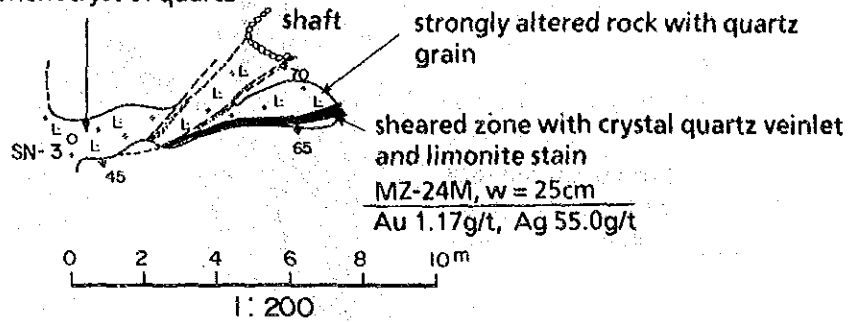


Apx. 11 Geological Sketch Map of Tunnel SN-1, SN-2 in South of the Colpar Area

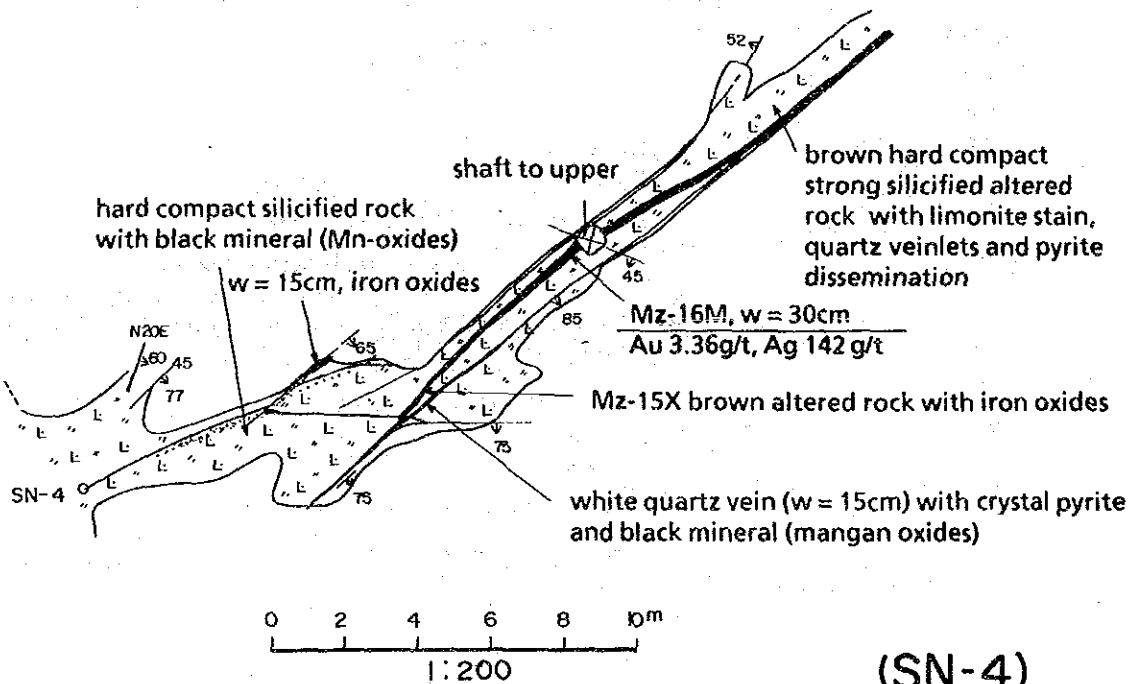
TN MN

strongly altered dacitic tuff with phenocryst of quartz



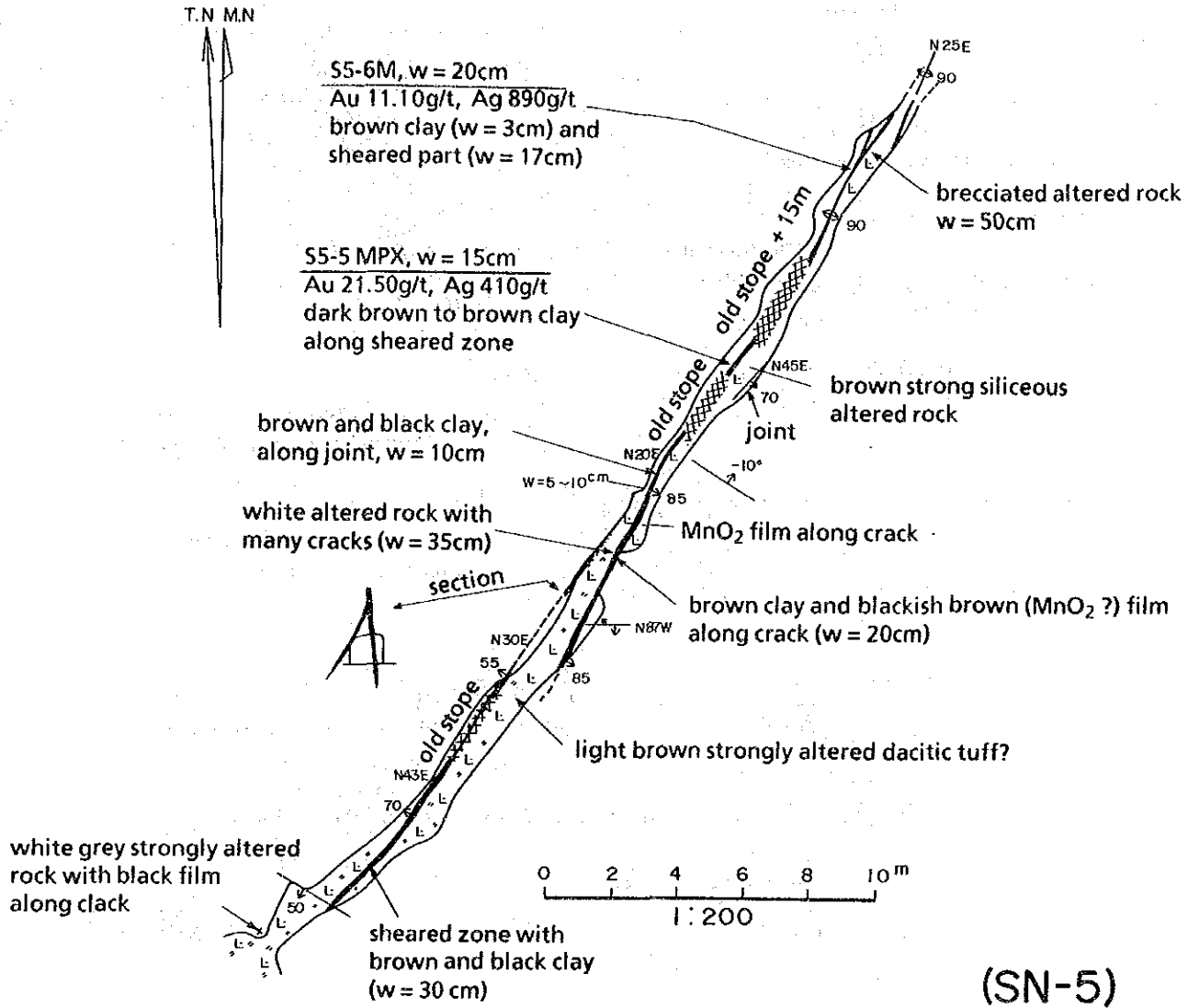
(SN-3)

