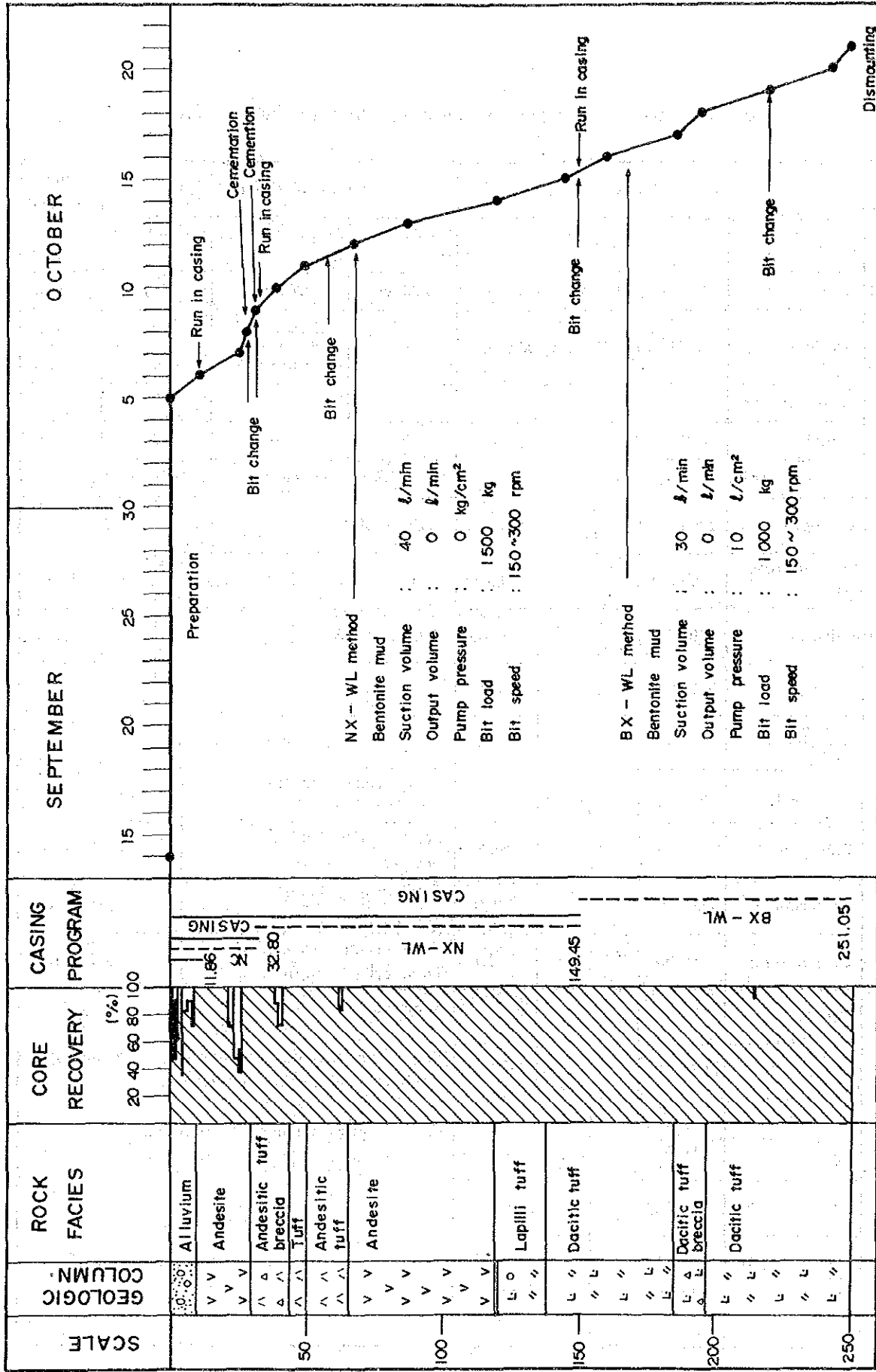
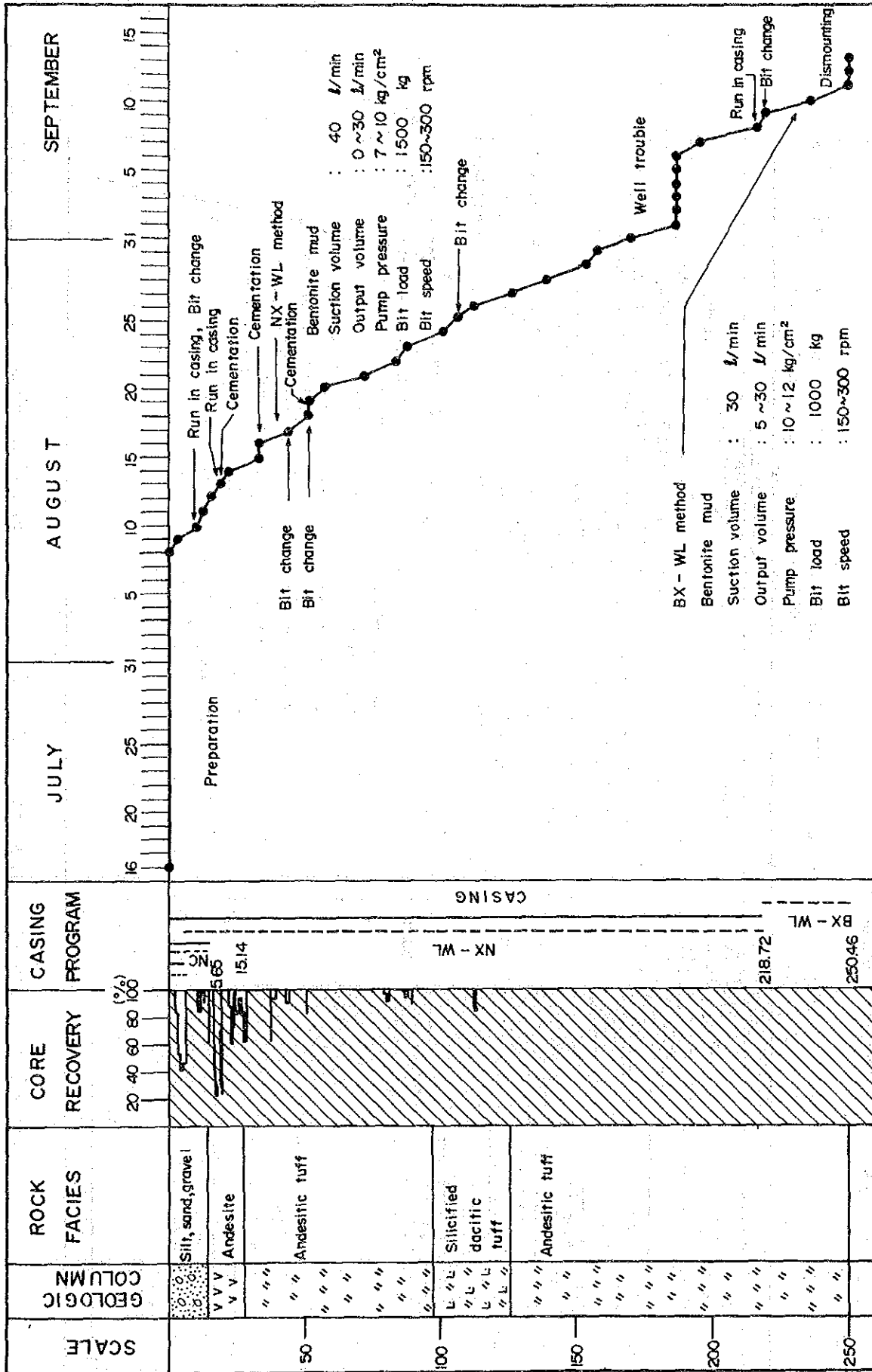


Ap. 28 (5) Summary of Drilling Results (MJP-15)

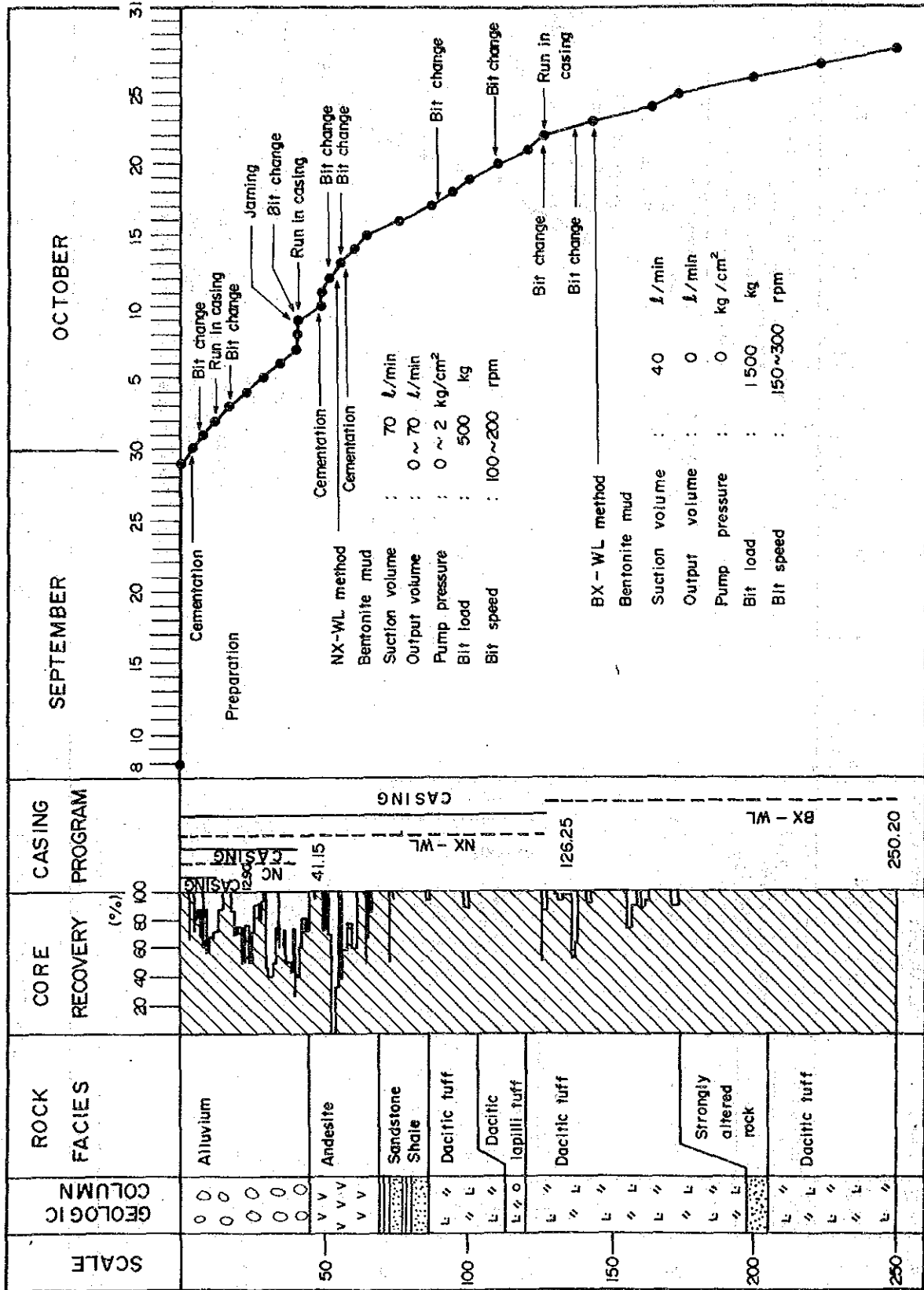
	Item	Working Period		Item of Working Period			Total Number of Workers
		Period	Number of Days	Actual Working Days	No Working Days		
Working period	Preparation	4th Aug. '87-30th Aug. '87		27days	27days	0days	481mans
	Drilling	31th Aug. '87-2th Oct. '87		33	Drilling 28	0	479.5
					Trouble 5	0	85.5
	Dismounting						
Total	4th Aug. '87-2th Oct. '87		60	60	0	1,046	
Drilling length, etc.				Core recovery for each 100m section			
Planned length	200.00m	Over burden	23.45m	Depth of hole	Section	Total	
Increase or decrease in length	0.35m	Core length	189.95m	0 ~ 100m	91.2	91.2	
Length drilled	200.35m	Core recovery	94.8%	100 ~ 200.35m	98.5	94.8	
Working time	Drilling	203° 20'	29.7%	20.4%			
	Hoisting & lowering rod casing	387° 40'	56.7	38.9	Drilling efficiency		
	Repairing	93° 00'	13.6	9.3	Total drilling length / Working Period		6.07m/day
	Sub total	684° 00'	100.0	68.6	Total drilling length / Net working days		6.07m/day
	Preparations	302° 00'		30.3	Total drilling length / Net drilling days		7.16m/day
	Dismounting	11° 00'		1.1	Total drilling workers / Total drillig length		0.42man/m
	Others				Remarks		
Total	997° 00'		100.0	Preparation includes transportation, transfer of machines and setting up derrick.			
Inserting casing pipe	Pipe size & inserted length (m)	Inserted length / Drilling length × 100 (%)	Recovery of casing pipe (%)	Core recovery includes overburden.			
	NC × 29.70	14.8	100				
	NX × 111.10	55.5	100				



Apx.29(1) Drilling Progress of the Colpar Area (MJP-11)



Apx.29(2) Drilling Progress of the Colpar Area. (MJP-12)



