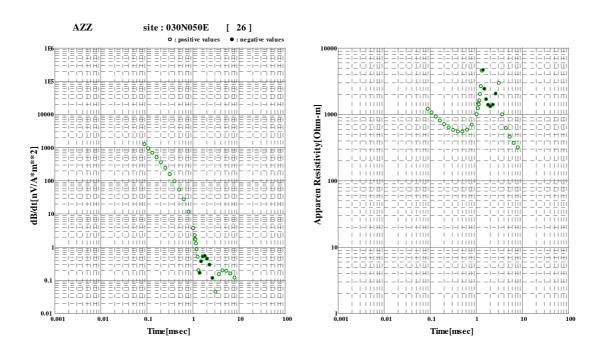


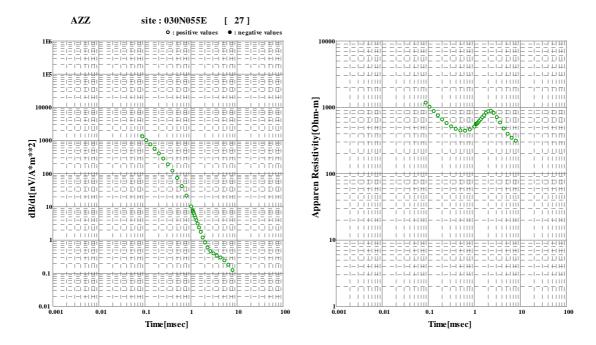


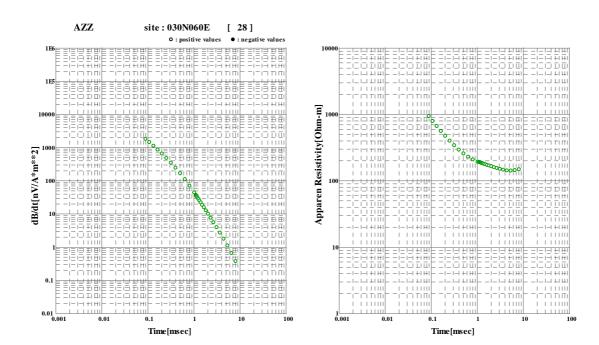


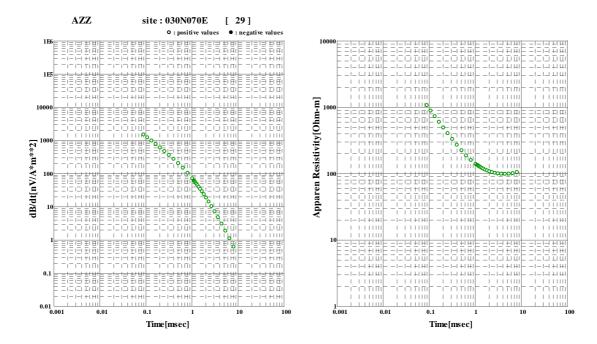


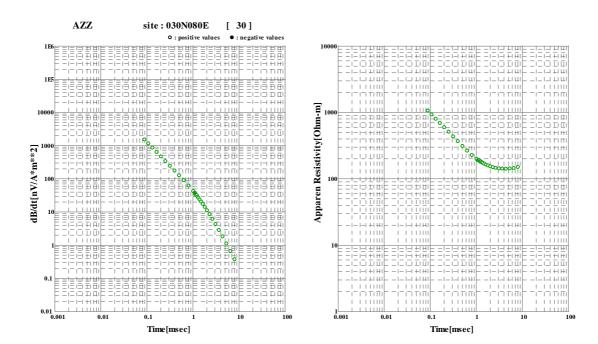


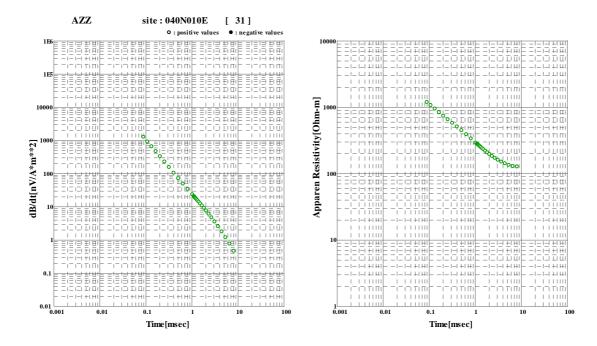


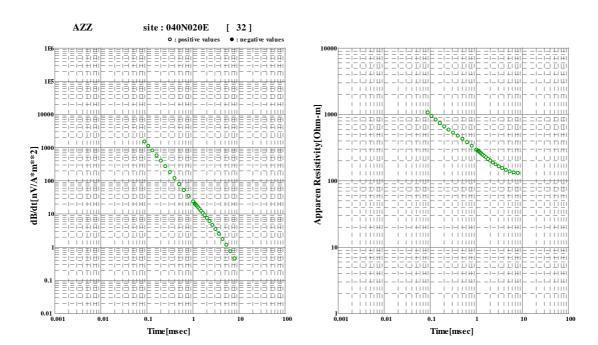


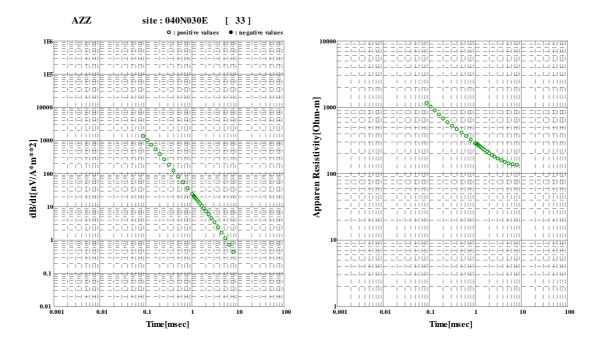


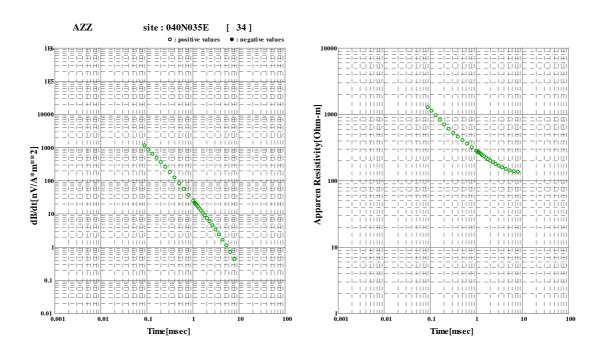


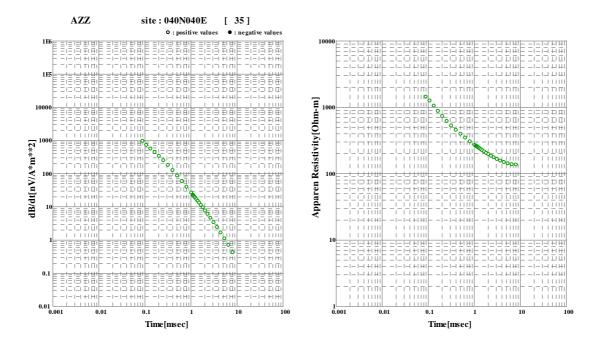


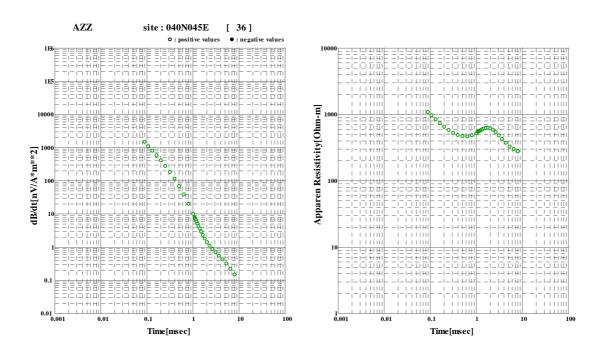


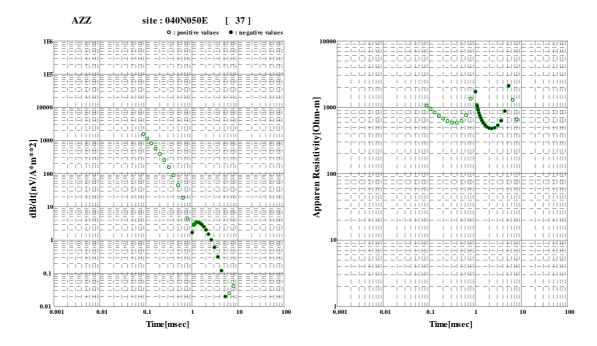


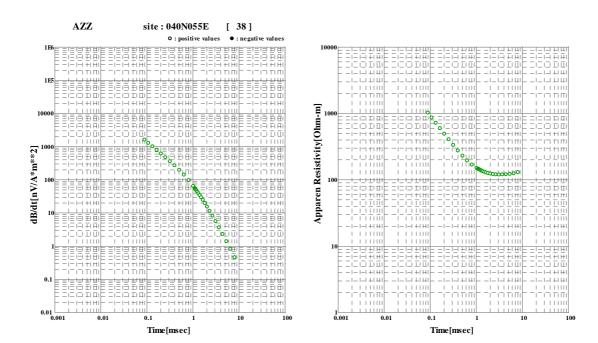


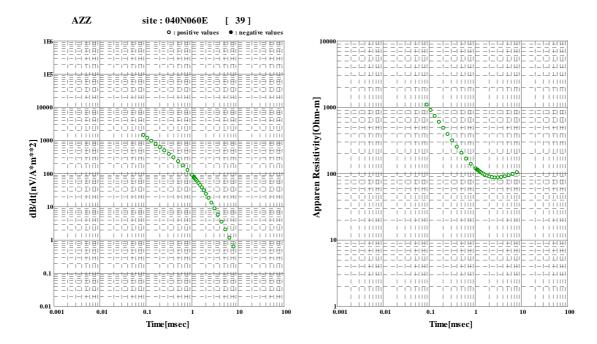


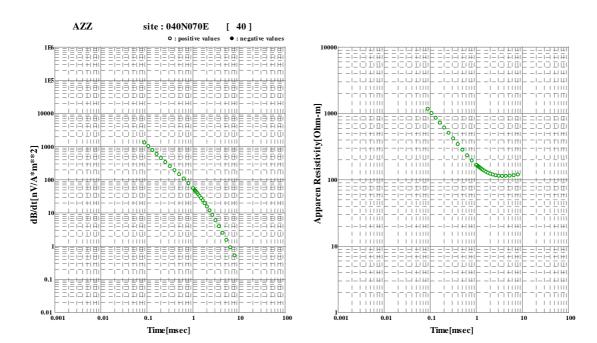


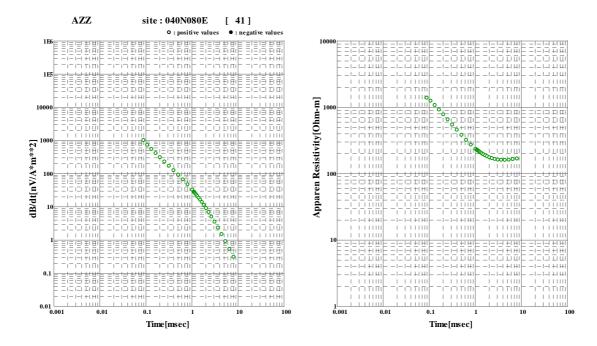


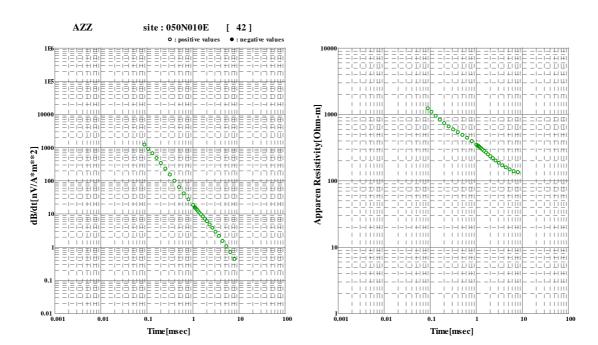


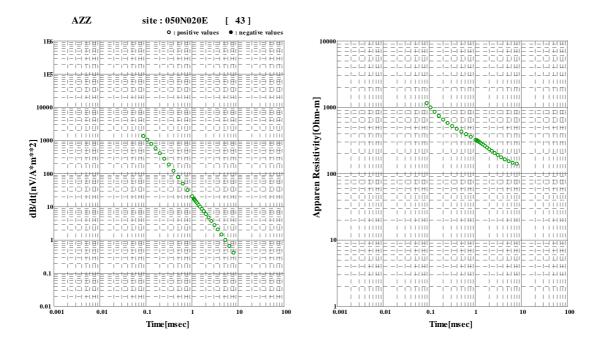


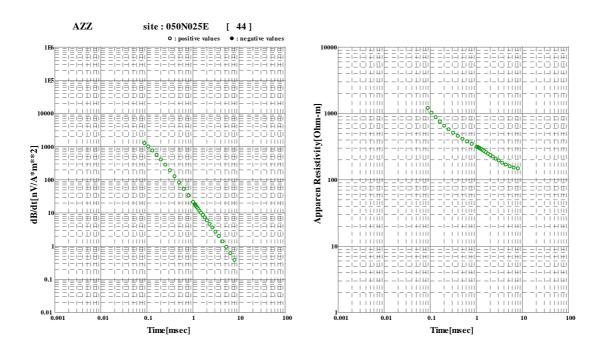


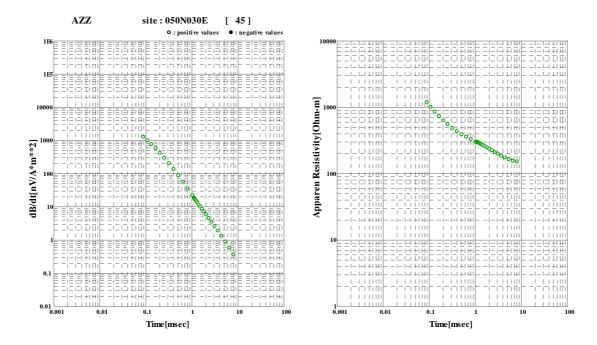


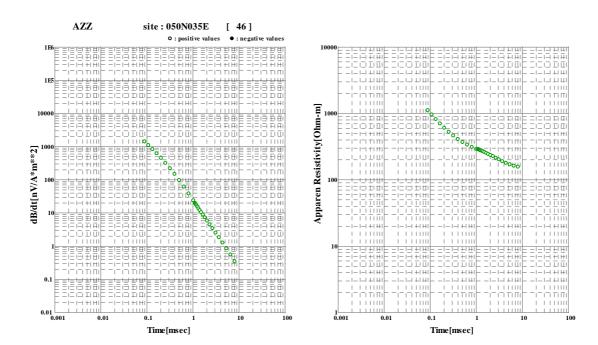


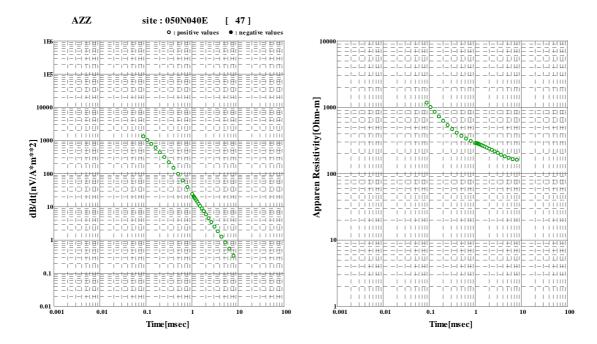


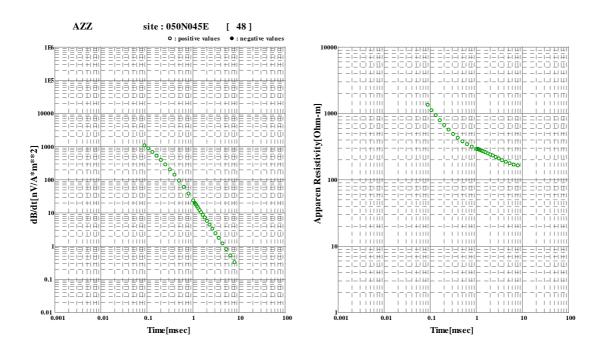


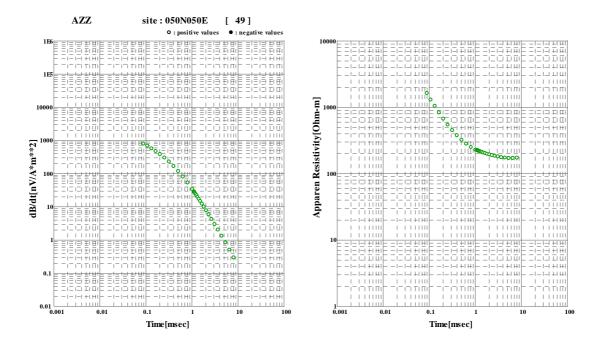


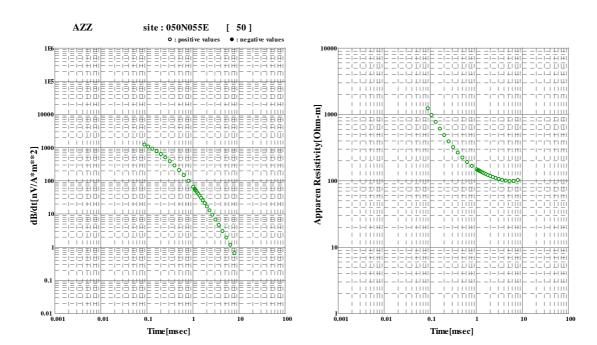


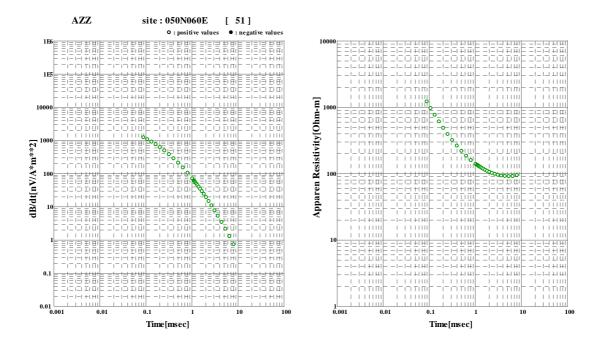


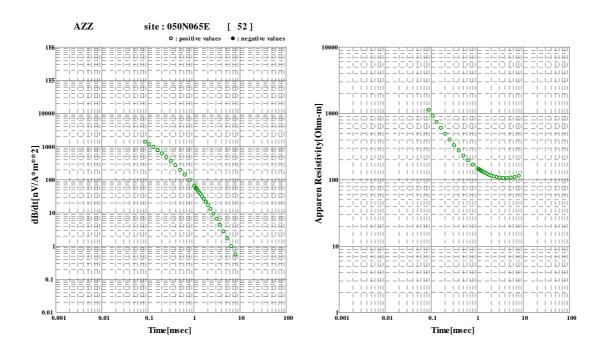


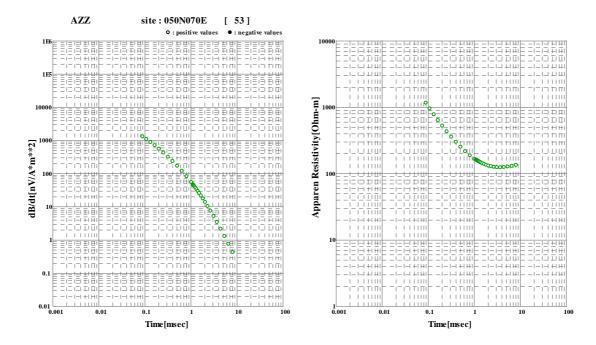


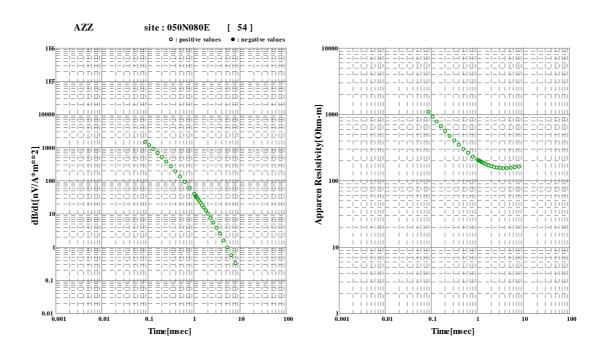


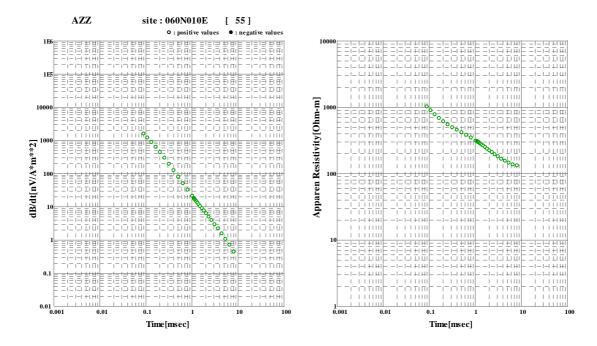


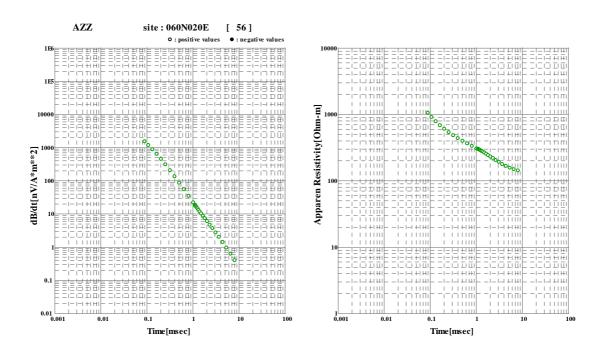


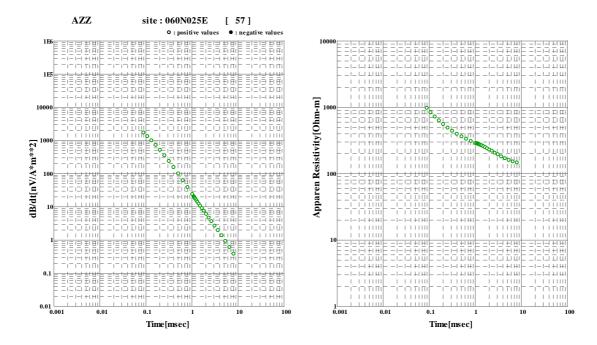


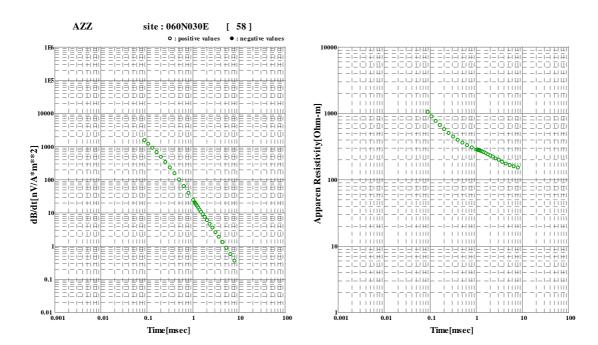


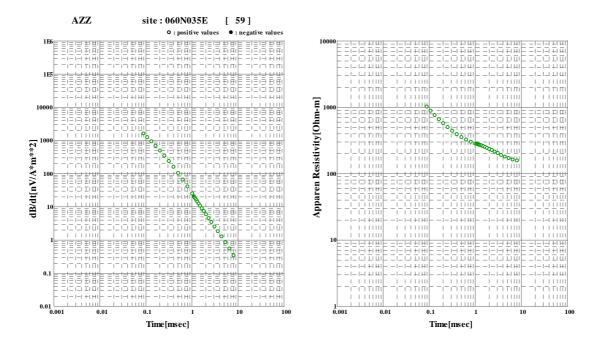


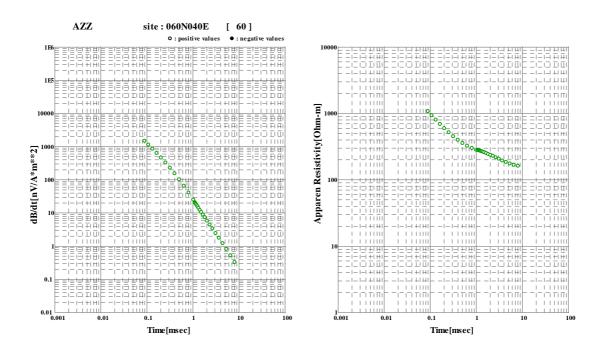


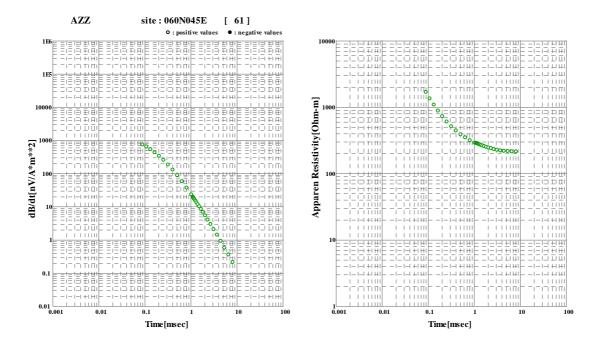


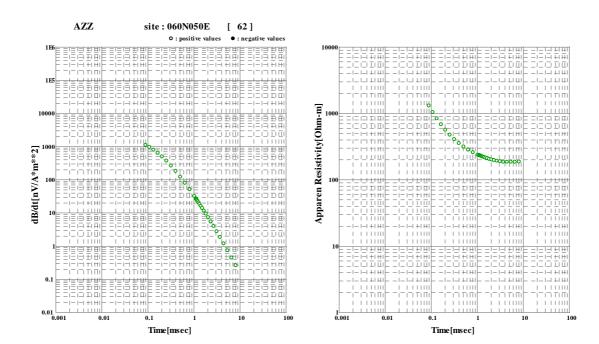


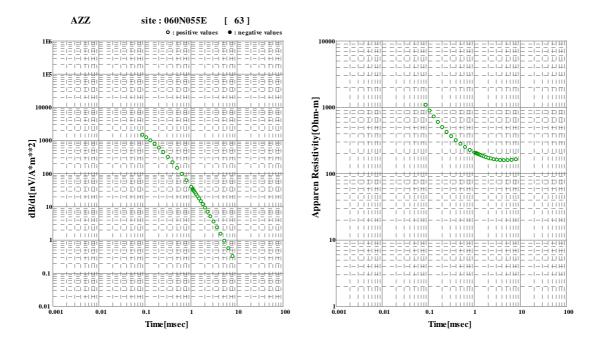


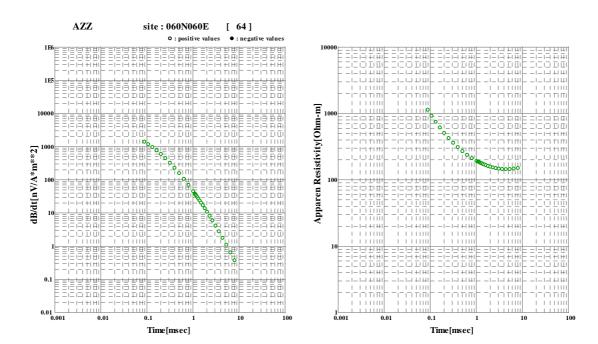


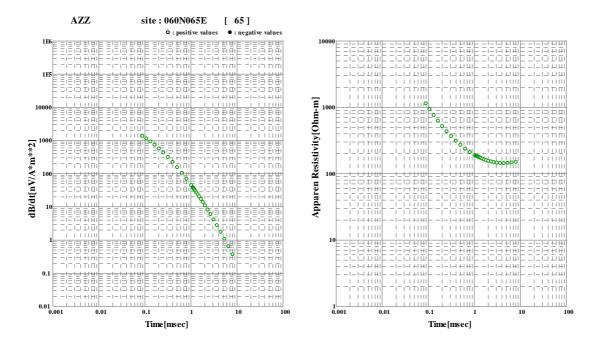


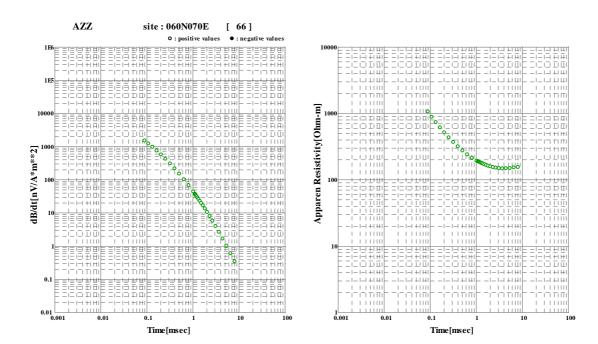


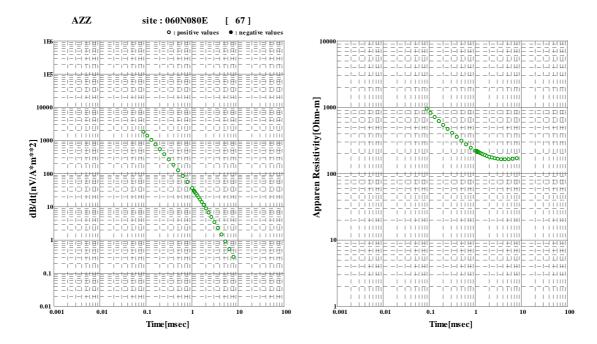


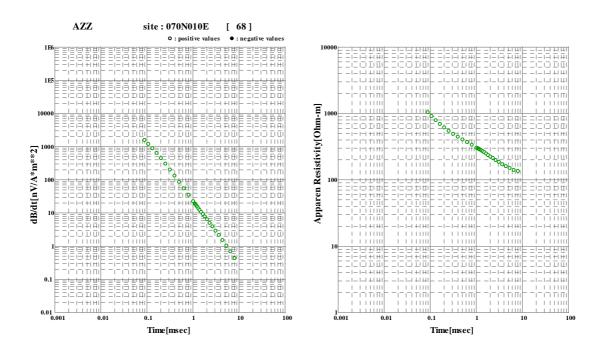


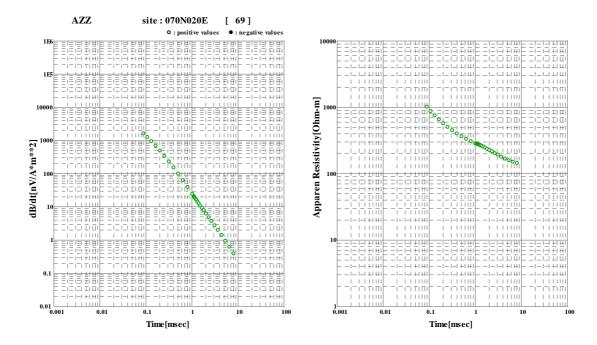


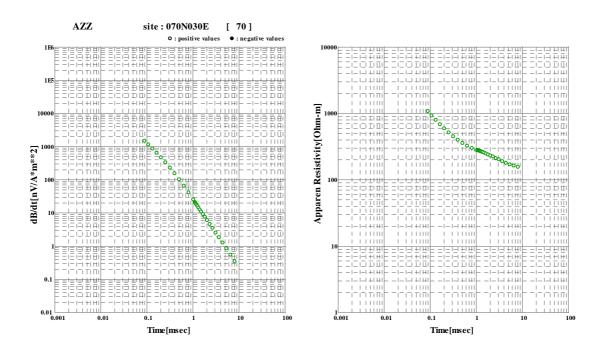


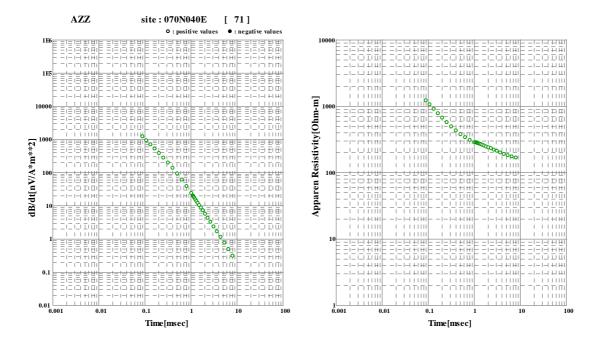


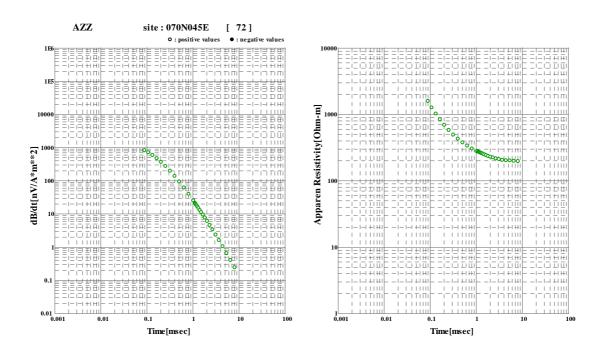


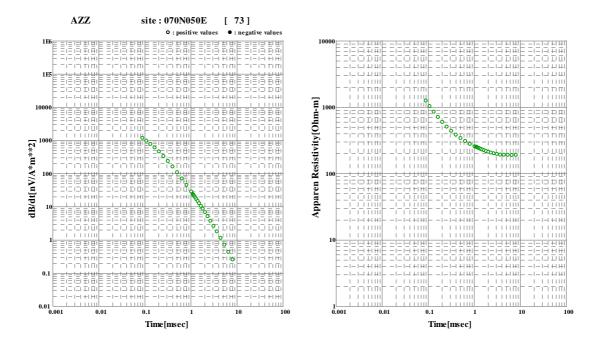


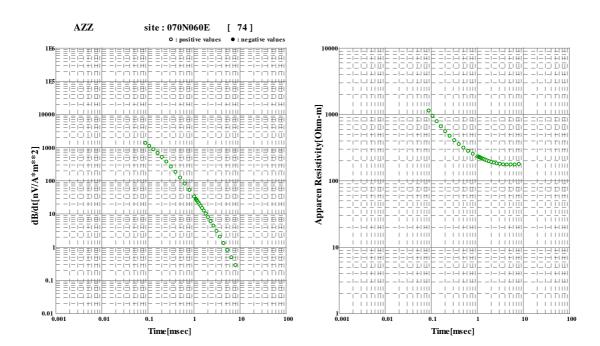


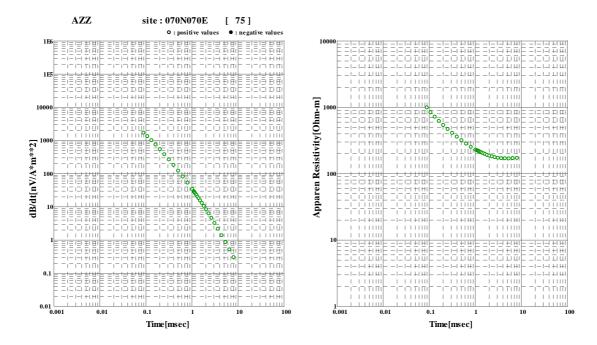


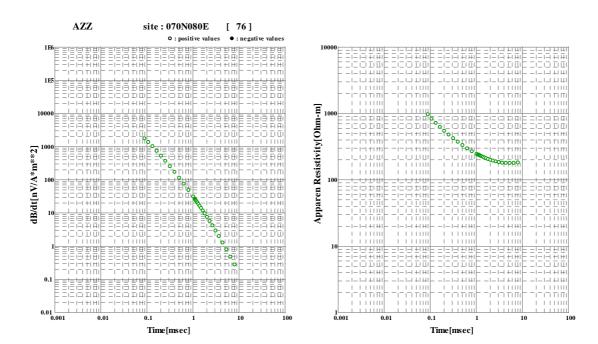


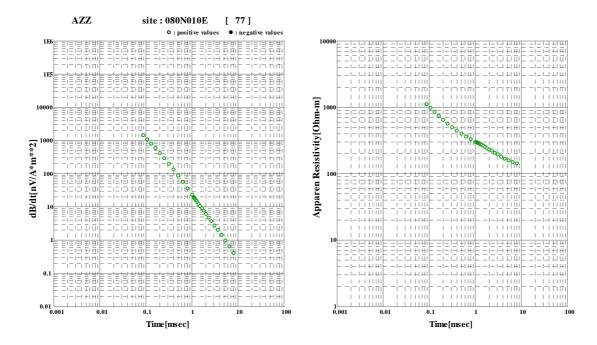


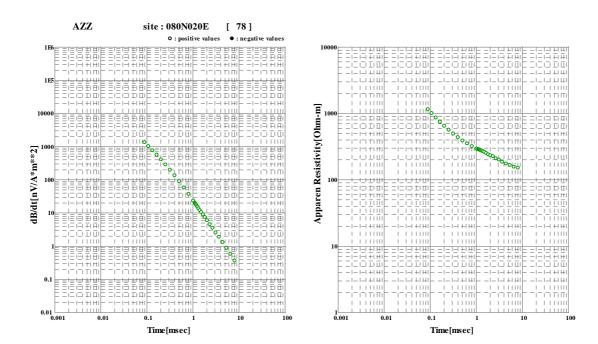


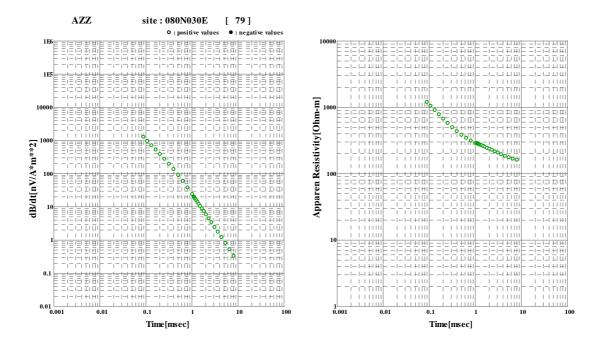


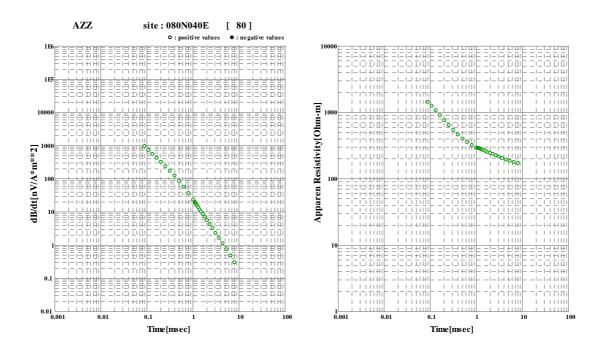


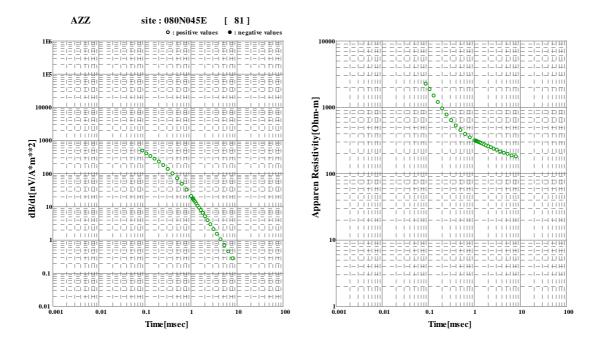


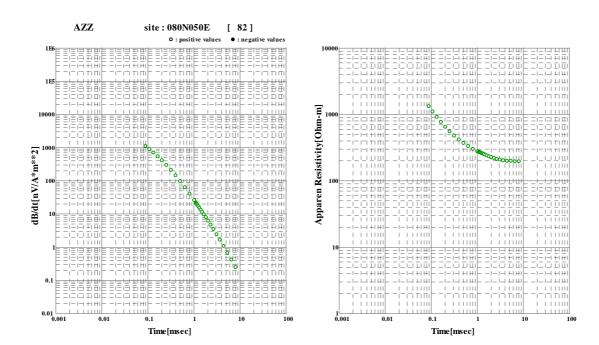


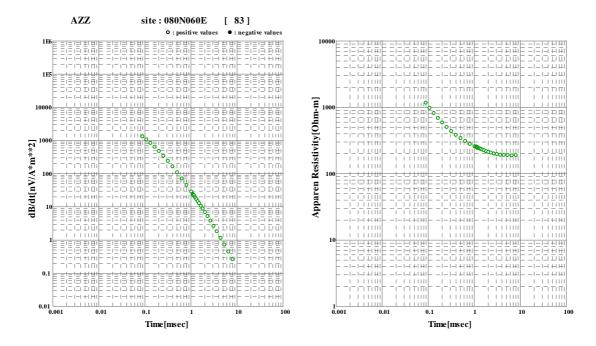


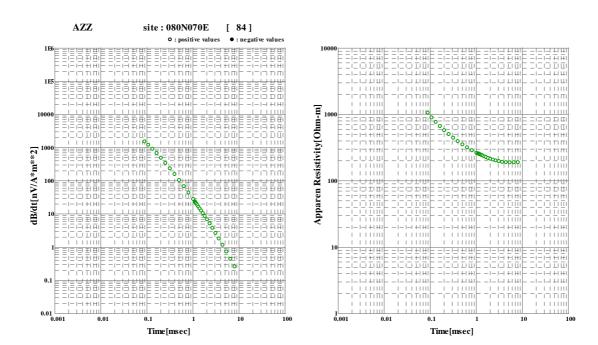


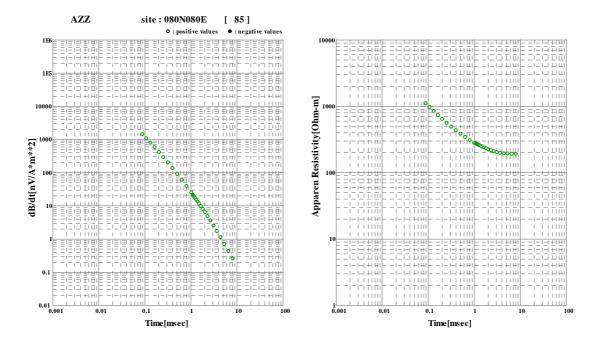


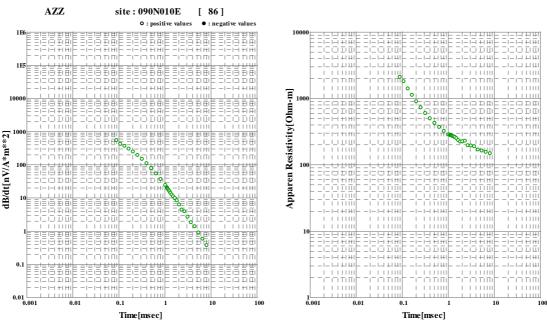




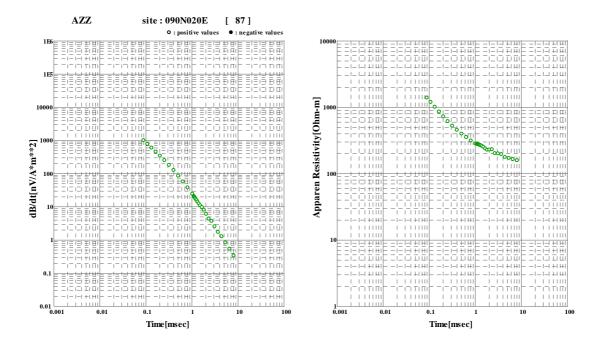


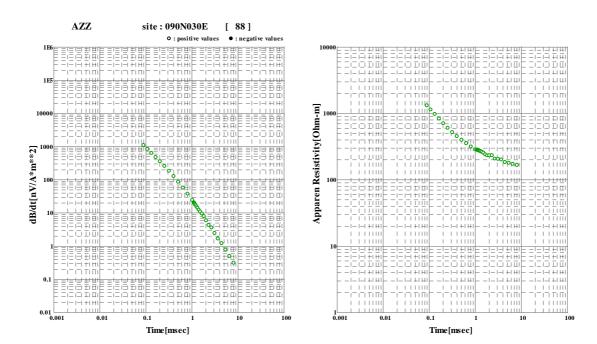


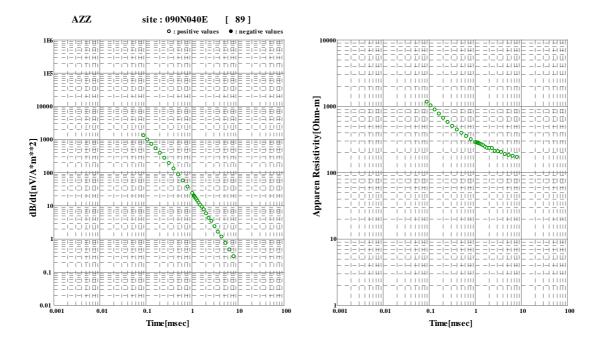


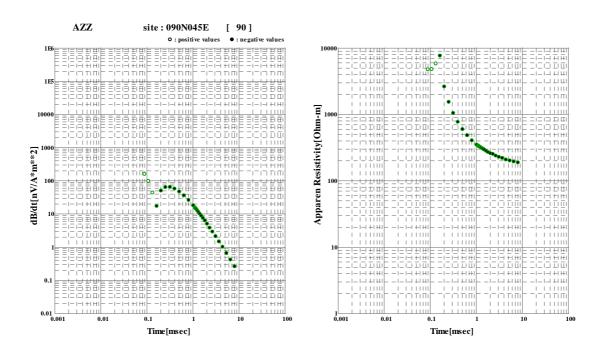


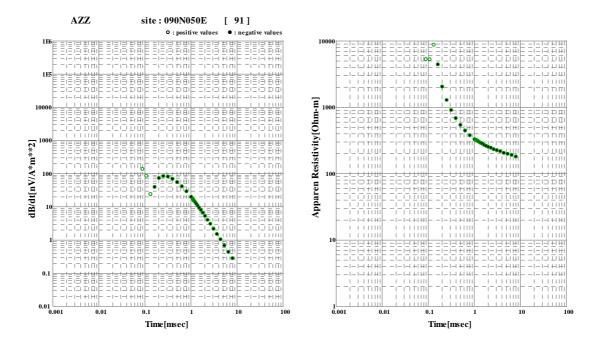
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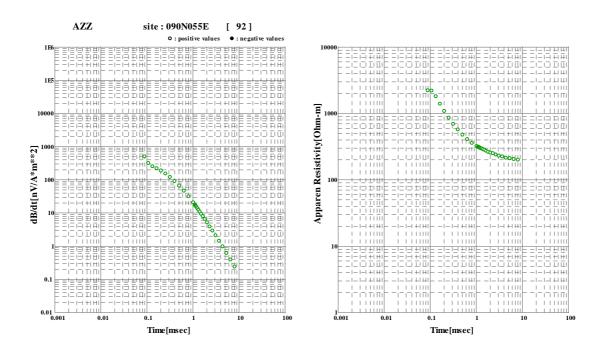