TN MN



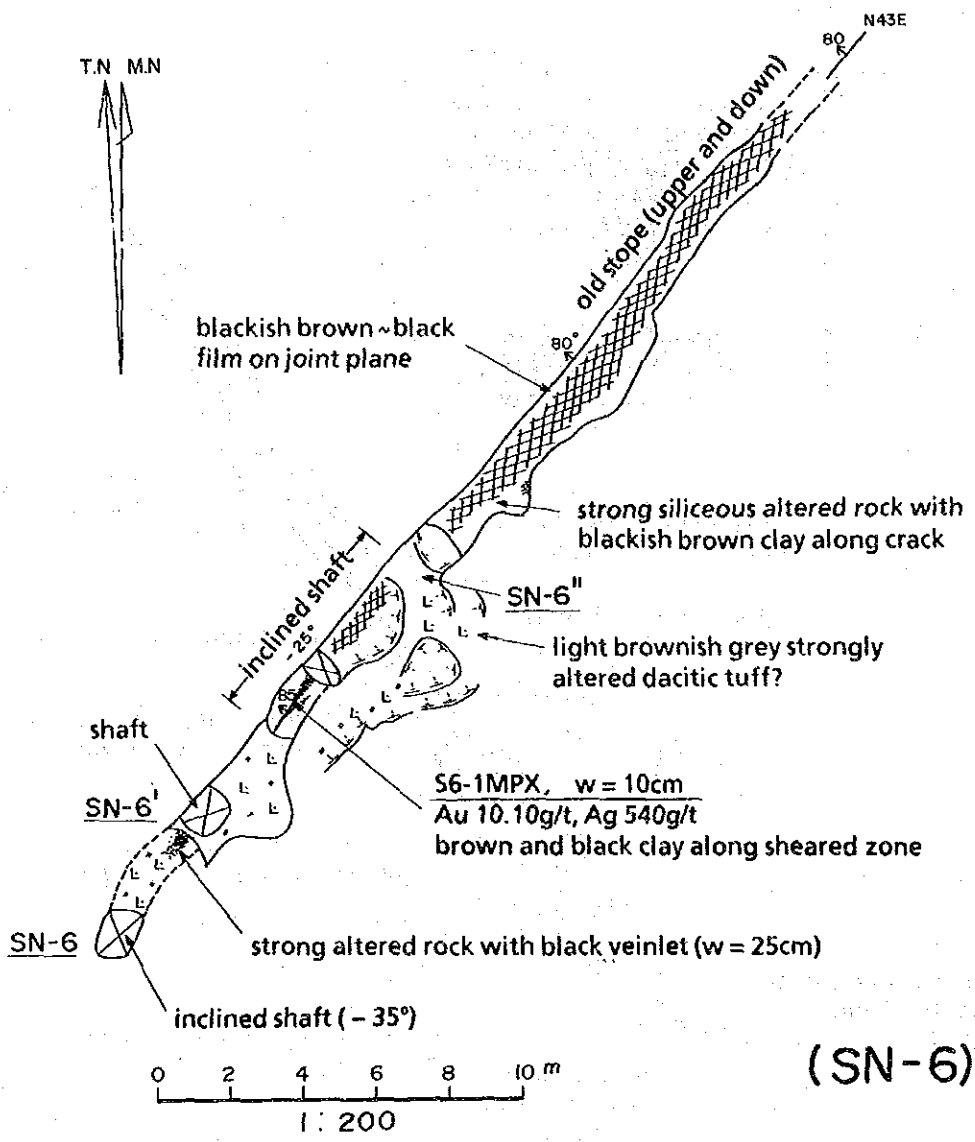
(SN-4)