Apx.29(3) Drilling Progress of the Colpar Area (MJP - 13)

Apx. 31 Drilling Equipment (MJP-11, 12)

Article	Model	Specification	Quantity
Drilling machine	Model "L-44" (LONGYEAR)	Capacity : NX 730m, BX 945m Inner diameter of spindle : 76mm Spindle speed : 700rpm Weight : 2,200kg	1set
Motor	353	Diesel engine : 4cycle Revolution : 2,200rpm Related power : 60ps	1set
Drilling pump	BEAN ROYAL420 (BEAN ROYAL)	Type : 3cylinders—single acting Capacity (max) : 75 ℓ/min Pressure (max) : 49kg/cm ²	1set
Motor	TJD (TELEDYNE WISCONSIN MOTOR)	Diesel engine : 4cycle Revolution : 1,800rpm Related power : 32ps	1set
Water supply pump	BEAN ROYAL 435 (BEAN ROYAL)	Type : 3cylinders—single acting Capacity (max) : 135 ℓ/min Pressure (max) : 56kg/cm ²	1set
Motor	TJD (TELEDYNE WISCONSIN MOTOR)	Gasoline engine : 4cycle Revolution : 1,800rpm Related power : 32ps	1set
Wire line hoist		Attached to drilling machine	1set
Derrick		Pipe structural derrick	1set
Generator	392 (MILWAUKEE WISCONSIN MOTOR)	Gasoline engine : 4cycle Revolution : 3,600rpm Related power : 10ps	1set
Drill rod	Wire line rod	NC : 20m NX : 250m BX : 250m	
Water tank		0.5 m ³ 2sets	

Apx. 32 Drilling Equipment (MJP-13)

Article	Model	Specification	Quantity
Drilling machine	Model "L-38" (LONGYEAR)	Capacity : NX 525m, BX 660m Inner diameter of spindle : 76mm Spindle speed : 700rpm Weight : 1,650kg	1set
Motor	353	Diesel engine : 4cycle Revolution : 2,200rpm Related power : 51ps	1set
Drilling pump	BEAN ROYAL 420 (BEAN ROYAL)	Type : 3cylinders--single acting Capacity (max) : 75 l /min Pressure (max) : 49kg/cm ²	1set
Motor	TJD (TELEDYNE WISCONSIN MOTOR)	Diesel engine : 4cycle Revolution : 1,800rpm Related power : 32ps	1set
Water supply pump	BEAN ROYAL 435 (BEAN ROYAL)	Type : 3cylinders--single acting Capacity (max) : 135 l /min Pressure (max) : 56kg/cm ²	1set
Motor	TJD (TELEDYNE WISCONSIN MOTOR)	Gasoline engine : 4cycle Revolution : 1,800rpm Related power : 32ps	1set
Wire line hoist		Attached to drilling machine	1set
Derrick		Pipe structural derrick	1set
Generator	392 (MILWAUKEE WISCONSIN MOTOR)	Gasoline engine : 4cycle Revolution : 3,600rpm Related power : 10ps	1set
Drill rod	Wire line rod	NC 50m NX 250m BX 250m	
Water tank		0.5 m ³ 2sets	

Apx. 33 Drilling Equipment (MJP-14, 15)

Article	Model	Specification	Quantity
Drilling machine	Model "L-38" (LONGYEAR)	Capacity : NX 525m, BX 660m Inner diameter of spindle : 76mm Spindle speed : 700rpm Weight : 1,650kg	1set
Motor	353	Diesel engine : 4cycle Revolution : 2,200rpm Related power : 51ps	1set
Drilling pump	BEAN ROYAL 420 (BEAN ROYAL)	Type : 3cylinders-single acting Capacity (max) : 75 l / min Pressure (max) : 49kg / c m ²	1set
Motor	TJD (TELEDYNE WISCONSIN MOTOR)	Diesel engine : 4cycle Revolution : 1,800rpm Related power : 32ps	1set
Wire line hoist		Attached to drilling machine	1set
Derrick		Pipe structural derrick	1set
Generator	392 (MILWAUKEE WISCONSIN MOTOR)	Gasoline engine : 4cycle Revolution : 3,600rpm Related power : 10ps	1set
Drill rod	Wire line rod	NC 50m NX 150m BX 200m	
Water tank		0.5 m ³ 2sets	

Apx. 34 Working Time and Efficiency of Drillings (MJP-11~MJP-15)

Working Time and Efficiency Drill Hole No.	Drilling		Hoisting and Lowering Rod, Casing		Repairing		Sub Total		Number of Workers		Lenght (m)
	Total Time	H/M	Total Time	H/M	Total Time	H/M	Total Time	H/M	Total Number of Workers	Man / m	
MJP-11	178° 15'	0.71	144° 45'	0.58	48° 00'	0.19	371° 00'	1.48	351	1.40	0~251.05
MJP-12	250° 30'	1.00	268° 30'	1.07	186° 00'	0.74	705° 00'	2.81	815	3.25	0~250.46
MJP-13	219° 30'	0.88	323° 30'	1.29	144° 00'	0.58	687° 00'	2.75	313	1.25	0~250.20
MJP-14	158° 50'	0.79	154° 10'	0.77	32° 00'	0.16	345° 00'	1.72	301.5	1.50	0~200.65
MJP-15	203° 20'	1.01	387° 40'	1.93	93° 00'	0.46	684° 00'	3.41	565	2.82	0~200.35

Apx. 35 Results of Bit works (MJP-11, 12, 13)

MJP-11

Item \ Depth (m)		0~32.80	32.80~149.45	149.45~251.05
Circulating water		Bentonite mud	Bentonite mud	Bentonite mud
Change bit		Cutter crown NCI Diamond NC2	Diamond NX0 Impregnated NX2	Diamond BX1 Impregnated BX1
Pump	Pressure (kg/cm ²)	0~2	0	10
	Suction volume (ℓ/min)	70	40	30
	Output volume (ℓ/min)	0~70	0	0
Bit	Load (kg)	500	1500	1000
	Speed (rpm)	100~200	150~300	150~300
* Core recovery (%)		89.3	99.6	99.9

MJP-12

Item \ Depth (m)		0~15.14	15.14~218.72	218.72~250.46
Circulating water		Bentonite mud	Bentonite mud	Bentonite mud
Change bit		Cutter crown NCI Diamond NX1 Tricon 43/4"	Diamond NX1 Impregnated NX2	Impregnated BX1
Pump	Pressure (kg/cm ²)	0~2	7~10	10~12
	Suction volume (ℓ/min)	70	40	30
	Output volume (ℓ/min)	0~30	0~30	5~30
Bit	Load (kg)	500	1500	1000
	Speed (rpm)	100~200	150~300	150~300
* Core recovery (%)		84.5	97.8	100

MJP-13

Item \ Depth (m)		0~41.15	41.15~126.25	126.25~250.20
Circulating water		Bentonite mud	Bentonite mud	Bentonite mud
Change bit		Cutter crown NCI Diamond NC1	Diamond NX2 Impregnated NX4	Diamond BX1 Impregnated BX1
Pump	Pressure (kg/cm ²)	0~2	0	10
	Suction volume (ℓ/min)	70	40	30
	Output volume (ℓ/min)	0~70	0	0
Bit	Load (kg)	500	1,500	1,000
	Speed (rpm)	100~200	150~300	150~300
* Core recovery (%)		73.6	90.4	97.8

※ Core recovery includes overburden.

Apx. 36 Results of Bit works (MJP-14, 15)

MJP-14

Item		Depth (m)		
		0~9.25	9.25~121.65	121.65~200.65
Circulating water		Bentonite mud	Bentonite mud	Bentonite mud
Change bit		Cutter crown NC1 Diamond NX1	Diamond NX0 Impregnated NX1	Diamond BX4 Impregnated BX3
Pump	Pressure (kg/cm ²)	0~2	0~2	5~7
	Suction volume (ℓ/min)	70	40	30
	Output volume (ℓ/min)	0~70	0~40	0~20
Bit	Load (kg)	500~800	1,500	1,000
	Speed (rpm)	100~200	150~300	150~300
* Core recovery (%)		75.4	99.2	94.5

MJP-15

Item		Depth (m)		
		0~29.70	29.70~111.10	111.10~200.35
Circulating water		Bentonite mud	Bentonite mud	Bentonite mud
Change bit		Cutter crown NC1 Diamond NX1 Impregnated NX1	Diamond NX2 Impregnated NX1	Diamond BX4 Impregnated BX1
Pump	Pressure (kg/cm ²)	0~2	0~2	5~7
	Suction volume (ℓ/min)	70	40	30
	Output volume (ℓ/min)	0~70	0~40	0~20
Bit	Load (kg)	500~800	1,500	1,000
	Speed (rpm)	100~200	150~300	150~300
* Core recovery (%)		87.7	93.4	98.4

* Core recovery includes overburden.

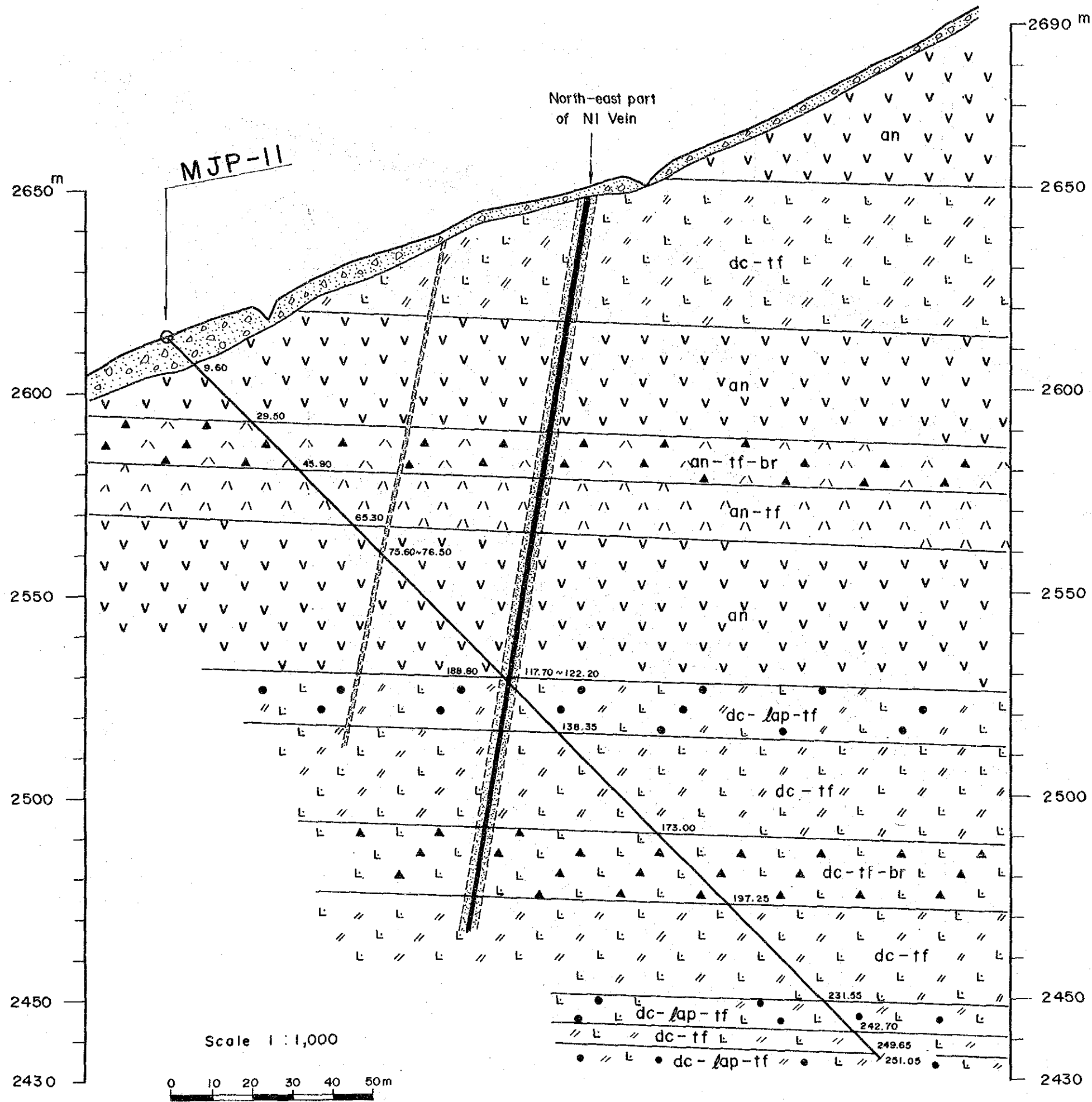
Apx. 37 Consumed Materials (MJP-11~MJP-15)