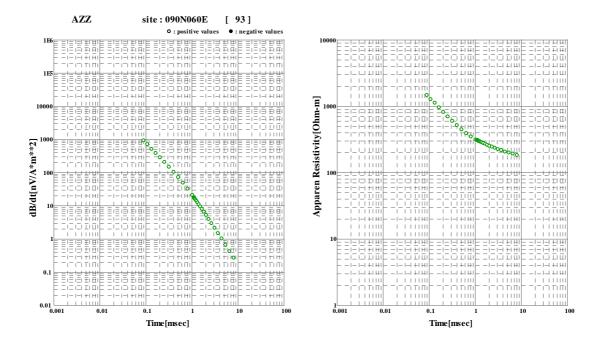


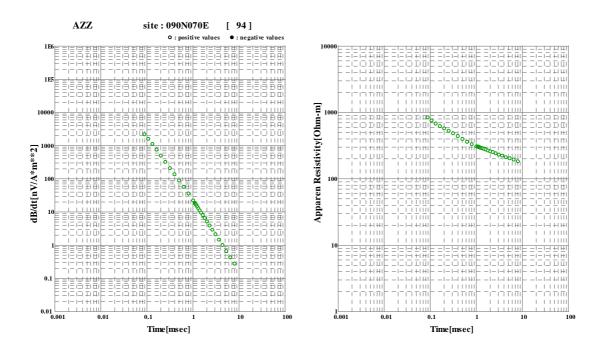


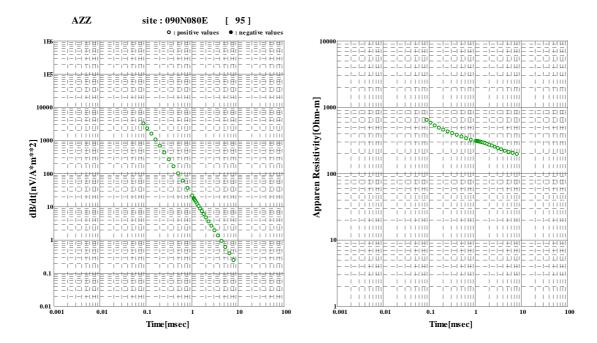


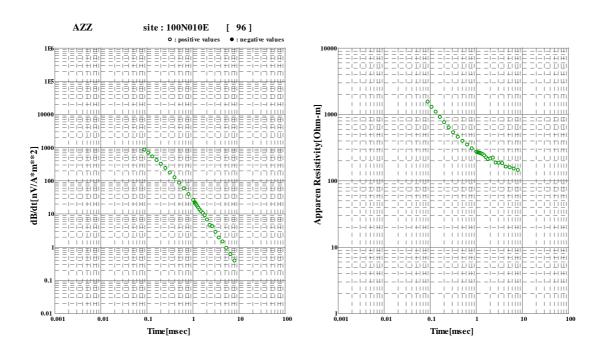


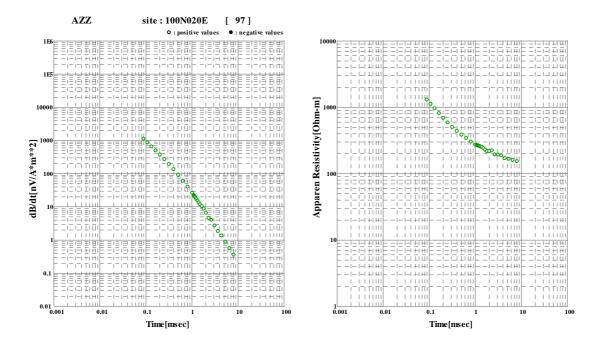


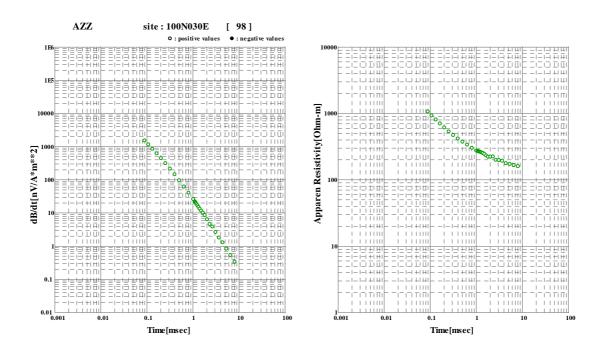


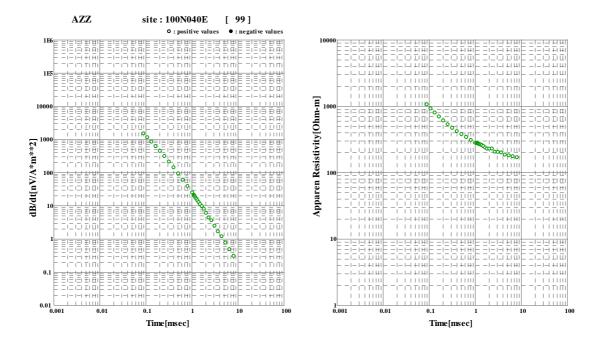


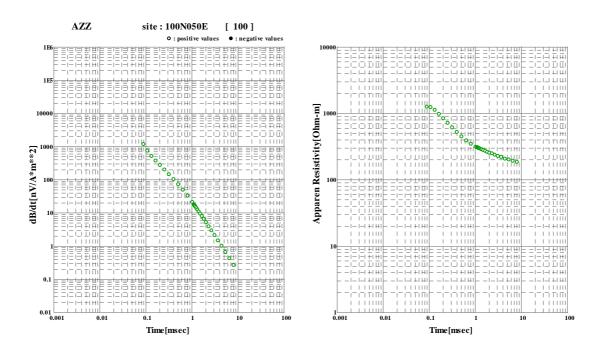


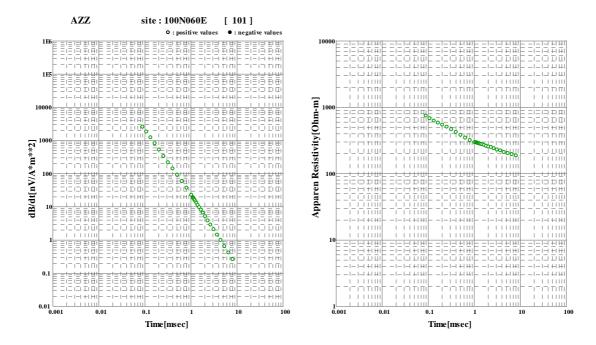


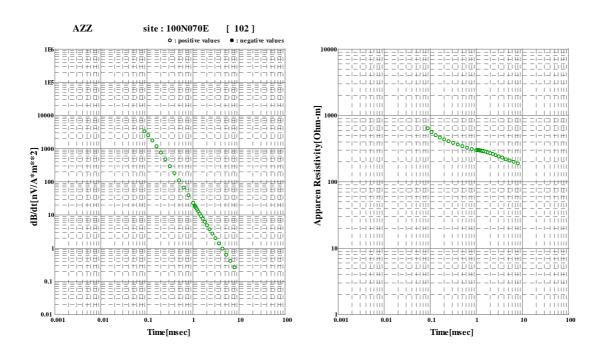


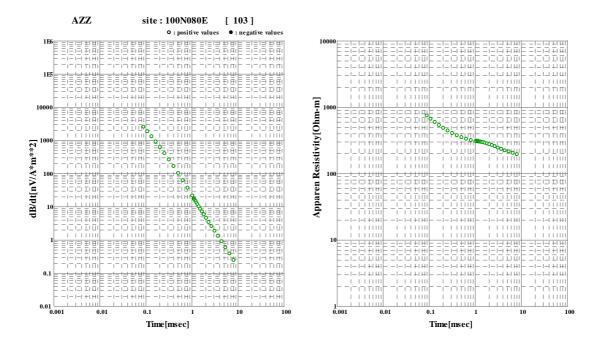


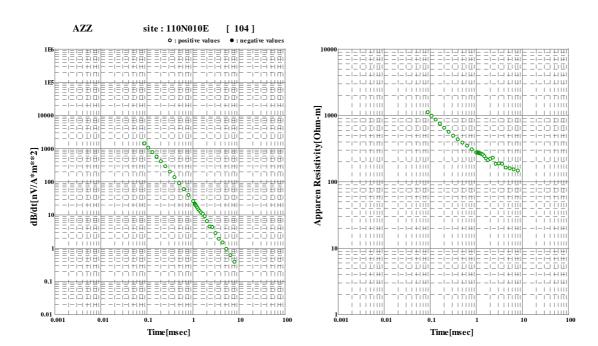


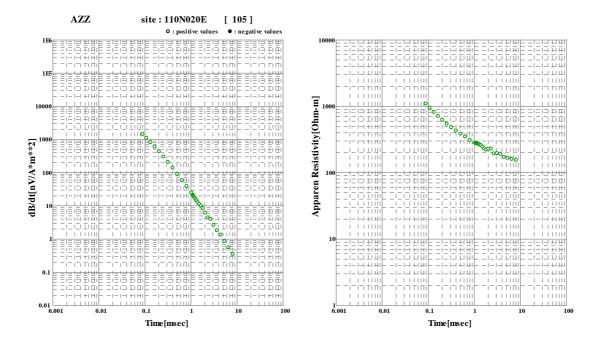


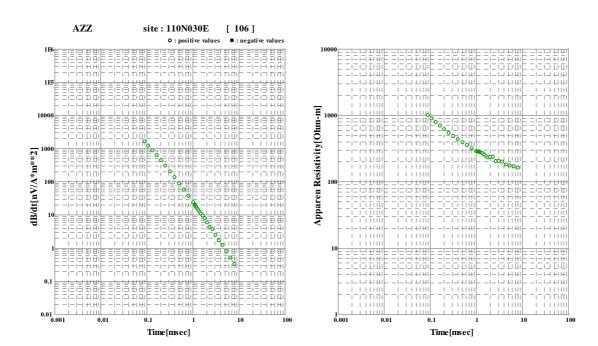


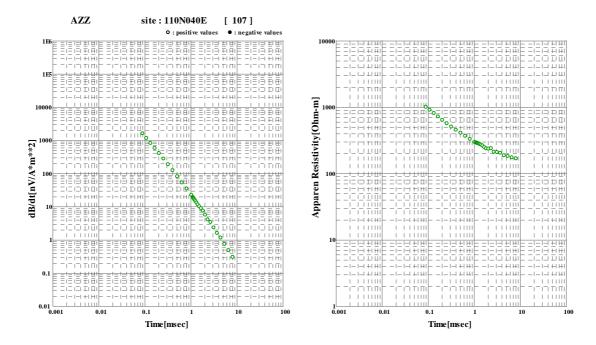


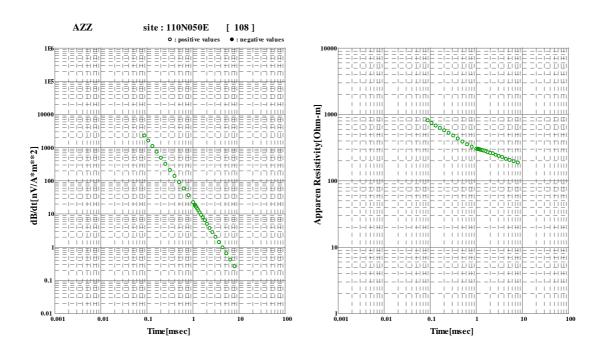


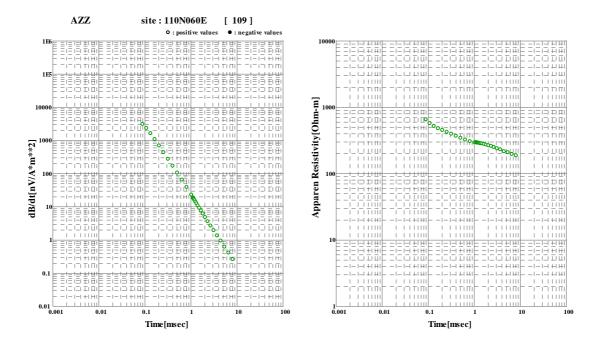


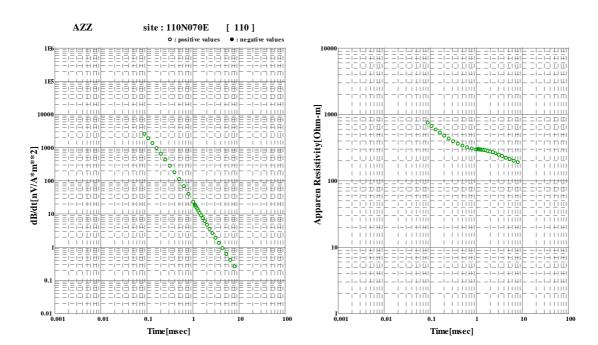


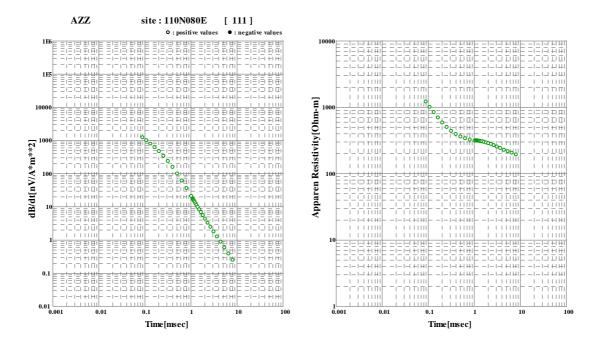


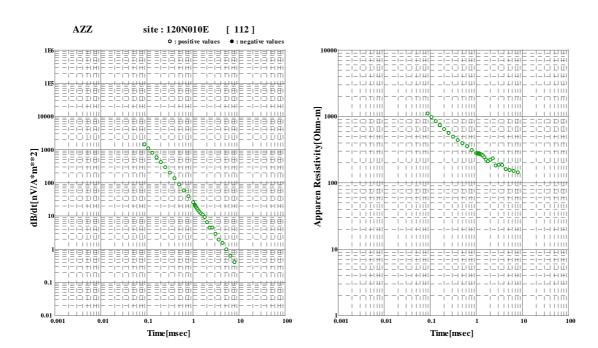


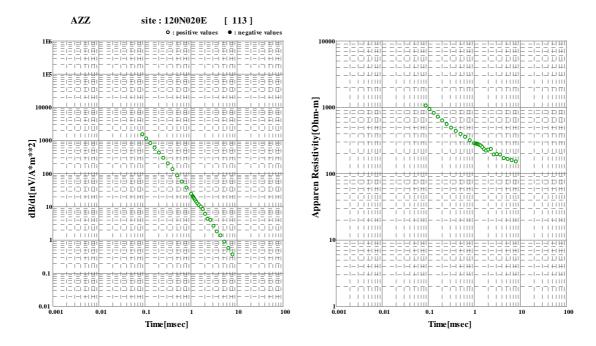


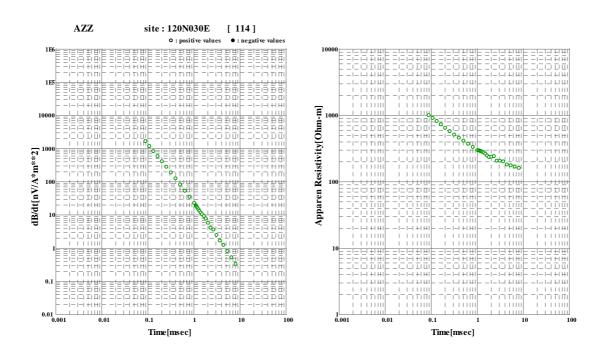


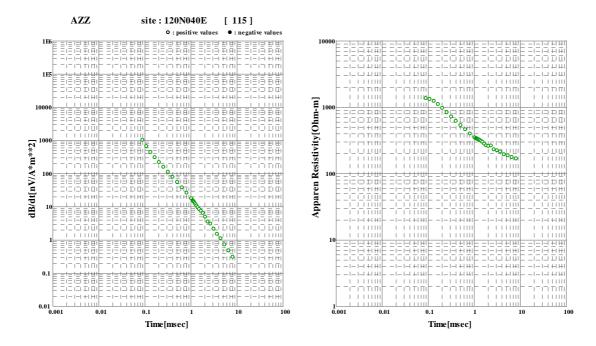


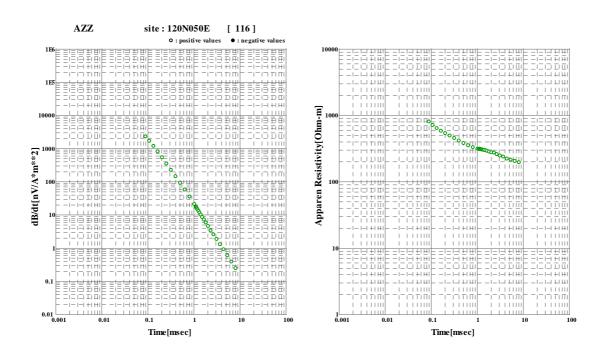


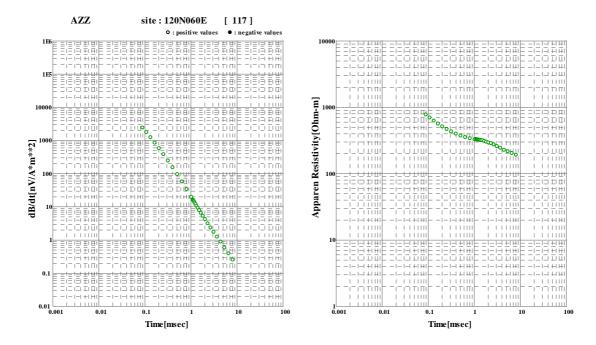


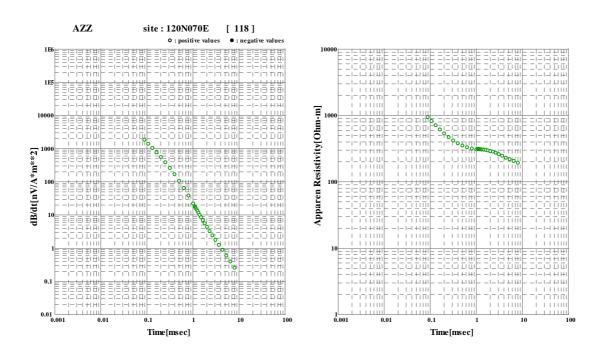


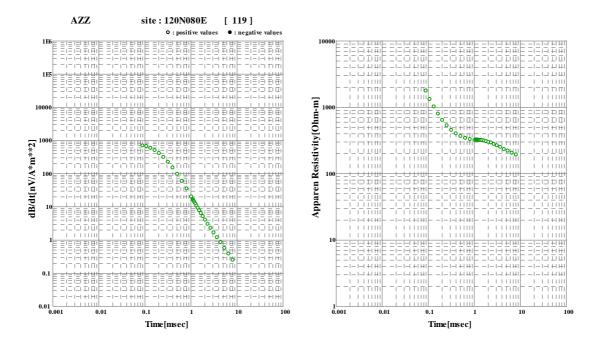


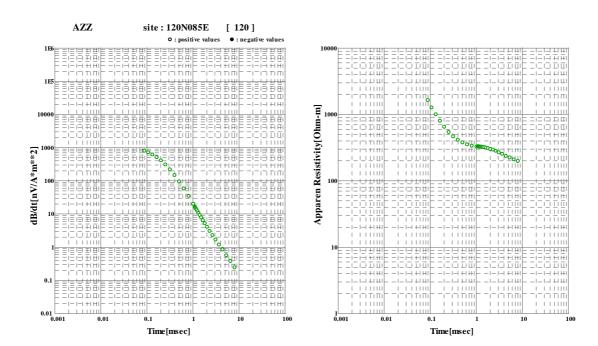


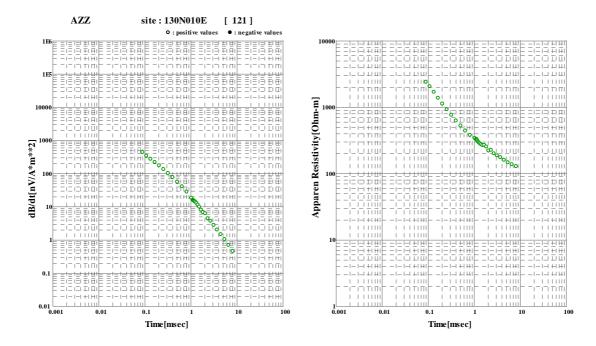


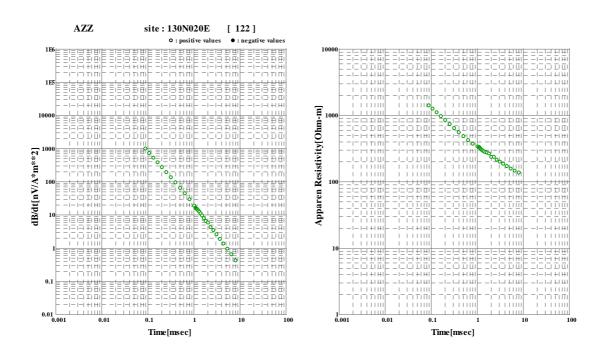


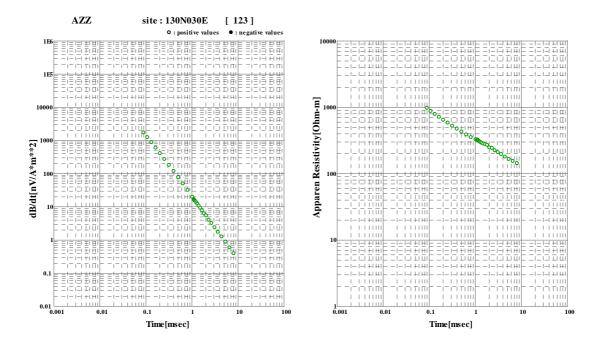


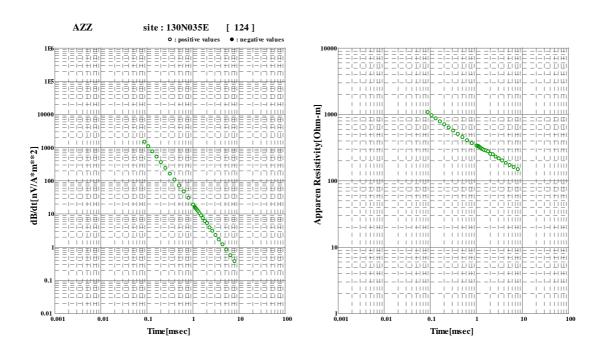


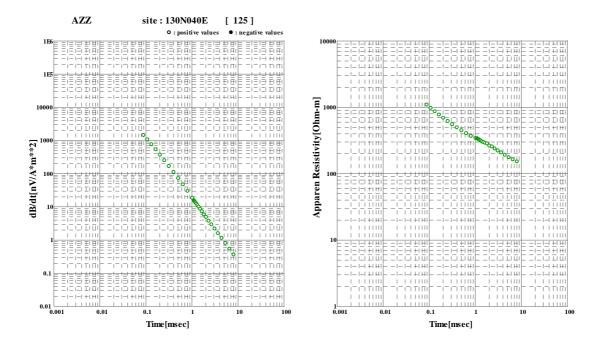


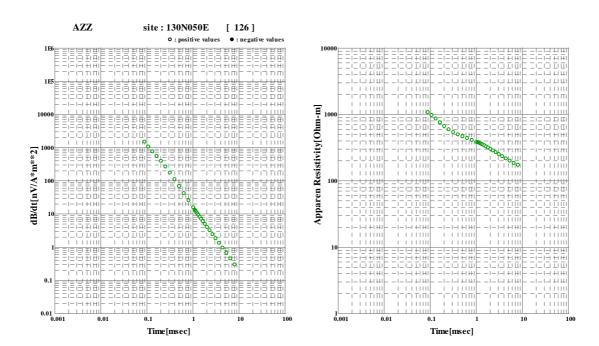


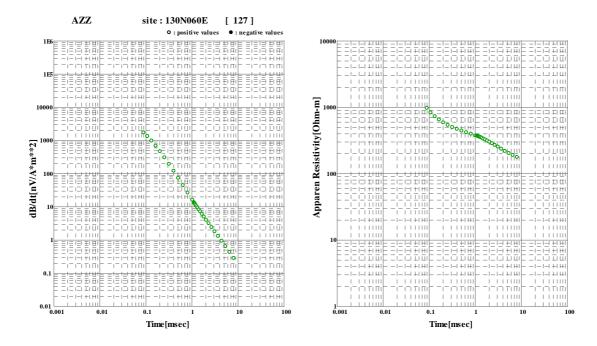


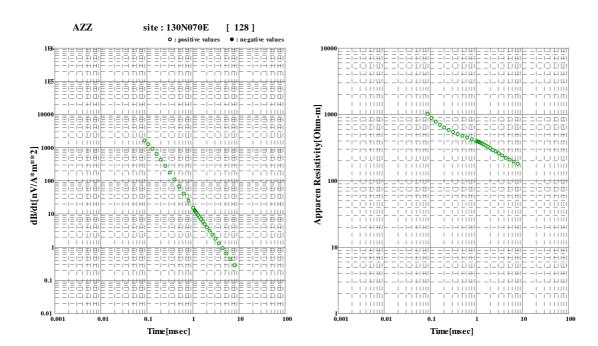


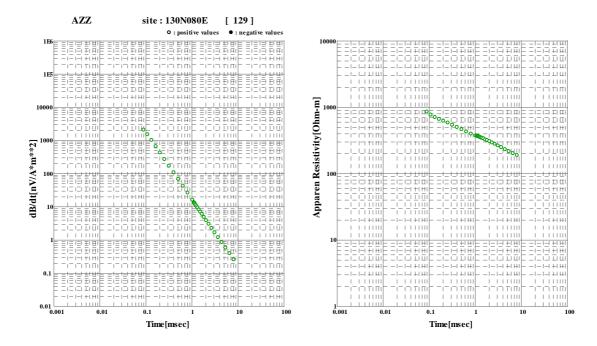


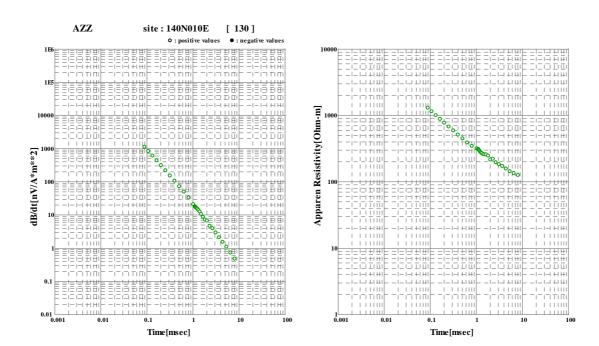


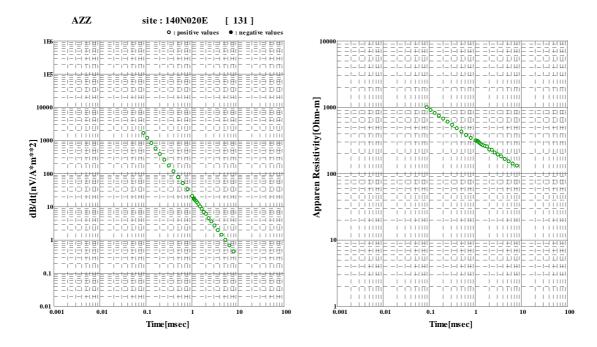


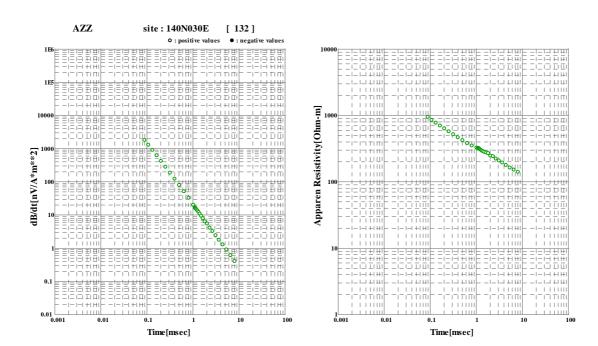


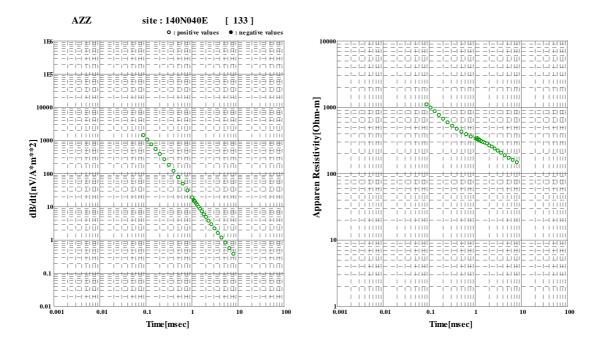


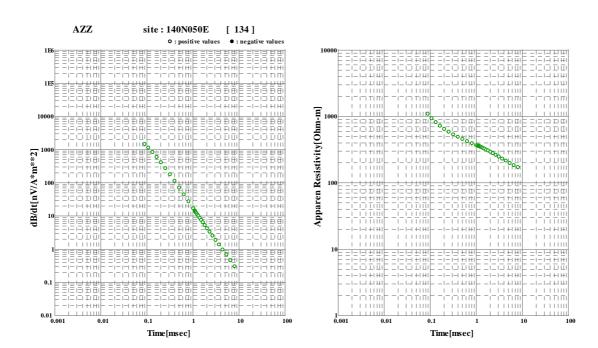


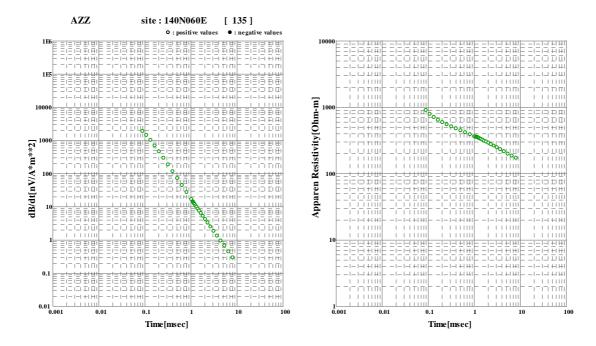


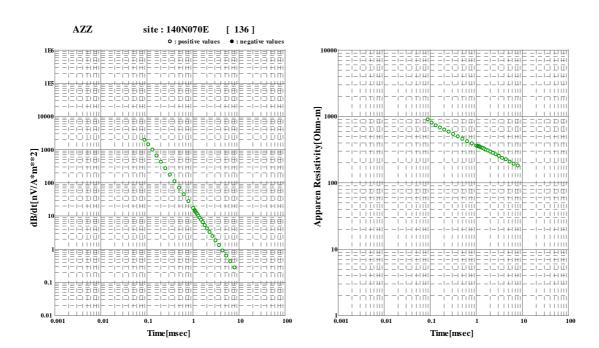


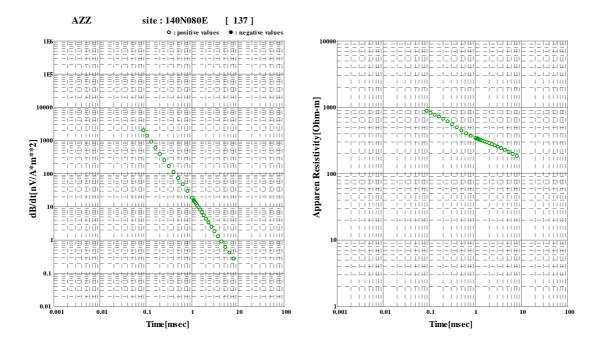


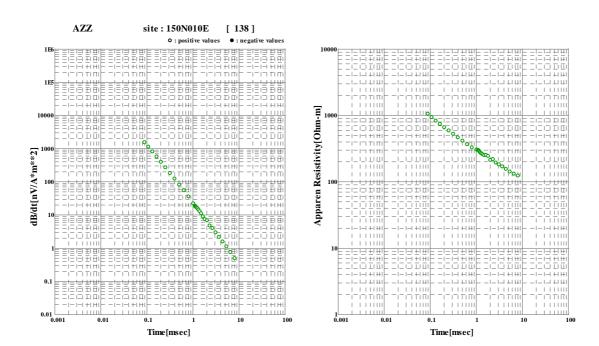


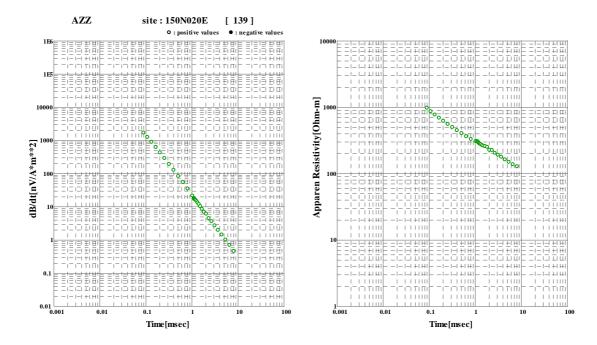


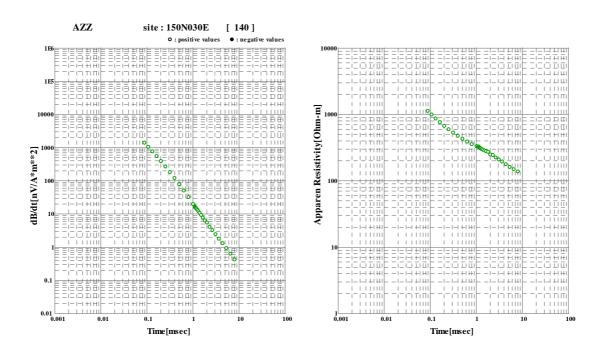


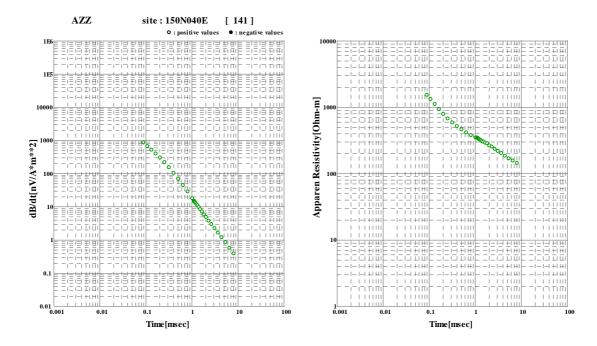


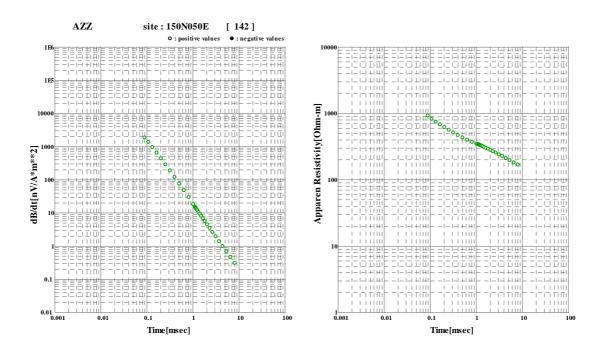


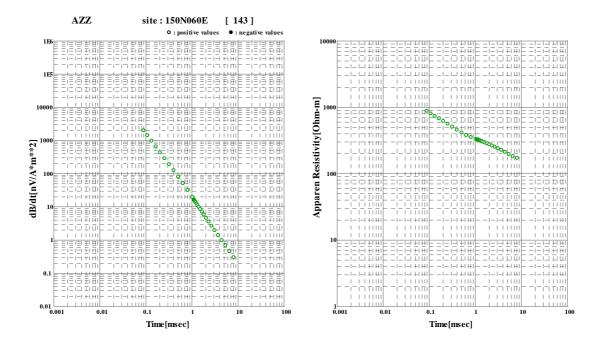


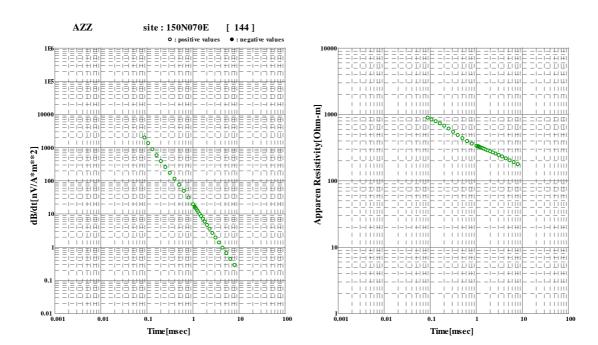


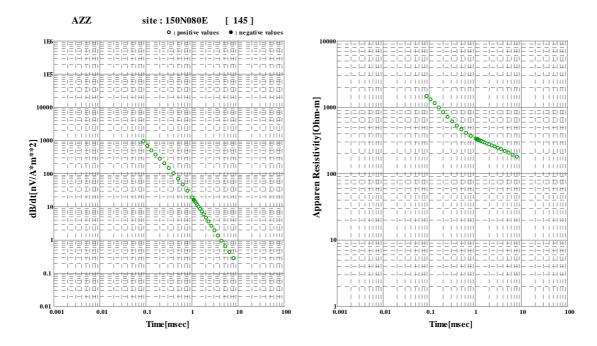


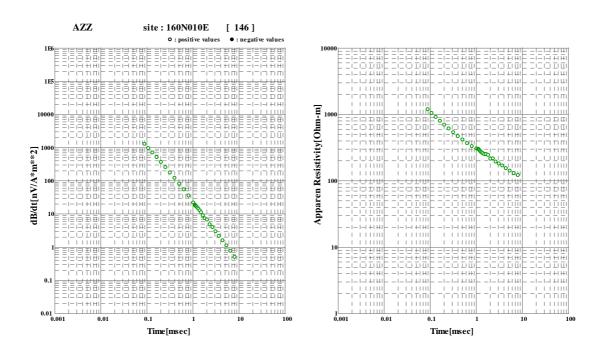


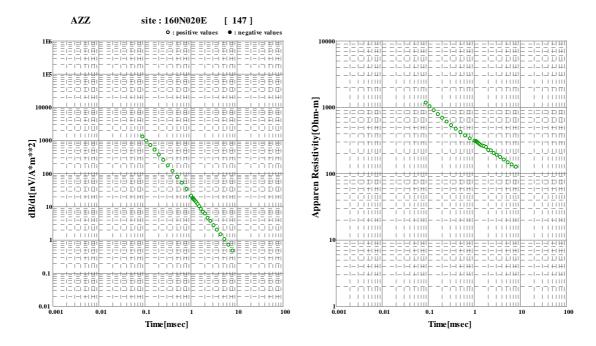


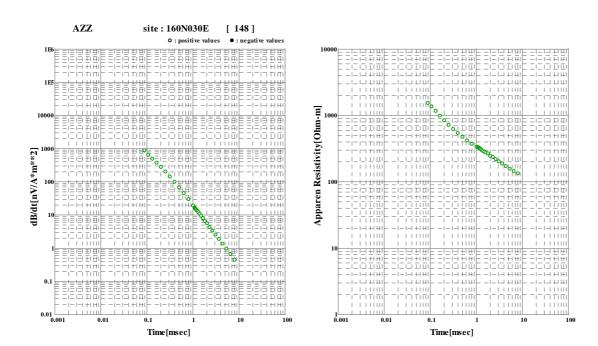


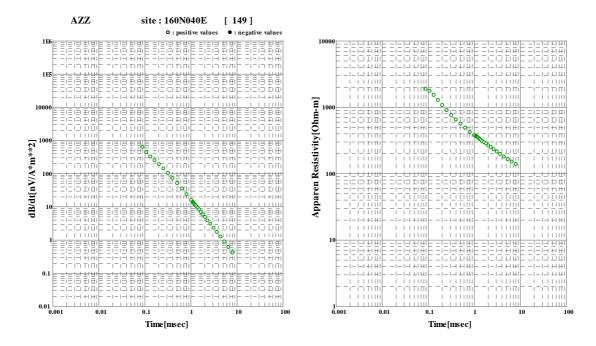


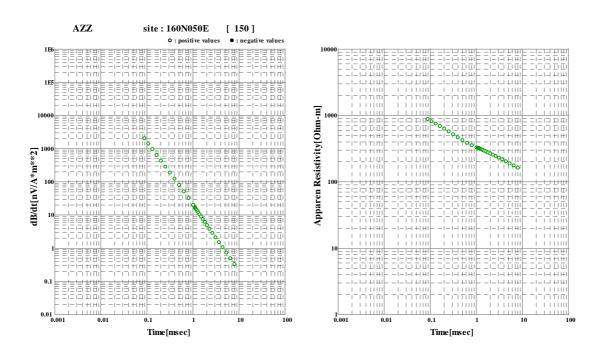


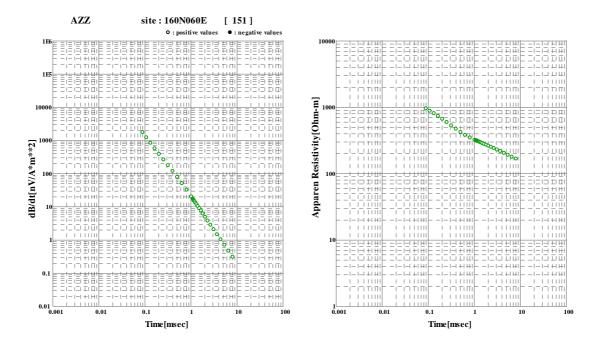


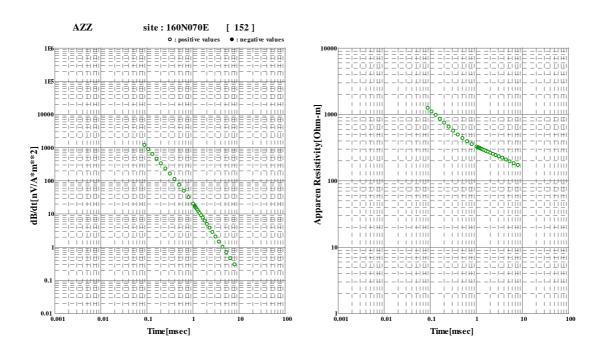


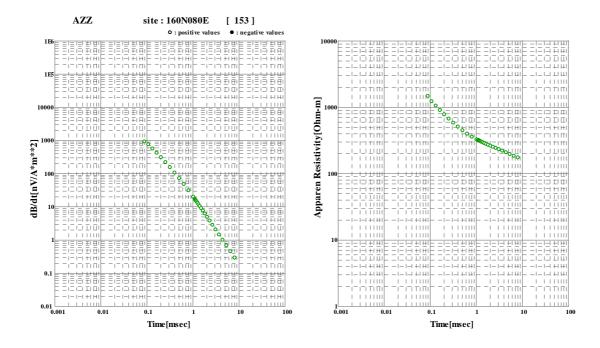






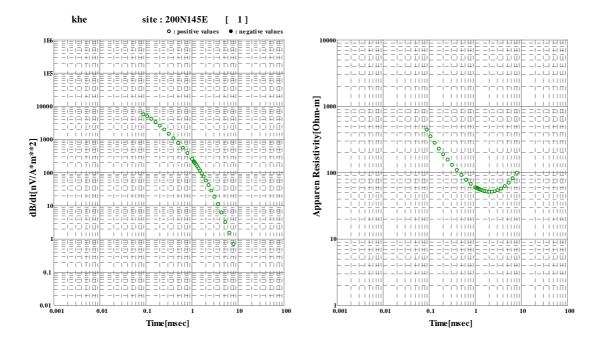


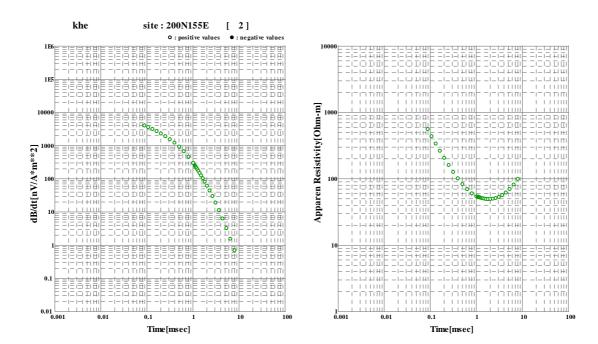


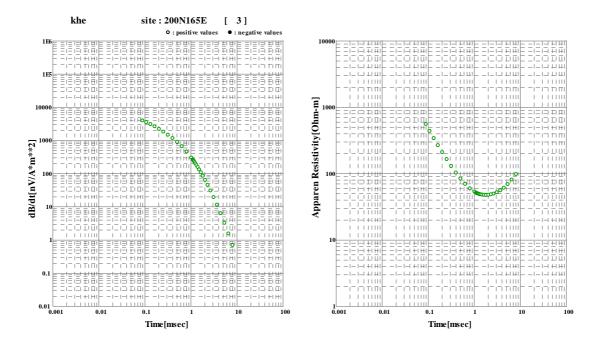


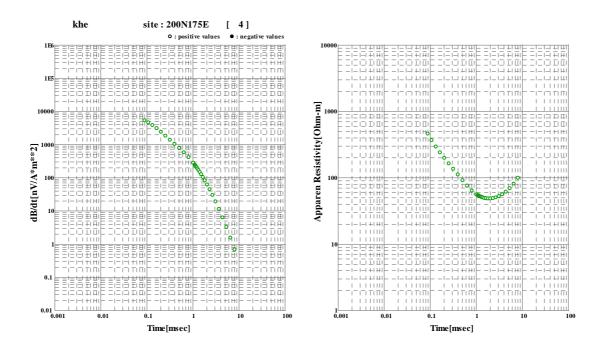
Khefawna Area

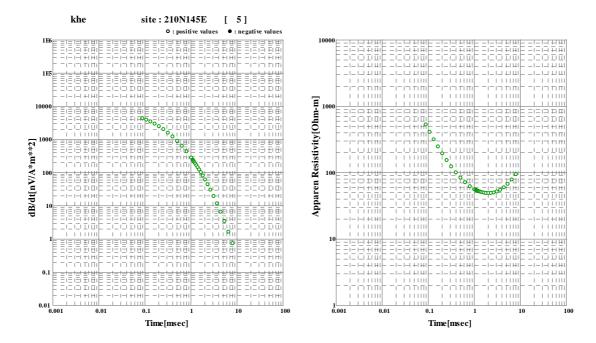
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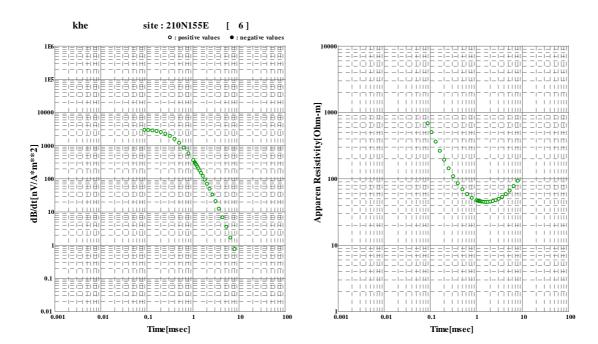


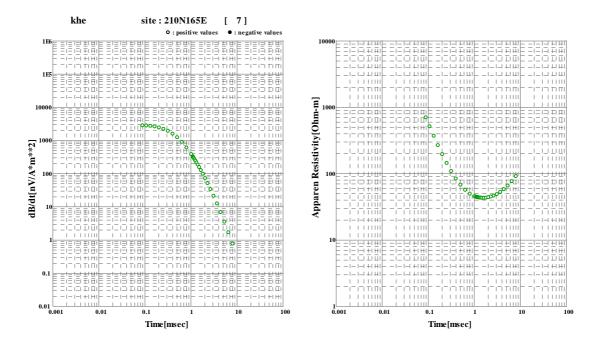


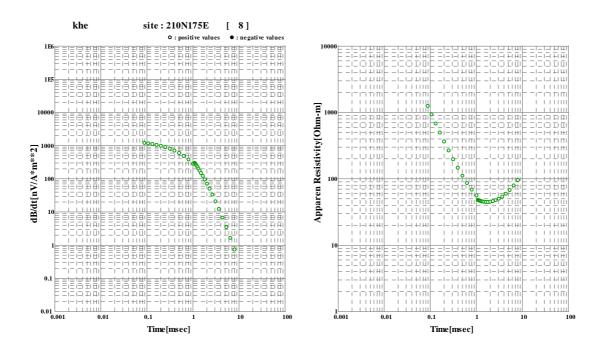


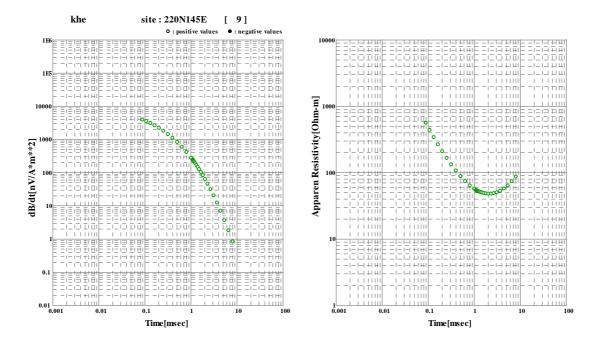


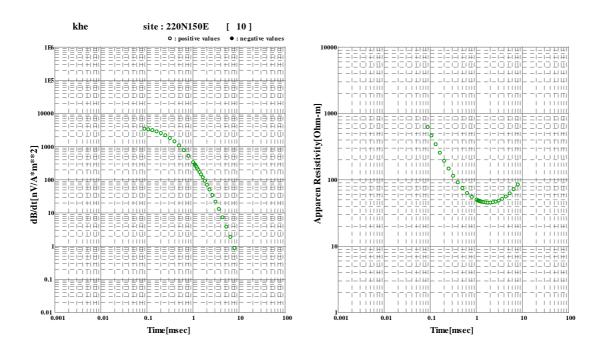


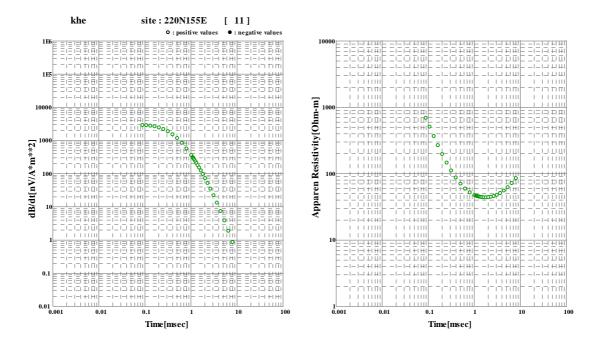


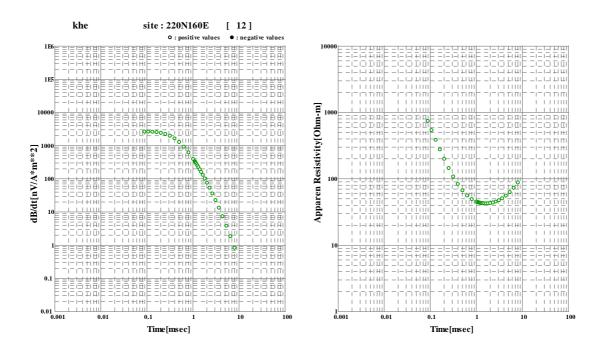


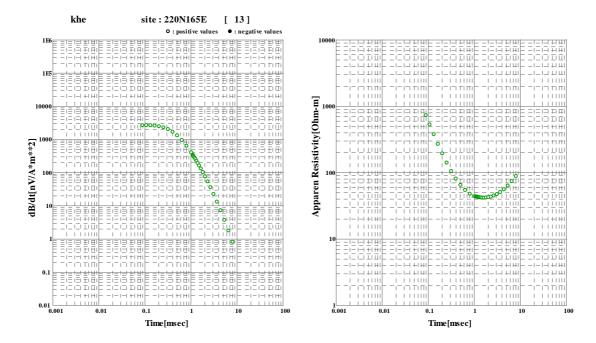


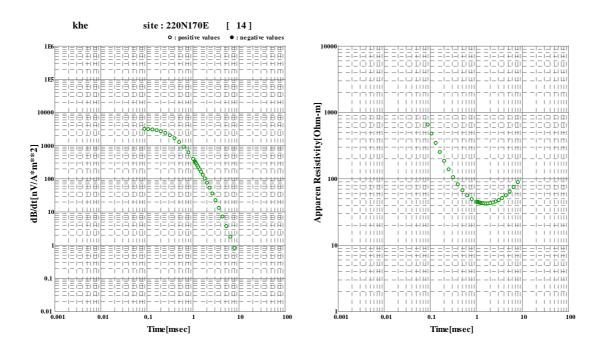


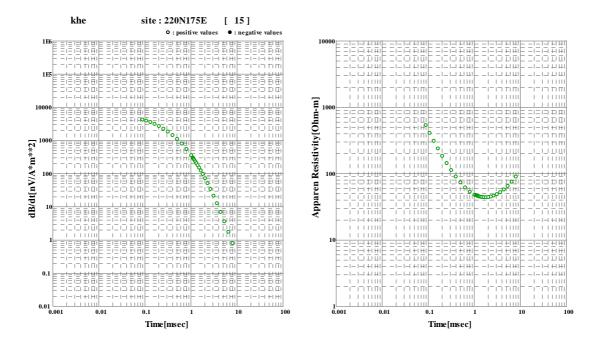


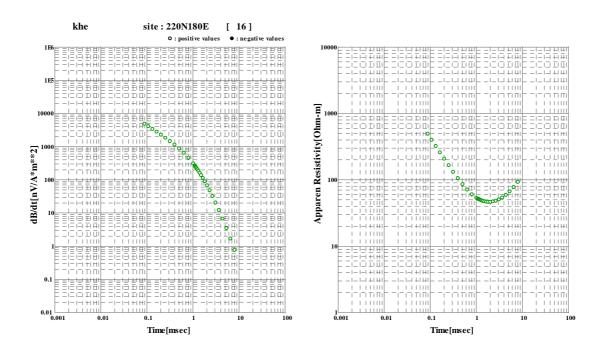


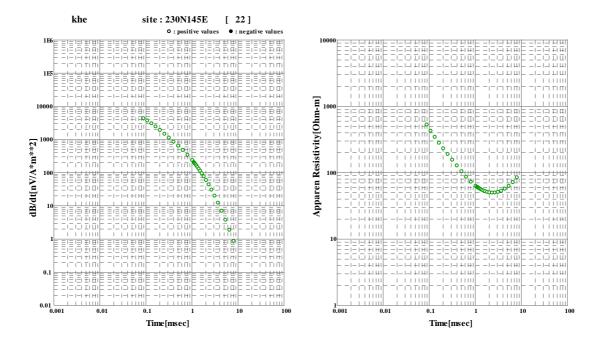


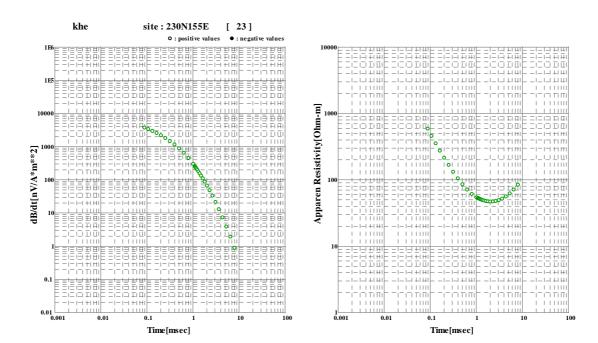


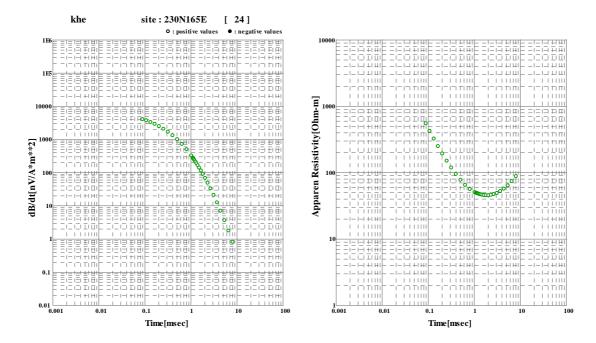


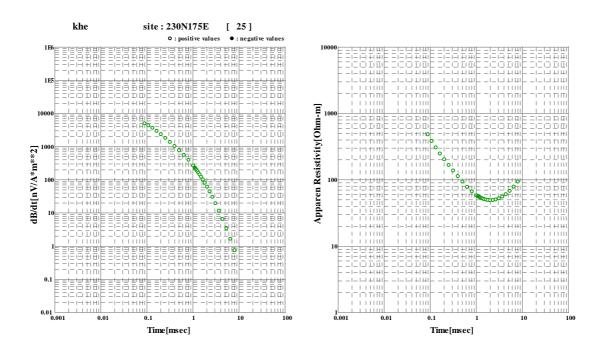












Geological Columnar Figures

		DOOL					SAM	1PLE			C	HEMIC	AL AN		S	<u> </u>
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
-	\sim		(- 3m, Tricon)		Wethered			,	,	()= = /	()- (/				()-7	
	\sim		Calcareous schist		Lim											
_			with pelitic schist layers.													
5-			foliation:40-50',													
-			lamination: 0-50 [°] . Carbonate veinlet.													
			Fractures.													
10-			Calcite -dolomite (?) -quartz veinlets													
			dominant.													
-																
15																
15																
-																
20			31.7 -32.0m, fine tuff thin layer.40 .													
			39.1 -39.55m, quartz (- calcite)													
-			vein.45 ['] .													
25			40.0m, fine tuff thin													
			layer.40 [°] .1.5cm.thick													
			40.4m, calcite (- quartz) vein, with pyrrhotite, sphalerite,													
			chalcopyrite.													
30			30 -50, 4cm width. partly pyrite?													
-			40.5m, calcite vein.55 [°] .width 10cm.													
			41.0 -41.1m, calcite (- pyrite - pyrrhotite -													
35 -			chalcopyrite													
			- sphalerite) vein. 25 [°] . 11cm width.													
-			41.1m-, barren calcite veins. 42.7 -43.1m, calcite (- chlorite)													
40			vein.40 [°] .													
40			43.4 -44.3m, fine sandy tuff.40 .	po,py												
-			44.3m-, pelitic schist- calcareous													
			schist. with quartz (- calcite) network-													
45 -			veinlet.													
			discordant to foliation.													
-			partly fine - sandy lamination.20 -40.													
50			52.9m, calcite - pyrrhotite vein.40'.													
50			width 15cm.													
			calcareous- pelitic schist. black.													
			with graphite.													
55 -			56.2 -56.6m, calcite veins. 45'.													
			width 3 -20mm.													
-			63.0m, calcite (-dolomite ?) vein.													
60			with sphalerite (p). and with parallel calcite veins.													
			along foliation.													
1 3				cp,po			62.7	62.75		0.035	2.4	0.0202	0.0205	8.45	5.1	4.3
			Calcareous schist. foliation 30 -40'.													
65			bedded. laminated with micro-folding (axix?).													
1			(uxix:).													
1 1			70.0, 70.15, 73.35m,													
70			pyrrhotite - calcite (- chalcopyrite) vein 45'.width : 3 - 30mm. along foliation.	1												
			45 .width 13 -30mm, along foliation. in the lower part of the vein,													
]			pyrrhotite - calcite vein.	cp,po												
			width : 12 -110mm.40'.													
75			72.4m-, chalcopyrite - pyrrhotite - calcite veins	00.55			74.0			0.7-	_	0.05-	0.055	0.707		