Apx. 12 Geological Sketch Map of Tunnel SN-3, SN-4 in South of the Colpar Area

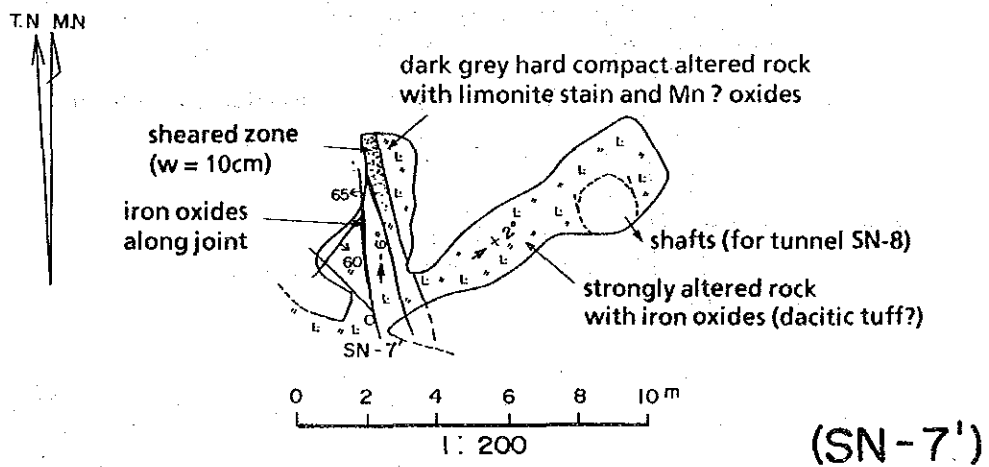
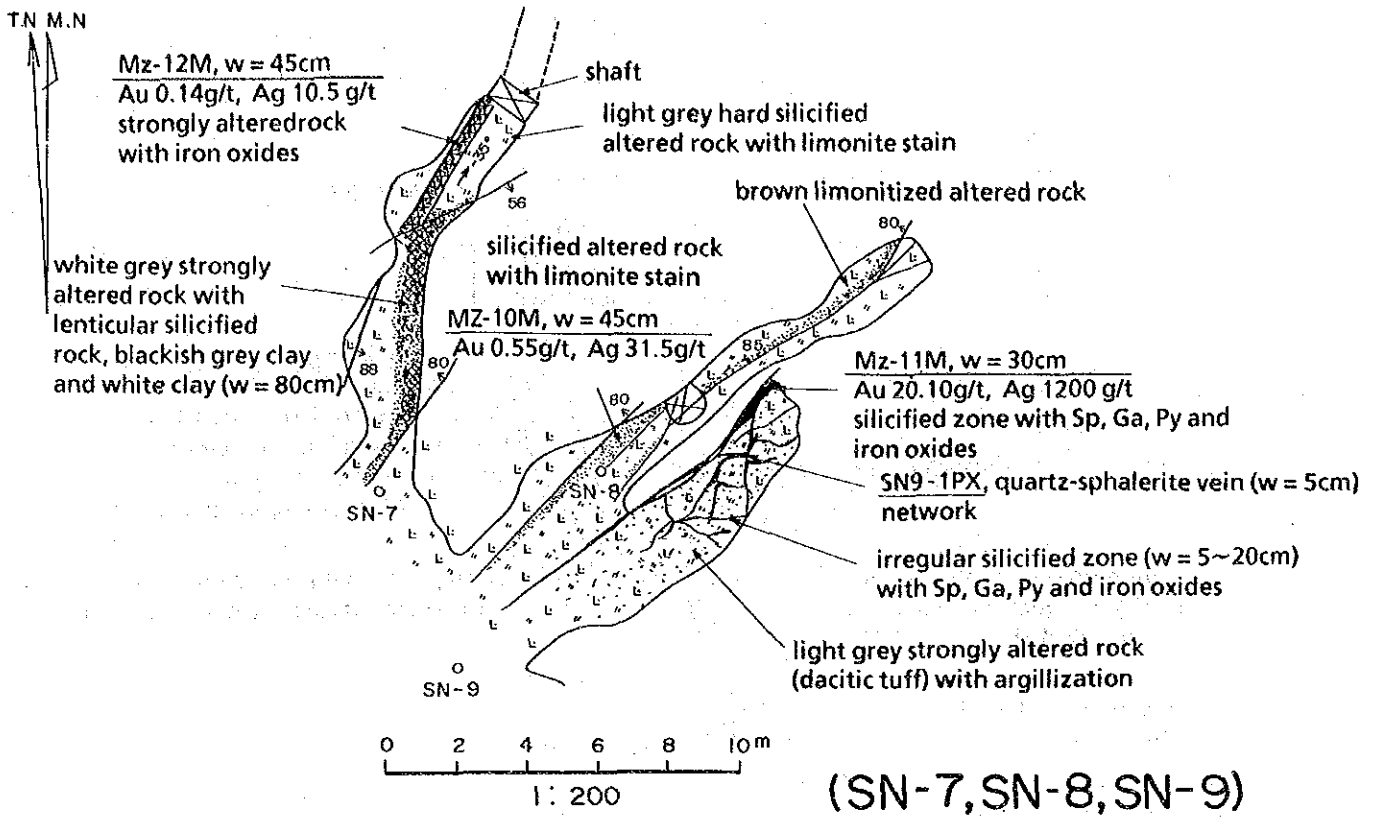


(SN-5)