Article	Specification	Unit	Quantity					Total
			MJP-11	MJP-12	MJP-13	MJP-14	MJP-15	
Diesel	Drilling machine and drilling pump	ℓ	3,650	5,300	5,200	3,000	4,650	21,800
Gasoline	Water supply pump and generator	ℓ	2,230	2,750	2,800	320	600	8,700
Diesel	Truck	ℓ	—	—	—	—	—	7,400
Gasoline	Truck and jeep	ℓ	—	—	—	—	—	6,300
Engine oil	Drilling machine, drilling pump and water supply pump	ℓ	50	120	80	50	100	400
Cylinder oil Gear oil	Drilling machine, drilling pump and water supply pump	ℓ	90	160	120	100	130	600
Grease		kg	40	60	40	40	60	240
Bentonite		kg	2,775	3,525	7,525	1,375	2,925	18,125
Cement		sx	10	8	11	2	19	50
CMC		kg	10	3	—	6	25	44
Diamond bit	NC	pcs	2	—	1	—	—	3
	NX	pcs	2	4	6	2	5	19
	BX	pcs	2	1	2	7	5	17
Diamond reaming shell	NC	pcs	—	—	1	—	—	1
	NX	pcs	1	1	2	1	1	6
	BX	pcs	—	1	1	1	2	5
Casing shoe bit	NC	pcs	1	1	1	1	1	5
	NX	pcs	—	1	1	—	1	3
Core barrel	NC	pcs	—	1	1	—	1	3
	NX	pcs	—	2	2	—	2	6
	BX	pcs	—	2	2	—	2	6
Drill rod	NC	m	—	20	50	—	50	120
	NX	m	—	250	250	—	150	650
	BX	m	—	250	250	—	200	700
Core lifter	NC	pcs	1	—	1	—	—	2
	NX	pcs	1	2	3	1	2	9
	BX	pcs	1	1	1	3	3	9
Core lifter case	NC	pcs	1	—	—	—	—	1
	NX	pcs	1	2	3	1	2	9
	BX	pcs	1	1	1	2	3	8
Chuck piece		pcs	—	1	1	—	1	3
Wire	4mm	m	—	280	280	—	230	790
	12mm	m	—	15	15	—	15	45
Lost circulation materials		kg	25	20	20	10	25	100

Apx. 38~42 Geological Section of Drilling Holes

Abbreviations

an	: andesite
an-tf	: andesitic tuff
an-tf-br	: andesitic tuff breccia
dc-tf	: dacitic tuff
dc-lap-tf	: dacitic lapilli tuff
dc-tf-br	: dacitic tuff breccia
grn-pt	: green patch
s.s	: Sandstone
sh	: Shale
alt-s.s.-sh	: alternation of sandstone and shale
Vsp	: Volcanic Sediments
al-d	: Debris (gravel, sand, silt, clay)



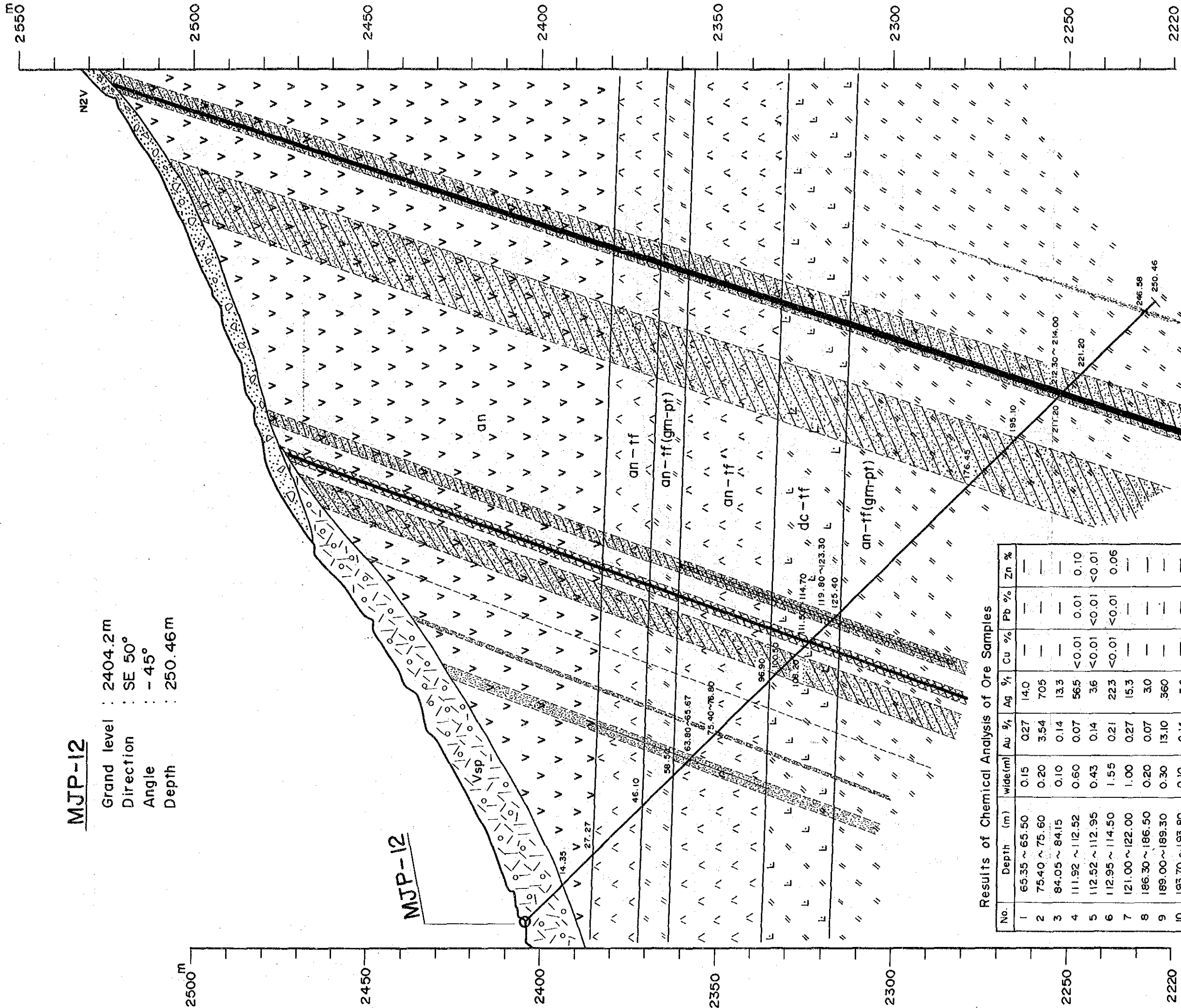
MJP-II

Grand level : 2613.9m
 Direction : SE 50°
 Angle : -45°
 Depth : 251.05m

Results of Chemical Analysis of Ore Samples

No.	Depth (m)	wide(m)	Au %	Ag %	Cu %	Pb %	Zn %
1	119.35 ~ 119.70	0.35	0.41	104.0	0.34	2.96	0.01
2	119.70 ~ 120.10	0.40	0.14	32.3	0.08	0.29	<0.01
3	120.10 ~ 120.95	0.85	0.14	28.3	0.03	0.17	0.02

Apx.38 Geological Section of Drilling Hole
 MJP-II in the Colpar Area



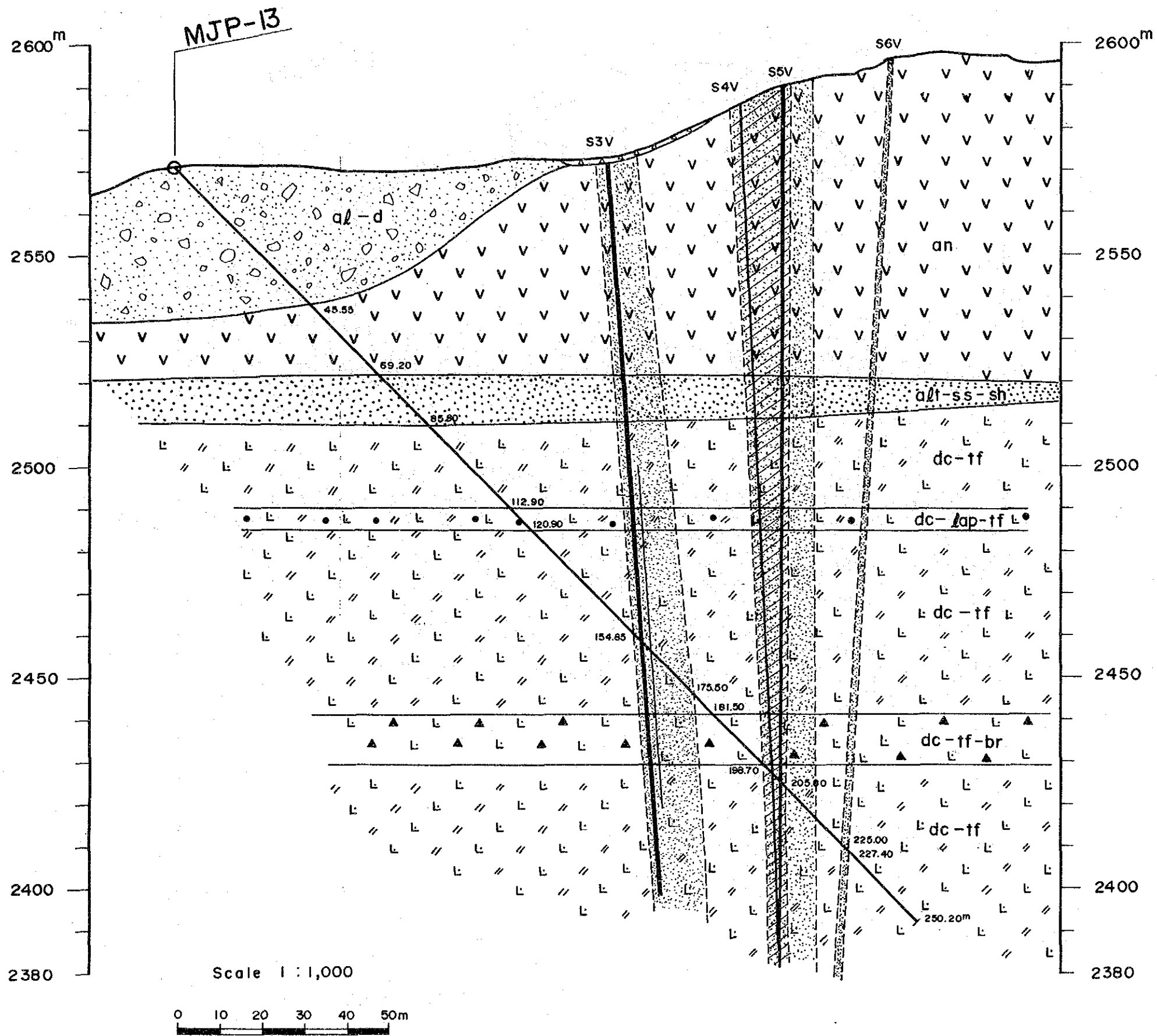
MJP-12

Grand level : 2404.2m
 Direction : SE 50°
 Angle : - 45°
 Depth : 250.46m

MJP-12

Results of Chemical Analysis of Ore Samples

No.	Depth (m)	width(m)	Au %	Ag %	Cu %	Pb %	Zn %
1	65.35 ~ 65.50	0.15	0.27	14.0	—	—	—
2	75.40 ~ 75.60	0.20	3.54	705	—	—	—
3	84.05 ~ 84.15	0.10	0.14	13.3	—	—	—
4	111.92 ~ 112.52	0.60	0.07	565	<0.01	0.01	0.10
5	112.52 ~ 112.95	0.43	0.14	36	<0.01	<0.01	<0.01
6	112.95 ~ 114.50	1.55	0.21	223	<0.01	<0.01	0.06
7	121.00 ~ 122.00	1.00	0.27	15.3	—	—	—
8	186.30 ~ 186.50	0.20	0.07	3.0	—	—	—
9	189.00 ~ 189.30	0.30	13.10	360	—	—	—
10	193.70 ~ 193.80	0.10	0.14	3.6	—	—	—
11	212.30 ~ 212.55	0.25	0.27	5.3	—	—	—
12	212.55 ~ 212.75	0.20	0.48	7.3	—	—	—
13	212.75 ~ 213.10	0.35	0.21	5.8	—	—	—
14	213.30 ~ 214.00	0.70	0.21	53	—	—	—
15	247.70 ~ 248.40	0.70	<0.07	1.3	—	—	—