-			along foliation. 6 -10cm intervals.	cp,po			76.3	76.4		0.73	6	0.0091	0.258	0.582	4.45	3.6
1			width 6 -15mm.													
80-			80.0 -80.6m,	ро			80.5	80.6		0.022	6.8	0.0787	0.318	0.405	>50	8.83
1			pyrrhotite - calcite vein.40 ['] . width :35 -40cm. fault?	r -			2010	5010		0.022	0.0	0.0707	5.510	0.405	/50	0.05
-			with chalcopyrite, sphalerite, (galena)													
05			84m-, micro-folding,													
85 -			and calcite veins 40cm-interval,													
-			along foliation. 40'.width 2 -9m. Partly in R-faults.													
1			95.5 -, pyrrhotite - calcite vein.													
90-			along foliation. 40 .width 40-80m.													
1			sphalerite and chalcopyrite.													
-			with similar network 80cm+ long. 99.1m, pyrrhotite - calcite vein.													
95			40 ['] .width :10mm.													
90			99.6m -, calcite - pyrrhotite vein.40'.	ро												
1 -			width :130mm. with chalcopyrite.													
100			brecciated at the boundary.	00			99.5 99.6	99.6 99.7		0.038	6.1	0.646	0.047	8.07	19.8	7.26
100				ро	1		77.0	77./	I	0.146	6	0.247	0.0586	2.15	>50	7.75

DEDTU		DOOK					SAN	IPI F			С	HEMIC	CAL AN		J I N IS	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
-			Calcareous- pelitic schist	po po pv cp	ch		(,	(,	(0111)	(pp)	(6611)	(10)	(/0)	(10)	(///	(10)
			100.4m,	po,py,cp												
105			pyrrhotite - calcite vein.40 .20mm.													
105			100.7m, (pyrrhotite -) calcite vein.													
-			30 -40'.13 -40mm. with pyrrhotite - chlorite - calcite veins.													
-			50 [°] . 160mm.													
110			101.2m -,													
-			pyrrhotite - chlorite - calcite vein.50 [°] . 160mm.													
-			101.6m -,	ро	ch											
115			chalcopyrite - pyrite - pyrrhotite													
			vein.30 ['] . with calcite - chlorite mass.													
-																
120			113.65 -114.10m,													
120			chlorite - calcite - quartz vein.30 ['] . width : 35cm.													
-			with pyrrhotite													
-			and fragments of schist and tuff.													
125 -			Calcareous- pelitic schist,													
1 -			altered (chlorite, sili) . foliation40 -45'.													
1			partly black (with graphite).													
130																
1			140.5m, pyrrhotite vein.25'.													
1			width 7mm.													
135			140.9m, calcite - pyrrhotite vein. 40 [°] .width 30mm.													
130			40.widii 30mm. 142.1 -142.3m,													
-			pyrrhotite - clay mineral - calcite vein.													
-			along foliation .40 [°] .width 110mm. 143.5 -143.9m,													
140-				ро												
-			30mm.													
-			144.6 -144.7m,													
145			pyrrhotite - calcite network. 145.0 - 150.6m,	ро												
-			pyrrhotite - calcite veins (- networks),													
-			15cm interval .45 [°] .	po,py,cp,sp po,cp	ch		148.2	148.3		0.114	7.4	0.0483	0.0769	6.96	20.3	>10.0
150			generally along foliation and with chlorite.	po,sp	011		140.2	140.0		0.114	7.4	0.0465	0.0709	0.90	20.5	>10.0
150			Ex.)													
-			147.8 -148.0m,													
-			chalcopyrite - sphalerite - pyrite - pyrrho - chlorite - calcite vein.													
155			45 [°] .width 80 -100mm.													
-			sulfide dominant along edge.													
1			148.2 -148.5m, pyrrhotite - chlorite -													
160			quartz - calcite vein. with chalcopyrite. 45 width 210mm.													
			148.8 -149.0m,													
1 -			sphalerite - pyrrhotite - calcite vein. with chalcopyrite. 45'.													
165			149.3 -149.6m,													
			pyrrhotite - calcite vein.40'. with sphaler													
1 :			154.7 -154.8m,													
470			pyrrhotite - calcite vein.45 .width 130m.													
170																
-																
1 3			171.9m,													
175 -			quartz - calcite vein.25 .width 30mm.													
1 3			with pyrrhotite(p). pyrite dissemination 176.7m,		ch											
1 .			metasomatic calcite, with chlorite, pyrite													
180-			177.6m,													
1			pyrrhotite - (quartz -) calcite vein.20'. width 9 -20mm. sphalerite.													
1				ру	ch											
185			182.6m, pyrite - chlorite veinlet.65'.													
100			width <1mm.													
			184.8m, calcite veinlets along foliation. with pyrrhotite. 30 width <10mm													
1 3			187.0m, pyrite - calcite vein.40'.	po,cp												
190 -			width <3mm. (pyrite is later than calcite													
1 :			188.3m, chalcopyrite - pyrrhotite - calcite vein.3													
-			3mm.													
195			195.5 - 195.7m,		ah											
135			F) F) F)	po,py	ch											
1 :			width <3mm. 196.75m, calcite - pyrrhotite vein,15 ['] .													
200			width 16mm.													
							1		1							

DEDTU		DOCK					SAM	PLE			С	HEMIC	CAL AN		JIN	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (nnm)	Ag (ppm)	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
205		Pelitic Schist	Pelitic- calcareous schist. lamination 10-30 . foliation 20-40 . with graphite. 206.3m,					(111)	(Chi)	(ppm)			(70)	(70)	(70)	(70)
210			pyrrhotite - calcite veinlet. 75 . 2mm.													
215			217.1m, pyrite - chlorite veinlet. 45'. width <1mm. 218.5m, pyrite - calcite network. 30'	ру	ch											
220			in fault (width 40mm). 222.5m,bedded (sandy-pelitic), 20. sorted 229.7m-231.9m, pale greenish gray fine tuff.													
225			silicified. chlorite. 230.1m, sphalerite - chalcopyrite - pyrrhotite (-quartz) -calcite vein.													
230			galena? 40'.10-40mm. 231.4m, pyrrhotite - chlorite - calcite veinlet. 50'. 3mm. with barren calcite veins.	po,cp,sp po	sili,ch											
235 240			235.0m, pyrite - calcite veinlet.20 ['] .1mm.	ру												
240																
250																
255																
260			258m, sorted. 259.7-259.9m, barren calcite vein. 5 [°] . Partly sandy schist. foliation20-30 [°] . bedded 20-40 [°] .													
265																
270			272.1m, chalcopyrite - pyrite - calcite vein.													
275			35-40°. 11mm.													
280			277.3-281.3m, fault. with shered zone.													
285			Pelitic- (sandy-) calcareous schist. with graphite. foliation 30-45'. bedded 30-50'. 277.3-281.3m, pyrite≿ chalcopyrite													
290			in fault, shered .													
295 300			293.7m, calcite network. with pyrite.													