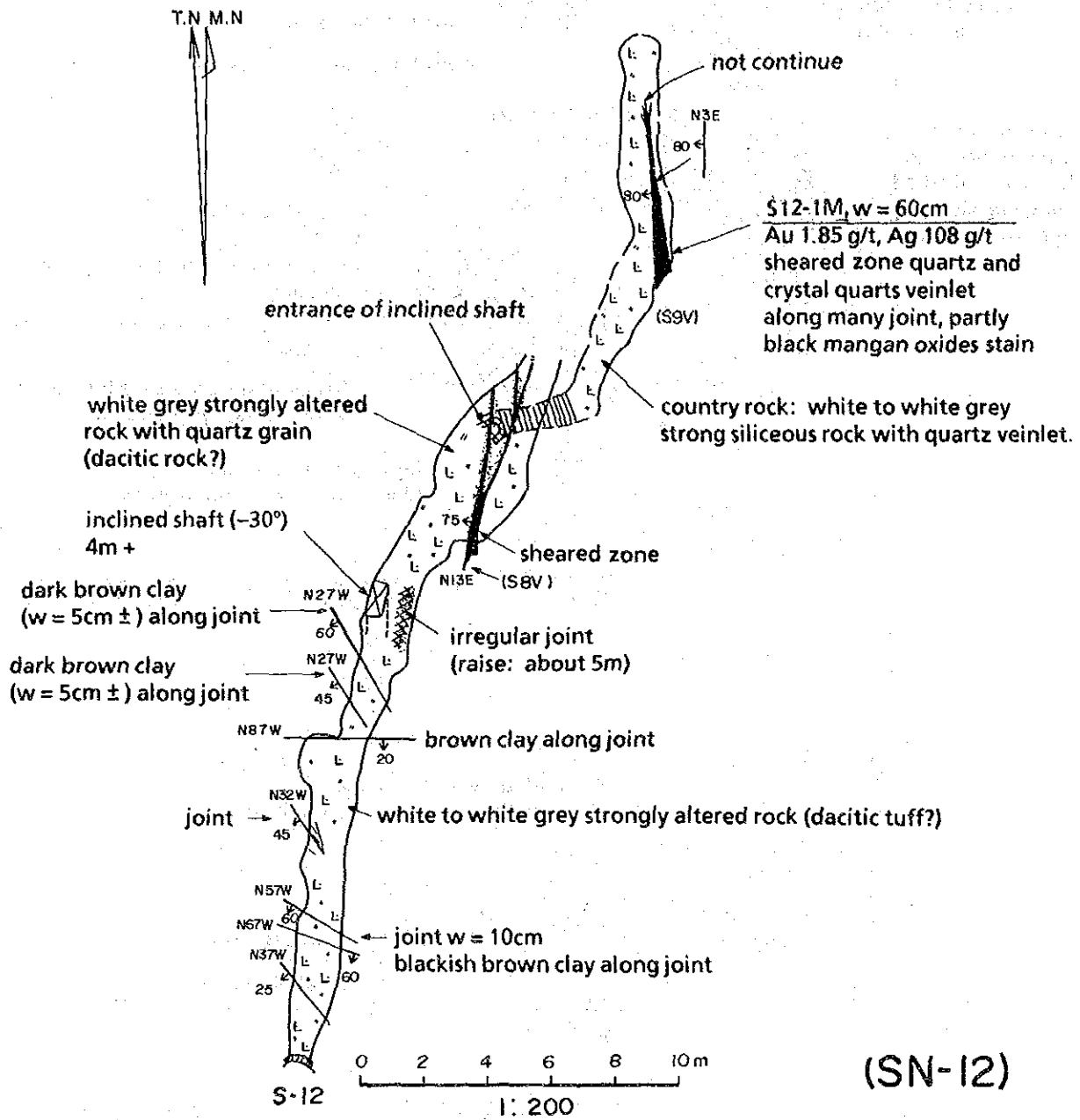
Apx.13 Geological Sketch Map of Tunnel SN-5 in South of the Colpar Area



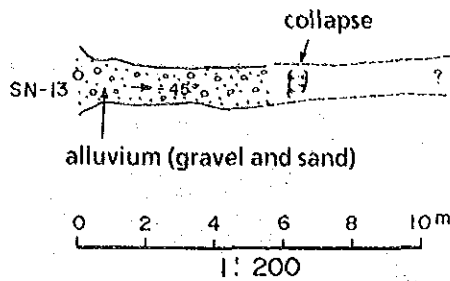
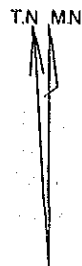
Apx.14 Geological Sketch Map of Tunnel SN-6 in South of the Colpar Area



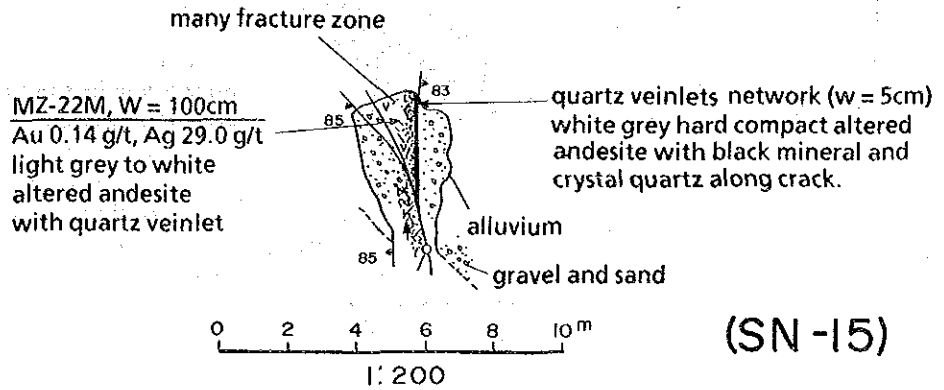
Apx.15 Geological Sketch Map of Tunnel SN-7, SN-7', SN-8, SN-9 in South of the Colpar Area