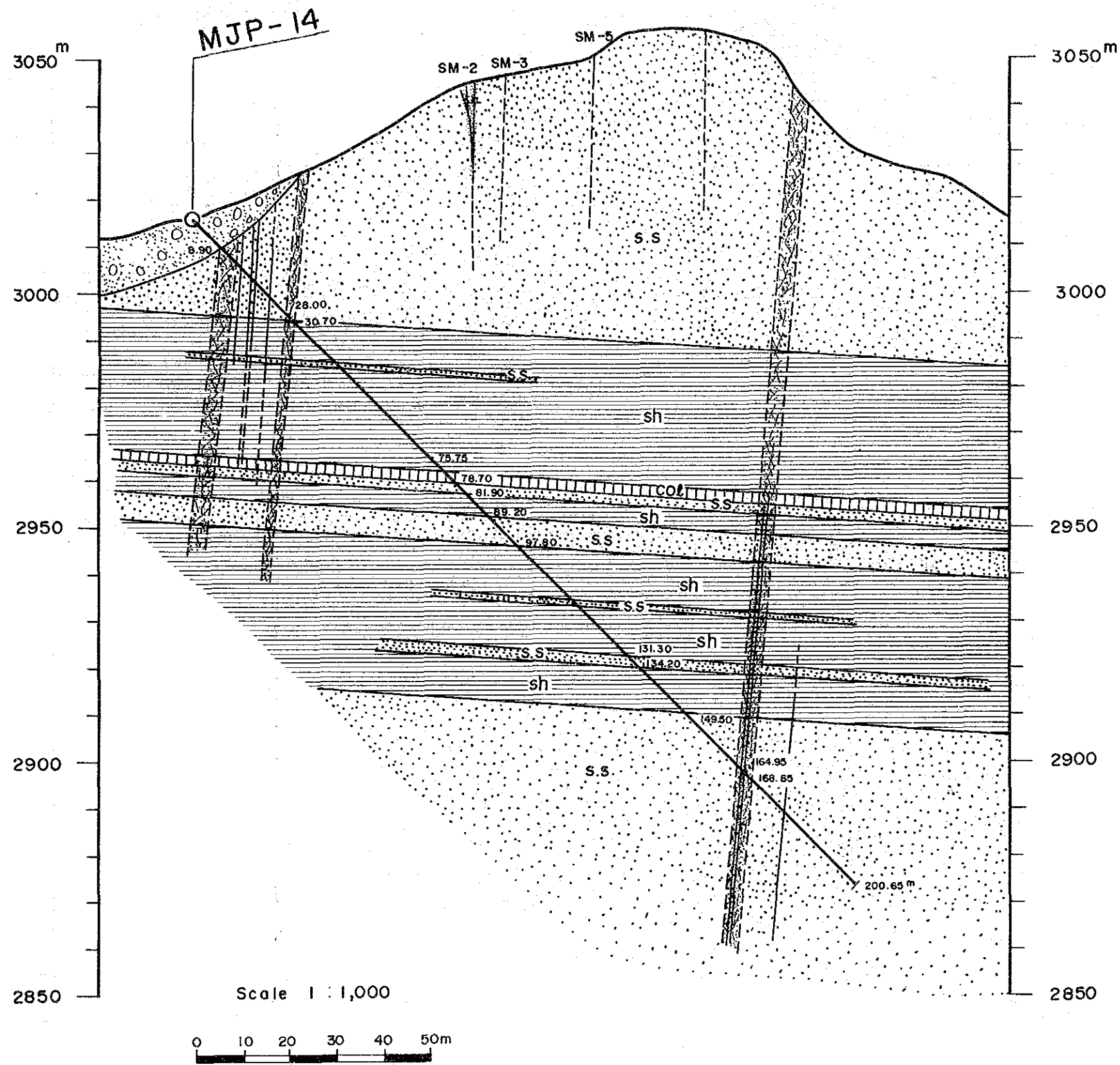
MJP-13

Grand level : 2571.3m
 Direction : SE 35°
 Angle : -45°
 Depth : 250.20m

Results of Chemical Analysis of Ore Samples

No.	Depth (m)	wide (m)	Au %	Ag %	Cu %	Pb %	Zn %
1	156.90 ~ 157.55	0.65	<0.07	3.6	—	—	—
2	199.45 ~ 199.60	0.15	2.33	8.0	0.03	0.33	0.48
3	199.60 ~ 200.60	1.00	0.27	1.9	<0.01	0.06	0.03
4	200.60 ~ 201.14	0.54	0.48	6.3	0.06	0.14	0.29
5	201.14 ~ 201.30	0.16	5.04	45.0	0.79	1.37	1.30
6	201.30 ~ 202.05	0.75	<0.07	2.3	<0.01	0.03	0.07
7	202.05 ~ 202.75	0.70	0.07	4.1	0.03	0.04	0.13
8	202.75 ~ 203.50	0.75	<0.07	5.0	0.06	0.12	0.14
9	203.50 ~ 204.20	0.70	0.21	18.0	0.18	0.86	1.62
10	204.20 ~ 205.05	0.85	<0.07	1.3	<0.01	0.01	0.02

Apx.40 Geological Section of Drilling Hole
 MJP-13 in the Colpar Area



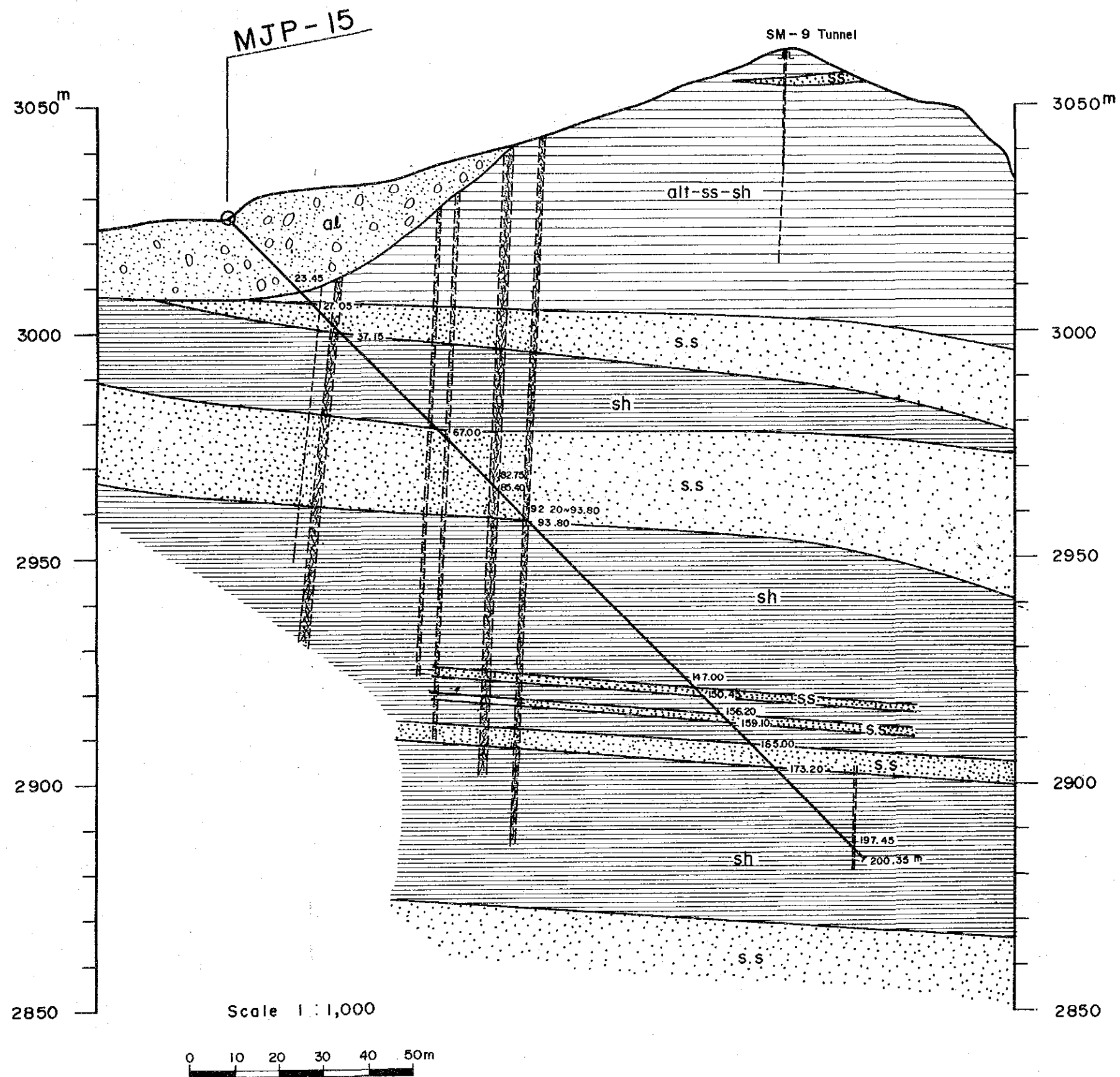
MJP-14

Grand level : 3015.6m
 Direction : SE 20°
 Angle : - 45°
 Depth : 200.65m

Results of Chemical Analysis of Ore Samples

No.	Depth (m)	wide(m)	Au % ₁	Ag % ₁
1	8.90 ~ 10.15	1.25	< 0.07	2.3
2	10.15 ~ 11.60	1.45	< 0.07	1.9
3	11.60 ~ 12.75	1.15	< 0.07	0.3
4	14.15 ~ 14.25	0.10	< 0.07	< 0.3
5	17.40 ~ 17.50	0.10	< 0.07	0.3
6	18.40 ~ 18.47	0.07	< 0.07	0.3
7	23.15 ~ 23.25	0.10	< 0.07	0.5
8	28.50 ~ 29.65	1.15	< 0.07	0.5
9	29.65 ~ 30.70	1.05	< 0.07	3.3
10	115.40 ~ 115.60	0.20	< 0.07	2.5
11	165.30 ~ 165.70	0.40	< 0.07	2.3
12	165.70 ~ 166.55	0.85	< 0.07	2.5
13	167.30 ~ 167.85	0.55	< 0.07	0.5
14	167.85 ~ 168.55	0.70	< 0.07	0.5
15	179.22 ~ 179.40	0.18	0.07	2.5

Apx.41 Geological Section of Drilling Hole
 MJP-14 in the Marcamalata Area



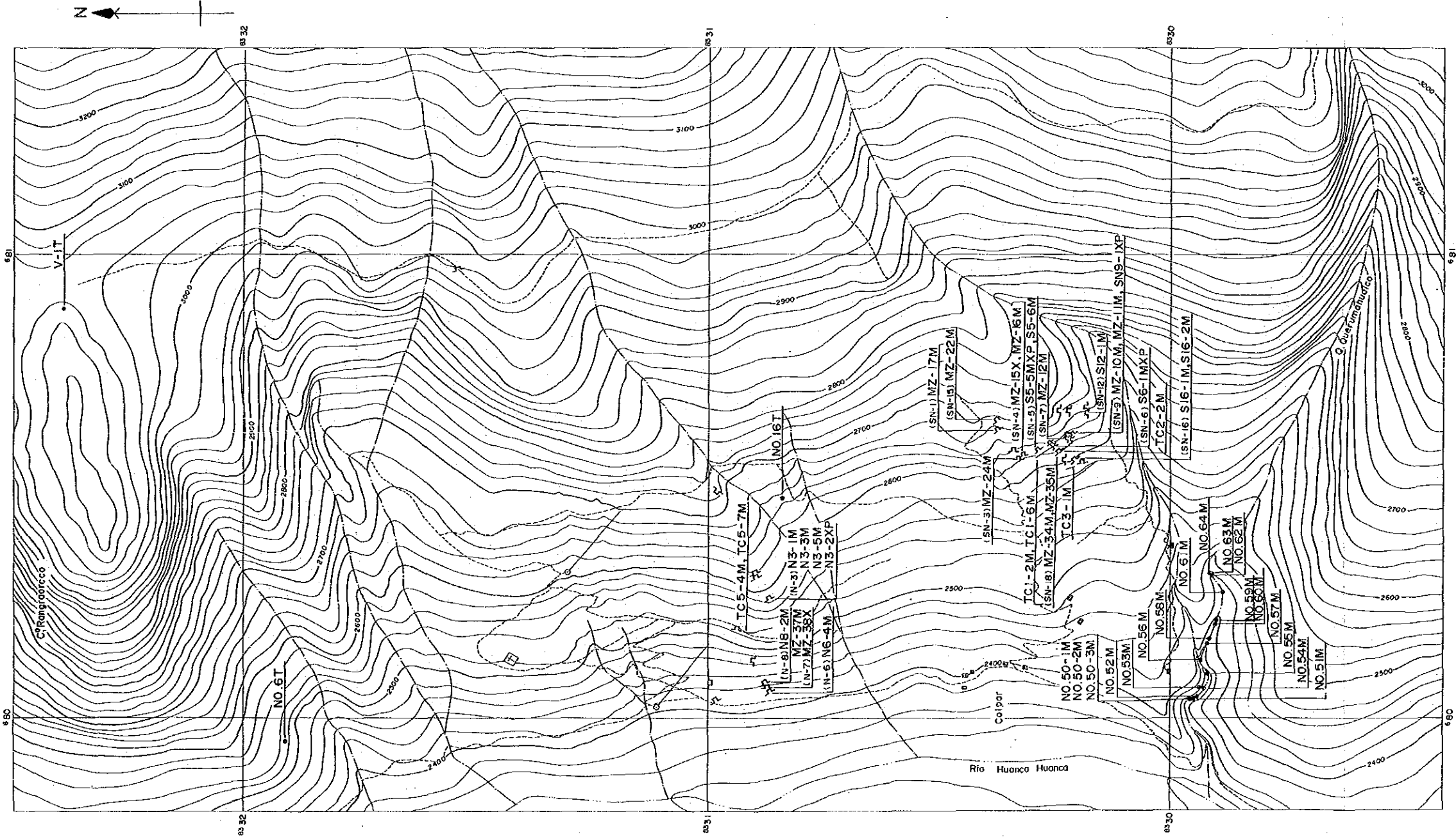
MJP-15

Grand level : 3026.7m
 Direction : SE 20°
 Angle : -45°
 Depth : 200.35m

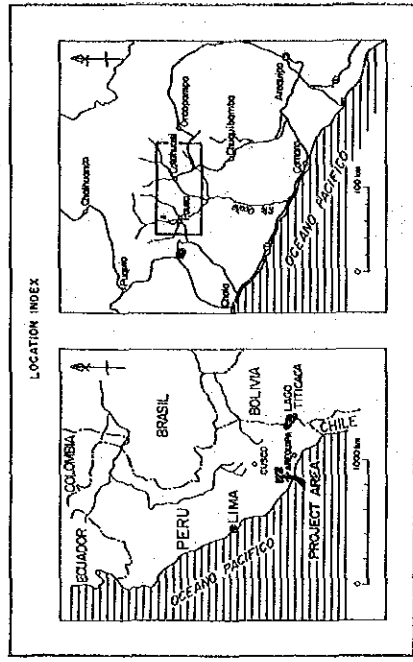
Results of Chemical Analysis of Ore Samples