DEDTU		DOCK					SAM	IPLE			С	HEMIC	CAL AN		S	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO	WIDTH	Au	Ag	Cu	Pb	Zn	Fe	S
		Pelitic Schist					(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%)
			Pelitic- calcareous schist. foliation40 ['] .bedded 10-30 ['] .													
0.05			Partly calcite network.													
305			307.0-307.3m, chlorite (-dolomite?) - calcite - quartz vein.35 ['] .20cm.													
1 1			307.3-307.4m, fine tuff thin layer.30 .	ру	ch											
040			chlorite. pyrite diss.													
310																
045																
315			317.5-319.9m, pyrrhotite - calcite veins													
				ро												
220			Pelitic- calcareous schist.				319.2	319.4		0.033	18.7	0.121	1.51	2.58	38.3	9.32
320			foliation15-50 ['] .													
1 1			bedded 15-40' in general.													
225			326.85m, pyrrhotite vein.35													
325			width :7-16mm.	ро												
1 1			with calcite and pyrite along foliation. 327.05m,	po po,py,cp												
220			pyrrhotite - pyrite diss. calcite.													
330			327.18m, pyrrhotite - calcite veinlet. chalcopyrite.15 ['] .width 6mm.													
1 1			327.60m,	na (77												
225			pyrrhotite - calcite veinlet.25 .4mm. 328.00m,	po,cp												
335			pyrrhotite - calcite veinlet.20 .4mm.													
			332.5-332.75m, chalcopyrite - pyrrhotite - calcite													
240			network. width <8mm.													
340			333.5m,	po,cp,sp?			340.3	340.4		NSS	8.8	0.0792	0.145	0.226	>50	7.12
				po,cp,sp po,cp,sp			540.5	540.4		INDD	0.0	0.0792	0.145	0.220	>30	7.12
245			337.65m, (marcasite? -) pyrite-													
345			pyrrhotite - calcite vein.65 ['] . 30mm.													
			339.8m,													
250			chalcopyrite - pyrrhotite vein.30 [°] .40mm.													
350			340.2m-340.4m,													
			chalcopyrite - pyrrhotite network. partly metasomatic.													
055		/	0.41.1	ру,ср												
355			(sphalerite? -) chalcopyrite - calcite - pyrrhotite vein.45 .30mm.													
			and calcite network,													
360			with chalcopyrite - pyrrhotite. 342.0m,													
360			chalcopyrite - sphalerite - calcite -													
			pyrrhotite vein. 40 .20-30mm.													
265																
365			354.6m,													
1 1			chalcopyrite - pyrite - calcite vein.5, 20mm.													
270																
370			Pelitic (partly sandy) schist. foliation20-30 [°] .bedded 20 [°] .													
1 1			graphite dominant.													
375																
575																
1 1			377.1-377.2m, chlorite - calcite vein. with pyrrhotite. 35 ['] . 30mm.		ch											
380			377.6m, chlorite - calcite vein.		ch											
360			with pyrrhotite. 20 ['] . 10mm. 378.6-379.3m, pale greenish gray fine th													
1 1			compact. 20'?													
385			metasomatic chlorite and calcite.													
305			382.3m-, graphite decreases.	ро												
1 1			382.4-386.0m, pyrrhotite - calcite vein.2	r~												
200			width <16mm. 15cm interval.													
390			Sandy - pende senise ronation (p)	ро												
1 1			30-45'.bedded 20'.graphite.													
205			386.85m, pyrrhotite - calcite vein.10 .40													
395																
1 1			390.10m, pyrrhotite – calcite disseminati 390.20m, lamination? 10 [°] .													
400			with calcite – pyrrhotite dissemination .													
					•					•						

DEDTU		DOOK					SAM	1PLE			С	HEMIC	CAL AN		IS	Ŭ
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO	WIDTH		Ag	Cu	Pb	Zn	Fe	S
-		Pelitic Schist	Pelitic schist. graphite.				(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%)
-			foliation 10-30 [°] . lamination 20 [°] in general.													
I			fammation 20 m general.	sp												
405			404.3m,404.5m,	зþ												
-			(galena? -) sphalerite veinlet.25'. 2mm.													
410																
-																
415																
-																
420																
420																
-																
425																
423																
1 3																
430																
-50																
1																
435																
-																
440																
			449.5 ~ 459.4m, shered zone. fault ?													
-			Shered Lone, har i													
445																
-																
-			459.4 ~ 460.0m,													
450			brecciated. dolomite ? (in matrix), pyrite, calcite, quartz.													
-			(in mann), pyric, caloric, quality													
-																
455			464.6m ~ ,													
-			calcareous ~ silty schist. foliation? lamination ~ bedding 35 ['] .													
-			talification bedding 55 .													
460																
-			468.6 ~ 469.8m,													
-			fine sandy schist. with calcite veins. with quartz and pyrrhotite.													
465																
1 -			471.0m, chalcopyrite-sphalerite-pyrrhotite-													
1 :			calcite	po,sp,cp												
470			vein. 20 ['] . 23mm. with parallel pyrrhotite - calcite													
1 -			veinlets.													
1			472.4m, (dolomite ? -)pyrrhotite-calcite	po,sp,cp,gn			473.4	473.6		0.101	10.3	0.153	1.07	3.22	31.8	>10.0
475			vein. 20 ['] . 70mm.													
1 -			473.2m ~ 473.8m, galena - sphalerite - chalcopyrite -													
400			pyrrhotite -quartz vein.													
480			cavities. 25'. 500mm. with parallel chalcopyrite - pyrrhotite													
1 :			-													
405			quartz veinlets. 475.6m, pyrrhotite - quartz vein. 30 ['] .													
485			20mm.													
1 :			476.4m, pyrrhotite - calcite vein. 30 [°] . 25mm.													
400																
490			Pelitic ~ silty ~ sandy schist . foliation $10 \sim 20^{\circ}$. lamination													
1 :			~ bedding folded, (generally 40').													
405			487.6m, pyrite - calcite network.													
495																
1 :			497.45 ~ 498.5m,													
500			sandy tuff. with calcite veinlet.													
500																

DEFTH (m) COLUMN ROCK NAME DESCRIPTION MINER ALTER	Fe S (%) (%)
Pelitic Schis Pelitic shares 505 Image: Schister Schild Schister, Schiste	
505 505 510 515 515 519 520 \$19.4 - 519.6m, and yes this is thin layer. 30. 525 \$19.4 - 519.6m, and yes this . 526 \$23.2m, shiy - fine sandy schist . 530 -532.2m, pelitic schist . 530 -532.2m, pelitic schist . 533 -532.2m, pelitic schist . 536 \$33.1m - rpelitic schist . 537 -532.2m, pelitic schist . 538 -532.2m, pelitic schist . 540 -532.2m, pelitic schist . 541 -51.1mination 35 . 545 -51.5mination 40 - \$1.1mination 40 - \$1.1min	
510 515 520 519.4 - 519.6m. 517 520 518 520 519.4 - 519.6m. 519.4 - 519.6m. 519.4 - 519.6m. 510 522 (33.2m. silty - fine sandy schist . 530 -532.2m. pelitic schist . 533.1m - , pelitic schist . 535 536.1m - , pelitic schist . 537 538.4m. fine sandy schist . 539.4m. fine sandy schist . 531.1m - , pelitic schist . 535 535.4m. fine sandy schist . 540 Pittic - strip webeit: relation 30 - 50.1 miniation 45. with catchie velables. graphite. 545 545 545.45m, small fault. 556 560	
515 519.4 - 519.6m, sity tuffaceous schist thin layer. 30. 520 519.4 - 519.6m, sity tuffaceous schist thin layer. 30. 525 6/32.2m, sity - fine sandy schist. 530 -532.2m, peltic schist. 533 -532.2m, peltic schist. 534 -532.2m, peltic schist. 535 533.1 m - peltic schist. 536 533.1 m - peltic schist. 537 -532.2m, peltic schist. 538 -532.2m, peltic schist. 540 -532.2m, peltic schist. 541 Siminianion45. 542 -545. 543 -545. 544 -545. 555 -545. 560	
520 519.4 - 519.6m, 519.4 - 519.6m, sity uffaceous schist thin layer. 30. 525 (523.2m, sity - fine sandy schist. 530 - 532.2m, pelitie schist. 530 - 532.2m, pelitie schist. 533 - 532.2m, pelitie schist. 534 - 532.2m, pelitie schist. 535 - 533.1m - , pelitie schist. 536 - 533.1m - , pelitie schist. 537 - 534.9m - , fine sandy schist. 10 intion 40 - 50.1mination45. graphite. 540 Pelitic - sity schist. 545 - 545.45m, small fault. 556 - 545.45m, small fault.	
520 519.4 - 519.6m, sity uffaceous schist hin layer. 30. 525 (523.2m, silty - fine sandy schist. 530 - 532.2m, pelitie schist. 533 - 532.2m, pelitie schist. 534 533.1m - , pelitie schist. 535 533.1m - , pelitie schist. 536 - 532.2m, pelitie schist. 537 533.1m - , pelitie schist. 538 - 532.2m, pelitie schist. 539 - 532.2m, pelitie schist. 540 - Folitic - silty schist. 541 - 50.1mination85. graphite. - silty schist. 545 - 545.45m, small fault. 556 - 560	
 sity uffaceous schist thin layer. 30. 525 (523.2m, silty ~ fine sandy schist . foliarion40. tamination35.) 530 - 532.2m, pelitie schist. 533.1m ~, pelitie schist. 534.0m ~, fine sandy schist. Ianimation30. foliation 40 - 50. lamination45. graphite. 540 Pelitic ~ sitty schist. foliation50-45. lamination45. graphite. 545.54.5m, small fault. 555. 560 	
 sity uffaceous schist thin layer. 30. 525 (523.2m, silty ~ fine sandy schist . foliarion40. tamination35.) 530 - 532.2m, pelitie schist. 533 1 - , pelitie schist. 534.0 m, fine sandy schist. 1 animation30. foliation 40 - 50. lumination45. graphite. 540 Pelitie ~ sitty schist. foliation50-45. lumination45. graphite. 545. 545.45m, small fault. 555. 560 	
520 foliation40'. lamination35'.) 530 -532.2m, pelitic schist. 535 \$33.1m ~, pelitic schist. 536 \$33.1m ~, pelitic schist. 537 \$33.1m ~, pelitic schist. 538 \$33.1m ~, pelitic schist. 549 Pelitic schist. 540 Pelitic ~ silty schist. foliation30-45'. lamination45'. graphite. 541 S45.45m, small fault. 555 \$45.45m, small fault. 550 \$60	
520 foliation40'. lamination35'.) 530 -532.2m, pelitic schist. 535 \$33.1m ~, pelitic schist. 536 \$33.1m ~, pelitic schist. 537 \$33.1m ~, pelitic schist. 538 \$33.1m ~, pelitic schist. 549 Pelitic schist. 540 Pelitic ~ silty schist. foliation30-45'. lamination45'. graphite. 541 S45.45m, small fault. 555 \$45.45m, small fault. 550 \$60	
535 - 532.2m, pelitic schist. 536 533.1m ~, pelitic schist. 537 534.9m ~, fine sandy schist. 1amination 30. foliation 40 - 50'. lamination 45'. graphite. 540 Pelitic - silty schist. 7540 Pelitic - silty schist. 7540 Pelitic - silty schist. 7545 545. 7545 545.45m, small fault. 7550 545.45m, small fault.	
535 533.1m ~, pelitic schist. with graphite. 534.9m ~, fine sandy schist. lamination30. foliation 40 ~ 50'. lamination45'. graphite. 540 Pelitic ~ silty schist. foliation30.45'. lamination45'. graphite. 545 545 545 545 550 555 560	
535 534.9m ~, fine sandy schist. Iamination30. foliation30. foliation 40 ~ 50. lamination45'. graphite 540 Pelitic ~ silty schist. foliation30.45'. lamination45'. with calcite veinlets. graphite. 545 545 545.45m, small fault. 550 560	
foliation 40 ~ 50'. lamination45'. graphite. 540 Pelitic ~ silty schist. foliation30-45'. lamination45'. with calcite veinlets. graphite. 545 560	
545 545 550 555 560	
545 with calcite veinlets. graphite. 545	
545.45m, small fault. 550 555 560	
555	
560	
560	
570 fructure zone (arround 570.10m).	
576.4 - , Silty schist. Foliation 20', Lamina 55'.	
575 581.3 ~ 581.5m, galena - chalcopyrite - sphalerite -	
pyrrhotite - calcite vein. 35', 150mm. 581.7m, chalcopyrite - galena -	
580 pyrrhotite. 35, 10mm. 582.0m ~ 582.15m, psamitic (tuffaceous?) po.sp.cp.gn	
schist thin layer. 35'. 582.1m - , silty schist. foliztion 40',	
584.7m, fault. 60 ['] , 10cm.	
593.9m, pyrite dissemination. with calcite.	
595	

DEDTU		DOOK					SAM	IPLE			С	HEMIC	CAL AN		JIN	<u> </u>
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist	bedded 40 dip.				(11)	(111)	(Cill)	(ppin)	(ppin)	(70)	(70)	(70)	(70)	(70)
605			Around 607m-, silty-fine sandy schist alternation. foliation30 dip ,													
000			beddwd 40 [°] dip Silty-fine sandy schist. alternation.													
610			foliation40 dip. bedding 45 dip.													
			around 609m-,													
615			silty-pelitic schist alternation. foliation40'dip , bedding 50-40'dip													
620			619.9m, calcite vein. 10 [°] dip. 100mm 621.2m-, pelitic schist. with graphite. friable.													
-			Pelitic-silty. Foliation(p) bedding 45													
625			dip. with calcite veinlet.													
			621.5-628.3m, friable with graphite.													
630																
635																
035																
640																
-																
645			Pelitic-silty. foliation30 dip. lamination45 dip.													
			650.20-650.65m, sheared zone. calcite network. In friable zone.													
650			in made zone.													
			pelitic-silty. foliation40-50 dip. lamination45 dip. calcareous													
655			664.0-664.1m, 665.0-665.8m, tuff ? calcareous.													
660			Pelitic schist. foliation30-40 [°] dip. lamination45 [°] dip. With graphite.													
665			674.80m-,													
			sandy schist. 70 [°] dip? folded. 676.70m-, sheared.													
670																
			Pelitic schist. foliation45 dip ? (p).													
675			lamination50-80 [°] dip (p). with calcareous. calcite veinlet. Pelitic-silty schist. foliation25 [°] dip.													
			Lamination 20'.													
680																
			694.3-695.1m, calcite vein. 10 dip.													
685			With specularite.													
690			drilled to 701.00m													
090			difficu to 701.00III													
695																
700																

DEDTU		DOOK					SAN	1PI F			C	HEMIC	CAL AN		IS	-
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO	WIDTH	Au	Ag	Cu	Pb	Zn	Fe	S
· · ·			- 2.10m, Tricon.				(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%)
	\frown		(Calcareous schist.)		Wethered Lim											
			2.10m, calcareous schist5.45m, wethered.													
5			5.45m -, foliation 45 ['] .													
-			Limonite along foliation.													
			Calcareous schist.													
10			lamination 30-50 [°] .foliation40-45 [°] . -20.3m, oxidized.													
-			calcite veinlet along foliation													
15																
-																
-																
20																
25																
-																
-																
30																
1			31.5m-, pyrite spotted.													
			32.3m, calcite vein.45 ['] .10mm.													
35			26 Ann munita palaita naturante													
-			36.4m, pyrite - calcite network. chalcopyrite.													
40			foliation: 15-45 [°] .bedded unstablely.													
-			calcite veinlets - networks.													
			pyrite(<2mm)spotted.													
45																
-																
50																
-																
55																
-																
60																
-																
65																
1			lamination20-45'.													
1 :																
70																
1 -																
1 :																
75																
1																
1 :																
80			85.9-86.55m, calcite vein.55 [°] . width 30cm+.													
1			pyrite and pyrrhotite at edges.													
1 :			87.1m, pyrite - calcite vein.55 ['] . width 4-20mm.													
85			calcite network													
1 3			Colorrous, politic solici folicito do	ру												
1 :			Calcareous- pelitic schist.foliation40- 50 [°] .	C 7												
90			bedded 15-45'.													
1			98.5-99.1m, calcite vein.30 [°] . width													
1 :			40cm+.													
95			with pyrrhotite and sphalerite (?). 99.7-100.3m, chlorite - calcite vein.30-													
1 :			45'.													
100			with sphalerite, chalcopyrite, pyrite. calcite veinlet.	po,sp?												
100			calene vennet.	py,cp,sp	<u> </u>				1	I		1		I		

(m) COLUMN NAME DESCRIPTION MINER ALTER No. FROM TO WIDTH AU Ag Cu P		SIS
105 105,55,105,555, fail: argilizated. of shared. 108,3-108,9, calice vein.40, veito pyrite. 108,3-108,9, calice vein.40, veito pyrite. 115 105,55,105,555, fail: argilizated. of shared. 108,3-108,9, calice vein.40, veito pyrite. 108,3-108,9, calice vein.40, veito pyrite. 125 124,7:126,681, 1cm fcm interval, diver followin. 125 124,7:126,681, 1cm fcm interval, diver followin. 125, 1cm calice vein.35 - 40. 124,7:126,681, 1cm fcm interval, diver followin. 125, 1cm calice vein.35 - 40. 130 124,7:126,681, 1cm fcm interval, diver calice vein.35 - 40. 124,7:126,681, 1cm fcm interval, diver calice vein.35 - 40. 124,7:126,681, 1cm fcm interval, diver calice vein.35 - 40. 130 124,7:126,681, 1cm fcm interval, diver calice vein.35 - 40. 124,7:126,681, 1cm fcm interval, diver calice vein.35 - 40. 124,7:126,681, 1cm fcm interval, diver calice vein.35 - 40. 131 131,05m, calice vein. with pyrthotie calice vein. 125,0:0:00m. 12,0,000m. 12,0,000 140 12,15m, calice vein. with pyrthotie calice vein. 125,0:0:00m. 12,0,000 12,0,000 155 calice vein. 125,0:0:00m. 12,0,000 12,0,000 12,0,000 160 12,15m, and interval, divertie, biologie 25,400. 12,15m, and interval, divertie, biologie 25,400. 12,1	NAME DESCRIPTION MINER. ALTER. NO. FROM TO WIDTH AU AG CU PO ZN	Fe S
110 105.65-105.75m, fault. argilizated. 65 detect. 105.105.275m, fault. argilizated. 65 detect. 108.2-108.9, calitie vail. 40. 115 6 duation 30 40. 111.5 120 124.7-126.0m, fam-fem interval, along Foliation 30 40. 124.7-126.0m, fam-fem interval, along Foliation 37.40. 120 124.7-126.0m, fam-fem interval, along Foliation 37.40. 124.7-126.0m, fam-fem interval, along Foliation 37.40. 120 125 124.7-126.0m, fam-fem interval, along Foliation 37.40. 124.7-126.0m, fam-fem interval, along Foliation 37.40. 130 124.7-126.0m, fam-fem interval, along Foliation 37.40. 124.7-126.0m, fam-fem interval, along Foliation 37.40. 130 124.7-126.0m, fam-fem interval, along Foliation 37.40. 124.7-126.0m, fam-fem interval, along Foliation 37.40. 130 124.7-126.0m, fam-fem interval, along Foliation 37.40. 127.5-126.0m, fam-fem interval, along Foliation 17.40. 141 143.75-144.40m, chlorite - calcite vein, vith pyrrhotite and sphalaritie, chlority calcite vein, vith pyrhotite, sphalarite, chlorite relative vein 40.50m, calcite vein, vith pyrhotite, sphalarite, chlorite relative vein 40.50m, calcite vein, schlarte vein 40.50m, calcite vein, vith pyrhotite, sphalarite, chlorite relative vein 40.50m, calcite v	Calcareous- pelitic schist.	
125 124.7-126.0m, 1cm-6cm interval, alog foliation. pyrhotic - calcite vein. 35 - 40. 130 Calcareous - sandy - pelitic schist. foliation 35-40. bedded 15-40. with calcite veinlets. 130 135 141 143.75-144.40m, chlorite - calcite vein. 40. S0-m. 142 143.75-144.40m, chlorite - calcite vein. 40. S0-m. 142 150.05m, calcite vein. with pyrthotite and splateric: a, obj-0.40mm. 150 151.05m, calcite vein. with pyrthotite and splateric: a, obj-0.40mm. 162 151.05m, calcite vein. with pyrthotite and splateric: a, obj-0.40mm. 165 Calcareous schist.foliation 20-45'. bedded 25-40. 166 Calcareous schist.foliation 20-45'.	65'. shered . 108.2-108.9, calcite vein.40'. with pyrite.	
120 pyrhotite - calcite vein. 35 - 40. 130 Calcarcous - sandy - pelitic schist. 131 foliation 35 - 40. bedded 15 - 40. 132 with calcite veinlets. 133 140 140 143.75 - 144. 40m, chlorite - calcite vein. 140 143.75 - 144. 40m, chlorite - calcite vein. 145 151.05m, calcite vein. with pyrhotite and sphalerite. 30. 30-40mm. 152.3m - 152.5m, chlorite - calcite vein. 153 calcite veinlet - network dominant (- 158.7m). 160 Calcareous schist.foliation 20-45'. 160 Calcareous schist.foliation 20-45'. 161 Calcareous schist.foliation 20-45'.		
140 145 150 150 151.05m, calcite vein, with pyrhotie and sphalerite. 30: 30-40mm. 152.3m-152.5m, chlorite - calcite vein, with pyrhotie, sphalerite, chalcopyrite. 25-30: 180mm. calcite veinlet - network dominant (- 158.7m). 160 Calcareous schist.foliation 20-45'. bedded 25-40'.	pyrrhotite - calcite vein. 35 -40'. Calcareous - sandy - pelitic schist. foliation 35-40'. bedded 15-40'.	
 143.75-144.40m, chlorite - calcite vein. 40[°], 50cm. 151.05m, calcite vein. with pyrrhotite and sphalerite. 30[°]. 30-40mm. 152.3m-152.5m, chlorite - calcite vein, with pyrrhotite, sphalerite, chalcopyrite 25-30[°]. 180mm. 155 160 165 171.3m, sphitta upig 25[°].40mm. 		
and sphalerite. 30. 30-40mm. 152.3m.152.5m, chlorite - calcite vein, with pyrrhotite, sphalerite, chalcopyrite. 25-30'. 180mm. calcite veinlet - network dominant (- 158.7m). 160 Calcareous schist.foliation 20-45'. bedded 25-40'. 171 3m galaita uain 25'.40mm		
155 calcite veinlet - network dominant (- 158.7m). 160 Calcareous schist.foliation 20-45'. bedded 25-40'. 165 IZI 2m geleite usin 25'.40mm	and sphalerite. 30 [°] . 30-40mm. 152.3m-152.5m, chlorite - calcite vein, with pyrrhotite, sphalerite, chalcopyrite.	
165	calcite veinlet - network dominant	
171.3m, calcite vein.25 ['] .40mm.		
174.4m, calcite vein.55 [°] .15-35mm. 175.3-176.2m, calcite vein.20-40 [°] . <40mm. with averaging 15cm interval.	174.4m, calcite vein.55 ['] .15-35mm. 175.3-176.2m, calcite vein.20-40 ['] .	
185		
195		

							SAM				0	HEMIC	CAL AN			
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
-		Pelitic Schist	Calcareous schist. foliation 35-45'.					,,		()=)= ()	()- (/					
-			bedded 23-43 .													
205																
210-																
-																
0.4.5			213.00-216.00m, chlorite - calcite vein. 30-45 ['] .250mm.													
215			215.9m, calcite vein.45 ['] .10mm.													
220																
225			Pelitic-silty - calcareous schist. foliation 40-60 [°] . unstable lamination.													
1 :			229.9-230.0m, sphalerite - pyrrhotite													
230			veinlet.	po,sp												
230			0-20'. 5mm. with calcite.													
-			233.1m, calcite vein.40 ['] . 30mm.	ро	ch											
235			pyrrhotite.													
-			233.3m-233.5m, calcite, chlorite, pyrrhotite.40', along foliation.													
-			partly with sphalerite, chalcopyrite.													
240																
			241.1-246.2m, calcite veinlet. with pyrrhotite. 60 [°] . 4mm. along	ро												
245			foliation.													
240				ро												
-			246.3m, pyrrhotite veinlet - diss. 65 ['] . w:3mm. along foliation.													
250																
-			247m, foliation 20 [°] .													
0.55																
255																
260																
			Pelitic-silty - sandy- calcareous schist.													
265			foliation 40-50 [°] . unstable lamination. with graphite.													
1			calcite veinlet along foliation.													
270			Pelitic- calcareous schist.foliation30.													
210			Unstable lamination.													
-			266.9-269.6m, graphite dominant.													
275			calcite veinlets along foliation.													
1 3																
			279.9-280.1m, shered zone.													
280			280.69m-280.73m, pyrrhotite - calcite vein.30 ['] .30mm.													
1 :			Pelitic ~ silty ~ calcareous schist.													
285			foliation 40 ~ 50 $$. lamination 20 ~ 30 $$.													
			calcite network dominant. 285.8 ~ 285.95m, calcite along foliation.													
	9		287.3 ~ 287.8m, (galena -)sphalerite-chalcopyrite	py,po,cp,sp py,cp												
290			-pyrrhotite-pyrite-calcite vein.													
-			50 [°] . 30mm. (pyrrhotite : upper side,													
			pyrite: lower side in the vein) with barren calcite veinlets.													
295			288.4m,													
:			chalcopyrite - pyrrhotite - calcite vein. 50'. 8mm.													
300				ру	cl											

Image: Column NAME DESCRIPTION MINER ALTER No. PROM TO INDIT A.N. Ag (20 Pb 2n) 305 Pelitic Schiel (mine schemas schiel) Provide construction (mine schemas schiel								SAM	IPI F		C	HEMIC			J I N IS	-
Pelitic Schist 1005 Pelitic Schist 1200 Pelitic Schist 1		COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO		Ag	Cu	Pb	Zn	Fe (%)	S (%)
310 Pelic: ~ ulty shia: 315 -132.3m, short/zore: 316 -132.3m, short/zore: 317 -132.5m, short/zore: 320 Pelic: ~ ulty schit. 321.3m, - pelic: ~ ulty schit. -132.5m, short/zore: 320 Pelic: ~ ulty schit. 321.3m, - pelic: ~ ulty schit. Pelic: ~ ulty schit. 101mm: white yrotic. Pelic: ~ ulty schit. 101mm	305		Pelitic Schist	Pelitic ~ silty ~ calcareous schist. foliation 50'. bedding 10 ~ 30'. calcite network ~ veinlets. with graphite. 305.25 ~ 305.45m, sandy schist. bedding10'.	Py	Chlorite								(70)	(70)	
315 ufflexeous - undy vehile. ufflexeous chile. 320 13.8 - peliar - calcarees schile. 321 13.8 - peliar - calcarees schile. 322 Value - schild training 35. 323 Value - schild training 35. 324 Value - schild training 35. 335 Value - schild training 35. 336 Value - schild training 35. 337 Value - schild training 35. 336 Value - schild training 35. 336 Value - schild training 35. 340 Status - fold training 35. 341 Status - fold training 35. 342 Status - fold training 35. 343 Status - fold training 35. 344 Status - fold training 35. 356 Status - fold training 35. 366 Status - fold training 35. 376 Status - fold training 35. 376 Status - fold training 35. 376 Status - fold training 35. 386 Status - fold training 35. 386 Status - fold training 35. 386 Status - fold tr	1			Pelitic ~ silty schist . - 312.3m, shered zone.		aili										
320 10m. with pryse. 325 Petitic - sity shit. 336 10min steeper, (35.5 m 35). 330 Petitic - sity shit. 335 10min steeper, (35.5 m 35). 330 Petitic - sity shit. 340 10min steeper, (35.5 m 35). 340 10min steeper, (35.5 m 35). 341 10min steeper, (35.5 m 35). 342 10min steeper, (35.5 m 35). 343 10min steeper, (35.5 m 35). 3440 10min steeper, (35.5 m 35). 340 10min steeper, (35.5 m 35). 341 10min steeper, (35.5 m 35). 342 10min steeper, (35.5 m 35). 343 10min steeper, (35.5 m 35). 344 10min steeper, (35.5 m 35). 345 10min steeper, (35.5 m 35). 346 10min steeper, (35.5 m 35). 366 10min steeper, (35.5 m 35). 370 10min steeper, (35.5 m 35). 386 10min steeper, (35.5 m 35). 387 10min steeper, (35.5 m 35). 388 10min steeper, (35.5 m 35).	315			tuffaceous ~ sandy schist. calcite. silicified. 313.8 ~ , pelitic ~ calcareous schist. foliation 30 [°] . lamination 25 [°] .		SIII										
325 Unstable himitation (10'). 330 ofiliation steeper. (33.5 m. 35.). 330 Pelitic - sity schiet. foldstooed5 (p). Jamination 10 in general. with graphine. 340 343 340 11.1 341 11.1 345 11.1 356 11.1 357 11.1 368 11.1 370 11.1 371 11.1 372 11.1 373 11.1 374 11.1 375 11.1 376 11.1 377 11.1 386 11.1 387 11.1 388 11.2 385 11.2 386 11.2 387 11.1 388 11.2 388 11.2	320			10mm. with pyrite. Pelitic ~ silty schist.												
330 Petitic - sity schit / foliation45 (p). lamination 10 in general. with graphite. 340 340 345 340 346 343 - 343.5m. fine mt/scours - sity hyper. 25 - calcite dominant. 356 Petitic - sity schit . foliation20. lamination.20. Petitic - sity schit . foliation20. af65 Petitic - sity schit . foliation20. af66 Petitic - sity schit . calciacoux. af67 Petitic - sity schit . calciacoux. af68 Petitic - sity schit . calciacoux. af69 Petitic - sity schit . calciacoux. af61 Petitic - sity schit . calciacoux. af62 Petitic - sity schit . calciacoux. af64 Petitic - sity schit . calciacoux. af65 Petitic - sity schit . calciacoux. af66 Petitic - sity schit . calciacoux. af67 Petitic - sity schit . calciacoux. af68 Petitic - sity schit . calciacoux. af69 Petitic - sity schit . calciacoux. af610 Petitic - sity schit . calciacoux. af610 Petitic - sity schit . calcaroux. af62 Peti	325			Unstable lamination (10 ['] ?). with graphite calcite networks.												
335 44.3.3 - 34.3.5m. 346 34.3.3 - 34.3.5m. 350 25. calcite dominant. 350 25. calcite dominant. 360 365 360 365 370	330			Pelitic ~ silty schist . foliation45 ['] (p). lamination 10 ['] in general.												
345 343.3 - 343.5m, frac urfcous ~ silp layer. 25. calcite dominant. 350 Pelitic - silty schist. foliation20'. lamination20. 360 365 360 365 370 370.6m ~, fine triffacous schist. calcite dominant. 371 370.6m ~, fine triffacous schist. calcite dominant. 372 370.6m ~, fine triffacous schist. calcite dominant. 374.7 - 375.0m, fructure . pyrite diss. py 380 Pelitic - sandy schist. calcareous. foliation 40-50. limination. generally 30-45. 378.95m, chalcopyrite - pyrhotite	335			with graphite.												
350 343.3 - 343.5m, fme tuffecous - silty layer. 25. calcite dominant. 365 Pelitic - silty schist . foliation20'. Immination20. 366 9 367 360 368 9 370 9 9 9 9 90.6p 380 Pelitic - sandy schist. calcite dominant. 97.47 - 375.0m, fructure . pyrite diss. po.6p 985 378.95m, chalcopyrite - pyrrhotite	340															
350 25. calcite dominant. 355 Pelitic ~ silty schist . foliation20. amination20. amination20. 360 360 361 amination20. 365 amination20. 370 tuffaceous schist. schist 370.6m ~ , fine tuffaceous schist. calcite dominant. 374.2m ~ , pelitic ~ sandy schist. 374.2m ~ , pelitic ~ sandy schist. po.cp Pelitic ~ sandy schist. calcareous . 380 Pelitic ~ sandy schist. 381 378.95m., chalcopyrite - pyrrhotite	345															
355 Jamination20'. 360 Jamination20'. 365 Jamination20'. 366 Jamination20'. 367 Jamination20'. 370 Jamination20'. Jamination20'. <	350			25 [°] . calcite dominant.												
365 370 utfaceous schist 375 376 9 9 9 9 9 9 9 90,cp 9 9 9 9 9 9 90,cp 9 9 9 9 9 9 90,cp 9<	355															
 370 370 schist 370.6m ~, fine tuffaceous schist. calcite dominant. 374.2m ~, pelitic ~ sandy schist. with graphite. 374.7 ~ 375.0m, fructure . pyrite diss. po,cp 380 Pelitic ~ sandy schist . calcareous . foliation 40-50. lamination, generally 30-45. 385 378.95m, chalcopyrite - pyrrhotite 	360															
375 370.6m ~, fine tuffaceous schist. calcite dominant. 374.2m ~, pelitic ~ sandy schist. with graphite. 374.7 ~ 375.0m, fructure . pyrite diss. py 380 Pelitic ~ sandy schist . calcareous . foliation 40-50'. lamination, generally 30-45'. po,cp 385 378.95m, chalcopyrite - pyrrhotite Image: construct of the second																
375 calcite dominant. 374.2m ~, pelitic ~ sandy schist. with graphite. 374.7 ~ 375.0m, fructure . pyrite diss. 374.7 ~ 375.0m, fructure . pyrite diss. po.cp py 380 Pelitic ~ sandy schist . calcareous . foliation 40-50'. lamination, generally 30-45'. po.cp 385 378.95m, chalcopyrite - pyrrhotite intervention	r i		tuffaceous													
380 Pelitic ~ sandy schist . calcareous . foliation 40-50'. lamination, generally 30-45 . 385 378.95m, chalcopyrite - pyrrhotite	r t		schist	calcite dominant. 374.2m ~, pelitic ~ sandy schist. with graphite.												
378.95m, chalcopyrite - pyrrhotite	380			Pelitic ~ sandy schist . calcareous . foliation 40-50'.	L 010h											
with graphite. foliation almost vertical.	385			378.95m, chalcopyrite - pyrrhotite - calcite vein. 40 [°] . 30mm.												
390 387.7m, pyrite dissemination.	390			387.7m, pyrite dissemination.												
395 394.5m, calcite - pyrrhotite vein. 65'. 4 ~ 11mm.	1				ро											