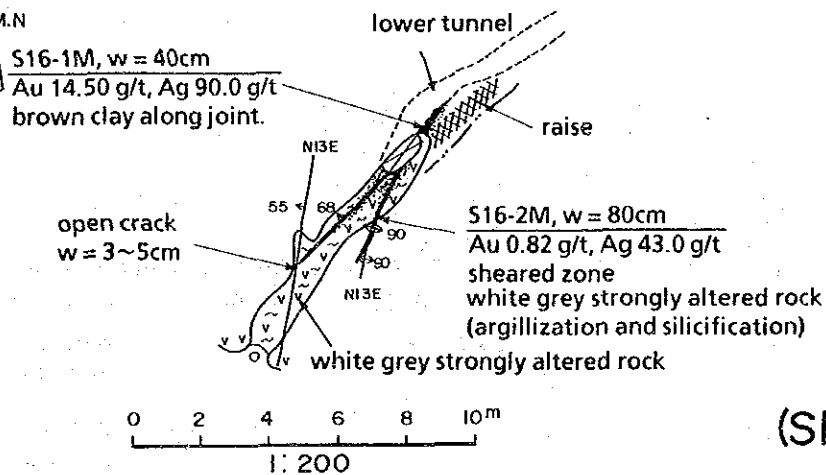
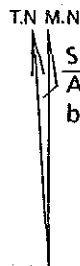
Apx.16 Geological Sketch Map of Tunnel SN-12 in South of the Colpar Area



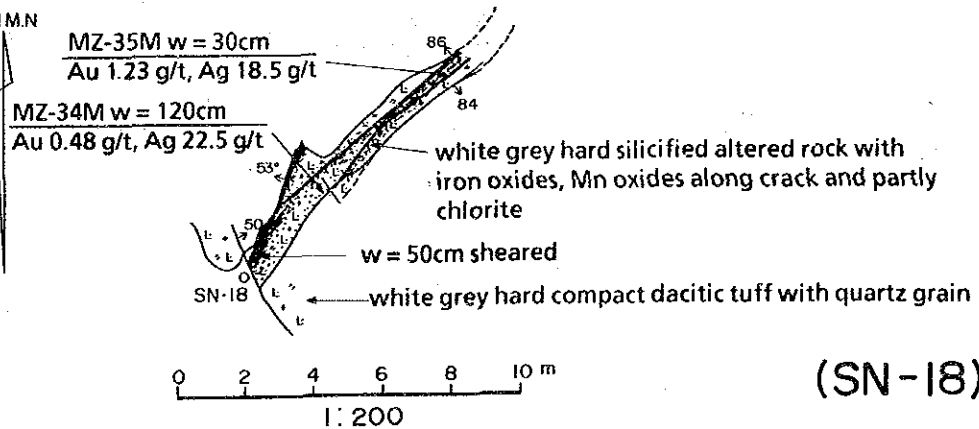
(SN-13)



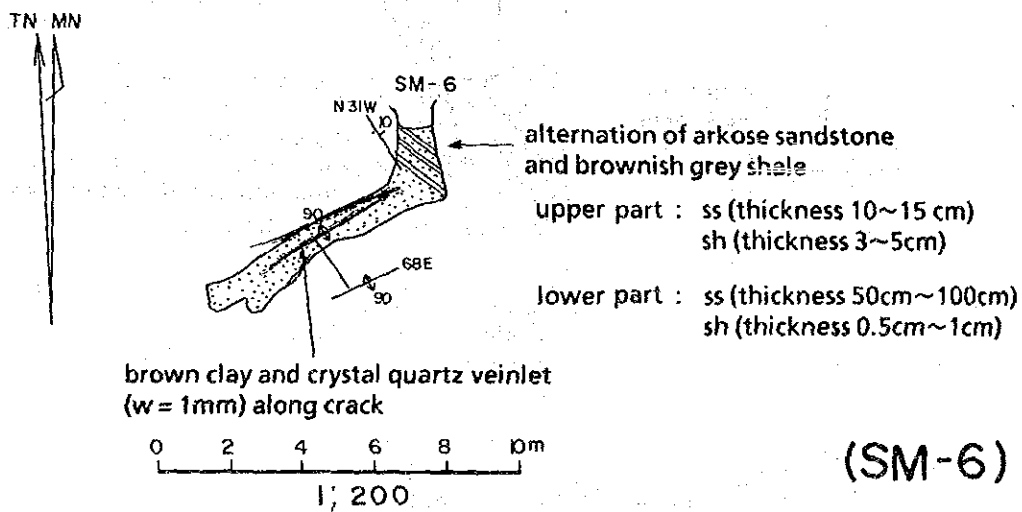
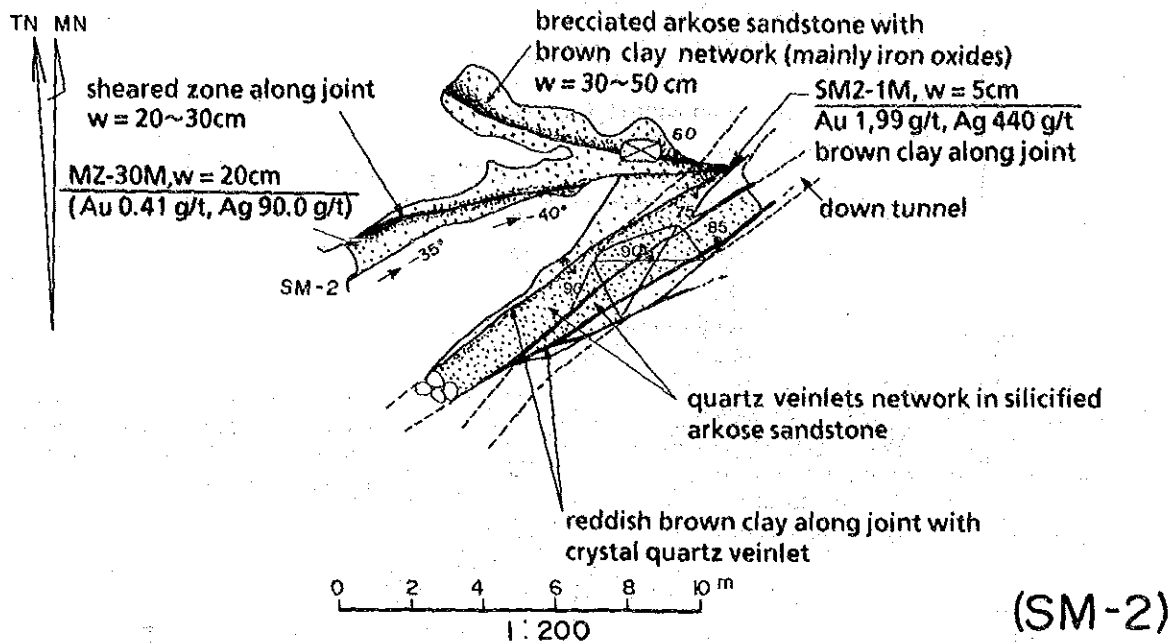
(SN-15)