No.	Depth (m)	wid(m)	Au g/t	Ag g/t
1	32.70 ~ 33.45	0.75	< 0.07	1.9
2	33.45 ~ 34.20	0.75	< 0.07	1.0
3	35.00 ~ 36.00	1.00	< 0.07	0.3
4	63.70 ~ 64.00	0.30	0.07	0.3
5	68.35 ~ 69.55	1.20	< 0.07	1.3
6	82.75 ~ 83.80	1.05	< 0.07	0.5
7	84.50 ~ 85.00	0.50	< 0.07	0.8
8	92.20 ~ 93.10	0.90	< 0.07	0.3
9	93.10 ~ 93.80	0.70	< 0.07	2.8
10	197.45 ~ 197.80	0.35	< 0.07	1.9

Apx.42 Geological Section of Drilling Hole
 MJP-15 in the Marcamalata Area



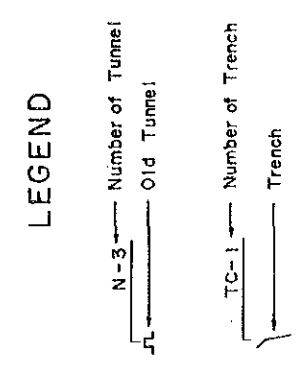
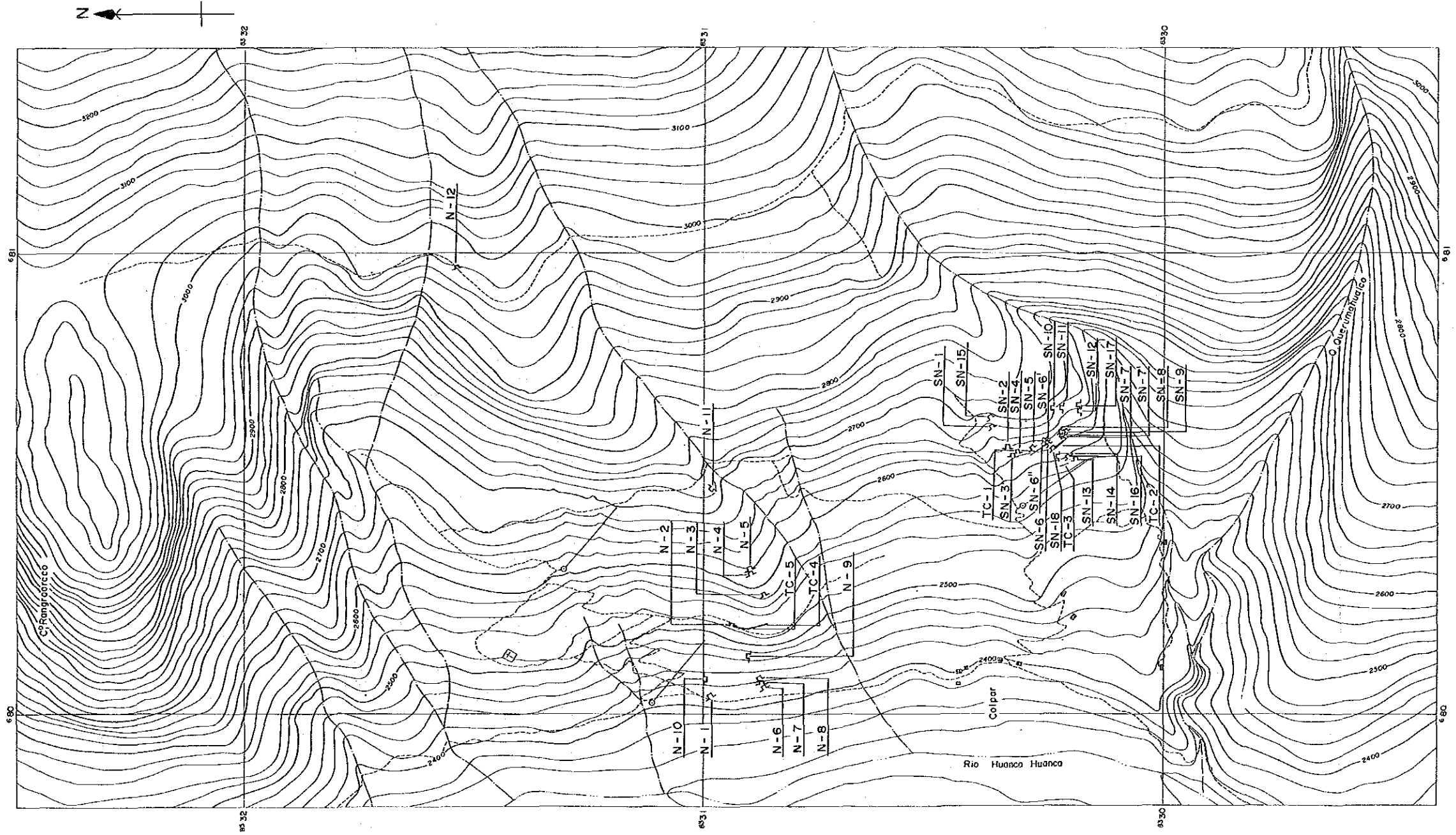
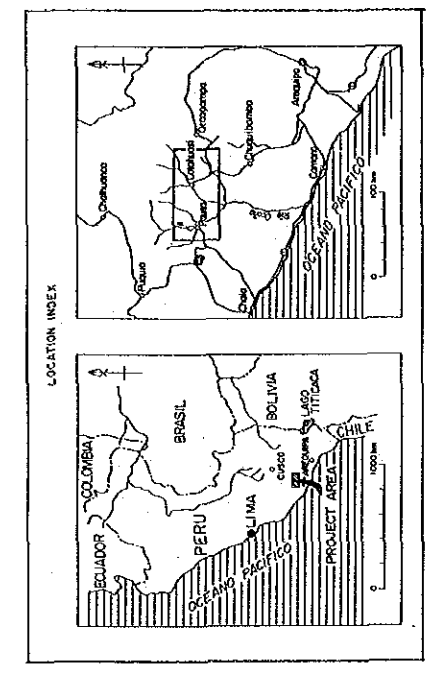
A-72



LEGEND

- (P) : Polished Section
 - (T) : Thin Section
 - (X) : X-Ray Powder diffraction
 - (M) : Chemical Analysis of Ore
- Number of tunnel
 Number of sample
 (SN-1) MZ-17M

Apx.43 Location Map of Rock and Ore Samples of the Colpar Area



Apx.44 Location Map of Old Tunnels and Trenches in the Colpar Area

MJP-11(1) Direction: SE 50°, Angle: -45°, Depth: 251.05m

SCALE	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY	RECOVERY (%)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (g/t)			
0-9.50m			Alteration 0.00-1.50m: grey silt and small (1-4cm) gravel 1.50-3.00m: mainly gravel (1-2cm) with grey soil gravel... grey and light grey dacite, angular														
9.50-11.50m			grey to greenish grey porphyritic andesite with many fractures 9.60-11.50m, 17.30-18.10m, 17.60-28.50m: many fracture zone.														
11.50-13.50m			yellowish brown weathered andesitic tuff breccia 12.70-19.90m: strongly sheared zone with clay, 20.40-22.90m: sheared zone (many fractures)														
13.50-15.50m			grey andesitic tuff breccia breccia: light grey porphyritic andesite (1-5 cm) matrix: grey andesitic tuff brown to dark brown iron oxides along many cracks.														
15.50-17.50m			42.25-42.30m: white calcite vein network														
17.50-19.50m			grey dacitic lapilli tuff with quartz grains lapilli: white grey dacite (0.2-0.8 cm) grey hard compact andesitic fine tuff 48.30m: white leucocratic calcite vein														
19.50-21.50m			grey andesitic tuff breccia breccia: mainly light grey porphyritic andesite (0.5-2.5 cm) greenish grey hard compact andesitic tuff														
21.50-23.50m			53.50-54.40m, 55.30-55.50m: greenish grey andesitic tuff breccia with dissemination of pyrite 55.50-57.30m: dark grey hard massive andesitic fine tuff														
23.50-25.50m			light greenish grey andesitic tuff 60.50-61.00m: light greenish grey andesitic lapilli tuff 62.25m: white calcite veinlets														
25.50-27.50m			dark grey hard massive andesite mafic mineral changed to chlorite 69.00m: calcite veinlet (w=0.2cm)														
27.50-29.50m			55.60-56.50m: light grey weakly altered andesite 70.00m: leucocratic pyrite vein 76.00m: white calcite veinlet (w=1.0cm) with crystal of calcite														
29.50-31.50m			dark grey hard massive andesite with calcite veinlet, 83.20m-83.60m: white calcite veinlet (w=0.1-0.2cm) 83.60m: calcite vein (w=0.5cm)														
31.50-33.50m			85.90m: calcite veinlet 88.20-89.20m: six calcite veinlets (w=0.2cm under) in andesite 89.80m: calcite vein														
33.50-35.50m			dark grey hard massive andesite mafic mineral changed to chlorite 94.10-94.20m: white calcite veinlet 95.10-95.60m: calcite veinlet and network														
35.50-37.50m			89.10m: white calcite vein (w=0.5cm) 99.90m: calcite vein (w=0.2cm)														

MJP-11(2) Direction: SE 50°, Angle: -45°, Depth: 251.05m

SCALE	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY	RECOVERY (%)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (g/t)			
100-102m			dark grey hard massive andesite with reddish brown iron oxides along cracks, mafic mineral changed to chlorite 104.70m: white calcite veinlet (w=0.5cm) 105.20-105.75m: brown iron oxides along many cracks														
110-112m			111.55m: calcite veinlet														
117.00-118.80m			grey to light grey bleached andesite with dissemination of pyrite crystal														
118.80-119.50m			light grey strongly sheared lapilli tuff 119.55-119.70m: dark grey quartz vein with breccia of strong silicified rock and disseminated mafic mineral (Fe, Mg, Ca, Pb) 119.70-120.70m: light grey strongly silicified lapilli tuff with many quartz veinlets contain mafic mineral (Fe, Mg, Ca, Pb) 120.70-120.75m: light grey to dark grey brecciated quartz vein with dissemination of pyrite 120.75-120.95m: light grey strongly silicified lapilli tuff														
120.75-120.95m			light greenish grey dacitic lapilli tuff lapilli: angular to subangular lapilli (0.5-2.0 cm) of andesite and dacite matrix: greenish grey tuff with quartz grains														
120.95-122.00m			dark greenish grey dacitic lapilli tuff lapilli: green porphyritic andesite (0.2cm under) matrix: dark greenish grey tuff with quartz grains gradual change														
122.00-123.00m			light greyish green dacitic tuff with green leucocratic patch and quartz grain														
131.55m			131.55m: white quartz vein (w=0.7cm)														
140-142m			light greyish green dacitic tuff with small breccia of green andesitic tuff, green leucocratic patch and quartz grain (0.1cm)														
150-152m			gradual change														
160-162m			green dacitic tuff with small (0.2-0.4 cm) breccia of green andesite & light grey dacite and quartz grain in matrix * no visible leucocratic green patch														
170-172m			gradual change														
172-174m			green dacitic lapilli tuff lapilli: angular, dark green andesite, grey andesite and light grey dacite (0.5cm under, w=0.2-1.0cm) matrix: small fragments of rock and quartz grain														
174-176m			part-colored dacitic tuff breccia breccia: 0.5cm under, small kind of andesite matrix: rock fragments and quartz grain														
176-178m			light green dacitic fine tuff green dacitic lapilli tuff														
178-180m			green to light green dacitic tuff breccia breccia: 0.5cm under, grey andesite white dacite etc. matrix: rock fragments and quartz grain														
180-182m			white grey hard compact dacitic tuff breccia breccia: 0.5cm under, white grey dacite matrix: rock fragments and quartz grain * weakly silicified rock, dissemination of pyrite														
182-184m			light green dacitic tuff with light green leucocratic patch														

MJP-11(3) Direction: SE 50°, Angle: -45°, Depth: 251.05m

SCALE	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY	RECOVERY (%)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (g/t)			
200-202m			light green dacitic tuff with light green leucocratic patch 201.40-202.40m: white grey weakly altered dacite tuff (bleached)														
210-212m			light greenish grey dacitic tuff with green patch and quartz grain in matrix 211.40-212.00m: white and grey leucocratic quartz vein let														
220-222m			220.40m: small (0.2-0.3) grey clay (thickness 3cm)														
230-232m			light green dacitic tuff with small fragments (0.5cm under) of andesite and dacite & leucocratic green patch and quartz grain in matrix gradual change														
240-242m			light green dacitic lapilli tuff lapilli: 0.5cm under, dark green and grey andesite, white grey dacite and a little of green patch matrix: small fragments of rock and quartz grain														
242-244m			green dacitic tuff breccia														
244-246m			light green dacitic tuff with small fragments (0.5cm under) of andesite and dacite, and quartz grain in matrix														
246-248m			light green dacitic lapilli tuff														

Apx.47(1) Geological Log of Diamond Drilling Hole (MJP-11)