-							SAM				C		CAL AN			
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
405 410		Pelitic Schist	pelitic ~ silty schist . 406 ~ 407m, lamination folded. Partly 70'. 45 [°] . Foliation (p). Lamination 45 [°] ? . calcareous . With graphite.													
415 420 425																
430 435			Foliation 40 [°] . Lamination 25 [°] , folded. calcareous . with graphite.													
440			 440.75m -, calcite - chlorite vein, 45', 90mm. 452.2m, pyrrhotite diss veinlets. 452.2m - , medium sandy scist (-tuff?) 		ch											
445 450			455.3m - 455.6m, galena - chalcopyrite - sphalerite - pyrrhotite - chlorite - calcite vein. 35, 20cm. 455.8-, pelitic - silty schist silty schist. foliation(p). lamination 45' dip.	ро												
455 460			456.5m, fault. 30 dip. And pelitic under. 464.0-464.9m, sheared zone. silty-pelitic schist. partly sandy, calcareous.	po,sp,cp,g n	ch											
465			foliation 30-50 [°] dip. lamination20- 60 [°] dip.													
470 475																
480																
485 490																
495 500																

DEDTU		DOOK					SAN	1PLE			С	HEMIC	CAL AN		S	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)		WIDTH (cm)	Au (ppm)	Ag	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
<u> </u>		Pelitic Schist	Silty-pelitic schist. partly sandy,				(m)	(m)	(Cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%)
			calcareous. foliation 30-50 dip. lamination20-													
505			60 [°] dip.													
000																
			501.8-502.2m, chalcopyrite-sphalerite-pyrrhotite-													
510			calcite vein. along foliation. 50 dip. 160mm.													
			Sulfides are anhedral to calcite.	po,py,sp,cp py,po,sp,cp	ch											
545			With parallel veinlets. Silty-pelitic schist.	ру												
515			foliation 50' dip. lamination 35' dip.													
			511.3m,													
520			chalcopyrite-sphalerite-pyrite-pyrrhotite -calcite vein.													
			along foliation. 35 ['] dip. 30mm. 511.55m, chalcopyrite-sphalerite-													
			pyrrhotite													
525			-pyrite-chlorite-calcite vein. 40 [°] dip. 35mm.													
:			511.7m, sphalerite-pyrite-pyrrhotite- calcite vein.													
530			25 dip. 20mm.													
000			514.0-514.5m, fault. 45 dip ? pyrite dissemination.													
			silty-fine sandy schist. foliation 30 [°] dip (p). lamination10-													
535			60 [°] dip.													
			silty-fine sandy schist. foliation(p). lamination20- 70 dip.													
E 40			partly friable. silty schist. calcareous.													
540			foliation 20'dip. lamination 20'dip.													
545																
550																
555			553.9m, chlorite-calcite vein.													
000			40'dip. 200mm. silty-pelitic schist. foliation 35'dip.													
			lamination60-30- 10 dip.													
560			calcareous.													
			pelitic-sandy schist. foliation 30 dip.													
FGF			lamination 25 ['] dip. calcareous. partly friable.													
565																
1																
570																
1																
575			583.85-584.15m, tuff ? layer. Fine and c													
:																
580			586.65m, pyrrhotite-calcite vein.25 di588.0m, pyrrhotite-calcite veinlet.30 di													
			588.5-589.1m, pyrrhotite-chlorite-calcite													
			politic cohiet alternation with worth 11													
585			pelitic schist. alternation with partly silty foliation 25 dip. lamination 30 dip.													
-			594.2-594.35m, fine tuff layer. 30 dip.													
500				ро	ch											
590			Drilled to 601.20m.													
1																
595																
1																
600																
000			1				1	1	1		1					

DEDTU		DOCK					SAM	IPLE			С	HEMIC	CAL AN		IS	-
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER	ALTER.	No.	FROM (m)		WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
			(- 109.6m, Tricon)		Wethered		(11)	1117	(only		(ppm)	(10)	(74)		(70)	(10)
			Cenozoic sediment. Sand and gravels		Lim											
5			with soil and limonite.													
10																
15																
Ĩ																
00																
20																
25																
30																
35																
40																
10	- M															
	I V I															
45																
50																
	Λ															
55																
60																
65																
00																
70																
75																
80																
85																
90																
30																
95																
100																
100			1		1				1							

							SAM	IPI F			0	HEMIC	CAL AN			—
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
			- 109.6m, Tricon.				(1117	(111)	(OIII)	(ppin)	(ppin)	(/0)	(70)	(/0)	(70)	(70)
	-11				Lim.											
	1 \ /		Sand and gravels with limonite.													
105	\mathbf{X}															
	1 /\ I															
	1/ \I															
110																
110	-		109.6m-, core drilled.													
			Cenozoic sand and gravels													
	-		(-conglomerate). Gravels: pelitic schist, sandy schist,													
115	1 1		tuffaceous schist. <35mm.													
	-		matrix: sandy with limonite.													
	1															
120																
	-															
125																
120			123m-, Boulder gravels													
1]		(weathered gabbro?). Partly magnetic. partly foliated.													
400	- 1		with limonite,													
130	1		calcite and clay mineral in matrix.													
1																
1]															
135	j															
1]															
140]															
			142.5m-, pelitic-silty schist. foliation,60-70 [°] .													
			Ustable beddeing -lamination.													
145																
140			-148.6m oxidized (weathered) zone.													
			149.05m, pyrrhotite - calcite veinlet.													
			55'.													
150			width <5mm. 151.20m, chalcopyrite - pyrrhotite -													
			pyrite													
			- calcite network. foliation.													
155			151.60m,													
			chalcopyrite - pyrrhotite - pyrite network													
160			154.45m,													
100			quartz - calcite - pyrite - pyrrhotite veinlet	py,cp,po												
			.60 [°] .6mm.	P3;09;P0												
			with parallel calcite veinlets (15cm													
165	1		interval).													
1			162.3m,162.4m,162.8m,162.9m,													
1			pyrite - pyrrhotite veinlet.60 .5mm.													
170			with branchs. 163.5-164.0m, pyrite dissemination													
1	1		along foliation.													
1			164.7m,165.0m, chalcopyrite - pyrite													
175			vein. 50 [°] . 6mm. with chlorite. 165.7m, pyrite - calcite veinlet. 60 [°] . widt	DV/												
			parallel veinlets. chlorite. 30cm	ро РУ												
1																
180			Pelitic-silty schist. foliation 45' (p) . lam partly shered.													
160																
1			177.0m, pyrite - calcite vein.75 ['] . 15mm.	ро												
1			178.4m, pyrrhotite - calcite vein.60 ['] . 3m 181.8m, pyrrhotite - calcite vein.55 ['] . <4n	ро												
185																
1			Pelitic- calcareous schist. foliation 50 [°] .													
1			weak lamination 60'.													
190			186.7m-196.7m, altered (calcite, silicifie	00												
			188.3m, pyrrhotite - calcite network.	po po												
1			188.9m, quartz vein.10 ['] . 11mm. 189.15m, pyrrhotite - calcite veinlets. 65													
195			190.0m, pyrrhotite - calcite vein. 65 . <6													
195			191.1m, 191.3m, pyrrhotite - calcite veir	po po												
1	ſ // 🗌			ро												
200			194.8m-195.6m, pyrrhotite - calcite vein 195.7m-196.1m, pyrrhotite - calcite vein													
200									1				1	1	1	

DEPTI (m)							JAIN	IPLE				HEMIC	AI AP		5	
(11)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		Dolitio Sobiet	Calcareous- silty schist. graphite. Partly tuffaceous. foliation 45'.	ро	са			()		()=)= 1 - 1 /						
			lamination 20-70 [°] .													
205		-	201.2m, pyrrhotite - calcite vein.5 ['] . 23mm. lamination70 ['] .	ро												
200			205.1m, pyrrhotite - calcite veinlet.													
			60 [°] .5mm.													
210	1		210.7m, chalcopyrite – pyrrhotite dissemination, along foliation. calcite.													
			silicified? .	cp,po	sili?											
			213.0-213.3m, chalcopyrite - pyrrhotite - calcite	cp,po												
215	1		network.	-1.4												
			220.5m-224.0m, tuffaceous psamitic schist.													
			Unclear foliation and lamination.													
220			220.6m, calcite vein.55 ['] . 12mm. 221.0m,													
			chalcopyrite - pyrrhotite - calcite vein. 40'.40mm.	on nu												
			222.5m, chalcopyrite - pyrite - calcite	cp,py cp,sp,po												
225			vein.													
	1		65 [°] . 40mm. 222.8m-222.9m,													
			chalcopyrite-sphalerite-pyrrhotite- calcite vein.													
230			50 [°] .90mm.													
			in pyrite dissemination zone and sphalerite - chalcopyrite - pyrrhotite													
			network.													
235			223.5-223.9m, Dolerite dyke. 60 [°] .	ру												
			Pyrrhotite - diss. Nonmagnetic.													
	1		224.0m-, silty - fine sandy schist.													
240			tuffaceous? greenish by chlorite.													
			224.7m, pyrite - pyrrhotite network.													
			234.0m, foliation pyrite - calcite veinlets,	ру												
245			along foliation. 50 [°] .	-7												
			234.50m, pyrite - calcite vein.50 ['] .<30mm.													
050			with pyrite - calcite network.													
250			Calcareous-silty - sandy schist.foliation5													
			lamination40-90 ['] . Calcite veinlets along foliation.	cp,po												
255			Carche vennets along follation.	cp,po												
200			244.0m - , pyrite - calcite veinlet. 60 ['] .	ро			256.7	256.8		0.15	1	0.577	0.0257	0.0218	38	8.76
	1		1mm. 20cm interval. 246.5-246.7m, pyrrhotite - calcite netwo	-						0.15	1	0.577	0.0257	0.0210	50	0.70
260			247.4m, calcite - pyrite vein. 65 ['] . 5mm.	cp,po												
200			248.55m, small fault. 60 [°] . 20mm. breccia -250.3m, pyrite - calcite veinlet, 60 [°] .													
			10cm interval. 252.9m,													
265	1		chalcopyrite - pyrrhotite - calcite vein.													
			40 [°] . 50mm. 253.5m,													
			chalcopyrite - pyrrhotite vein.60.													
270	-		width <6mm. 255.1m,													
			pyrite - pyrrhotite - calcite network.													
			Pyrrhotite - calcite veinlet. 60 ['] . width <1mm. 10cm interval.													
275			256.2m-257.9m, pyrrhotite dissemination													
			with chalcopyrite. silicified. 259.1m-,													
			chalcopyrite - pyrrhotite - calcite networ													
280			silicified. Partly chlorite.													
			More silicified. hard. calcite network. Calcareous ~ silty schist . hard.													
			foliation 50 (p). calcite network													
285	1		285.8m ~ 287.4m, chalcopyrite - calcite - pyrrhotite vein ~	cp,po												
			90'. width<70mm. cavity.		Ι.											
001			-288.3m, Pyrrhotite network. partly chlor and (chalcopyrite -)pyrite - chlorite -	po,cp	ch											
290	1		along foliation 65'.	ро												
				ро ру												
0.07			Silty ~ calcareous schist silicified. calcite veinlet. foliation50 ~ 7	ро	ch											
295	1		$lamination \ unstable (p).$													
			292.85 ~ 292.95m, pyrrhotite - calcite - quartz vein. 60 [°] . 40	ру												
300			293.1 ~ 293.3m,													

		5001					SAM	IPI F			С	HEMIC	CAL AN		S	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist					(1117	(111)	(CIII)	(ppin)	(ppin)	(70)	(70)	(70)	(70)	(70)
			silicified. calcite veinlet. foliation50-70 [°] (p).													
0.05			lamination unstable(p).	ро												
305			303.1m, calcite-pyrrhotite vein.													
-			50'. width<11mm. network like. 303.75m, pyrrhotite vein. 10'. 6mm.													
			303.9m, pyrrhotite vein. 50'.	po,py												
310			width<4mm. 304.75m, pyrrhotite vein. 40 [°] . 3mm.													
-			307.65m, calcite-pyrrhotite vein. 30'.	ру												
			4mm. 308.5m-, sandy schist,													
315			pyrrhotite-pyrite diss.													
-			along foliation (50 [°]). silicified.	ро	ch											
			311.0m, calcite-pyrrhotite vein. 40 [°] . 3-10mm.	po,cp	ch											
320 -			311.05m, pyrite-calcite vein.													
			45'. width10mm.													
			silty schist.													
325			foliation65'. lamination55'.													
1 1			chlorite. tuffaceous ? 315.5m, calcite-pyrrhotite vein. 30-50'.													
1			10mm.													
330			315.9m, pyrrhotite vein. 50 ['] . 8mm. 316.75m, pyrrhotite-chlorite-calcite	ру												
			network													
1 -			pyrite-pyrrhotite networks.													
335			318.0m, chalcopyrite-pyrite vein. 50 [°] . 4mm.	po,py												
000			318.2-319.1m, shered zone.													
1 1			319.1-, silty schist . foliation 50 [°] . lamination60 [°] . Partly chlorite.													
340			321.8m, calcite vein. 70 [°] . 32mm. with													
540			dolomite ?	ру												
			325.5m, pyrite-calcite network.329.7m, pyrite-calcite veinlet. 60[']. 7mm.	po,py												
245			pyrite sissemination along foliation.													
345			foliation steeper (65').	cp,sp,po,py												
			334.9m, (pyrite-) pyrrhotite vein. 60 ['] . 8n 337.75m, pyrrhotite veinlet. 60 ['] . 3mm.													
0.50			339.1m, pyrrhotite-calcite vein. 50 . 9mm													
350			340.5m, pyrite vein. 50 [°] . 8mm. chlorite. 342.3m, pyrite-pyrrhotite vein. 50 [°] . 6mm													
-			with calcite. chlorite.													
			Silty -fine sandy schist . foliation50 [°] (p). lamination70 [°] ?													
355 -			343.25m-343.30m,													
-			calcite-pyrrhotite-pyrite veins. 50.6mm													
			344.4m, pyrrhotite-pyrite-calcite vein. 50 ['] . 8mm	po,py			358.6	359.0		0.322	1	0.216	0.0211	0.0182	29.6	7.25
360 -			345.1m,													
			(sphalerite-chalcopyrite-)pyrrhotite-pyr 55'. 12mm.													
1 1			346.5m, pyrite vein. 50 [°] . 6mm.													
365			346.7m, calcite-pyrrhotite vein. 55 ['] . 30m													
1 1			355.1m, chalcopyrite-calcite-pyrrhotite v 50 ['] . 10mm.													
			355.3m,													
370			chalcopyrite-calcite-pyrrhotite network. 356.9m, calcite-pyrrhotite network. 65.													
1 1			357.3m,													
1 -			chalcopyrite-pyrrhotite vein. 60. 4mm. 357.6m, pyrrhotite vein. with calcite. 65													
375			357.6m, pyrrhotite vein. with calcite. 65 358.0m,													
			(chalcopyrite-pyrite-)pyrrhotite vein. w													
1 3			65 [°] . 9mm. with branchs. 358.75-362.0m,													
380			silicified fine sandy schist. mineralizate													
000			(sphalerite-)chalcopyrite-pyrite-pyrite													
1 1			network-dissemination. pyrite, pyrrhotite, chalcopyrite, quartz													
385																
305			Silty -fine sandy schist . foliation 50 (p) white altered. chlorite-pyrrhotite-calcite													
1 1																
			382.3m-386.0m, micro-diorite? dyke. 70 calcite-chlorite veins.													
390			carche-chiorite veins.													
1 -			Fine sandy schist -pelitic schist alternatio													
1 1			quartz crystal along foliation.													
395			Silty -tuffaceous schist . foliation 45'. lar													
1 1			with calcite chlorite.													
400			398.4-398.6m, dolomitevein. 30'? 190n													
400									L							

Image: Column NAME DESCRIPTION Mrste A.TER No. FROM TO WIDTH Au Ap Cu Pp Zi 40.5 Sity dim sump value Sity dim sum value<	5		AL AN	HEMIC	С			1PI F	SAN					5001		
Petitic Schist Nay -fice and y shint. 405 Mail - 400 km 405 Mail - 400 km 410 Prote-calce with the inflation of 0. 410 Add with the inflation of 0. 411 Definite calce waint. 412 Add with the inflation of 0. 413 Add with the inflation of 0. 414 Add with the inflation of 0. 420 Add with the inflation of 0. 421 Add with the inflation of 0. 422 Add with the inflation of 0. 423 Add with the inflation of 0. 424 Add with the inflation of 0. 425 Add with the inflation of 0. 426 Add with the inflation of 0. Add with the inflation of 0. 427 Main and with the inflation of 0. Add with the inflation of 0. 428 Add with the inflation of 0. Add with the inflation of 0. 429 Add with the inflation of 0. Add with the inflation of 0. 421.1 m. Add with the inflation of 0. Add with the inflation of 0. 433 Add with the inflatin of 0. Add with the inflation of 0.	Fe S	Zn	Pb	Cu	Ag			TO	FROM	No.	ALTER.	MINER.	DESCRIPTION	ROCK NAME	COLUMN	DEPTH (m)
405 405 405 406 407 408 4	(%) (%)	(%)	(%)	(%)	(ppm)	(ppm)	(cm)	(m)	(m)				Silty -fine sandy schist .	Pelitic Schist		
405 000m. humanon 0. 405 ally minocon schet alternton. bit with collise value. op 410 ally minocon schet alternton. bit with with collise value. op 411 dialogy operatorize active value. op 420 ally minocon schet alternton. chalogy operatorize active value. op 421 all filter and schetting operatorize active value. op 422 all filter and schetting operatorize active value. op 423 all filter and schetting operatorize active value. op 424 all filter and schetting operatorize active value. op 425 all filter and schetting operatorize active value. op 426 all filter and schetting operatorize active value. op 427 all filter and schetting operatorize active value. op 426 all filter and schetting operatorize active and schetting operatorize active and schetting operatorize active and schetting operatorize active													406.2-406.3m,			
405 06.5m, shis alternation, shis alte																
410 411.4m, chalcoprint gryntotic cakie wind, 423.7. 411.4m, chalcoprint gryntotic cakie wind, 423.7. pop 420 411.4m, chalcoprint gryntotic cakie wind, 423.7. pop 422 411.7m, chalcoprint gryntotic cakie wind, 423.7. pop 423 411.7m, chalcoprint gryntotic cakie wind, 423.7. pop 424 413.7m, chalcoprint gryntotic cakie wind, 433.7m, character setter wind, 433.7m, character setter wind, 443.7m, print discremination. pop 425 413.5m, (calcie cabrims, lynamic wind, 445.7m, minimized S.7. pop 430 413.5m, frite discremination. 445.7m, frite discremination. 445 445.7m, frite discremination. 445.7m, frite discremination. 445 413.7m, print discremination. 445.7m, frite discremination. 445.7m, frite discremination. 445.7m, frite discremination. 445.7m, frite discremination. 445.7m, frite discremination. 45.7m, frite discremination. 45.7m, frite discremination. 445.7m, frite discremination. 45.7m, frite discremination. 45.7m, frite discremination. 455.7m, frite discremination. 45.7m, frite discremination. 45.7m, frite discremination. 4660 47.2m, frite discremination. 47.7m, frite discreminaticabremination.													406.3m-,			405
410 Dolumics-actics winks. 415 421.4m, 421.5m, 423.7m, 11flecense athic laminator5.4.0, which by skite statiskis thin large: 0.020 420 which by skite shifts shift thin large: 0.020 421 43.1.7m, 11flecense shifts filts andy skite. 0.020 433.4m, 41.7m, 413.7m, 414												ру				
415 421.4m, 05.100m, 43.37, 420 421.4m, 43.37, 420 421.4m, 43.37, 423, 423, 423 421.4m, 43.37, 423, 423, 423 421.4m, 43.37, 423, 433, 433, 433, 433, 433, 433, 433																
415 chalorymic-pytholic-caldie vein. 65, 100m. op.op 420 with sty-kits - pdits statist in ing-re. po.op 421 uit/accoust skits file stady schits. po.op 4225 uit/accoust skits file stady schits. po.op 425 uit/accoust skits file stady schits. po.op 425 uit/accoust skits file stady schits. po.op 430 (caldet-dolomite.)putto vite. po.op 435 uit/accoust skits file stady schits. po.op 443 (allet-dolomite.)putto vite. po.op 10 with pythe. po.op 443 (allet-dolomite.)putto vite. po.op 4440 451.2.no. pythe dolomita.06.05 chalor.06.05 4450 (allet-dolomite.)putto vite. po.op 4450 (allet-dolomite.)putto vite. po.op 4455 (allet-dolomite.)putto vite. po.op 450 (allet-dolomite.)putto vite. po.op 451 (allet-dolomite.)putto vite. po.op 452 (allet-dolomite.)putto vite. po.op 455 (allet-dolomite.)putto vite. po.op																410
415 chalorymic-pytholic-caldie vein. 65, 100m. op.op 420 with sty-kits - pdits statist in ing-re. po.op 421 uit/accoust skits file stady schits. po.op 4225 uit/accoust skits file stady schits. po.op 425 uit/accoust skits file stady schits. po.op 425 uit/accoust skits file stady schits. po.op 430 (caldet-dolomite.)putto vite. po.op 435 uit/accoust skits file stady schits. po.op 443 (allet-dolomite.)putto vite. po.op 10 with pythe. po.op 443 (allet-dolomite.)putto vite. po.op 4440 451.2.no. pythe dolomita.06.05 chalor.06.05 4450 (allet-dolomite.)putto vite. po.op 4450 (allet-dolomite.)putto vite. po.op 4455 (allet-dolomite.)putto vite. po.op 450 (allet-dolomite.)putto vite. po.op 451 (allet-dolomite.)putto vite. po.op 452 (allet-dolomite.)putto vite. po.op 455 (allet-dolomite.)putto vite. po.op																
415 chalorymic-pytholic-caldie vein. 65, 100m. op.op 420 with sty-kits - pdits statist in ing-re. po.op 421 uit/accoust skits file stady schits. po.op 4225 uit/accoust skits file stady schits. po.op 425 uit/accoust skits file stady schits. po.op 425 uit/accoust skits file stady schits. po.op 430 (caldet-dolomite.)putto vite. po.op 435 uit/accoust skits file stady schits. po.op 443 (allet-dolomite.)putto vite. po.op 10 with pythe. po.op 443 (allet-dolomite.)putto vite. po.op 4440 451.2.no. pythe dolomita.06.05 chalor.06.05 4450 (allet-dolomite.)putto vite. po.op 4450 (allet-dolomite.)putto vite. po.op 4455 (allet-dolomite.)putto vite. po.op 450 (allet-dolomite.)putto vite. po.op 451 (allet-dolomite.)putto vite. po.op 452 (allet-dolomite.)putto vite. po.op 455 (allet-dolomite.)putto vite. po.op																
420 43.7.7. utilizeous schist. himmisticis 56.0: with dity schist finite schist him layse. p.o.p 421 43.7.8. utilizeous schist. himmisticis 56.0: with dity schist finite schist him layse. p.o.p 4225 43.7.8. utilizeous schist. finite schist him layse. p.o.p 4330 44.3.5.44.3.5.4. (calific-dolomite. iguart vein. 10 ¹ with yrite schist finite schist him layse. p.o.p 4330 44.3.5.44.3.5.4. (calific-dolomite. iguart vein. 10 ¹ with yrite finite schist finite schist him layse. p.o.p 4336 44.3.5.44.3.5.4. (calific-dolomite. iguart vein. 10 ¹ with yrite finite schist finite schist him layse. p.o.p 440 451.7.m. pyrite discontanton. 451.4.5.5. with 2.3.5.m. pyrite discontanton. p.o.p 445 451.4.68.6m. pyritholite discontanton. 452.5. with 2.3.5.m. pyrite discontanton. p.o.p 455 466. 467.7. 0.03 0.5 0.202 0.07 0.0106 466. 468.7. 0.03 0.5 0.202 0.07 0.0106 470 468.6. 0.00000000000000000000000000000000																415
420 http://withoutinestation.minimustors.ord. po.cp 425																
420 with ally schin-pelitic schia thin layer. po.pp 425 431.7m. trifficeous schint-fine sndy schint. all.1.7m. trifficeous schint-fine schint-fine. all.1.7m. trifficeous schint-fine. all.1.7m. trifficeous schint-fine.																
425 -0.07 0.09 -11.7/m 425 -11.7/m unflaccess schiat-fine sandy schiat. -11.7/m 430 -11.7/m unflaccess schiat-fine sandy schiat. -11.7/m 430 -11.7/m unflaccess schiat-fine sandy schiat. -11.7/m 433 -41.3.7/m unflaccess schiat-fine sandy schiat. -11.7/m 4430 -41.3.7/m unflaccess schiat-fine sandy schiat. -11.7/m 4433 -41.3.7/m unflaccess schiat-fine sandy schiat. -11.7/m 4435 -41.3.7/m unflaccess schiat-fine sandy schiat. -11.7/m 4440 -41.3.7/m unflaccess schiat-fine sandy schiat. -11.7/m 4440 -41.3.7/m unflaccess schiat-fine sandy schiat. -11.7/m 4440 -41.2.2/m unflaccess schiat-fine sandy schiat. -11.7/m 4445																420
425 utilizeous schist - fine sandy schist. 431.7m., sity - fine sandy schist (functions): bbd(ing):5. isolarity - fine sandy schist (functions): bbd(ing):5. 430 443.55 + 43.5m., (calite-schorinic)-guartz vein, 10. with yrme. isolarity - fine sandy schist. 433 443.55 + 43.45m., (calite-schorinic)-guartz vein, 10. foliation of 0 schorinic. isolarity - fine sandy schist. 434 4400 451.2m., pryite dissemination. isolarity - fine sandy schist. 4440 451.2m., pryite dissemination. isolarity - fine sandy schist. 4450 463.4.468.6m. pyrrhonia diss(0), with calcius. isolarity - fine sandy schist. 4450 472.3m. chlorite- valitic.envolut. isolarity - fine sandy schist. 455 with-20mm, with calcius and chlorite. visht-20mm, with calcius and chlorite. 470.4147.6m., lamination.57. ppr/bit diss.envolut. 470.4147.6m. 465 466.7 0.03 0.5 0.202 0.007 0.0106 470 (dalacopyrice) pyrhonize twinks. 5m. interval. 5m. interval. 5m. interval. 5m. interval. 5m. interval. 482.2m., 482.0m., 483.0m. pyrhonize diss.envoxd. 483.0m. pyrhonize diss.envoxd.												po,cp				
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ablerita (both of sides)																1 :
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486.0-486.3m, calcite vein. 35 [°] . 250mm. ch											ch					485
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493.3m, pyrrhotite network(f).													493.3m, pyrrhotite network(f).			1
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DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO	WIDTH (cm)	Au	Ag	Cu	Pb	Zn	Fe	S
	502.1		Silty - fine sandy schist . foliation 55'. bedding-lamination unclear. 501.25m, pyrrhotite - calcite vein.	ро			(m)	(m)	(Cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%)
505			501.90m, pyrrhotite - calcite vein. 55 [°] . 9 ~ 15mm.													
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515																
520																
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DEDTU		DOOK					SAM	1PLE			С	HEMIC	CAL AN		IS	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)		WIDTH (cm)	Au (ppm)	Ag	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
	\searrow		MJTK-6, (-3m, Tricon.)		Wethered		(11)/	(111)	(em)	(ppiii)	(ppin)	(70)	(70)	(70)	(70)	(70)
5			Pelitic schist. foliation 35'dip. lamination 20'dip.		Lim											
10																
15			28.5m, calcite vein. 35 dip. 140mm.													
20			30.5m, calcite vein. 35 dip. 50mm. with specularite.													
25			34.0m, calcite vein. 35' dip. 40mm. with galena and sphalerite.													
30			and guoin and spharente.													
35			pelitic-silty schist. calcareous. foliation35 dip. lamination 10-25 dip.	gn,sp												
40																
45			50.2m, sandy schist thin layer. 10 [°] dip. 50mm.													
50			56.5-56.7m, coarse sandy schist layer. 20 dip. pyrite dissemination.													
55			59.0m, calcite vein. 35 dip. 15mm. with specularite, sphalerite ?	ру												
60			Silty schist. calcareous. foliation 30 [°] dip. lamination 20 [°] dip.	sp?												
65			69.55m, chalcopyrite-galena-sphalerite-pyrrhotite -calcite vein. 30 dip. 50mm.													
70				po,sp,gn,cp												
75 80			78.7-79.4m, sheared zone. pelitic-silty schist. alternation. foliation 45- 25 dip. bedding 45- 25 dip.													
85			90.25m, pyrrhotite -calcite vein. 25 dip. 12mm. 91.1m,													
90			chalcopyrite-galena-sphalerite-pyrrhotite -calcite vein. 35 dip. 200mm. 92.0m, pyrite-calcite vein. 20 dip. 40mm.	po,sp,gn,cp py		90.7	90.8			0.042	18.2	0.49	2.41	1.65	23.9	>10.0
95 100			99.7-101.45m, mineralization. chalcopyrite-sphalerite-pyrite -chlorite-pyrrhotite-calcite vein. 35-40 dip. With dolomite-quartz ? And pyrrhotite network in silty schist un													

										-						
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	SAN FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	HEMIC Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
			Pelitic-silty schist. foliation 25-40 dip. Lamination unclear.				101.2			0.096	3	0.0429	0.241	0.33	18.3	>10.0
105 110			-111.6m, (chalcopyrite-sphalerite-)pyrite -pyrthotite-Calcite vein. With 3cm-50cm interval. 15-25 dip. 2-30mm.													
-			111.6m-, pelitic schist. friable by	po,po,sp,cp												
115			foliation. Foliation=lamination 30'dip. silty schist. calcareous. foliation 20' dip. lamination 25'dip.													
120																
125			133.95m, pyrrhotite-calcite vein.				125.2	125.3		0.112	3.5	0.29	0.0452	0.0993	42.1	>10.0
130			134.25-134.80m, chalcopyrite-galena-sphalerite-pyrite -pyrrhotite-calcite vein. 20'dip.													
135			silty schist. calcareous. foliation 25' dip. lamination 25' dip (=foliation).	po po,py,sp,gn,cp po			134.2	134.7		0.087	19.7	0.321	0.84	0.346	25.7	>10.0
140			 137.9m, pyrrhotite-calcite vein. 25 dip. 9mm. 138.5m, calcite vein. With pyrrhotite. 	ро												
145			25' dip. 30mm.	ро												
150 155			143.5m, calcite vein. With pyrrhotite. 35 dip. 25mm.													
160																
165																
170			Silty-pelitic schist. calcareous. foliation 25' dip. lamination 25' dip (=foliation). With calcite veins along foliation.													
175																
180																
185																
190																
195 200																

(m) OCCOM NAME DESCRIPTION Mark ATTR: No. (PCM) No. (PCM) Add (C) P P P P 200 Pelific Schttt Tales data (stress) with prime sches cancers. (PM) (P)						1		SVI			0					
Politic Schtz auguste intervent. (Figure unity web greiter, intervent. (Figure 113 = 7117. and, informations (P) 1245 = 2005. (Figure 1145), 125 1245 = 2005. (Figure 1145), 125 125 125 = 2005. (Figure 1145), 125 125 = 2005. (Figure 1145), 125 126 = 1005. (Figure 1145), 125 127 = 277. (Figure 1145), 125 126 = 1005. (Figure 1145), 125 127 = 277. (Figure	DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO		Ag	Cu	Pb	Zn	Fe	S (%)
210 21.7 Feat. 30.00 211 21.5 - 21.6 has mark to compare the second and the	205		Pelitic Schist	Foliation(p). partly 20'dip. bedding 10'dip.	ру				(111)	(ppm)		(70)	(10)	(10)	(70)	(70)
215 300m - short frame. 220 With quark with framewing With the transmission of With quark with framewing With the transmission of With quark with q				with pyrite-calcite vein (w:9-18mm). 211.7m-fault. 40'dip. 211.3 ~ 211.7m, tuff layer, 15'. 215.0 ~ 216.8m, sheared zone.												
220 Choice - address entropy heads of the second address of the s	215			bedded20'. 219.0m ~, sheared zone. With quartz vein fragments. pelitic ~ sandy schist. foliation 30'.												
220 Jone: py ch 230 22,00 - 22,65.m. (synthe, subheris, quarz, cakite vin, 35:10m. pythe: ackite vin. 30 3 mm. py ch 235 pinitic - sity (quarty, such) schitt. (batter vin. 30 45 beakfed 45, friable. p 240 233 6 - 256 5m, full? 35. 241 235 - 256 5m, full? 35. 245 reprice - sity (quarty, such) schitt. (batter vin. 30 45 beakfed 45, friable. p 246 257.1 - 257.85m, putter - sity ventorite discerimination and reprice.com p 250 suffice - discover cons. underscover. p 251 pointic - such ventor. (along fullimine. ventors) p 262 pointic - such ventors. (along fullimine. ventors) p 263 pointic - such ventors. (batter ventors) p 264 270.1 - 257.05m, suffice discovering of batter. (batter ventors) p 275 280.6 - 200.7m, ventors. p 266 p p p 276 280.6 - 281.7m, cutter. cutter. cutter ventors) peditic - suity vehice. foliation 0.5 bet p p 276 280.6 - 281.7m, cutter veitor p 280.7m 280.7m, cutter veitor (cutter ventor) p 276 280.6 - 281.7m, cutter veitor p 280.7m 280.7m, cutter veitor p	220			Chlorite - calcite network along fractures,												
 230 230 9000, pyrite cakite visi. 30 8000. 235 246 241 - 256.500, fault? 35. 247 243 - 256.500, fault? 35. 245 246 257 - 257.800. 257 - 257.800. 257 - 257.800. 256 257 - 257.800. 256 257 - 257.800. 256 256 266 - 200. 270 Im., sheard and: 25. 266 - 200. 270 Im., sheard and: 25. 266 - 200. 270 Im., sheard and: 25. 270 Im., sheard and: 26. 271 Im., sheard and: 26. 272 Im., sheard and: 26. 273 Im., sheard and: 26. 274 Im., sheard and: 26. 275 Im., sheard and: 26. 276 Im., sheard and: 26. 277 Im., sheard and: 26. 278 Im., sheard and: 26. 279 Im., sheard and: 26. 280 Im. and sheard and and and and and and and and and an		/		zone. 226.70 ~ 226.85m, (pyrite-) chlorite- quartz- calcite vein.	ру	ch										
240 243.6 - 256.5m, fault? 35. 245 277.1 - 257.85m, print- synthetic dissemination and rying follow in the lower zone) is ulfide distribution and rying follow in the lower zone) is ulfide distribution in the upper zone, and calcive network in the lower zone) is ulfide distribution 25 bedded 25. 260 256 pelicits - sindy schiat. Follow in the upper zone, and calcive network for 25. Policy - sindy schiat. Following -				230.90m, pyrite- calcite vein. 30 [°] .8mm.												
245 price - pyrhotic dissemination and replacement along foliation. (Slicified in the upper zone, and calcite network in the lower zone) sulfade disseminated along foliation(p). 256 pelicie - sandy schist. 261 255.500 Tom. 266 pelicie - sandy schist. 266 pelicie - sandy schist. 267 20.05.7 - 500 Tom. 266 pelicie - sandy schist. 267 20.05.7 - 500 Tom. 2660 pelicie - sandy schist. 267 20.05.7 - 500 Tom. 2660 pelicie - sandy schist. 267 pelicie - sandy schist. 268 pelicie - sandy schist. 270 and pyrhotite network for 2Scn. 271 Silly - fine sandy schist. 272 280 6 - 281.2m. calcite vein. 273 280 6 - 281.2m. calcite vein. 280 Silly - fine sandy schist. 281 282.5m. ristructure. 282 283.5m. ristructure. 283 283.5m. ristructure. 284 285.5m. ristructure. 285 280.5m. ristructure. 286 28.5m. ristructure. 287 28.5m. ristruct				foliation 30-45'.bedded 45'. friable.												
250 silicities in the upper zone, and calcite network in the lower zone) 255 sufficies discriminated along foliation(p). 255 pelitic - sandy schist. 10 and model 25.5 10 and model 26.5 10 and model 26.5 <	245			pyrite - pyrrhotite dissemination and replacement												
255 pelitic - sandy schist. foliation 25. bodded 25. 260.65 - 260.70m. 260 pelitic - sity schist. foliation 60.bed 261 pelitic - sity schist. foliation 60.bed 262 270.1m., sheared zone. (theard pelitic schist, calcaceous) pelitic - sity schist. foliation 60.bed 265 pelitic schist, calcaceous) partitic schist, calcaceous) pelitic schist, calcaceous) 270 and pyrthotic network for 25cm. 280 -281.2m., calcite vein. 280 -281.2m., calcite vein. 280 -281.2m., calcite vein. 281 -283.2m., calcaceous) po.cp 282 -283.2m., chicte vein. 283 -283.2m., chicte vein. po.cp 284 -281.2m., chicte vein. py.sp 290 Pelitic - sity -fine sandy schist allermati py.sp 290 Pelitic - sity -fine sandy sc	250			(Silicified in the upper zone, and calcite network in the lower zone) sulfides disseminated along												
260 pelitic ~ sitly schist. foliation 60'.bed 265 270. Im-, sheared zone. 266 pelitic schist. with graphite. 276.85 ~ 277.40, pyrrhoite vein. 276.85 ~ 277.40, pyrrhoite vein. With chalcopyrite (p). sitic/fed(p). and pyrhoite network for 25cm. 270 and pyrhoite network for 25cm. 275 280.6 ~ 281.2m, calcite vein. 280 Calcite veins with chlorite, party graphit 280 Calcite veins (w: 8 ~ 40mm) with average po.cop 281 283.5m, sphalerite - pyrite - calcite vein 282 285.5m, sphalerite - pyrite - calcite vein 283 286.5m, fractured and friable. 284 Pelitic - sity -fine sandy schist alternati Foliation= bedding 10. 285 285.5m, sphalerite - pyrite - calcite vein 280 Pelitic - sity -fine sandy schist alternati Foliation= bedding 10. 280 Pelitic - sity -fine sandy schist alternati Foliation= bedding 10. Partly friable with graphite and calcite vein Purtly friable with graphite and calcite vein	255			pelitic ~ sandy schist. foliation 25 bedded 25'. 260.65 ~ 260.70m, chalcopyrite- pyrite- quartz- calcite netv	ро,ру											
 Pelitic schist. with graphite. 276.85 - 277.40, pyrthotite vein. With chalcopyrite (p). Silticified(p). and pyrrhotite network for 25cm. Silty - fine sandy schist. foliation 30-3 calcite veins with chlorite, partly graphit 280.6 ~ 281.2m, calcite vein. With dominant pyrrhotite in the lower p and with chalcopyrite (p). Silty reite and chlorid Sorted sandy schist (calcareous). Calcite veins (w: 8 - 40mm) with averap po.cp chlictie veins (w: 8 - 40mm) with averap po.cp chlictie veins (w: 8 - 40mm) with averap po.cp py.sp Pelitic – silty – fine sandy schist alternati Foliation= bedding 10'. Partly friable with graphite and calcite v 				friable, partly sheared. pelitic ~ silty schist. foliation 60 [°] .bede 270.1m-, sheared zone. (sheared pelitic schist, calcareous)												
 Silty - fine sandy schist. foliation 30-3 calcite veins with chlorite. partly graphit 280.6 ~ 281.2m, calcite vein. With dominant pyrrhoite in the lower p and with chalcopyrite. pyrite and chlorit sorted sandy schist (calcareous). Calcite veins (w: 8 ~ 40mm) with avera po.cp calcite veins (w: 8 ~ 40mm) with avera po.cp calcite veins, sphalerite - pyrite - calcite vein py.sp Pelitic - silty -fine sandy schist alternati Foliation = bedding 10'. Partly friable with graphite and calcite v 				pelitic schist. with graphite. 276.85 ~ 277.40, pyrrhotite vein. With chalcopyrite (p). silicified(p).												
280 With dominant pyrrhotite in the lower p and with chalcopyrite, pyrite and chlorit Sorted sandy schist (calcareous). Calcite veins (w: 8 ~ 40mm) with average po.Cp ch 285 283.9m ~, silty schist. foliation = beddir 285 285.5m, sphalerite - pyrite - calcite vein 286.95m-, fractured and friable. py,sp Pelitic - silty -fine sandy schist alternati Foliation= bedding 10'. Partly friable with graphite and calcite v				calcite veins with chlorite. partly graphit												
283.9m ~, silty schist. foliation = beddir 285 285.5m, sphalerite - pyrite - calcite vein 286.95m-, fractured and friable. py,sp Pelitic - silty -fine sandy schist alternati Foliation= bedding 10°. Partly friable with graphite and calcite v	280			With dominant pyrrhotite in the lower p and with chalcopyrite, pyrite and chlorit Sorted sandy schist (calcareous).		ch										
290 Foliation= bedding 10'. Partly friable with graphite and calcite v	285	/		283.9m ~ , silty schist. foliation = beddir 285.5m, sphalerite - pyrite - calcite vein												
295 Drilled to 301.9m.	290			Foliation= bedding 10'.												
	295			Drilled to 301.9m.												