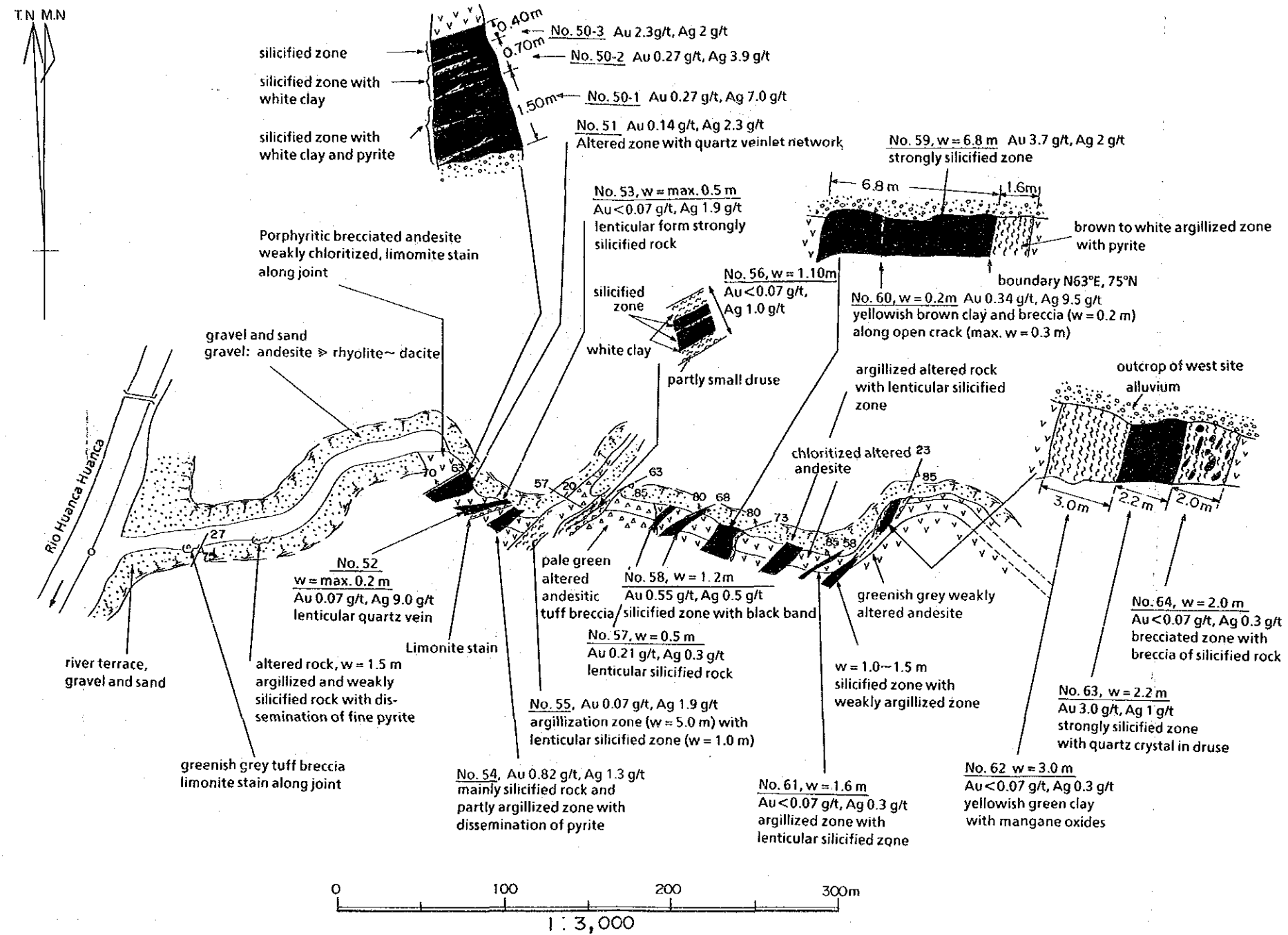
(SN-16)