MJP-12(1) Direction: SE50°, Angle: -45°, Depth: 250.46m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY (%)	SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Mo (%)		
0			Parent Sediments silt, sand, gravel silt and sand; white to light grey tuffaceous silt and sand gravel: size under 20 mm, blue-grey, light green andesite, dark grey andesite.														
10			dark grey hard compact andesite with weak chloritization														
15			18.34-19.05 m: brown iron oxides along cracks														
20			19.54-19.90 m: strongly sheared zone with brown and white clay														
25			21.15-24.85 m: light grey weakly altered andesite argillized zone with iron oxides														
30			24.85-27.27 m: dark grey to light grey hard compact hardened andesite														
35			27.27-29.65 m: light greenish grey weakly altered andesite tuff														
40			29.65-30.30 m: strongly sheared zone fault breccia with clay														
45			31.30-33.50 m: brown iron oxides along cracks and quartz veins (w=0.5 cm)														
50			39.55-43.12 m: light grey hard compact to semi andesite tuff with pyrite and brown iron oxides along crack														
55			43.12-46.10 m: brownish grey strongly sheared zone														
60			greenish grey hard compact andesite tuff with lenticular green patches and a little breccia of andesite (l=3 cm), yellowish brown iron oxides along crack														
65			light greenish grey hard compact andesite tuff with a little breccia of grey andesite (l=3-5 cm)														
70			63.01-65.67 m: grey to light grey strongly silicified rock with dissemination of pyrite														
75			65.67-68.10 m: grey quartz veinlet network														
80			light greenish grey hard compact andesite tuff with small breccia (l=0.5 cm) of grey andesite														
85			75.42-76.80 m: light grey strongly silicified rock with dissemination of pyrite														
90			75.42-76.80 m: very strongly silicified zone with quartz veins (w=2 cm), Cp, Ca, Sp														
95			greenish grey weakly altered andesite tuff														
100			84.05-84.14 m: white grey quartz vein														
105			88.00-88.30 m: grey quartz vein														
110			88.00-88.30 m: grey quartz vein														
115			90.00 m: dark grey breccia vein with a little Cp and many pyrite crystals														
120			91.60 m: black mineral (Sp, Mg, Mn, Py) lenticular vein (w=3 cm)														
125			grey to light grey silicified andesite tuff with dissemination of pyrite														
130			light greenish grey silicified rock (dacitic tuff) with phenocryst of quartz grains (l=0.3 cm)														

MJP-12(2) Direction: SE 50°, Angle: -45°, Depth: 250.46m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY (%)	SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Mo (%)		
100			white grey very strongly silicified rock (dacitic tuff) with phenocryst of quartz grains and lenticular breccia														
110			light grey strongly silicified dacitic tuff with phenocryst of quartz														
115			111.50-112.25 m: light grey very strongly silicified rock with black mineral (Cp, Ca, Ag, Py) along cracks														
120			112.25-113.95 m: dark grey quartz vein with black mineral and pyrite														
125			113.95-114.70 m: light grey strongly silicified rock with black mineral (Ag, Py) along cracks														
130			119.80-121.00 m: light grey strongly silicified rock with black vein along cracks														
135			121.00-122.90 m: grey very strongly silicified rock with black vein network and pyrite vein along cracks														
140			123.00-123.30 m: light grey strongly silicified rock with black vein along cracks														
145			light greenish green hard compact andesite tuff with lenticular green patches														
150			131.20-131.40 m: strongly silicified zone 131.37 m: quartz veinlet (w=0.5 cm) along crack														
155			135.40 m: quartz veinlet (w=0.7 cm)														
160			light greenish green hard compact andesite tuff with lenticular green patches and a little breccia of andesite (l=1 cm)														
165			146.92 m: black mineral (Sp, Ag) and Py along crack														
170			153.25 m: white quartz veinlet (w=0.3 cm)														
175			152.10-152.80 m: grey clay vein with pyrite vein (w=0.2-0.3 cm)														
180			light greenish grey silicified andesite tuff with lenticular green patches														
185			158.00-158.00 m: white grey strongly silicified zone														
190			161.89 m: white quartz veinlet (w=0.5 cm)														
195			165.60 m: white quartz veinlet (w=0.1 cm)														
200			167.82 m: white quartz vein (w=0.5 cm)														
205			174.30 m: white quartz vein (w=1 cm)														
210			176.45 m: quartz veinlet (w=0.1 cm)														
215			light grey medium to strongly silicified andesite tuff, black rock														
220			182.21-184.10 m: strongly sheared zone with grey clay along cracks														
225			181.50 m: fault breccia with grey clay														
230			186.30 m: black mineral (Mg, Sp) irregular vein														
235			186.30-193.70 m: dark andesite of black mineral vein (w=3 cm)														
240			189.00 m: black mineral (Sp, Mg, Mn, Py) lenticular vein (w=3 cm)														
245			193.70-193.80 m: white grey to grey quartz chlorite vein with black mineral														
250			193.80-193.90 m: grey clay and silicified rock														
255			193.90-194.00 m: grey clay														
260			grey silicified andesite tuff with lenticular green patches														

MJP-12(3) Direction: SE 50°, Angle: -45°, Depth: 250.46m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY (%)	SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Mo (%)		
200			200.50 m: dark of black mineral														
205			202.22 m: quartz veinlet with reddish brown mineral														
210			203.35-203.35 m: white quartz vein with black mineral (w=2.5 cm)														
215			204.25-204.85 m: quartz veinlet network with black mineral														
220			206.60-206.70 m: grey to white quartz vein network (w=1.5 cm)														
225			206.95-207.00 m: black and reddish brown vein (w=1.5 cm)														
230			light greenish green andesite tuff with lenticular green patches														
235			white grey strongly silicified andesite tuff with dots of black mineral														
240			212.30-212.60 m: breccia bearing dark grey quartz vein 115.60-212.75 m: black veinlet (w=1 cm) with white calcite veinlet (l=1 cm)														
245			212.75-213.10 m: dark grey quartz vein with black mineral 213.10-213.30 m: grey strongly silicified rock														
250			213.30-214.00 m: grey quartz vein with white quartz vein network														
255			215.57-216.75 m: lenticular black vein														
260			220.62 m, 220.50 m: black veinlet and dots														
265			220.95-221.05 m: white quartz vein (w=0.2 cm)														
270			221.10-221.30 m: white quartz veinlet and black veinlet														
275			222.85 m: lenticular black vein (w=1.0 cm)														
280			224.35 m: black vein with pyrite (w=0.5 cm)														
285			225.35 m: grey and black quartz vein (w=1.5 cm)														
290			light greenish grey medium silicified andesite tuff with lenticular green patches														
295			229.05 m: grey quartz vein with reddish brown mineral and pyrite														
300			230.80-230.90 m: quartz veinlet network														
305			235.50-236.05 m: white quartz vein network														
310			light greenish green hard compact andesite tuff with lenticular green patches and small breccia of grey andesite														
315			240.50-240.75 m: grey quartz veinlet network														
320			241.70-244.40 m: white quartz vein network														
325			245.40-245.00 m: andesite tuff breccia														

Apx.47(2) Geological Log of Diamond Drilling Hole (MJP-12)

MJP-13(1) Direction: SE35°, Angle: -45°, Depth: 250.20m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY	SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Fe (%)		
0-100			Alluvium 0.00-1.00 m: grey sand and pebbles gravel of dacite 1.00-3.00 m: cobble gravel of dacite and grey soil 3.00-8.49 m: cobble and pebbles gravel of light grey dacite, rhyolite, andesitic tuff 8.40-8.90 m: grey sand and granite 8.90-13.55 m: cobble gravel of dacitic lapilli tuff and porphyritic grey dacite 13.55-18.40 m: block of light grey to light brownish grey dacite 18.40-22.10 m: horniferous (Φ20 cm) and cobble gravel of grey andesite, yellowish grey dacite and light grey dacite 22.10-29.50 m: block and pebbles gravel of dacite 29.50-33.25 m: pebbles gravel of light grey dacite, greenish grey andesite and porphyritic grey dacite, rhyolite, andesite 33.25-39.00 m: block of porphyritic grey dacite 39.00-43.50 m: pebbles of grey andesite and a little bit of porphyritic dacite 43.50-44.95 m: grey soil and pebbles gravel 44.95-48.65 m: grey clay with small chips of andesite 48.65-51.50 m: dark grey weathered andesite with reddish of green andesite (Φ10 cm) 51.50-55.25 m: dark grey porphyritic andesite with many cracks, phenocryst of plagioclase (Φ0.5 cm) 55.25-61.10 m: all size of grey andesite 61.10-69.20 m: dark brownish grey tuffaceous shale with many fractures 69.20-73.50 m: grey tuffaceous coarse grained sandstone 73.50-77.25 m: dark brownish grey tuffaceous shale with many fractures 77.25-81.00 m: grey tuffaceous coarse to fine grained sandstone with thin bedded brownish grey shale 81.00-85.75 m: grey tuffaceous conglomerate pebbles: sub-angular, Φ=1 cm 85.75-91.50 m: brownish grey shale with dark grey lenticular sandstone 91.50-95.25 m: light green fine grained tuff, weakly argillization 95.25-99.00 m: light grey massive dacite tuff with green lenticular patch and quartz grain 99.00-102.75 m: brown iron oxide & bogerack 102.75-106.50 m: weakly argillization 106.50-110.25 m: dacite tuff with brown iron oxides along cracks and veins														

MJP-13(2) Direction: SE 35°, Angle: -45°, Depth: 250.20m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY	SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Fe (%)		
100			light greenish grey dacite tuff with green lenticular green patch (Φ1 cm x 0.3 cm) and quartz grain 103.60-104.00 m: light green dacite, fine tuff														
110			gradual change light green massive dacite lapilli tuff with lenticular green patch (Φ1-2 cm) and quartz grain														
120			gradual change light green dacite tuff with green patch (Φ1 cm) x 0.3 cm under 112.10 m: white quartz vein (Φ=0.2 cm) gradual change light green dacite, fine tuff														
130			gradual change light green dacite tuff with green patch (Φ1 cm x 0.3 cm) x 1 112.90 m: white quartz vein (Φ=0.2 cm) with pyrite														
140			gradual change light green dacite tuff with a little small green patch 113.75 m: light green dacite tuff with green patch and andesite breccia (Φ0.4 cm under) of grey green light green														
150			gradual change dacite lapilli tuff with quartz grain lapilli: Φ2 cm under, lapilli of andesite														
160			light green massive dacite tuff with a little breccia (Φ1 cm) of white dacite and green andesite gradual change white grey bleached dacite tuff with quartz grain 116.90-117.50 m: dark grey strongly altered rock with white quartz veinlets network and grey clay 117.50-120.10 m: reddish brown iron oxide network 120.10-120.40 m: dark grey strongly altered rock with white quartz veinlets network														
170			white grey bleached dacite tuff with white lenticular patch and quartz grain														
180			gradual change light green dacite tuff with light green lenticular patch and quartz grain														
190			gradual change light greenish grey dacite tuff breccia breccia: Φ2-5 cm, angular, breccia of green and brown andesite, porphyritic andesite and dacite matrix: small fragments of andesite and quartz grain 126.50 m: white quartz vein (Φ=0.5 cm) gradual change white grey strongly altered rock 129.00 m, 129.05 m: white quartz veinlet 129.45-129.60 m: white grey strongly altered rock with crystal of Sp, and fine black mineral														

MJP-13(3) Direction: SE 35°, Angle: -45°, Depth: 250.20m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS										CORE RECOVERY	SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	As (%)	Fe (%)		
200			white grey strongly altered rock 200.00 m: lenticular vein of Sp, Cp, Ge and Py 200.14-200.30 m: white quartz vein network with black 201.00-201.25 m: Sp+Ca+Py mineral 202.00-202.50 m: strongly altered rock with partly lenticular veinlets of Sp and Cp 203.00-204.00 m: white grey strongly altered rock with Sp-Cp-Ge-Py veinlets network and disseminated 204.00-205.00 m: white grey strongly altered rock with partly black vein network gradual change white to light grey massive altered (bleached) dacite tuff with dissemination of pyrite, quartz grain gradual change 212.90-213.10 m: black veinlets with Sp+Ca+Py														
210			gradual change light grey weakly altered dacite tuff with breccia of light green lenticular andesite (Φ1-3 cm) and partly white quartz veinlets														
220			gradual change 225.00-227.40 m: dissemination of pyrite and black fine veinlets														
230			light grey weakly altered bleached dacite tuff with light green andesite and quartz grain, partly white quartz veinlets sometimes contain breccia (Φ2 cm) of green porphyritic andesite														
240			219.95 m, 240.20 m: white quartz veinlets (Φ=0.3-0.5 cm) light grey weakly altered dacite tuff with quartz grain and small (Φ1-3 mm) light green andesite														
250																	

ApX.47(3) Geological Log of Diamond Drilling Hole (MJP-13)