DEPTH		ROCK					SAM					a de la companya de l	CAL AN			
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
			(- 3m, Tricon)		Wethered											
			Calcareous schist		Lim											
5.			with pelitic schist layers.													
			foliation:40-50°, lamination:0-50°.												-	
•			Carbonate veinlet.												-	
10-			Fractures. Calcite -dolomite (?) -quartz veinlets													-
			dominant.													
•																
15																
20·			31.7 -32.0m, fine tuff thin layer.40°.													
		. •	20 1 20 55m operator (publita)												-	
			39.1 - 39.55m, quartz (- calcite) vein.45°.													
25 ·			40.0m, fine tuff thin layer.40°.1.5cm.thick													
•			40.4m, calcite (- quartz) vein,													
•			with pyrrhotite, sphalerite,													
30			chałcopyrite. 30 - 50°, 4cm width, partly pyrite?													
•			40.5m, calcite vein.55°.width 10cm. 41.0 -41.1m,													
•			calcite (- pyrite - pyrrhotite -													
35			chalcopyrite - sphalerite) vein. 25°. 11cm width.													
•			41.1m-, barren calcite veins.													
			42.7 -43.1m, calcite (- chlorite) 40°													
40			vein.40°. 43.4 -44.3m, fine sandy tuff.40°.	ро,ру												
· ·			44.3m-, pelițic schist- calcareous													
			schist. with quartz (- calcite) network-													
45			veinlet.													
			discordant to foliation. partly fine - sandy lamination.20 -40°.													
:			50.0 m and i to mark a tite as in 40°													
50			52.9m, calcite - pyrrhotite vein.40°. width 15cm.													
			calcareous- pelitic schist. black.					n an								
			with graphite.													
55			56.2 - 56.6m, calcite veins. 45°. width 3 - 20mm.													
			63.0m, calcite (-dolomite?) vein.													
			with sphalerite (p).													
60			and with parallel calcite veins. along foliation.													
			Calcareous schist. foliation 30 - 40°.	ср,ро			62.7	62.75	5	0:035	2.4	0.0202	0,0205	8.45	5.1	4.3
05			bedded.													
65			laminated with micro-folding (axix?).			l					******		- Bally for the second			
			70.0, 70.15, 73.35m,						e mañar son e ago e e							
70			pyrrhotite - calcite (- chalcopyrite) veir 45°.width : 3 - 30mm. along foliation.					Ye and a second s						and the second se		
70			45 whath : 3 - 30mm. along foliation. in the lower part of the vein,									-		And a second		
. X			pyrrhotite - calcite vein.	ср,ро				Y Barrer						1	Barry the side of the second se	
			width : 12 - 110mm.40°. 72.4m					-		• •				Name of party of the second		
- 75			chalcopyrite - pyrrhotite - calcite veins	ср,ро		e e	76.3	76.4	1	0.73	6	0.0091	0.258	0.582	4.45	3.6
			along foliation. 6 - 10cm intervals. width 6 - 15mm.	00,00				, , , ,		0.75		0.0071	0.200	0.000		
60			80.0 -80.6m,													
80			pyrrhotite - calcite vein.40°. width : 35 - 40cm. fault?	ро			80.5	80,0	5	0.022	6.8	0.0787	0.318	0.405	>50	8.83
:			with chalcopyrite, sphalerite, (galena)					9-1 9-1								
85			84m-, micro-folding. and calcite veins 40cm-interval,													
00			along foliation.								r Ad					
			40°. width 2 -9m. Partly in R-faults. 95.5 -, pyrrhotite - calcite vein.					an e chine e c			· ·			Ter - c fer - y - g fer -		
00			along foliation, 40°. width 40-80m.					Same and the second sec								
90			sphalerite and chalcopyrite. with similar network 80cm+ long.												u Allan u A	
			99.1m, pyrrhotite - calcite vein.					sanaya ing sa	an ann							
0 E			40°. width : 10mm. 99.6m -, calcite - pyrrhotite vein.40°.					rover and the second second			10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -					t de la contra de la contra de
95			width : 130mm. with chalcopyrite.	ро											arran - Antonio Martino Altante	
			brecciated at the boundary.				99.5	i 99.	4	0.038	6.1	0.646	0.047	8.07	-19.8	7.26
-	S MARIER C. LOUIS		-	_	-	- ·	. OD S		P3 1	A A 2 B A		11/11	. n n 1 1 1			1 776

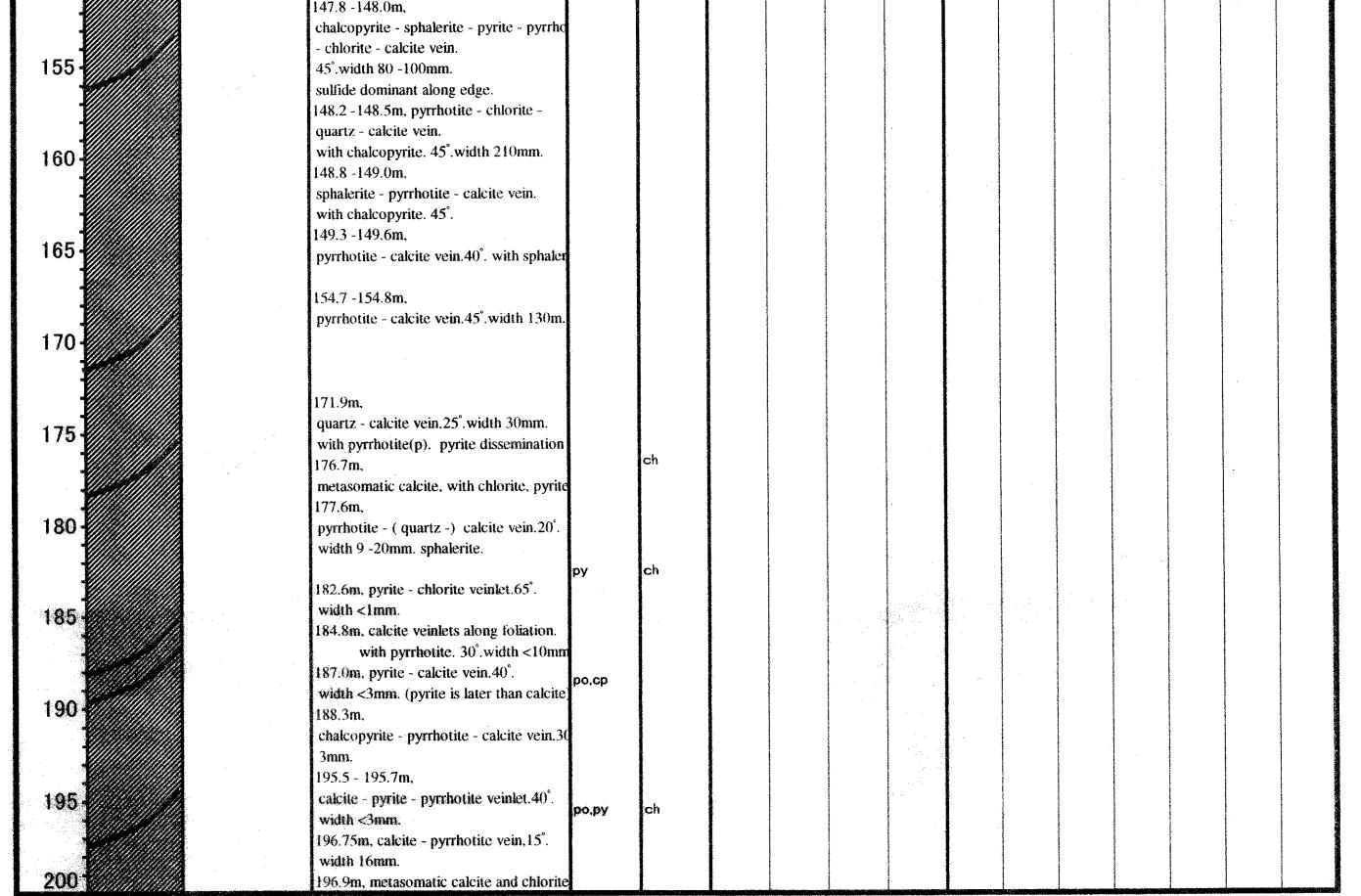
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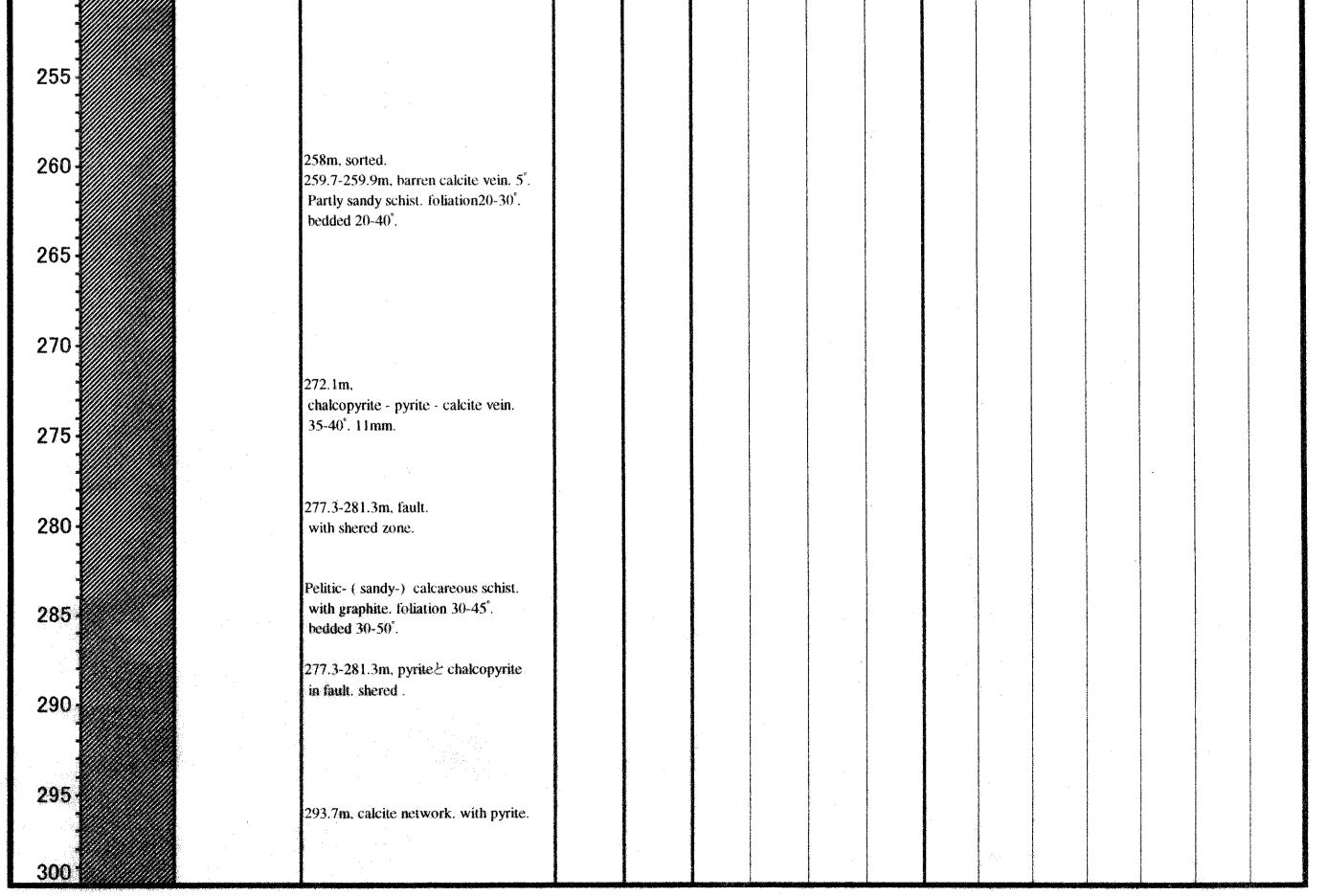
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DEPTH		ROCK					SAM						AL AN			
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)		Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
			Calcareous- pelitic schist		ch											
-		· · · · ·		ро,ру,ср												
1			100.4m,													
105			pyrrhotite - calcite vein.40°.20mm.													
100]			100.7m, (pyrrhotite -) calcite vein. 30 -40°.13 -40mm.													
		· · · · ·	with pyrrhotite - chlorite - calcite veins.													
-			50°. 160mm.													
4.4.0			101.2m -,													
110			pyrrhotite - chlorite - calcite vein. 50° .													
			160mm.													
			101.6m -,		- 4											ŀ
			chalcopyrite - pyrite - pyrthotite	ро	ch											
115		• • •	vein.30°.													
-			with calcite - chlorite mass.													
1																
]			113.65 -114.10m,													
120-			chlorite - calcite - quartz vein.30°.			2										
			width : 35cm.	1												
-			with pyrrhotite													
1			and fragments of schist and tuff.									-				
125																ł
120]			Calcareous- pelitic schist.													
-			altered (chlorite, sili). foliation40-45°.							-			-			
-			partly black (with graphite).													
100																
130		·														
]			140.5m, pyrrhotite vein.25°.													
-			width 7mm.													
			140.9m, calcite - pyrrhotite vein. 40° .width 30mm.									****				
135-			40.whith Somm. 142.1 -142.3m,													
4			pyrrhotite - clay mineral - calcite vein.							l						
			along foliation .40°. width 110mm.													
			143.5 -143.9m,													
140-			(pyrrhotite -) calcite vein.40°.width	ро												
-			30mm.													
1			144.6 - 144.7m,													
en 199			pyrrhotite - calcite network.													
145-			145.0 -150.6m,	ро												
			pyrrhotite - calcite veins (- networks),													
a			15cm interval .45°.	po,py,cp,sp												
	///////////////////////////////////////		generally along foliation and with	ро,ср	ch		148.2	148.3		0.114	7.4	0.0483	0.0769	6.96	20.3	>1
150-			chlorite.	po.sp				-								
100			Ex.)											And the second se		
			147.8 -148.0m,	I						1	1		1	{		

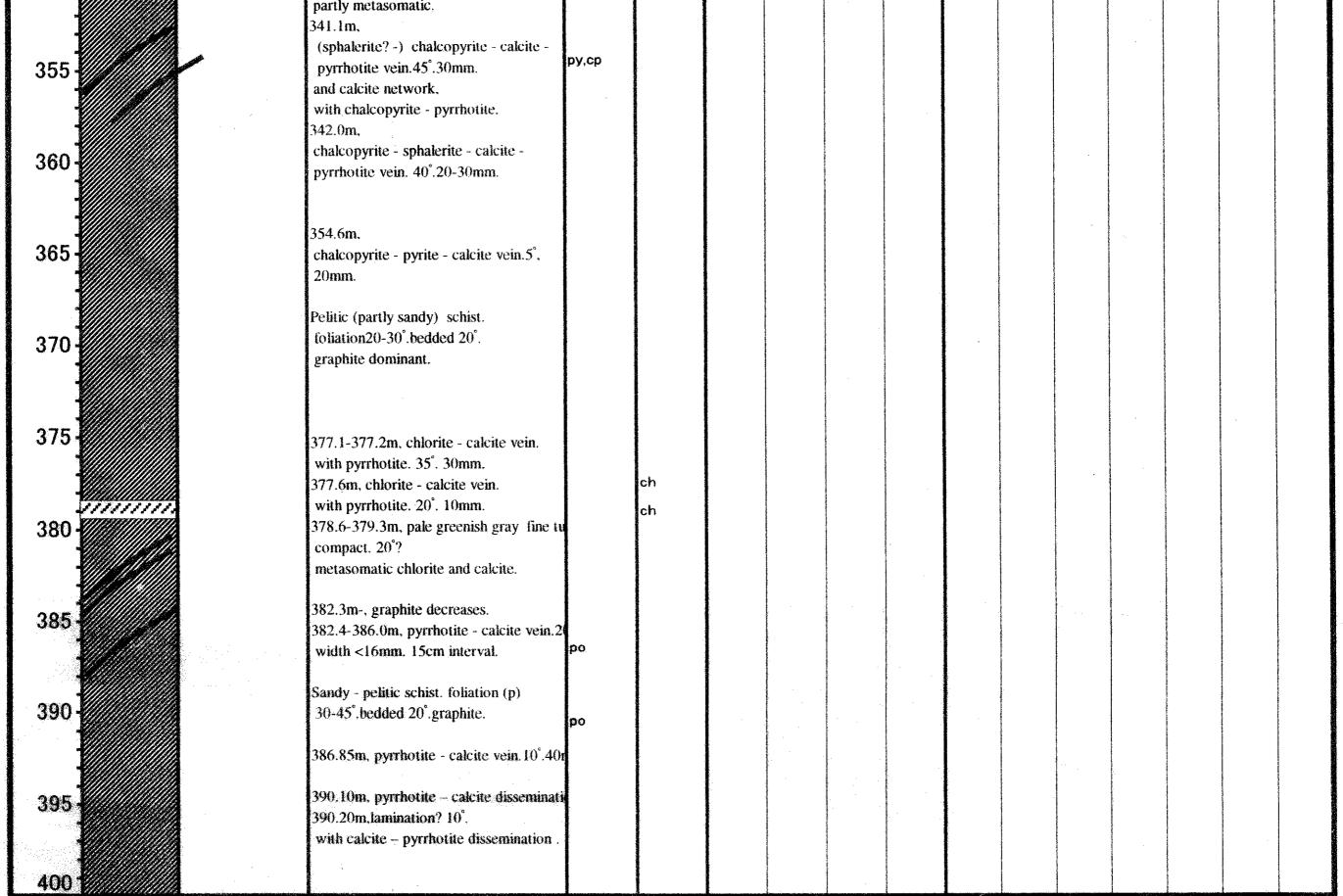
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(m) NAWE Pelitic- calcareous lamination 10-30°. foliation 20-40°.	RIPTION MINER	ALTER.	<u> </u>	SAM						AL AN			
Pelitic Schist lamination 10-30°. foliation 20-40°.	schist.		No.	FROM (m)	TO (m)	WIDTH (cm)		Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
205 with graphite.										5.26			
206.3m, pyrrhotite - calcite	veinlet. 75°. 2mm.												
215 217.1m. pyrite - ch	lorite veinlet.												
218.5m, pyrite - calcite net in fault (width 40m	am).	ch											
220- 222.5m,bedded (s sorted 229.7m-231.9m, pale greenish gray							:		•				
225 - silicified. chlorite. 230. 1m, sphalerite - chalco (-quartz) -calcite v	ein.					and the second							
230 galena? 40°.10-4 231.4m, pyrrhotite - chlorit 50°. 3mm.	e - calcite veinlet. po,cp,sp	sili,ch											
235 with barren calcit 235.0m, pyrite - calcite veit						n - Angelen - Angele							an he an
240													1
245													
250													

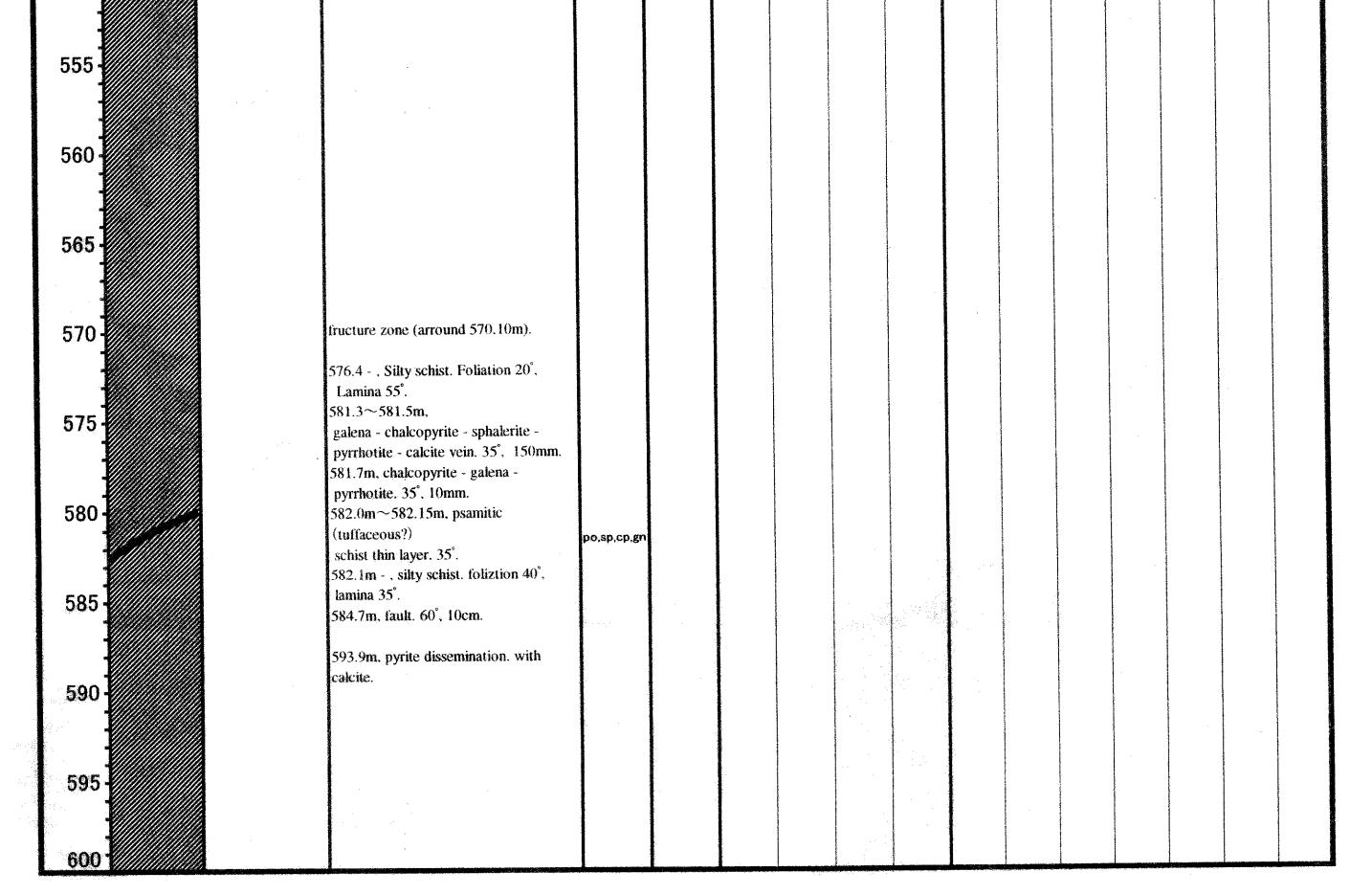


							SAM	IPLE			C	HEMIC	AL AN		IS	
DEPTH (m)	COLUMN	ROCK	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)		Ag (ppm)	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
305		Pelitic Schist	Pelitic- calcareous schist. foliation40°.bedded 10-30°. Partly calcite network. 307.0-307.3m, chlorite (-dolomite?) - calcite - quartz vein.35°.20cm.	ру	ch											
310-																
315			317.5-319.9m, pyrrhotite - calcite veins along foliation.with chalcopyrite.	ро												
320			Pelitic- calcareous schist. foliation15-50°. bedded 15-40° in general.				319.2	319.4		0.033	18.7	0.121	1.51	2.58	38.3	9.32
325			17 6	ро ро,ру,ср												
330			 327.18m, pyrrhotite - caloite veinlet. chalcopyrite.15°.width 6mm. 327.60m, 	ро,ср												ġ
335			328.00m, pyrrhotite - calcite veinlet.20°.4mm. 332.5-332.75m, chalcopyrite - pyrrhotite - calcite network. width <8mm.													
340			333.5m,	po,cp,sp? po,cp,sp			340.3	340.4		NSS	8.8	0.0792	0.145	0.226	>50	7.12
345			pyrrhotite - calcite vein.65°. 30mm. 339.8m, chalcopyrite - pyrrhotite vein.30°.40mm.													
350			340.2m-340.4m, chalcopyrite - pyrrhotite network. partly metasomatic,											s de la constante		

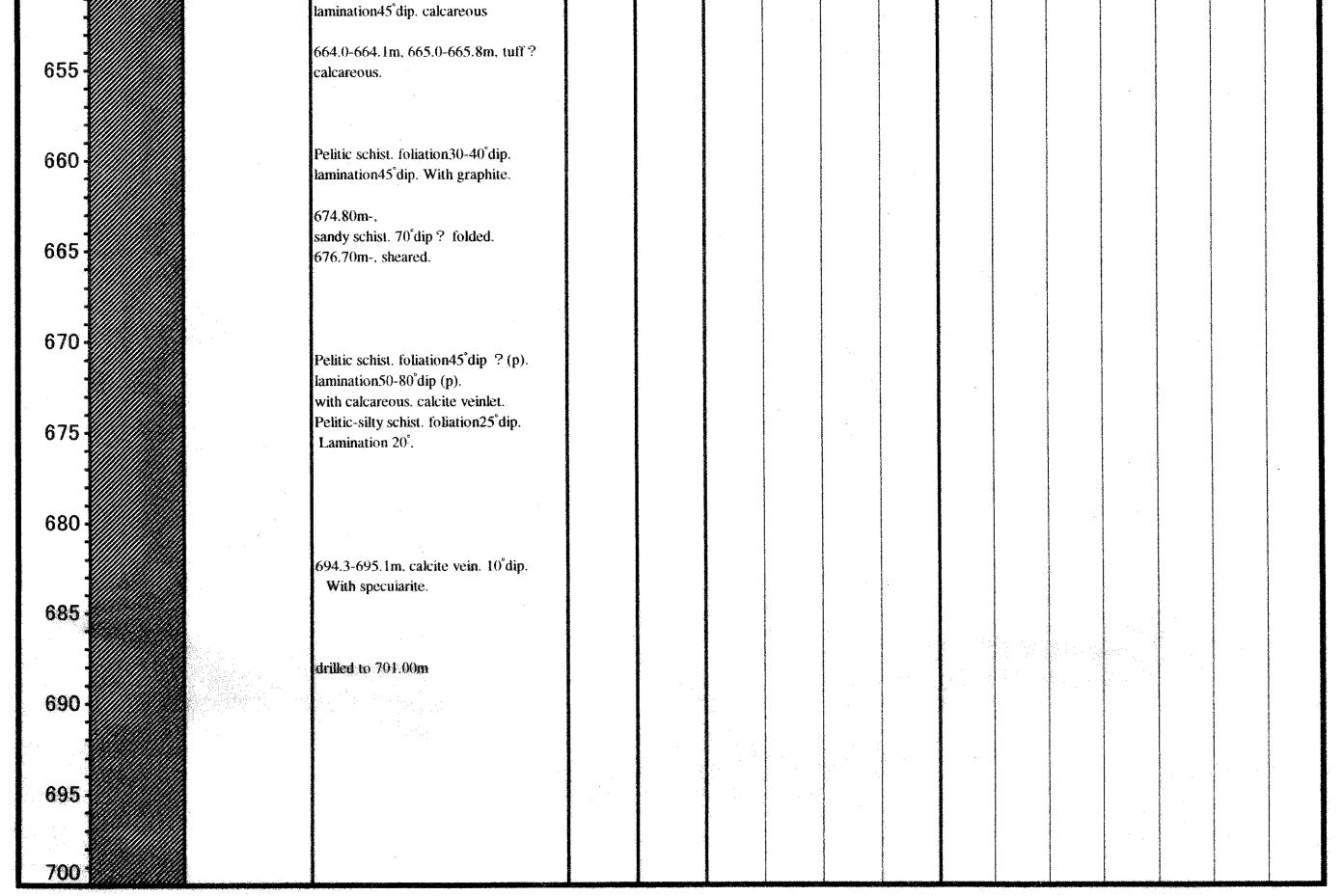


							SAM	IPLE	· · · · · · · · · · · · · · ·		C	HEMIC	AL AN	IAL YS	IS	
DEPT (m)		ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	محافظ المكاف المكاف الم	WIDTH	3	Ag	Cu	Pb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist	Pelitic schist. graphite.					(111)		(ppm)	(ppm)		(70)	(70)	(70)	\7 0 /
			foliation 10-30°. lamination 20° in general.													
40	5		404.3m,404.5m.	sp												
			(galena? -) sphalerite veinlet.25°.								-					
			2mm.										-			
41							an main and a set of the set of t									
41	5												All You and a second			
							· · · · · · · · · · · · · · · · · · ·									
42													generative for generative mapping	-		
42	5															
43	0											2	And the form of the second			
43	5												-			
44	0		449.5~459.4m,										re al a constante de la constan			
			shered zone. fault?													
44	5															
			459.4~460.0m, brecciated. dolomite ?					-								:
45			(in matrix), pyrite, calcite, quartz.													
45	5		464.6m~,													
			calcareous \sim silty schist. foliation? lamination \sim bedding 35°.													
											and a second and a s		and a sub-	anverte e da en la distante a ve		
46	⁰ ¥		468.6~469.8m.													
			fine sandy schist. with calcite veins.													
46	5		with quartz and pyrrhotite.						Andreas and a second second second							
			471.0m, chalcopyrite-sphalerite-pyrrhotite-													
·			calcite vein. 20°. 23mm.	po,sp,cp												
47			with parallel pyrrhotite—calcite veinlets.						- - -							
			472.4m,	po.sp.cp.gr			473.4	473.6		0.101	10.3	0.153	1.07	3.22	31.8	>10.0
47	5		(dolomite ? -) pyrrhotite-calcite vein. 20°. 70mm.										2.071		- * * * ****	
			473.2m~473.8m, galena—sphalerite—chalcopyrite—						-							
			pyrrhotite -quartz vein. cavities. 25°: 500mm.					Annual Annua	3							
48			with parallel chalcopyrite - pyrrhotite -				all and a second se									
			quartz veinlets. 475.6m, pyrrhotite—quartz vein. 30°.								on and the second of the secon					
48	5 🗸		20mm. 476.4m, pyrrhotite—calcite vein. 30°.					rundadi un'analer venurativa inte	and an advance of the second							
			25mm.										- -	Sur Vergenerer		
			Pelitic \sim silty \sim sandy schist .				Na Anna a Na Anna Anna Anna Anna	-								
49			foliation $10 \sim 20^{\circ}$. lamination \sim bedding folded, (generally 40°).				14 - 14 - 14 - 14 - 14 - 14 - 14 - 14 -							9. 		
			487.6m, pyrite-calcite network.				t to say that the same say that the same say that the same say that the same same says the same same same same									n
49	5		497.45~498.5m,				Add any of contrast of the second				e a contra contra de la contra d					and other a stand back to see the first of
			sandy tuff. with calcite veinlet.				1. -								******	
50							A LANGE OF CONTRACT OF THE OTHER		and a contract of the second							- an and - an - reference to a low of the second

		DOOK					SAM	IPLE		C	HEMIC	AL AN	IALYS	IS	
DEPTH (m)	COLUMN	ROCK NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist	Pelitic \sim fine sandy schist alternation. foliation20°. bedding30 \sim 40°. with graphite.												
505															
510															
515-															
520			519.4~519.6m, silty tuffaceous schist thin layer. 30°.												
525			(523.2m, silty \sim fine sandy schist . foliation40°. lamination35°.)												
530			\sim 532.2m, pelitic schist .												
535 -			533.1m \sim , pelitic schist. with graphite. 534.9m \sim , fine sandy schist . lamination30°. foliation 40 \sim 50°. lamination45°. graphite.												یک ایک ایک ایک ایک ایک ایک ایک ایک ایک ا
540			Pelitic \sim silty schist . foliation30-45°. lamination45°. with calcite veinlets. graphite.												
545			545.45m, small fault.												
550															