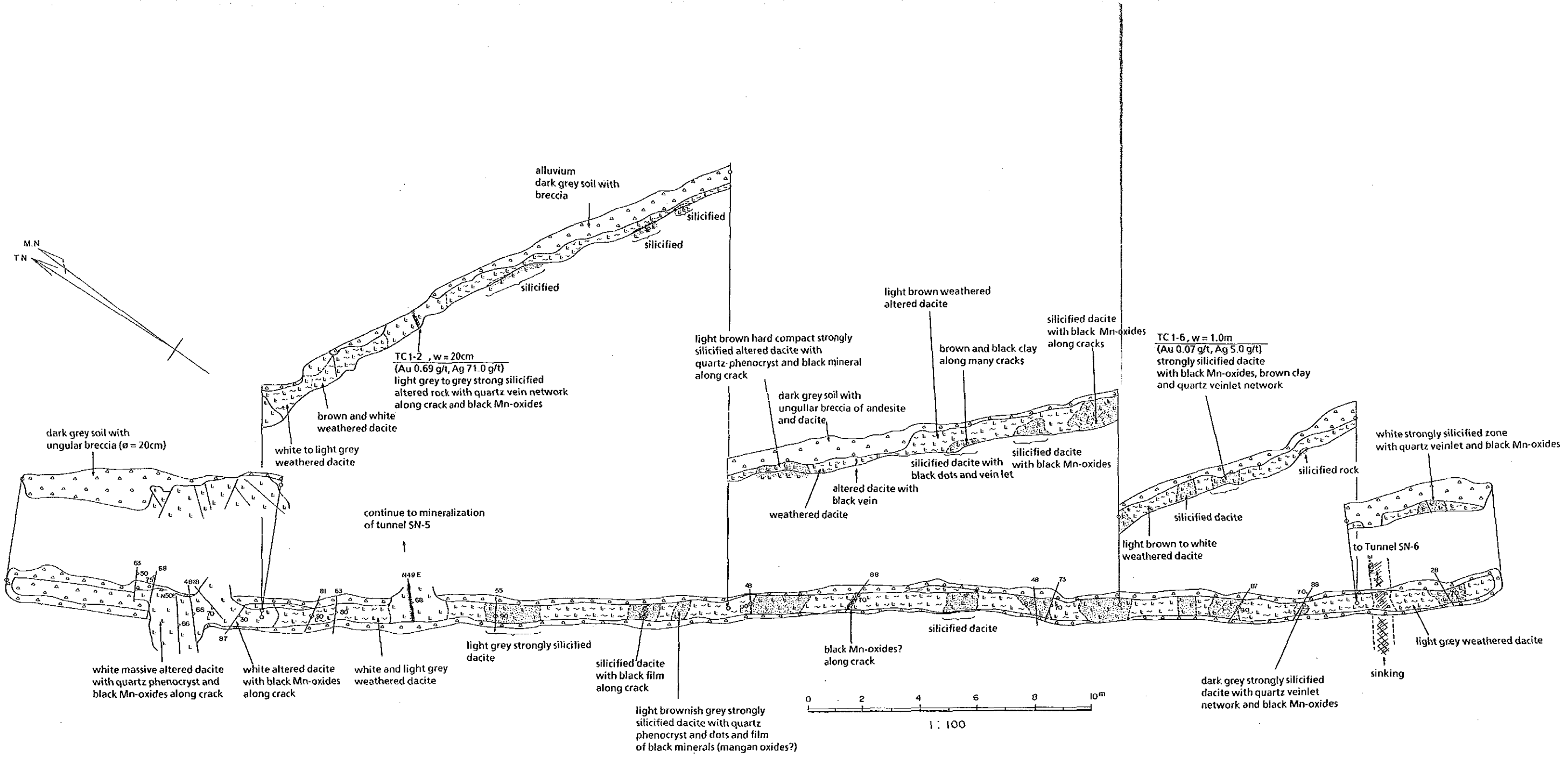
(SN-18)



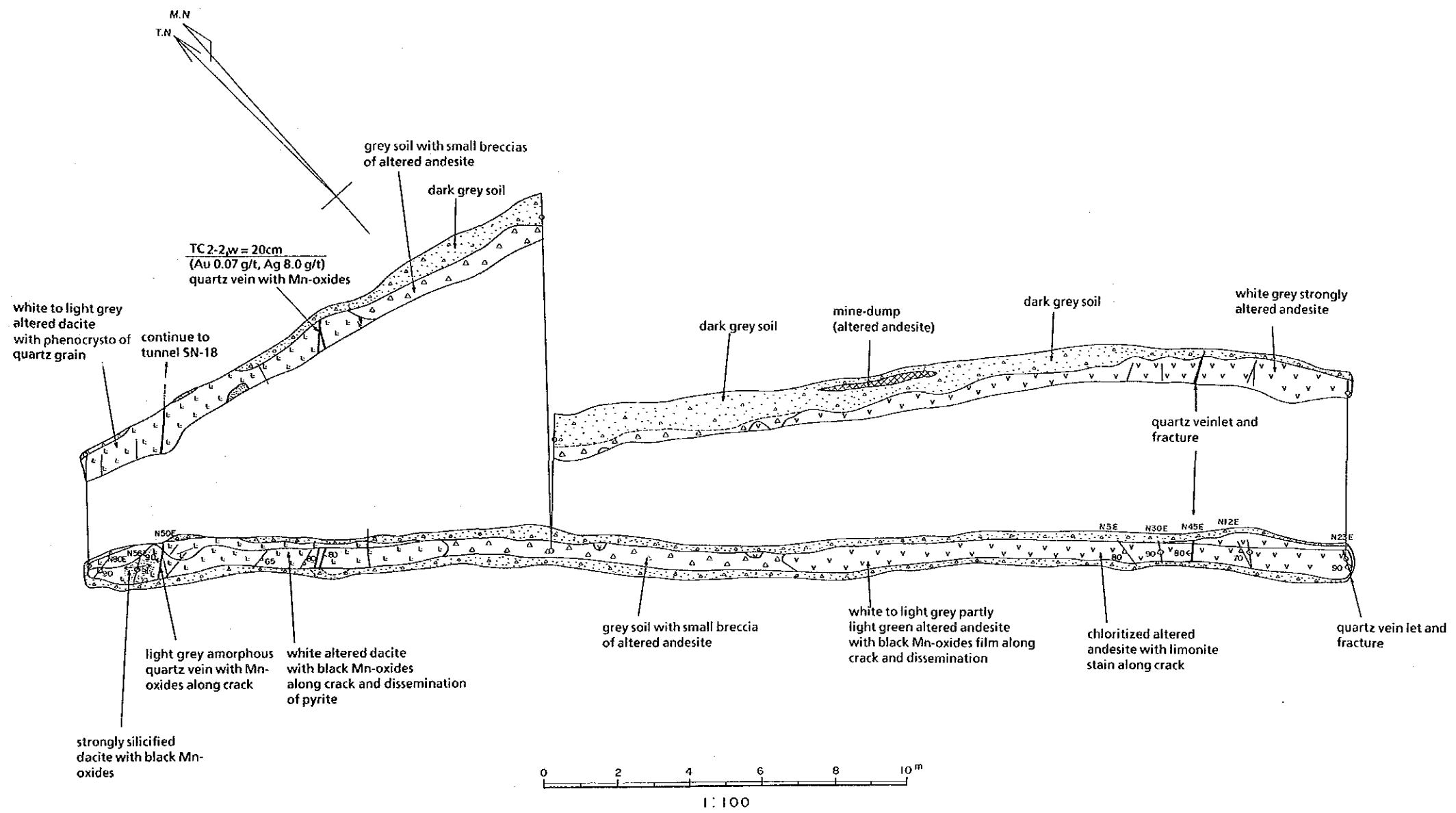
Apx. 18 Geological Sketch Map of Tunnel SM-2, SM-6 in the Marcamalata Area