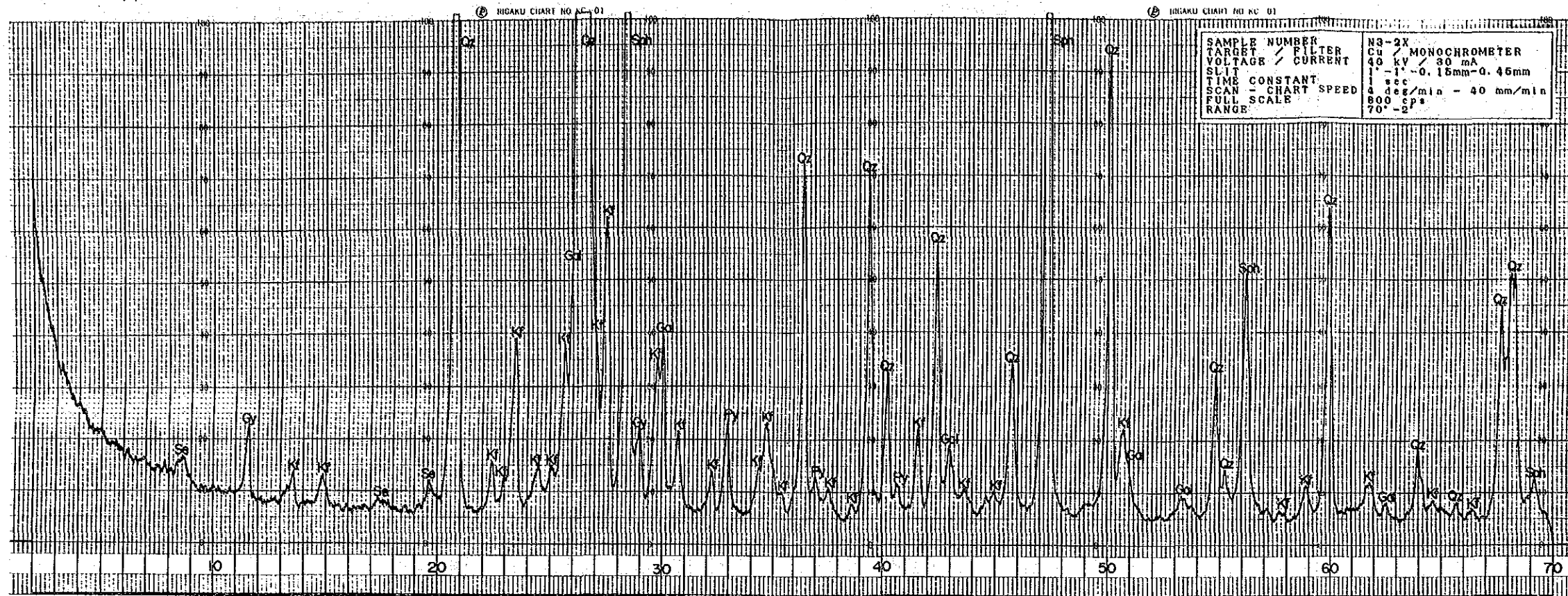
Apx. 48 X-ray Powder Diffraction Charts

Abbreviations

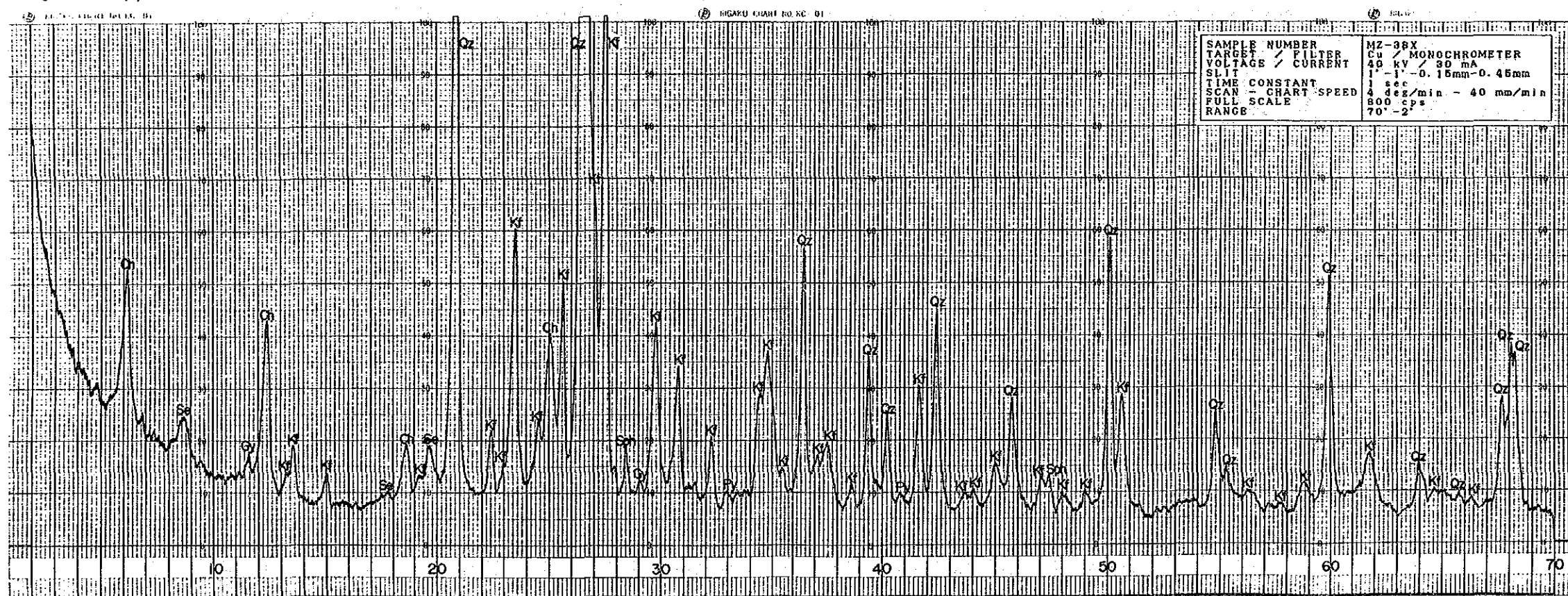
Mineral

Qz : quartz	An : anhydrite
Se : sericite	Gy : gypsum
Ch : chlorite	Ja : jarosite
Am : amesite	Py : pyrite
Kf : potassium feldspar	Go : goethite
Cal : calcite	Gal : galena
Do : dolomite	Sph : sphalerite
	Ag : Ag mineral

Apx. 48 (1)