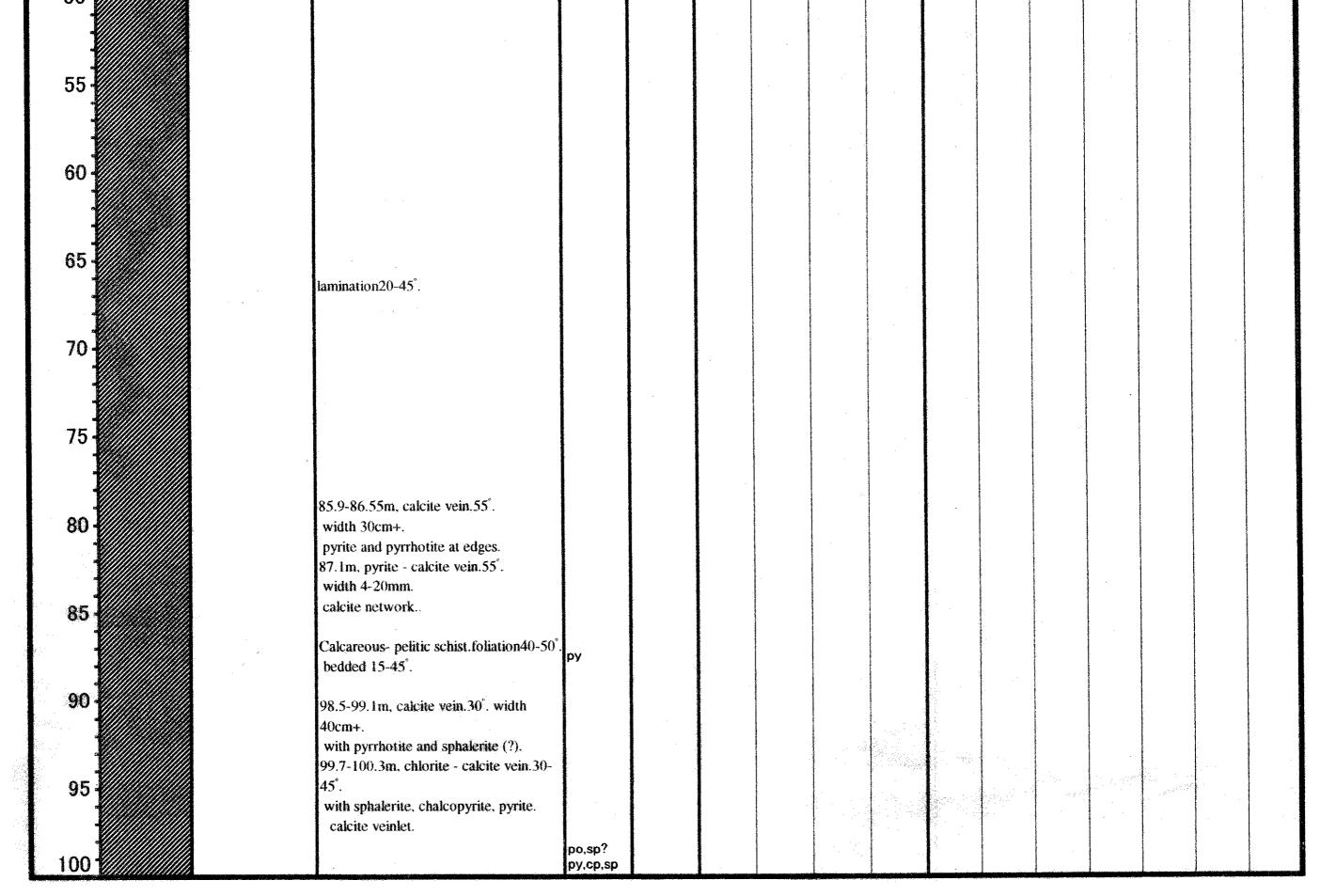


DEPTH		ROCK	·				SAM				C			VALYS	, in the state of the	
(m)	COLUMN		DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
60E			Silty-pelitic schist. foliation35° dip. bedded 40° dip. Around 607m-, silty-fine sandy schist alternation. foliation30° dip ,					annan a shara karan na								
605 -			beddwd 40°dip Silty-fine sandy schist. alternation.													
610		:	foliation40°dip. bedding 45°dip.													
			around 609m-,													
615			silty-pelitic schist alternation. foliation40°dip, bedding 50-40°dip													na video mano na video na mano
620			619.9m, calcite vein. 10°dip. 100mm 621.2m-, pelitic schist. with graphite. friable.													a
625 -			Pelitic-silty. Foliation(p) bedding 45°dip. with calcite veinlet. 621.5-628.3m, friable with graphite.													an de mar de la constante de la
630																a fa a f
635																
640																
645			Pelitic-silty. foliation30°dip. lamination45°dip. 650.20-650.65m, sheared zone. calcite network. In friable zone.													
650			pelitic-silty. foliation40-50°dip. lamination45°dip. calcareous													

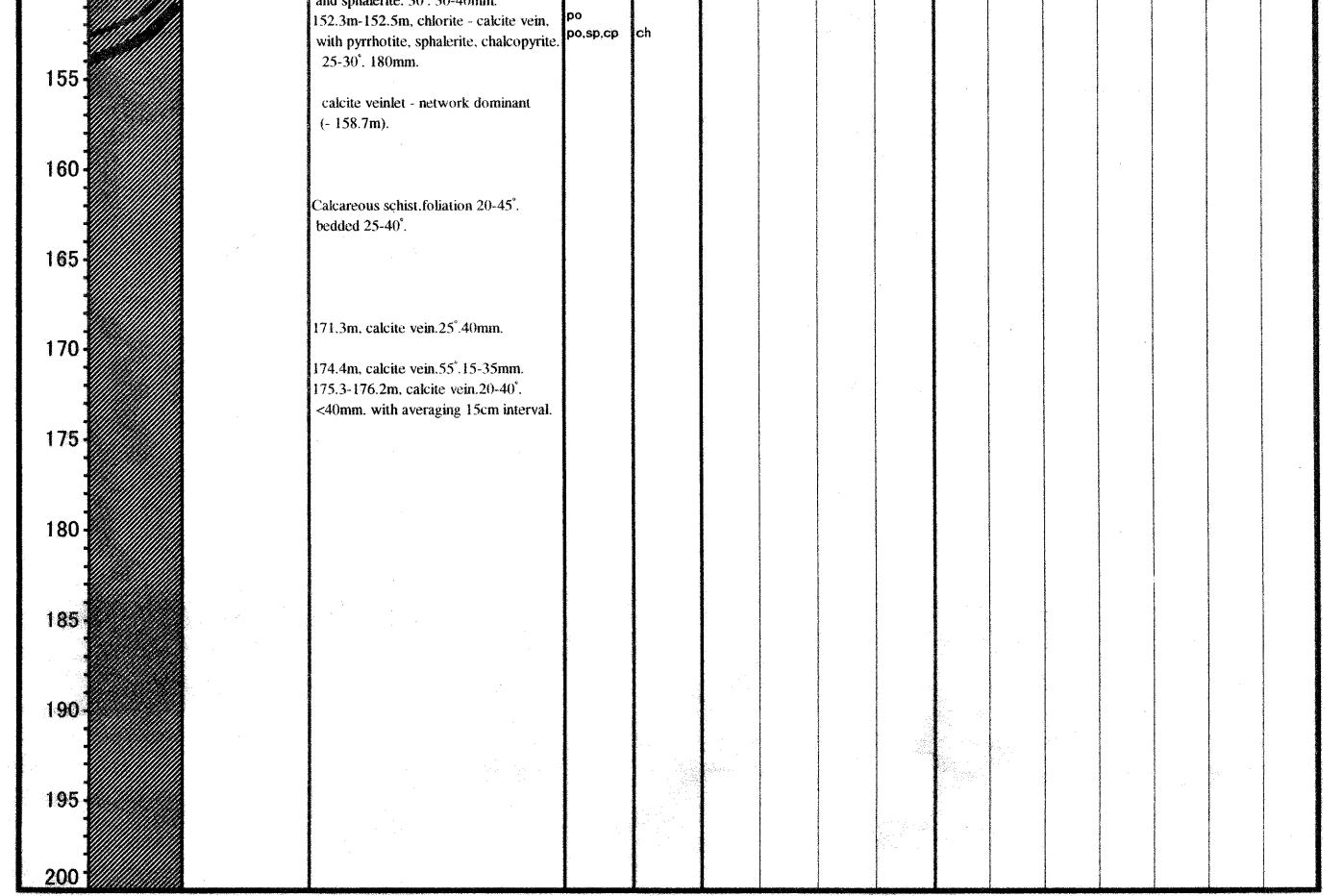


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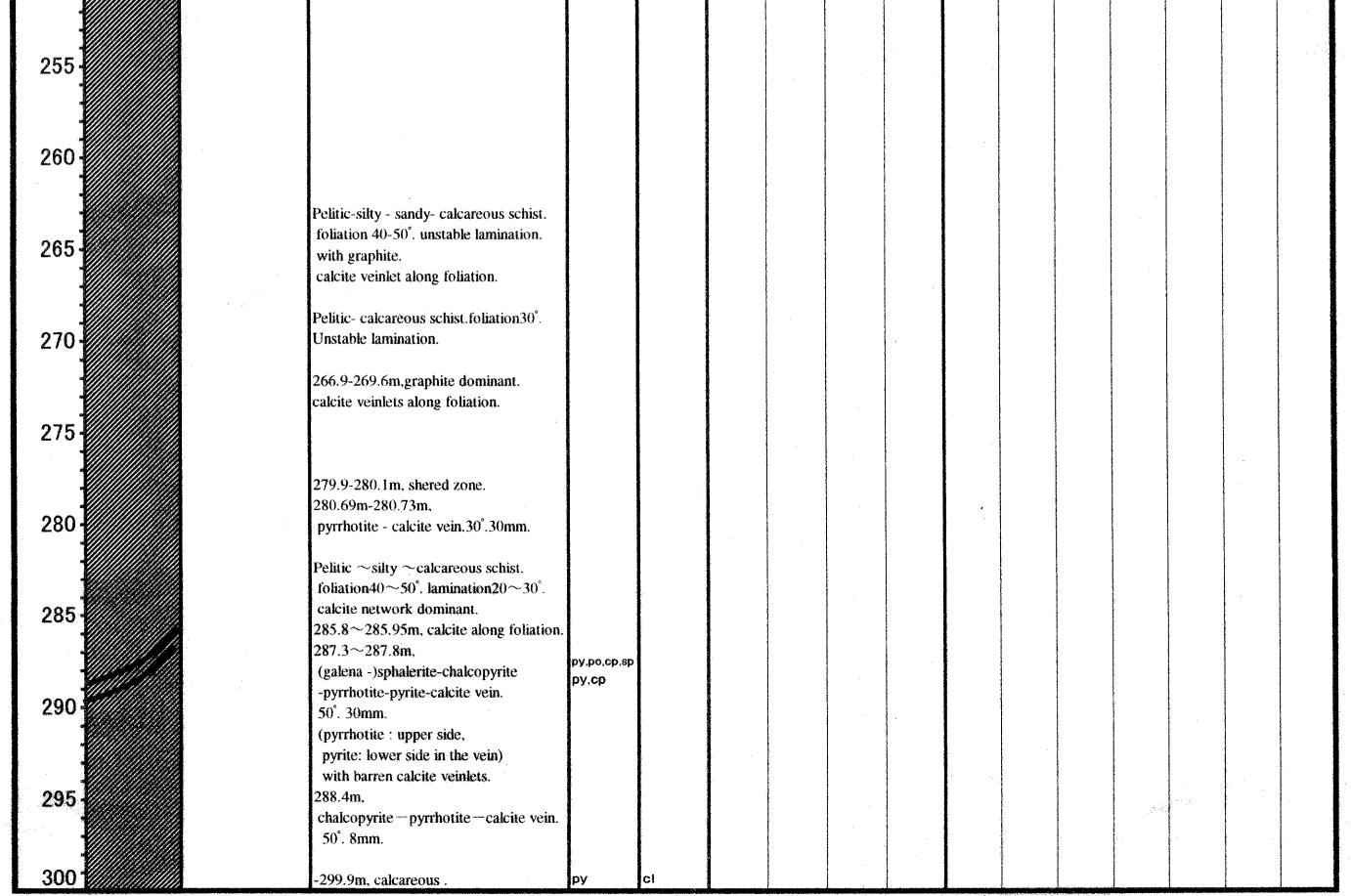
DEPTH	ROCK						IPLE			C	HEMIC	CAL AN		IS	
(m) COLUM	N NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	1	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
5		 - 2.10m, Tricon. (Calcareous schist.) 2.10m, calcareous schist5.45m, wethered. 5.45m -, foliation 45°. Limonite along foliation. 		Wethered Lim											
10		Calcareous schist. lamination 30-50°.foliation40-45°. -20.3m, oxidized. calcite veinlet along foliation							-						
15															
20															
25															
30		31.5m-, pyrite spotted. 32.3m, calcite vein.45°.10mm.													
35		36.4m, pyrite - calcite network. chalcopyrite.								n da na anna an anna an an an an an an an a	ner e se e				
40		foliation: 15-45°. bedded unstablely. calcite veinlets - networks. pyrite(<2mm)spotted.					nego de la companya en la companya e								
45															
50-								are provide the second se						a ur van yn i tri i ar taa ar ta arij wa	ł



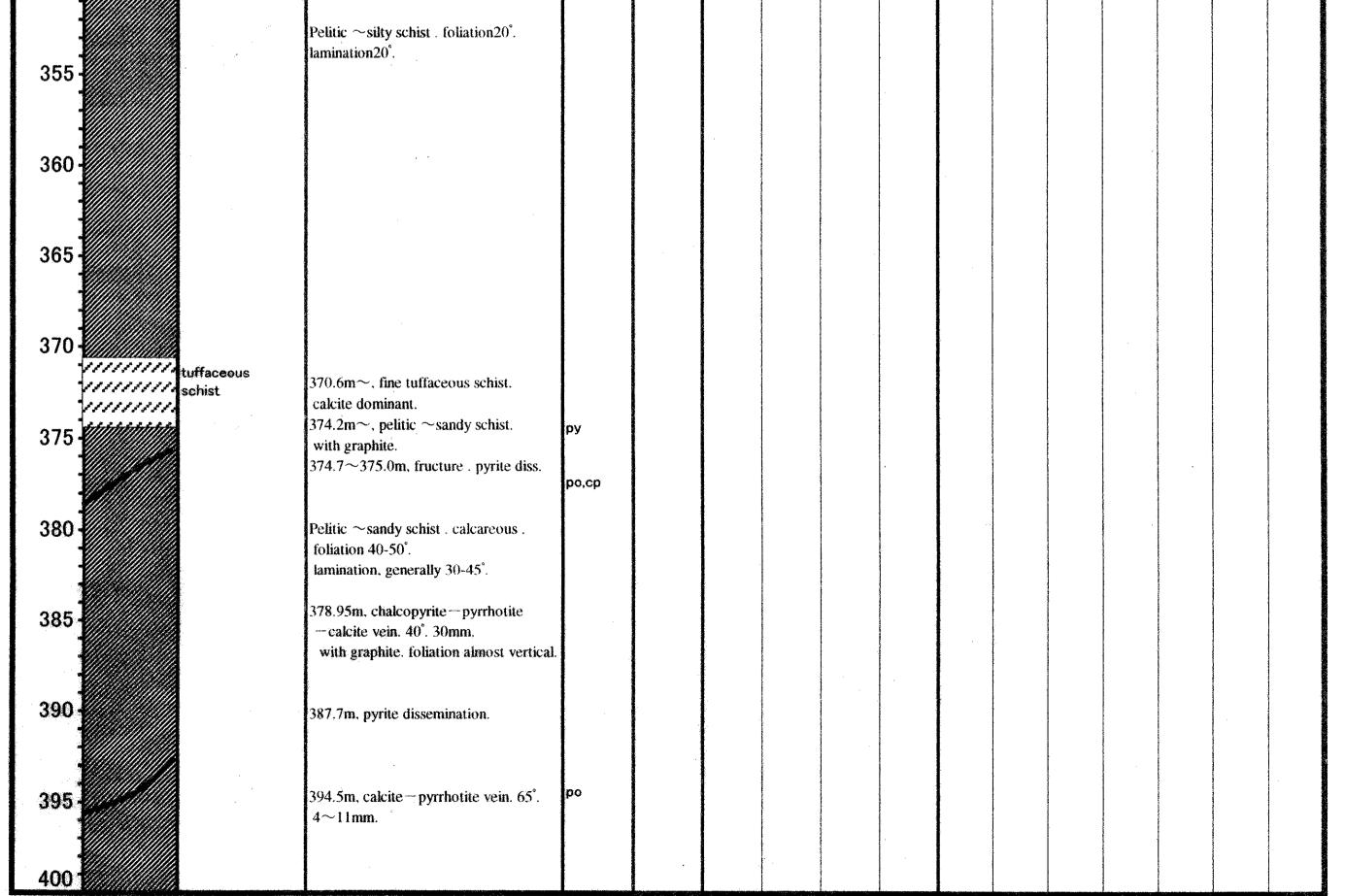
перты		ROCK		[SAM	IPLE			C	HEMIC	CAL AI	VALYS	1\$	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	то	WIDTH	1	Ag	Cu	Pb	Zn	Fe	S
							(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%
-			Calcareous- pelitic schist.													
1		1997 - 1997 -	foliation40-50°.bedded 15-45°.													
			4.													
105									2.							
1																
110			105.65-105.75m, fault. argilizated.													
110			65°, shered .													
-			108.2-108.9, calcite vein.40°.													
			with pyrite.													
115			foliation $\rightarrow 30^{\circ} \rightarrow 40^{\circ}$.													
-																
1																
120																
]			124.7-126.0m, 1cm-6cm interval,													
			along foliation.													
125			pyrrhotite - calcite vein. 35 -40°.						2							
-																
-			Calcareous - sandy - pelitic schist.													
130			foliation 35-40°. bedded 15-40°.					- 								
1307			with calcite veinlets.			•										
						-										
1																
135									-							
1																
]															-	
													- -		2 	
140																
1																
-		•	143.75-144.40m, chlorite - calcite vein.													
145			40°, 50cm.													
145										l	- 					
										l						
1																
150			151.05m, calcite vein. with pyrrhotite													
			and sphalerite. 30 [°] . 30-40mm.							l		-	ļ			



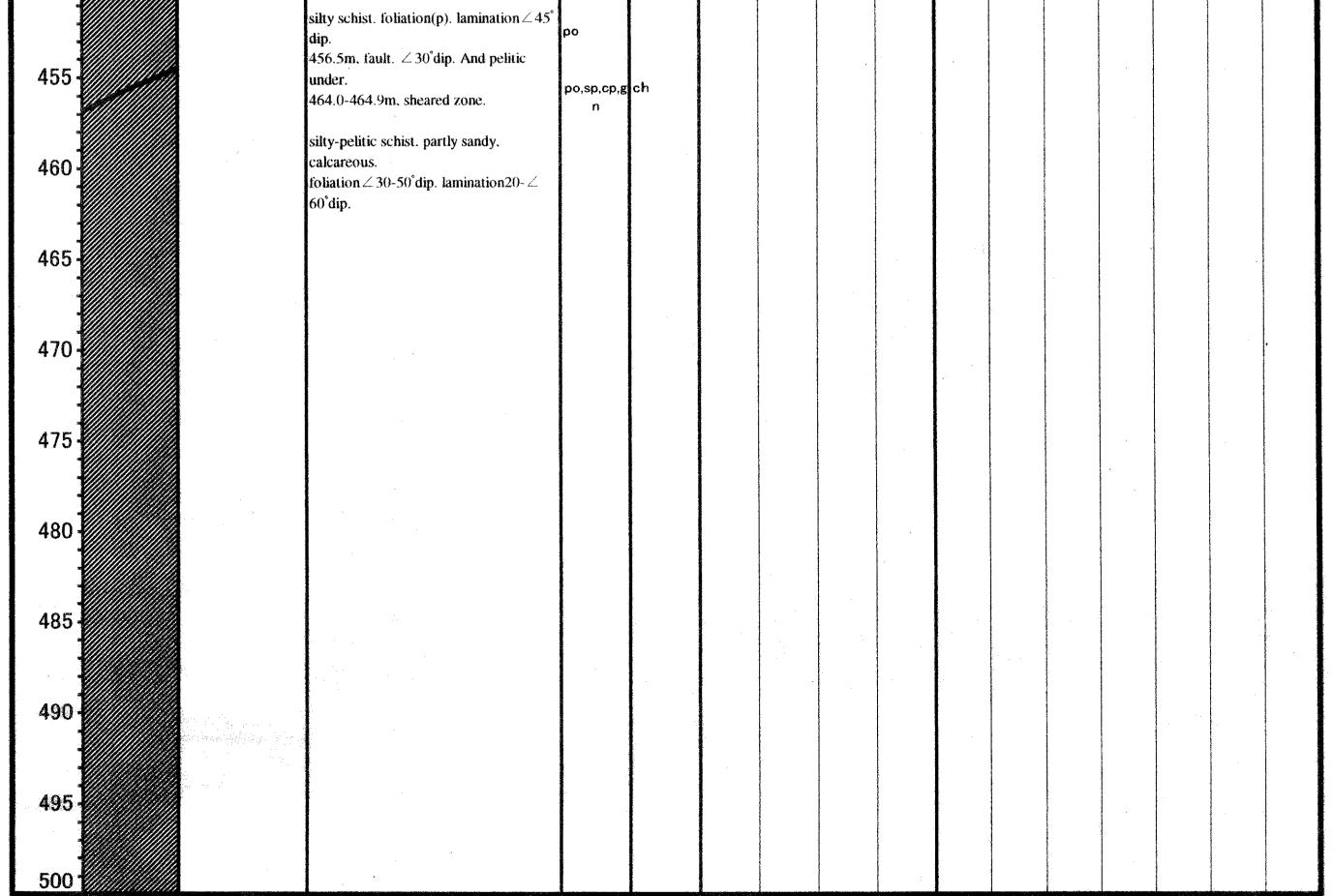
DEPTH		ROCK	a na baran ang ang ang ang ang ang ang ang ang a				SAM	IPLE		· · · · · · · · · · · · · · · · · · ·	С	HEMIC	CAL AN	ALYS	IS	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	£	Ag (ppm)	Cu (%)	Рb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist	Calcareous schist. foliation 35-45°. bedded 25-45°.													
205																
210																
215			213.00-216.00m, chlorite - calcite vein. 30-45°.250mm. 215.9m, calcite vein.45°.10mm.													
220																
225			Pelitic-silty - calcareous schist. foliation 40-60°. unstable lamination.													
230			229.9-230.0m, sphalerite - pyrrhotite veinlet. 0-20°, 5mm. with calcite.	po,sp												
235			 233. Im, calcite vein.40°. 30mm. pyrrhotite. 233.3m-233.5m, calcite, chlorite, pyrrhotite.40°, along foliation. partly with sphalerite, chalcopyrite. 	ро	ch											
240			241.1-246.2m, calcite veinlet. with pyrrhotite. 60°. 4mm. along	ро												
245			foliation. 246.3m, pyrrhotite veinlet - diss. 65°.	ро												
250			w:3mm, along foliation. 247m, foliation $\rightarrow 20^{\circ}$.						· · ·							



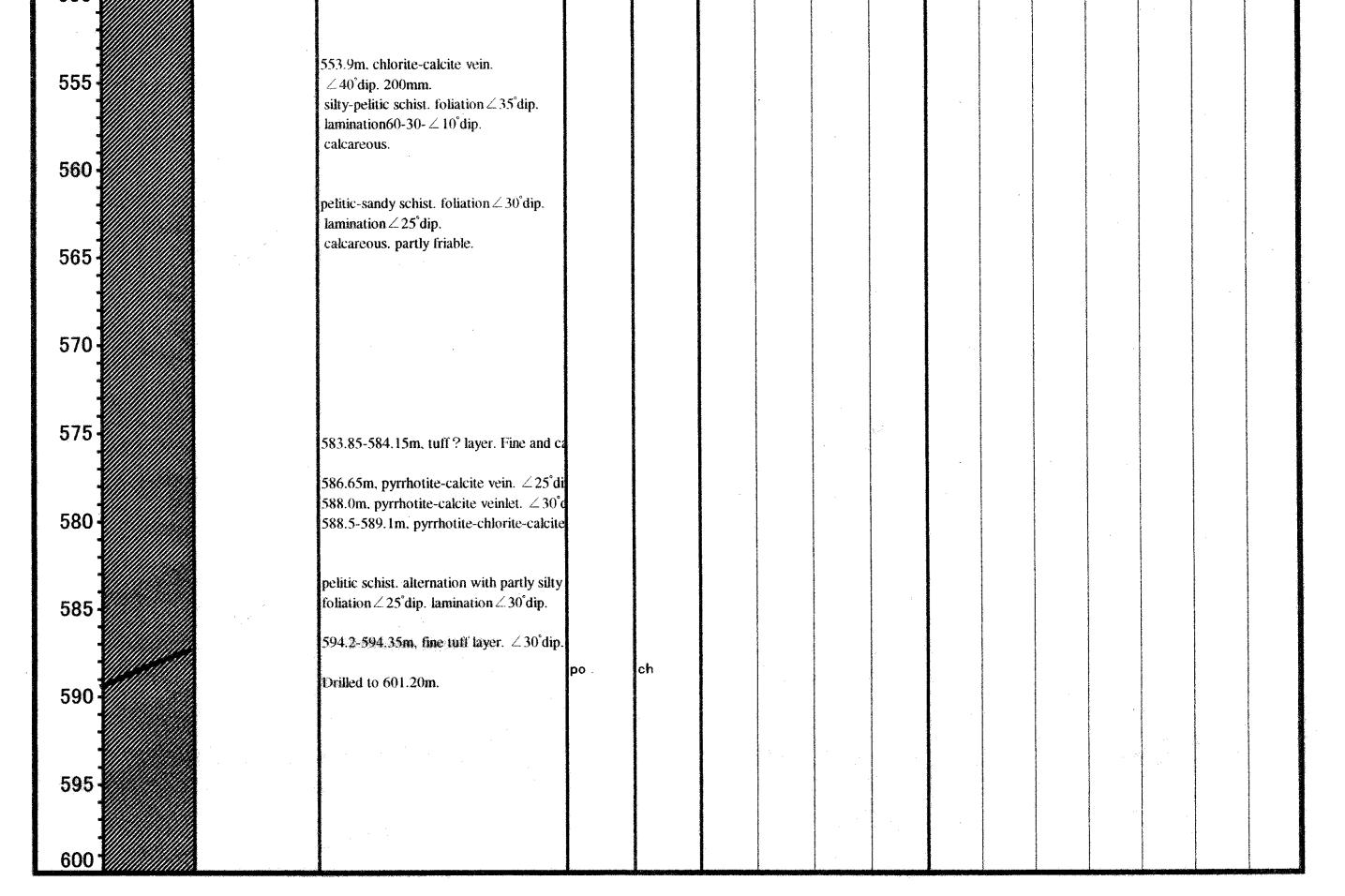
DEPTH		ROCK	an an an an an ann an ann an ann ann an				SAM	IPLE		С	HEMIC	CAL AI	VALYS	IS	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist	Pelitic ~silty ~calcareous schist.	Py	Chlorite										<u></u>
			foliation 50°, bedding $10 \sim 30^\circ$.												
			calcite network \sim veinlets. with												
305 -			graphite.												
1			305.25~305.45m, sandy schist.												
1			bedding 10°.												
-			306.6m~, shered zone.												
310			Pelitic \sim silty schist												
			- 312.3m, shered zone.	1		5 2									
l	//////////////////////////////////////		312.4~313.8m,												
-			tuffaceous \sim sandy schist.		sili								-		
315-			calcite. silicified.												
-			313.8 \sim , pelitic \sim calcareous schist.												
1			foliation 30°. lamination 25°.												
3			317.85m. calcite vein. 70°.												
320			10mm. with pyrite.												
-															
			Pelitic \sim silty schist.												
1			foliation 15~20°.												
325			Unstable lamination (10°?).												
			with graphite calcite networks.												
-			1 foliation stars on (225.2m.25°)												
-			\downarrow foliation steeper, (335.3m 35°).												
330															
330 1			Pelitic \sim silty schist . foliation 45° (p).												
-			lamination 10° in general.											ļ	
-			with graphite.												
335-															
330															
-															
240				1											
340															
-															
												,			
345															
1			343.3~343.5m,												
-			fine tuffceous \sim silty layer.												
			25°. calcite dominant.												, i
350-															
3301															



DEPTH		ROCK	ан талан талар тара тара тара тара тара тара тар					IPLE				CAL AI			
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		Pelitic Schist	pelitic \sim silty schist . 406 \sim 407m, lamination folded. Partly 70°. \downarrow 45°.												
405 -			Foliation (p). Lamination 45°?.												
410			calcareous. With graphite.												
415															
420														-	
425															
430 -															
435 -			Foliation 40°. Lamination 25°, folded. calcareous with graphite.												
440			 440.75m -, calcité - chlorite vein, 45°, 90mm. 452.2m, pyrrhotite diss veinlets. 452.2m - , medium sandy scist (-tuff?) 		ch										
445			455.3m - 455.6m, galena - chalcopyrite - sphalerite - pyrrhotite - chlorite - calcite vein. 35°, 20cm.												
450-			455.8-, pelitic - silty schist												