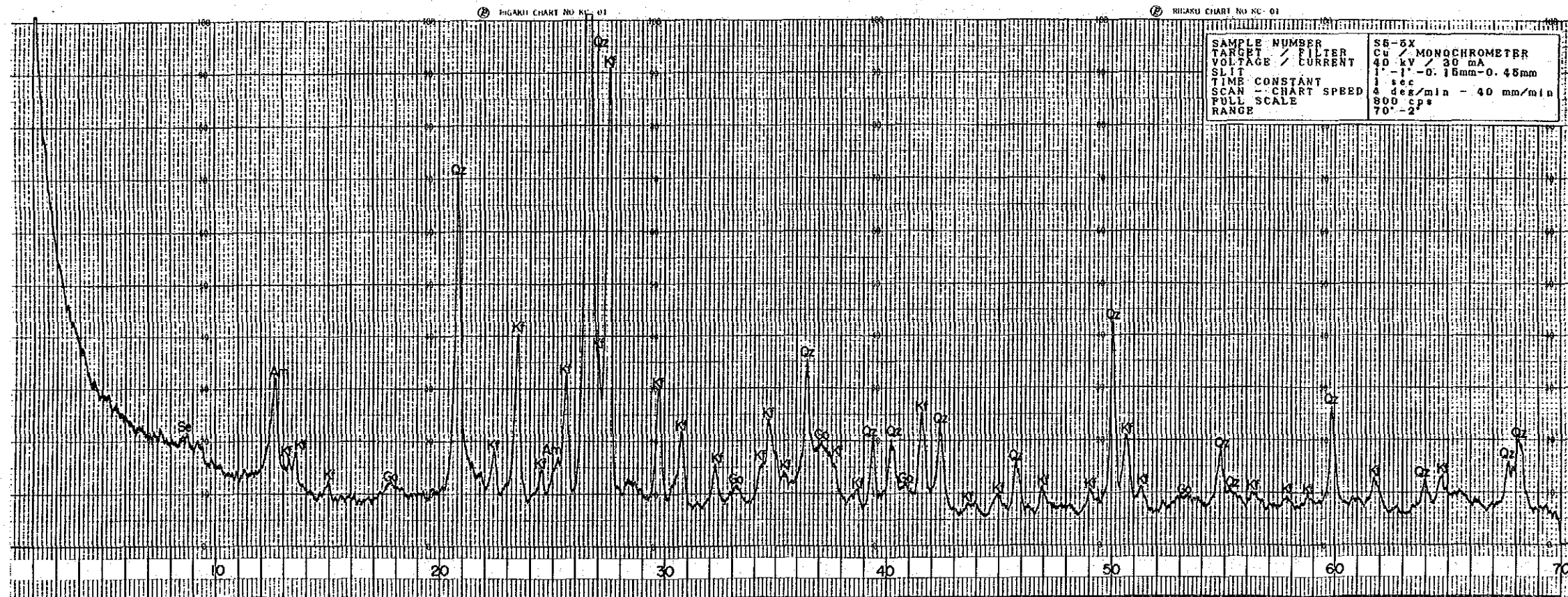
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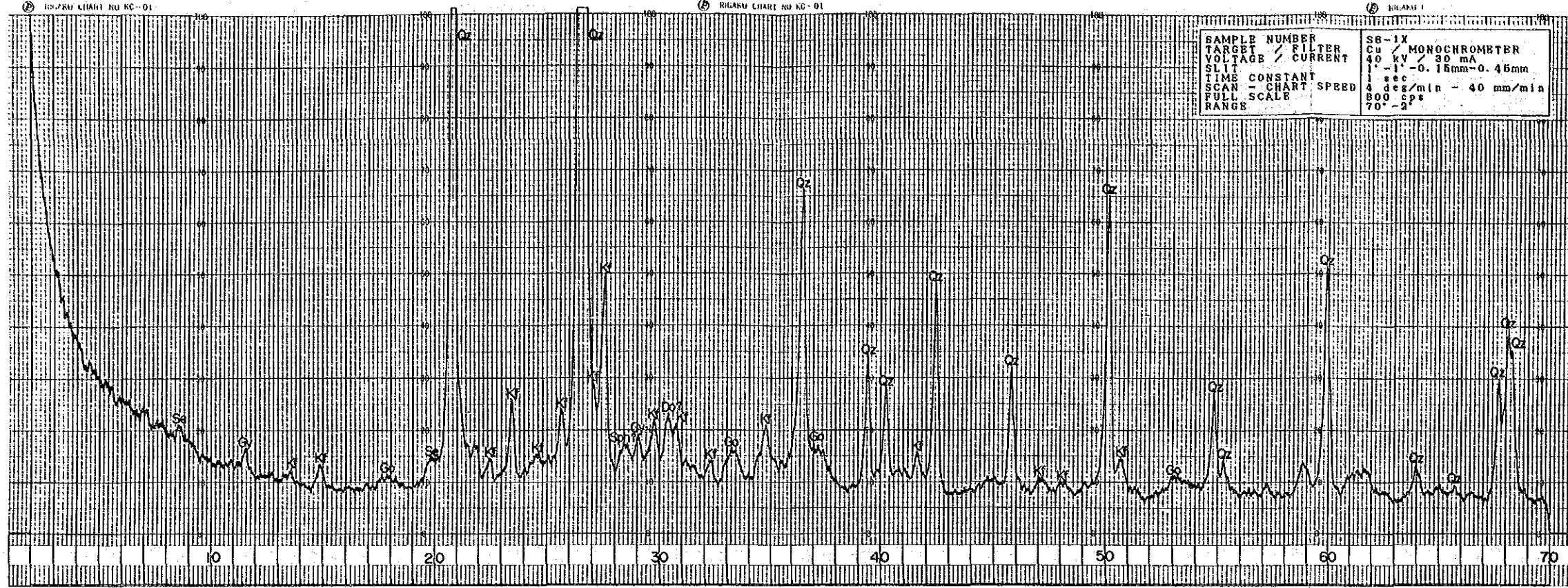
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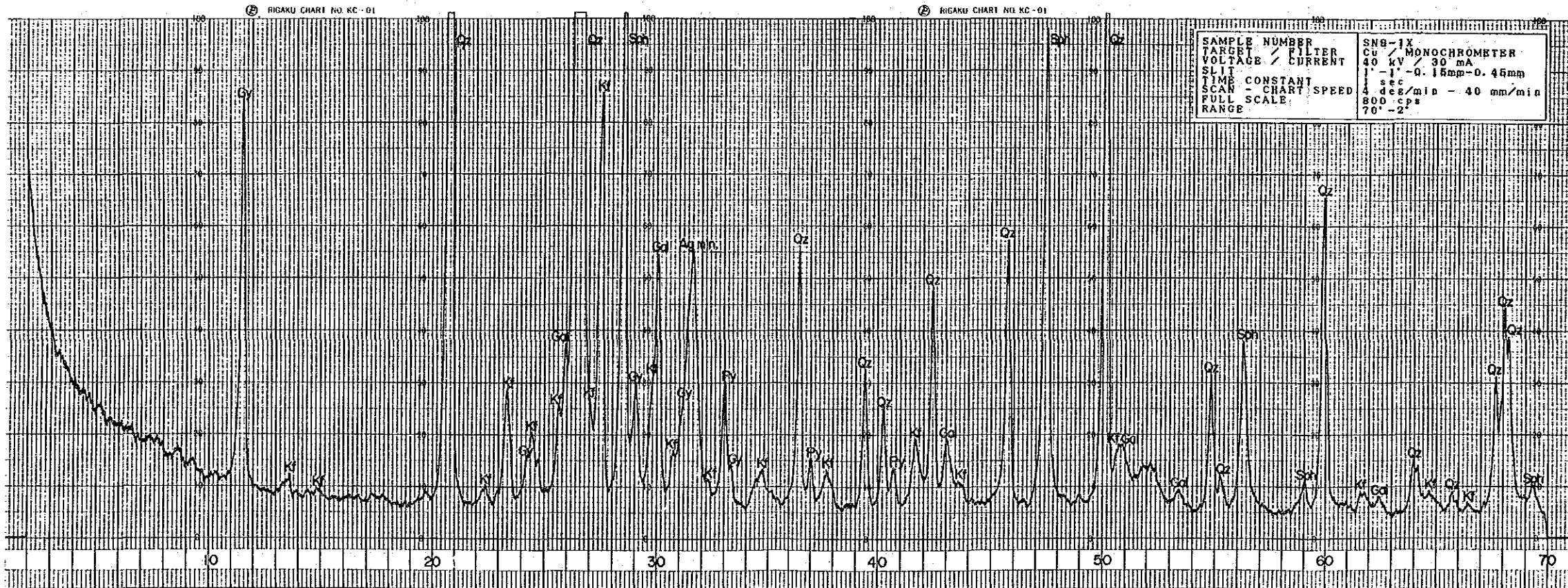
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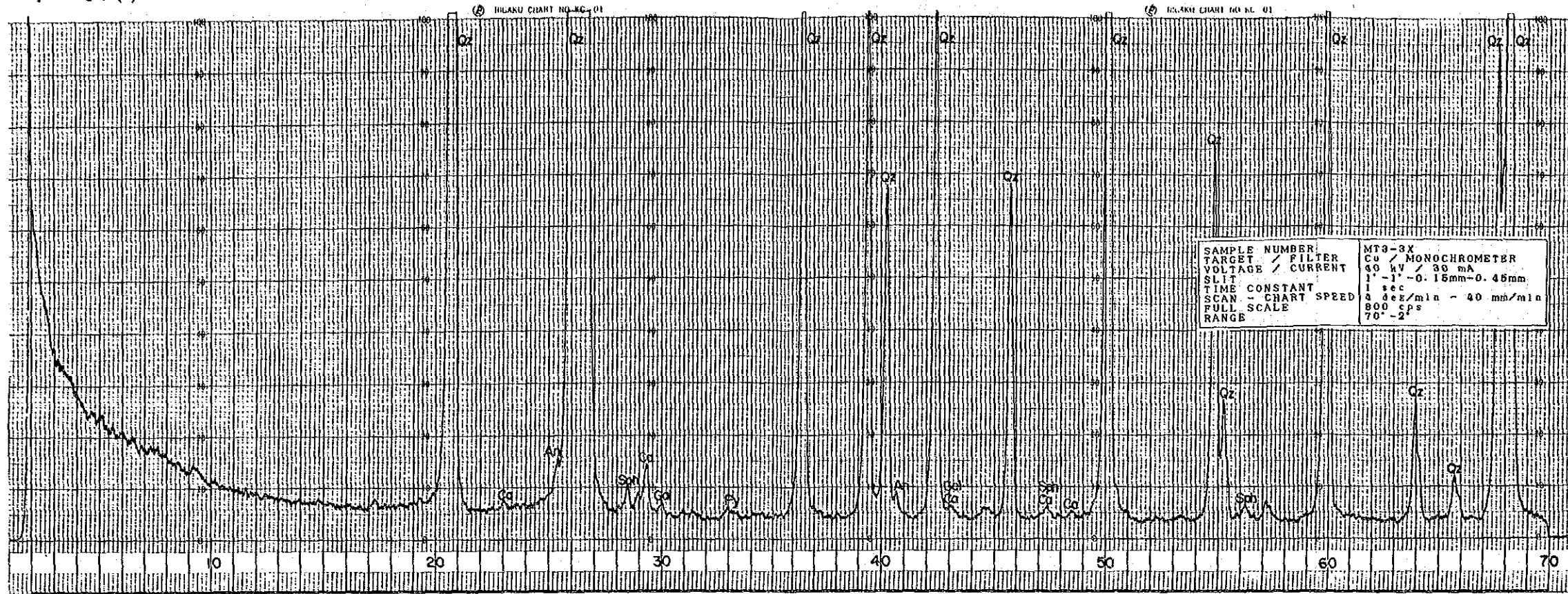
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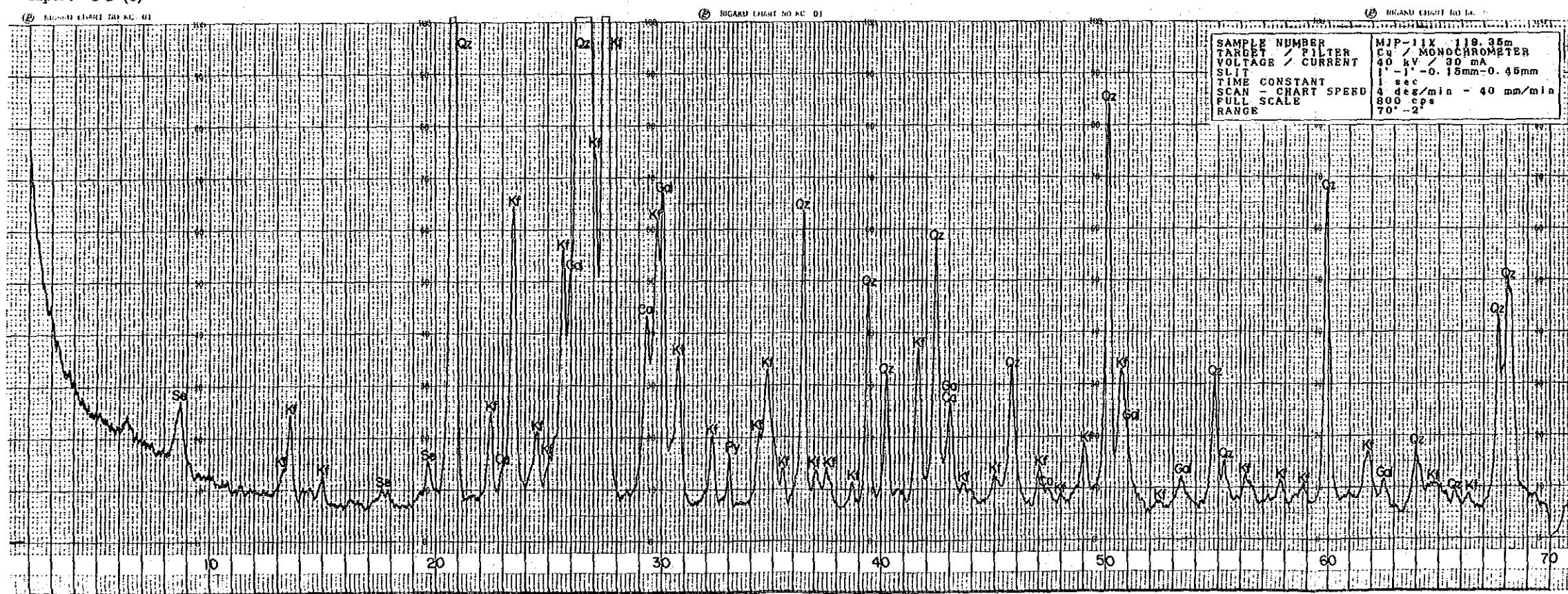
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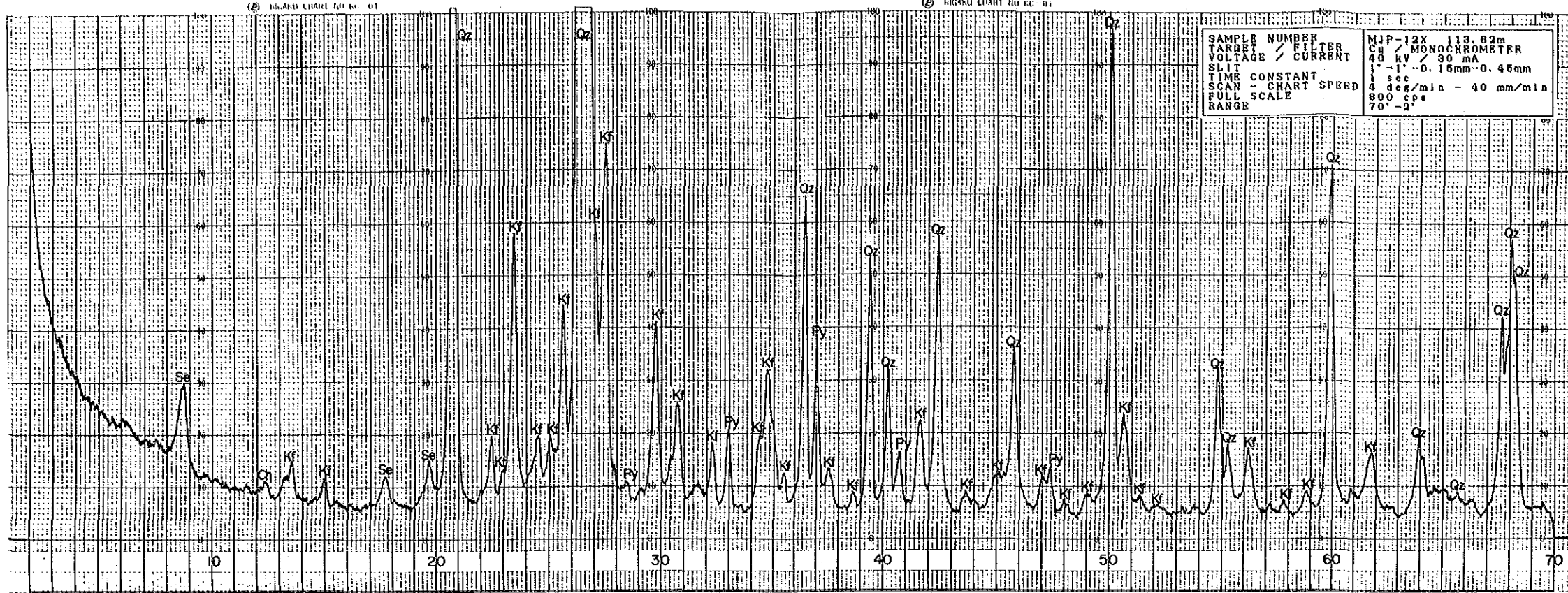
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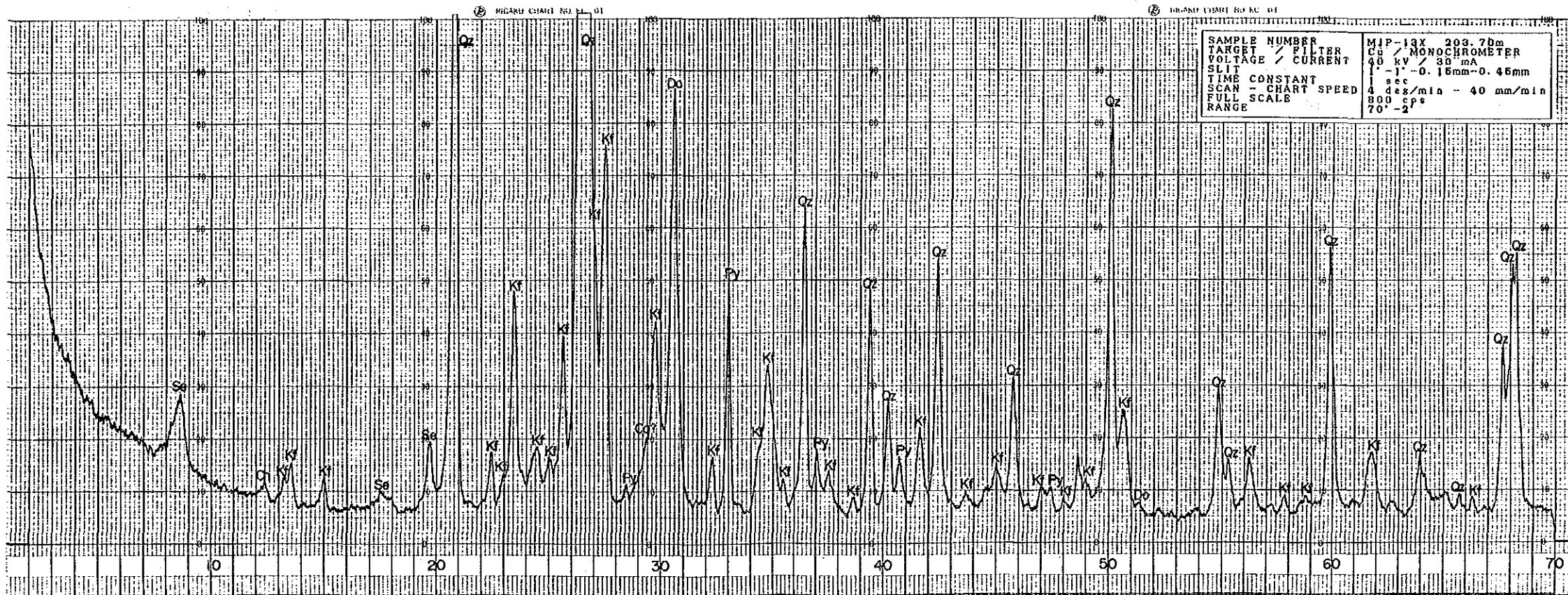
Apx. 48 (8)



Apx. 48 (9)



Apx. 48 (10)



Apx. 48 (1)



Apx. 48 (2)