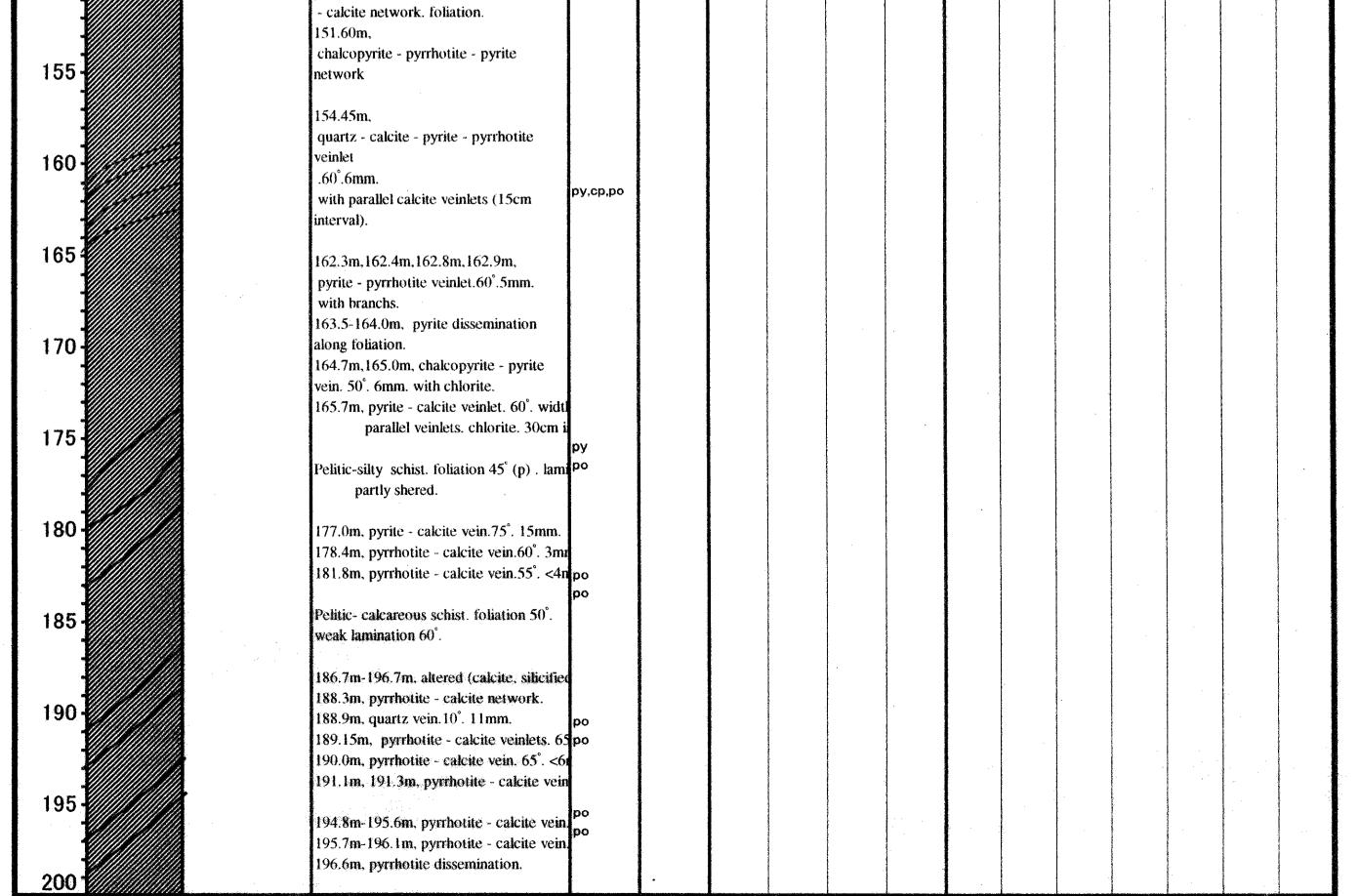


ЕРТН		ROCK	ан ан ул				SAM	PLE			C	HEMIC	CAL A	VALYS	IS	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	TO	WIDTH		Ag	Cu	Pb (%)	Zn	Fe	S (N)
		Dalitia Cabiat	Silty-pelitic schist. partly sandy,				(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%
		renuc ocinst	calcareous.													
			foliation \angle 30-50° dip. lamination 20- \angle													
			60°dip.													
505																
			501.8-502.2m,													
			chalcopyrite-sphalerite-pyrrhotite-													
E to			calcite vein.													ł
510			along foliation. $\angle 50^{\circ}$ dip. 160mm.													
J			Sulfidee are anhedral to calcite	po,py,sp,cp											-	
			With parallel veinlets.	py,po,sp,cp	ch											1
			an no in													
515			foliation \angle 50° dip. lamination \angle 35° dip.	ру						-						
-																
			511.3m,													
1			chalcopyrite-sphalerite-pyrite-pyrrhotite													
520			-calcite vein.													
			along foliation. $\angle 35^{\circ}$ dip. 30mm.													
- F			511.55m, chalcopyrite-sphalerite-													
			pyrrhotite													
FOF			-pyrite-chlorite-calcite vein.									1				
525-			$\angle 40^{\circ}$ dip. 35mm.													
1			511.7m, sphalerite-pyrite-pyrrhotite-													
I			calcite vein.													
Į.			∠25°dip. 20mm.													
530			514.0-514.5m, fault. ∠45°dip?													
-			pyrite dissemination.													
			silty-fine sandy schist.													
Ĩ			foliation $\angle 30^{\circ}$ dip (p). lamination $10-\angle$													
535			60°dip.													
~~~ <b>I</b>			silty-fine sandy schist.							-		ł				
ł			foliation(p). lamination20- $\angle 70^{\circ}$ dip.													
ť			partly friable.													
EAO			silty schist. calcareous.													
540			foliation $\angle 20^{\circ}$ dip. lamination $\angle 20^{\circ}$ dip.													
I				1												
- <b>1</b>										1				-		
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DEPTH		ROCK						IPLE					AL AN			
(m)	COLUMN	NAME	DESCRIPTION	MINER	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Рb (%)	Zn (%)	Fe (%)	S (%)
		n an	( - 109.6m, Tricon)		Wethered											
			Cenozoic sediment.		Lim											
5			Sand and gravels with soil and limonite.													
4																
10-																
1																
15														and and a second se		
4														an a		
4															u Selan and a second	
20									ange an ann an							
1								ili ve nyu - teoriet							-	
25																
1																
1								- - - -								
30		an a														
35									an a						u strange alle and alle alle alle alle alle alle alle all	
4									11.55 - 12 - 1-2 - 12 - 12 - 12 - 12 - 12 -		La maio de la contra					
40																
1																
45									ar fan		2 Vorman - Van 2000 - Van 200					
															ar	
_																
50 -		<i>,</i>														
1																
55																
															voni v vran	
												a an				j. 
60																جاوية الجاري والمراجع
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65-																
00]												ar - La fa - La				
70																
											And the second se					
75																
. /0]																
80													-			
0E																
85 -												na go na guna an a	-			
-																
90-		e de la composición d														
5																
							un									
95 -																
-	1														1	

DEPTH	Conversion of a state of the second state of the	ROCK					SAM	PLE		2	C	HEMIC	CAL A	NALYS	SIS	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH		Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
a sayan sa na njasi na mananan sa sa sa sa			- 109.6m, Tricon.					71417					1 (10)	<u>\/9/</u>		
-	\ /			1	Lim.						Ì					
	\ /		Sand and gravels with limonite.													
105	I X I	••	· · · · · · · · · · · · · · · · · · ·													
-		· .								l.						
	/							,								
	/ N												ŀ			
110-	0000		109.6m-, core drilled.													
			Cenozoic sand and gravels													
-	$\begin{array}{c} \circ \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$		(-conglomerate).													
115-	$\circ \circ \circ \circ$		Gravels: pelitic schist, sandy schist,													
	$\begin{array}{c} \circ \circ \circ \circ \\ \circ & \circ \end{array}$		tuffaceous schist. <35mm. matrix: sandy with limonite.													
	0000			<b>[</b> .				· · · ·								
	$\circ \circ \circ \circ$															
120-	$\begin{array}{c} \circ \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$															
	0000															
-	$\begin{smallmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ \end{smallmatrix}$															
125	0000															
	0000		123m-, Boulder gravels													
-	$\begin{array}{c} \circ \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$		(weathered gabbro?).							l						
	0000		Partly magnetic. partly foliated. with limonite,													
130-	$\begin{array}{c} \circ \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$		calcite and clay mineral in matrix.													
-	0000															
	0000															
	$\begin{array}{c} \circ \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$															
135-	0000															
	$\circ \circ \circ \circ$															
•	$\begin{array}{c} \circ \circ \circ \circ \\ \circ \circ \circ \circ \end{array}$															
140	0000		142 Sm													
· · · ·	$\begin{smallmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ \end{smallmatrix}$		142.5m-, pelitic-silty schist. foliation,60-70°.											l l		
	0000		Ustable beddeing -lamination.													
145 -			-148.6m oxidized (weathered) zone.													
		1	149.05m, pyrrhotite - calcite veinlet. 55°.													
-			width <5mm.													
150-			151.20m, chalcopyrite - pyrrhotite -													
150			pyrite	1												
	VIIIIIIIIIIIIIII		calcite network foliation	8	8		1		1	<b>a</b>	1	I.	1	1	1	1



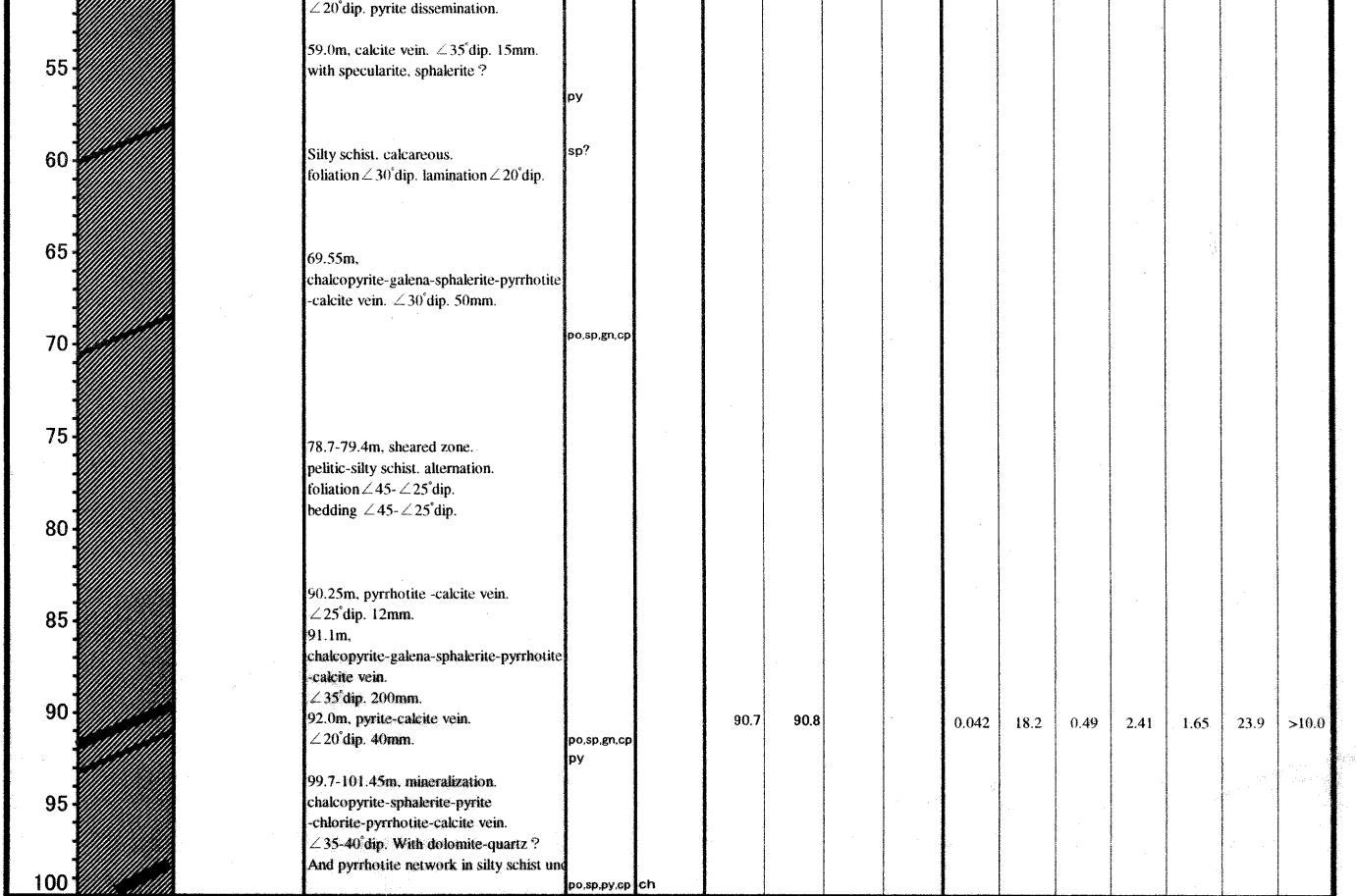
EPTH		ROCK		[			SAN	IPLE		ľ	С	HEMIC	CAL AN	<b>JALYS</b>	S	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	1	WIDTH		Ag	Cu	Pb	Zn	Fe	
			Calcareous- silty schist. graphite.				(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	
		Pelitic Schist	Partly tuffaceous. foliation 45°.	po	ca											
-			lamination 20-70°.													
205		-	201.2m, pyrrhotite - calcite vein 5°. 23mm, lamination 70°.	ро			-		- - - -	× .						
200			205.1m, pyrrhotite - calcite veinlet.				landar and a second									
			60°.5mm.			ŧ.										
			210.7m, chalcopyrite – pyrrhotite	· ·												
210-			dissemination, along foliation. calcite. silicified?	cp,po	sili?				-							
			213.0-213.3m,													
-			chalcopyrite - pyrrhotite - calcite	cp,po												
215			network.									-				
- · ·			220.5m-224.0m, tuffaceous psamitic schist.									-				
			Unclear foliation and lamination.					renta aleren di Antonio e qu								
			220.6m, calcite vein.55°. 12mm.					· ·								
220			221.0m, chałcopyrite - pyrrhotite - całcite vein.													
-			40°.40mm.	ср,ру												
]			1	cp,sp,po												
225 ·			vein. 65°. 40mm.					an curu a cu								
*			222.8m-222.9m,													
-			chalcopyrite-sphalerite-pyrrhotite-	l												
230-			calcite vein. 50°.90mm.				- -									
200			in pyrite dissemination zone									-				
1			and sphalerite - chalcopyrite - pyrrhotite									]				
			network.	ру												
235-			223.5-223.9m, Dolerite dyke. 60°. Pyrrhotite - diss.													
-			Nonmagnetic.		1											
-			224.0m-,silty - fine sandy schist.													r
240			tuffaceous? greenish by chlorite.													
-			224.7m, pyrite - pyrrhotite network.													
-			234.0m, foliation pyrite - calcite veinlets.				- 									
045			along foliation. 50°.	ру												
245			234.50m. pyrite - calcite vein.50°.<30mm.													
			with pyrite - calcite network.						- - - -							
1																
250-			Calcareous-silty - sandy schist.foliation5 lamination40-90°.													
•			Calcite veinlets along foliation.													
-				ср,ро ср,ро												
255			244.0m - , pyrite - calcite veinlet. 60°. 1mm. 20cm interval.	- Pipe												
200			246.5-246.7m, pyrrhotite - calcite netwo				256.7	256.8		0.15		0.577	0.0257	0.0218	38	
			247.4m, calcite - pyrite vein. 65°. 5mm.				200,7	200.0		0.15		0.517	0.02.57	0.0210	96	
-			248.55m, small fault. 60°. 20mm. breccia	ср,ро												
260 -			-250.3m, pyrite - calcite veinlet, 60°. 10cm interval.	CP,90							ran e					
			252.9m,									2				
-			chalcopyrite - pyrrhotite - calcite vein.		-											
265			40°. 50mm. 253.5m,					-								
			chalcopyrite - pyrrhotite vein.60°.													
			width <6mm.					n n n n n n n n n n n n n n n n n n n			and an					
			255.1m,					el/valuere site								
270			pyrite - pyrrhotite - calcite network. Pyrrhotite - calcite veinlet. 60°.													
			width <1mm, 10cm interval.					- Property careful and								
			256.2m-257.9m, pyrrhotite dissemination	I												
275-			with chalcopyrite. silicified. 259.1m-,										****			ļ
			chalcopyrite - pyrrhotite - calcite netwo	I				ar renfer disk ar sin f	-							
			silicified. Partly chlorite.													
280			↓ More silicified. hard. calcite network.						-				· ·			
200			Calcareous $\sim$ silty schist , hard.													
•			foliation 50°(p). calcite network													
			285.8m~287.4m,													
285			chalcopyrite—calcite—pyrrhotite vein~ 90°. width<70mm. cavity.	cp,po										an chuirean an		
			-288.3m, Pyrrhotite network. partly chlo												**	
			and (chalcopyrite -) pyrite - chlorite -	ро,ср	ch			-								
290			along foliation 65°.	-		ĺ							n L			********************
and a set of the set o			Silty $\sim$ calcareous schist	ро							ar a c i - t Manara			*		
-			silicified. calcite veinlet. foliation $50 \sim 70$	I. S.					-		an a	F				
			lamination unstable (p).	po	ch											
			292.85~292.95m.	T .		1	t	ł	1	1		l I	1	-	ł	
295				d		l										
295			pyrrhotite-calcite-quartz vein. 60°. 4 293.1~293.3m,	( py												

DEPTH		ROCK						IPLE	1					VALYS		
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)		Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%
		<b>Pelitic Schist</b>	Silty -calcareous schist												Madada ana ang ang ang ang ang ang ang ang an	
j			silicified. calcite veinlet. foliation50-70° (p).													
1			lamination unstable (p).	ро												
305			303.1m, calcite-pyrrhotite vein.													
]			50°. width<11mm. network like.				daga na sa									
			303.75m, pyrrhotite vein. 10°. 6mm.	po,py												
			303.9m, pyrrhotite vein. 50°. width<4mm.	ро,ру												
310			304.75m, pyrrhotite vein. 40°. 3mm.													
			307.65m, calcite-pyrrhotite vein. 30°.	ру												
1			4mm.													
315			308.5m-, sandy schist,													
			pyrrhotite-pyrite diss. along foliation (50°). silicified.	ро	ch											
1			311.0m, calcite-pyrrhotite vein.													
1			40°. 3-10mm.	ро,ср	ch											
320-			311.05m, pyrite-calcite vein.				100-100-100-100-100-100-100-100-100-100									
			45°. width10mm.				a managa kan ja ang									
- 1		2	silty schist.													
005			foliation65°. lamination55°.													
325			chlorite. tuffaceous?													
]			315.5m, calcite-pyrrhotite vein. 30-50°.													
			10mm.													
330-			315.9m, pyrrhotite vein. 50°. 8mm.	ру												
3301			316.75m, pyrrhotite-chlorite-calcite network													
			pyrite-pyrrhotite networks.													
1			318.0m, chalcopyrite-pyrite vein. 50°.													
335-			4mm.	ро,ру												
			318.2-319.1m, shered zone.													
. ]			319.1-, silty schist . foliation 50°. lamination60°. Partly chlorite.													
-			321.8m, calcite vein. 70°. 32mm. with					, ,								
340 -			dolomite ?	ру												
]			325.5m, pyrite-calcite network.													
			329.7m, pyrite-calcite veinlet. 60°. 7mm.	ро,ру				1. UP 11. 1 . 1								
245			pyrite sissemination along foliation. $\downarrow$ foliation steeper (65°).													
345			334.9m, (pyrite-) pyrthotite vein. 60°. 8r	cp,sp,po,py												
-			337.75m, pyrrhotite veinlet. 60°. 3mm.													
1			339.1m, pyrrhotite-calcite vein. 50°. 9mr	r	l											
350-			340.5m, pyrite vein. 50°. 8mm. chlorite.													
			342.3m, pyrite-pyrrhotite vein. 50°. 6mm with calcite. chlorite.													
			Silty -fine sandy schist . foliation $50^{\circ}(p)$ .				ļ									
]			lamination70°?													
355-			343.25m-343.30m,		1											
1			calcite-pyrrhotite-pyrite veins. 50°. 6mr	I	1							ļ				
-			344.4m,	00.01			358.6	359.0		0.322	1	0.216	0.0211	0.0182	20.6	7
360			pyrrhotite-pyrite-calcite vein. 50°. 8mm 345.1m,	P0,PY			000.0	000.0		0.524		0.210	0.0211	0.0102	29.0	'
300			(sphalerite-chalcopyrite-) pyrrhotite-pyr													
-			55°. 12mm.													
1			346.5m, pyrite vein. 50°. 6mm.													
365			346.7m, calcite-pyrrhotite vein. 55°. 30n	3												
-			355.1m, chalcopyrite-calcite-pyrrhotite v 50°. 10mm.													
			355.3m,													
			chalcopyrite-calcite-pyrrhotite network.													
370-			356.9m, calcite-pyrrhotite network. 65°.													
	Y/////////////////////////////////////		357.3m,													
			chalcopyrite-pyrrhotite vein. 60°. 4mm. 357.6m, pyrrhotite vein. with calcite. 65	3												
			358.0m.	1												
375	Y/////////////////////////////////////		(chalcopyrite-pyrite-) pyrrhotite vein. w	/				1	i.	1	-					-
			65°. 9mm. with branchs.													
•			358.75-362.0m,	]												
380 -			silicified fine sandy schist. mineralizate				and the second se		-	1		Anna an Anna				
			(sphalerite-) chalcopyrite-pyrite-pyrrho network-dissemination.	1												
			pyrite, pyrrhotite, chalcopyrite, quartz							]						
-	V/////////////////////////////////////			1									an chan an a			
385 -	V/////////////////////////////////////		Silty -fine sandy schist foliation 50° (p)							1						
	¥/////////////////////////////////////		white altered. chlorite-pyrrhotite-calcite	1	-										-	
	~0/////////////////////////////////////		382.3m-386.0m, micro-diorite? dyke. 7	)								an a				
Ľ	<i>Y////////////////////////////////////</i>	- · · · · · · · · · · · · · · · · · · ·								I	to construct the second se				-	
			calcite-chlorite veins.	-	1	I	1	I		ł	1			1		
390									1							
390 -			Fine sandy schist -pelitic schist alternation	)								* 24 19 19 19 19 19 19 19 19 19 19 19 19 19	a constant and the second s			
390				9									na pône ana mar "ar "Ar Angela (Ar Angela) an			a papar na falancia e por una se functión en un de terre
			Fine sandy schist -pelitic schist alternation quartz crystal along foliation.													n por com a subject da com por como en a forma de la como de c
390 395			Fine sandy schist -pelitic schist alternation													a para sebaga na a un promo d'ancio e nada ser a tanto e de de la como de la como de la como de la como de la c
			Fine sandy schist -pelitic schist alternation quartz crystal along foliation. Silty -tuffaceous schist . foliation 45°. la	n												a prime de la constante en la constante de la c

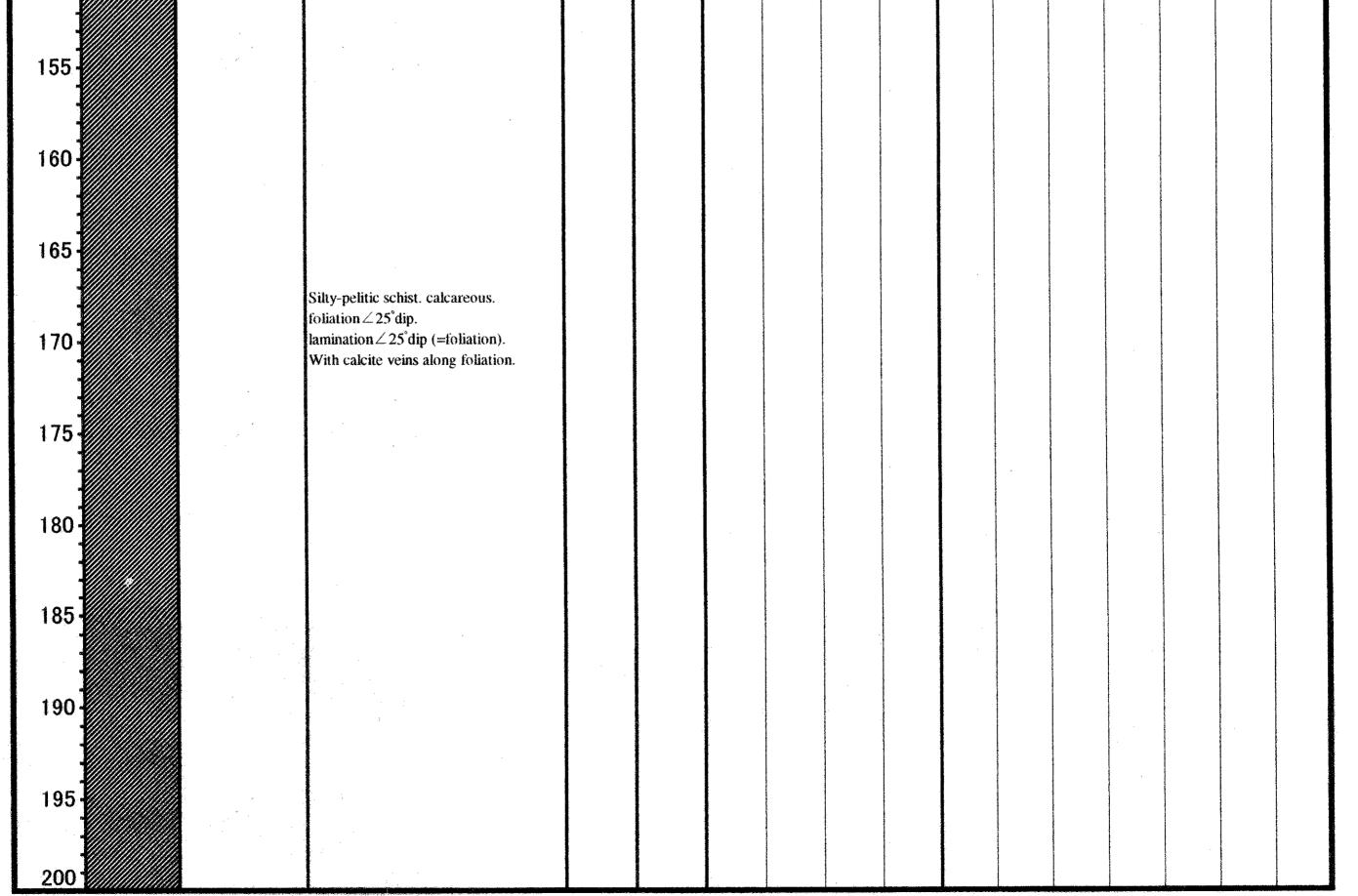
PTH	1	ROCK					SAM	PLE			С	HEMIC	AL AN	IALYS	S	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH	Au (ppm)	Ag (pom)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
		^D elitic Schis	Silty -fine sandy schist .													
-			406.2-406.3m, pyrite-calcite vein. 70°.					-								
			100mm. foliation60°. lamination70°.													
405			406.3m-, silty -tuffaceous schist alternation.						n e comercia de							
			silty schist dominant.	ру			-									
			Dolomite-calcite veinlet.													
410																
			421.4m-,					-								
415			chalcopyrite-pyrrhotite-calcite vein.													
4			65°. 100mm. 423.7-,													
			tuffaceous schist. lamination55-60°.				Anno a state of the state of th									
420			with silty schist -pelitic schist thin layer.	1												
1			-431.7m.	рө,ср					87-11-11-11-11-11-11-11-11-11-11-11-11-11							
	//////////////////////////////////////		tuffaceous schist -fine sandy schist . 431.7m-,													
425	11111111		silty -fine sandy schist. foliation45°.													
	///////////////////////////////////////		bedding45°.													
	11111111		443.35-443.45m,													
430-	//////////////////////////////////////		(calcite-dolomite-) quartz vein.													
-			10°. with pyrite. $\downarrow$ lamination, 60-65°. chlorite.													
9 1			446.7m, pyrite diss-network.					- - -								
435-			448.2-448.8m. calcite-quartz vein. 10°. foliation 60°. lamination 45°.									and a second	annu ann			
													- en esta de la companya de la comp			
-0			451.2m, pyrite dissemination.									a for a second and a	- Alexandro er annan a characharacharacharacharacharacharach			
440			459.35m, chlorite-calcite vein.				1									
2			20°. 60mm.													
4 												rom herbete to gardente				
445			463.4-468.6m, pyrrhotite diss(f). with													
			calcite.													
											-					
450			472.3m, chlorite.													
3			473.35m-473.80m, chalcopyrite-pyrite-pyrrhotite veinlet.									r - Arran Barra				
· ···· ···			50°.													
455			width<20mm. with calcite and chlorite. 475.5m, lamination65°.													
			pyrrhotite dissnetwork							c			-			
4 4			476m-, lamination50°.		ch											
460		-	478.4-478.6m, pyrrhotite network. 479.2m, pyrrhotite dissnetwork.													
1			479.4-480.8m,												and a first free of the second	
			(chalcopyrite-) pyrrhotite veinlets-netw 5cm interval.	9												
465			50°. width<5mm. silicified. dolomite?	1			466.6	466.	7	0.03	0.5	0.202	0.007	0.0106	25.5	7.5
			480.15-480.80m, (chalcopyrite-)pyrrhotite network.	ро			400.0	400.	/	0.05	0.5	0.202	0.007	0.0100	20.0	1.5
<i></i>			10cm interval.													
470			481.4-481.6m, pyrrhotite network. 482.2m-,													
			silicified. pyrrhotite dissnetwork.													
			with calcite and chlorite. 482.3m, quartz vein. 10°.	ро,ру,ср	ch											
475			40mm. with pyrite, calcite and dolomite	oque												
			483.30m, pyriteveinlet, >75°. 2mm. even in quartz vein (10°, 40mm).	ро												
			manula atta dina (6)	po po,cp									-			
480			484.80, dolomite-calcite vein. 20°. 70mi chlorite (both of sides).	n											- 40	
			486.0-486.3m, calcite vein. 35°. 250mm	l.												
			pyrrhotite, chlorite.	po	ch											
485			493.3m, pyrrhotite network(f).			ł										
				po	ch					Î						
-	V/////////////////////////////////////						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									
490									17							
								di				an company to be set of the set o			-	
				po					1			0m - 40m - 1044 - 1044 - 1044			da ja na serie da se	
495								1							4-1	
	¥/////////////////////////////////////	• •											And a second			Annal and a star of the star of the star
	<i>•</i>								-				1			1

DEPTH	COLUMN	ROCK		1.491.1			SAM		14/10-		HEMIC				-
(m)			DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH (cm)	Au Ag (ppm) (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	(9 (9
	502.1	Pelitic Schist	Silty - fine sandy schist . foliation 55°.	ро							- <del>La de la constanta des</del>				
			bedding-lamination unclear. 501.25m, pyrrhotite - calcite vein.												
505 -			501.90m, pyrrhotite - calcite vein. 55°. $9 \sim 15$ mm.												
									and a second						
510															
515															
0.0										× -					
520 -			•						a de grande a constante de la c						
-															
525 -									-						
530-											7				
030															
535															
														-	
540 ·													-		
							Manufacture and an a	Constant of the second second							
													- Marine and the second se	You and the second s	
545									a na managana						
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550·														Ye a service a second between the	
555 ·															
	4													4 	
560								The second s							
	1													- - 	
565															
									-						
570	]										and a second				
570	]														
	]														
575	-											-			
	-						in and the second s								
580	1													-	
	1										19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 -				14-14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
	•														
585	1														
	1								- -						
590												n de la constante de			
								-							
595	]												e e		
090															
	1														

ROCK NAME	DESCRIPTION MITK-6.	MINER.	ALTER.	No.	FDOM	+~	1							
	MTPLA			140.	FROM (m)	TO (m)	WIDTH (cm)		Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
	(-3m. Tricon.)		Wethered Lim											
	Pelitic schist. foliation $\angle 35^{\circ}$ dip. lamination $\angle 20^{\circ}$ dip.													
						· · ·								
	28.5m, calcite vein. $\angle 35^{\circ}$ dip. 140mm.							-						
	.30.5m, calcite vein. $\angle$ 35 dip. 50mm. with specularite.													
	34.0m, calcite vein. ∠35°dip. 40mm.													
	with galena and sphalerite.													
		gn,sp												
								-					n for a second	
	50.2m, sandy schist thin layer.													
	∠ 10°dip. 50mm.													
	56.5-56.7m, coarse sandy schist layer.							5						
		iamination $\angle$ 20° dip. 28.5m, calcite vein. $\angle$ 35° dip. 140mm. 30.5m, calcite vein. $\angle$ 35° dip. 50mm. with specularite. 34.0m, calcite vein. $\angle$ 35° dip. 40mm. with galena and sphalerite. pelitic-silty schist. calcareous. foliation 35° dip. lamination $\angle$ 10-25° dip. 50.2m, sandy schist thin layer. $\angle$ 10° dip. 50mm.	<ul> <li>Iamination ∠ 20° dip.</li> <li>28.5m, calcite vein. ∠ 35° dip. 140mm.</li> <li>30.5m, calcite vein. ∠ 35° dip. 50mm. with specularite.</li> <li>34.0m, calcite vein. ∠ 35° dip. 40mm. with galena and sphalerite.</li> <li>pelitic-silty schist. calcareous. foliation 35° dip. Iamination ∠ 10-25° dip.</li> <li>8^{n.sp}</li> <li>50.2m, sandy schist thin layer. ∠ 10° dip. 50mm.</li> <li>56.5-56.7m, coarse sandy schist layer.</li> </ul>	<ul> <li>Iamination∠20° dip.</li> <li>28.5m. calcite vein. ∠35° dip. 140mm.</li> <li>30.5m. calcite vein. ∠35° dip. 50mm.</li> <li>34.0m. calcite vein. ∠35° dip. 40mm.</li> <li>34.0m. calcite vein. ∠35° dip. 40mm.</li> <li>with galena and sphakerite.</li> <li>pelitic-silty schist. calcareous.</li> <li>foliation35° dip. tamination∠10-25° dip.</li> <li>gn.sp</li> <li>50.2m. sandy schist thin layer.</li> <li>∠10° dip. 50mm.</li> <li>56.5-56.7m, coarse sandy schist layer.</li> </ul>	<ul> <li>lamination ∠ 20' dip.</li> <li>28.5m, calcite vein. ∠ 35' dip. 140mm.</li> <li>30.5m, calcite vein. ∠ 35' dip. 50mm.</li> <li>34.0m, calcite vein. ∠ 35' dip. 40mm.</li> <li>with specularite.</li> <li>34.0m, calcite vein. ∠ 35' dip. 40mm.</li> <li>with galena and sphalerite.</li> <li>pelitic-silty schist. calcareous.</li> <li>roliation35' dip. lamination ∠ 10-25' dip.</li> <li>gn.sp</li> <li>50.2m, sandy schist thin layer.</li> <li>∠ 10' dip. 50mm.</li> <li>56.5-56.7m, coarse sandy schist layer.</li> </ul>	<ul> <li>Jaminatjon ∠ 20'dip.</li> <li>28.5m, cak/ite vein. ∠ 35'dip. 140mm.</li> <li>30.5m, cak/ite vein. ∠ 35'dip. 50mm.</li> <li>with specularite.</li> <li>34.0m, cak/ite vein. ∠ 35'dip. 40mm.</li> <li>with galena and sphalerite.</li> <li>pelific-silty schist. cak/areous.</li> <li>foliation 35'dip. lamination ∠ 10-25'dip.</li> <li>g^{p1,sp}</li> <li>50.2m, sandy schist thin layer.</li> <li>∠ 10'dip. 50mm.</li> <li>56.5-56.7m, coarse sandy schist layer.</li> </ul>	<ul> <li>iumination ∠ 20° dip.</li> <li>28.5m, calcile vein. ∠ 35° dip. 140mm.</li> <li>30.5m, calcile vein. ∠ 35° dip. 50mm.</li> <li>with specularite.</li> <li>34.0m, calcile vein. ∠ 35° dip. 40mm.</li> <li>with galena and sphakerite.</li> <li>pelitic-silly schist. calcareous.</li> <li>follation 35° dip. lamination ∠ 10-25° dip.</li> <li>80.50</li> <li>50.2m, sandy schist thin layer.</li> <li>∠ 10° dip. 50mm.</li> <li>50.2m, sandy schist thin layer.</li> <li>≤ 10° dip. 50mm.</li> </ul>	Imminipation ∠ 20° dip.         28.5m, calcite vein. ∠ 35° dip. 140mm.         30.5m, calcite vein. ∠ 35° dip. 50mm,         with specularite.         34.0m, calcite vein. ∠ 35° dip. 40mm.         with galena and sphalerite.         pelitic-silty schist. calcareous.         roltation35° dip. tamination ∠ 10-25° dip.         8 ^{m.99} 50.2m, sandy schist thin layer.         ∠ 10° dip. 50mm.         56.5-56.7m., coarse sandy schist layer.	Jamination 4 20'dip.         28.5m, calcite vein. 4 35'dip. 140mm.         30.5m, calcite vein. 4 35'dip. 50mm.         with specularite.         34.0m, calcite vein. 4 35'dip. 50mm.         with galena and sphalerite.         34.0m, calcite vein. 4 35'dip. 40mm.         with galena and sphalerite.         pelitik-sity schist. calcareous.         foliation 35'dip. tamination 4 10-25' dip.         50.2m, sandy schist thin layer.         4.10'dip. 50mm.         50.5-56.7m. coarse sandy schist layer.	Jaminasim $\angle 20^\circ$ dip.         28.5m, cakcite vein. $\angle 35^\circ$ dip. 140mm.         30.5m, cakcite vein. $\angle 35^\circ$ dip. 50mm.         with specularite.         34.0m, cakcite vein. $\angle 35^\circ$ dip. 40mm.         with specularite.         34.0m, cakcite vein. $\angle 35^\circ$ dip. 40mm.         with galena and sphalerite.         pelitike-silly schist. cakcareous.         polition 35^\circ dip. lamination $\angle 10^{-}25^\circ$ dip.         g0.8p         50.2m, sandy schist thin layer. $\angle 10^\circ$ form.         50.5-56.7m, course sandy schist layer.	Jamination ∠ 20'dip.         28.5m, calcite vein. ∠ 35'dip. 140mm.         30.5m, calcite vein. ∠ 35'dip. 50mm.         with specularite.         34.0m, calcite vein. ∠ 35'dip. 50mm.         with specularite.         34.0m, calcite vein. ∠ 35'dip. 40mm.         spelitk-silty schist. calcareous.         foliation35'dip. tamination ∠ 10-25'dip.         gn.3p         50.2m, sandy schist thin layer.         ∠ 10'dip. 50mm.         50.56.7m, coarse sandy schist layer.	Baningsion 2 20'dip.         28.5m. calcite vein. 2 35 dip. 140mm.         30.5m. calcite vein. 2 35 dip. 50mm.         with specularite.         34.0m. calcite vein. 2 35 dip. 40mm.         with specularite.         34.0m. calcite vein. 2 35 dip. 40mm.         with galena and sphalerite.         pelitic-silly schist. calcaroous.         follation 35 dip. tamination 2 10-25'dip.         gr.op         50.2m. sandy schist bin layer.         2 10 dip. 50mm.         56.5-56.7m. coarse sandy schist layer.	Iamination 2.20 dip.         28.5m, calcite vein. 2.35 dip. 140mm.         30.5m, calcite vein. 2.35 dip. 50mm.         with specularite.         34.0m, calcite vein. 2.35 dip. 40mm.         with specularite.         34.0m, calcite vein. 2.35 dip. 40mm.         with specularite.         pelitie-sitty schist. calcareous.         foliation35 dip. lamination 2.10-25 dip.         50.2m, sandy schist thin layer.         210 dip. 50mm.         50.5m. course: study schist layer.	Iamination / 20' üp.         28.5m, calcite vein. / 35' üp. 140mm.         30.5m, calcite vein. / 35' üp. 50mm.         vith specularite.         34.0m, calcite vein. / 35' üp. 40mm.         with galena and sphaterite.         politie-siley schist, calcareous.         politie-siley schist, calcareous.         politie-siley schist, calcareous.         politie-siley schist, calcareous.         politie-siley schist thin layer.         210' dip. 50mm.         50.2m, sundy schist thin layer.         50.5m.         50.5m.



DEPTH		ROCK					SAM	IPLE			С	HEMIC	AL AN	IALYS	IS	, with a second
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM	i .	WIDTH		Ag	Cu	Pb	Zn	Fe	S
				<u> </u>			(m)	(m)	(cm)	(ppm)	(ppm)	(%)	(%)	(%)	(%)	(%)
			Pelitic-silty schist. foliation $\angle 25-40^{\circ}$ dip. Lamination unclear.				101.2	101.3		0.096	3	0.0429	0.241	0.33	18.3	>10.0
			Lammation uncreat.								-					
			-111.6m,													
105 -			(chalcopyrite-sphalerite-)pyrite	- 												
			-pyrrhotite-Calcite vein.													
			With 3cm-50cm interval.							r.						
			∠ 15-25°dip. 2-30mm.													
110-																
				po,po,sp,cp												
-			111.6m-, pelitic schist. friable by													
115			foliation.					-								
115			Foliation=lamination $\angle 30^{\circ}$ dip.						· ·							
			silty schist, calcareous. foliation $\angle 20^{\circ}$ dip. lamination $\angle 25^{\circ}$ dip.													
			up. $animation \simeq 25$ up.					an a								
120-																
-																
•																
			w.													
125 -				1			125.2	125.3		0.112	3.5	0.29	0.0452	0.0993	42.1	>10.0
-			133.95m, pyrrhotite-calcite vein.													
			134.25-134.80m,													
130-			chalcopyrite-galena-sphalerite-pyrite													
			-pyrrhotite-calcite vein. $\angle 20^{\circ}$ dip.													
-				ро												
135			silty schist. calcareous. foliation $\angle 25^{\circ}$	po.py,sp.gn,cp			134.2	134.7		0.087	19.7	0.321	0.84	0.346	25.7	>10.0
135			dip.													
			lamination $\angle 25^\circ$ dip (=toliation).	po												
				ро												
140-			137.9m. pyrrhotite-calcite vein.								<i>.</i>					
			$\angle 25^{\circ}$ dip. 9mm.							ŀ						
			138.5m, calcite vein. With pyrrhotite.													
			∠25 [°] dip. 30mm.	ро												
145					COMPANY											
															l	
			143.5m, calcite vein. With pyrrhotite.													
100			$\angle 35^{\circ}$ dip. 25mm.				1									
150			-													
				1	1				1	1				1	1	1



EPTH		ROCK	i i na na n					IPLE			C	HEMIC	CAL AN	VALYS	IS	
(m)	COLUMN	NAME	DESCRIPTION	MINER.	ALTER.	No.	FROM (m)	TO (m)	WIDTH		Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Fe (%)	S (%)
			silty-pelitic schist. calcareous.					(11)	(GIII)	(ppm)		(/0)		1.107	(4)	//0,
		<b>Pelitic Schist</b>	Foliation(p).													
-			partly $\angle 20^{\circ}$ dip. bedding $\angle 10^{\circ}$ dip.													
		,	partly with graphite.	ру												
205 -		5. S										) >			:	-
]			204.50m, small fault ( $\angle$ 80° dip)													
			with pyrite-calcite vein (w:9-18mm).													
			211.7m-fault. $\angle 40^{\circ}$ dip.													
210			211.3~211.7m. tuff layer, $\angle 15^{\circ}$ .													
-			$215.0 \sim 216.8$ m, sheared zone.													
1			pelitic schist. foliation $\angle 20^{\circ}$ .													
]			bedded20°.													
215			$219.0m^{-1}$ , sheared zone.													
			With quartz vein fragments.					2								
-			pelitic ~ sandy schist. foliation $\angle 30^\circ$ .													
-			lamina~bed 10°. Chlorita – calcita patruark along													
220			Chlorite - calcite network along fractures.													
]			Pyrite dissemination.													
			r yrac dissemutation.													
-																
			-229.0m, fractured zone $\sim$ sheared													
225			zone.													
1			226.70~226.85m.	ру	ch											
			(pyrite-) chlorite- quartz- calcite vein.													
]			$\angle 35^{\circ}.120$ mm. pyrite is at edge (p).													
230-																1
			230.90m, pyrite- calcite vein. $\angle$											-		1
			30°.8mm.													
														- -		
235			pelitic $\sim$ silty (partly sandy) schist.											-		
			foliation $\angle 30-45^\circ$ . bedded $\angle 45^\circ$ . friable.	2												
-																
														-		
			243.6 $\sim$ 256.5m, fault? $\angle$ 35°.													
240-																
4																
-			257.1~257.85m,												-	
<b>{</b>			pyrite - pyrrhotite dissemination and												r I	
245 -			replacement													
			along foliation.													
1			(Silicified in the upper zone, and calcite													
			network													
250			in the lower zone)													
· 1			sulfides disseminated along foliation(p).	1					1	1	1			1	1	l