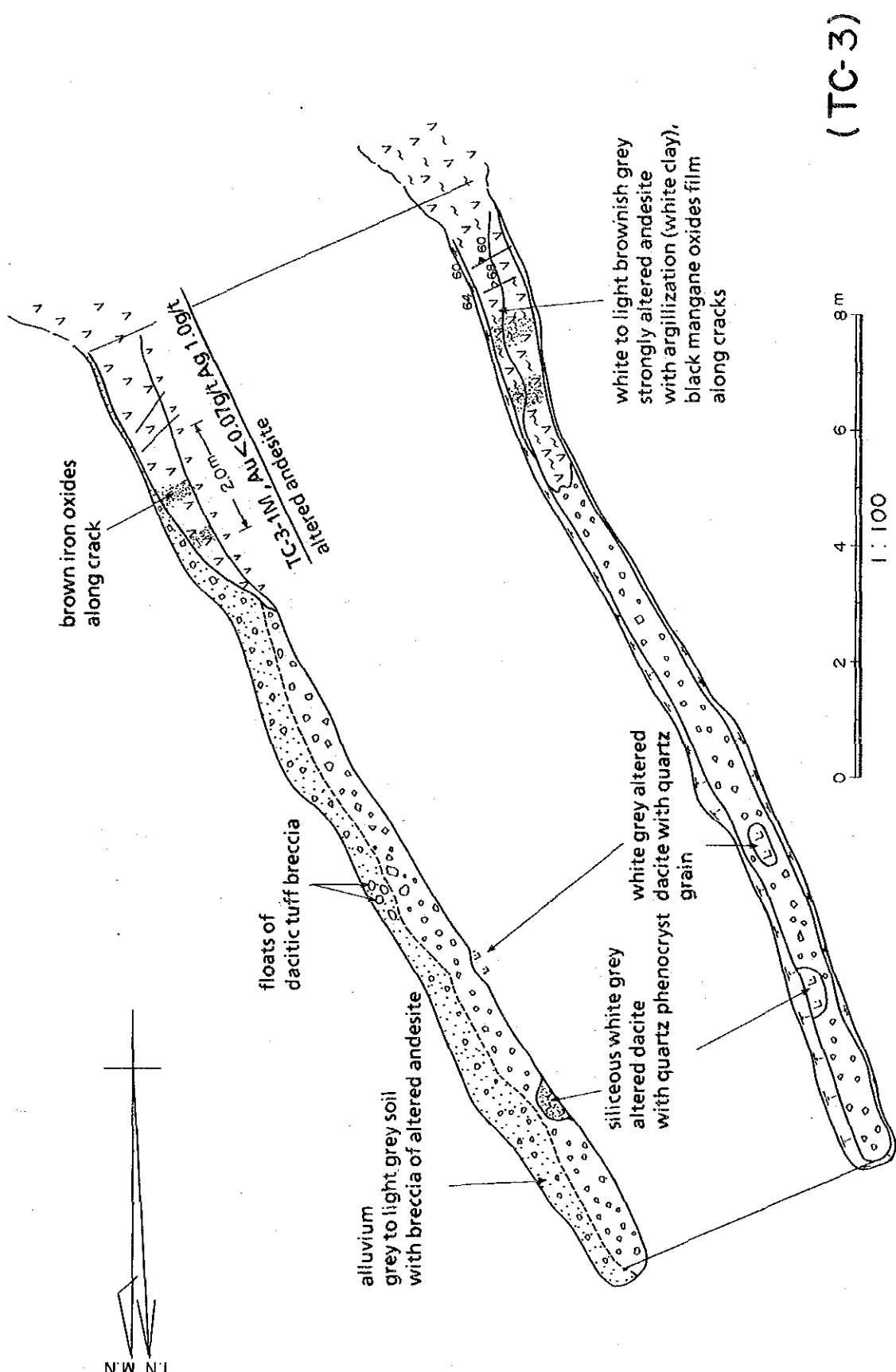
Apx. 19 Geological Route Map of Q. Querumahuaco Valley in the Colpar Area



Apx.20 Geological Sketch Map of Trench TC-1 in South of the Colpar Area

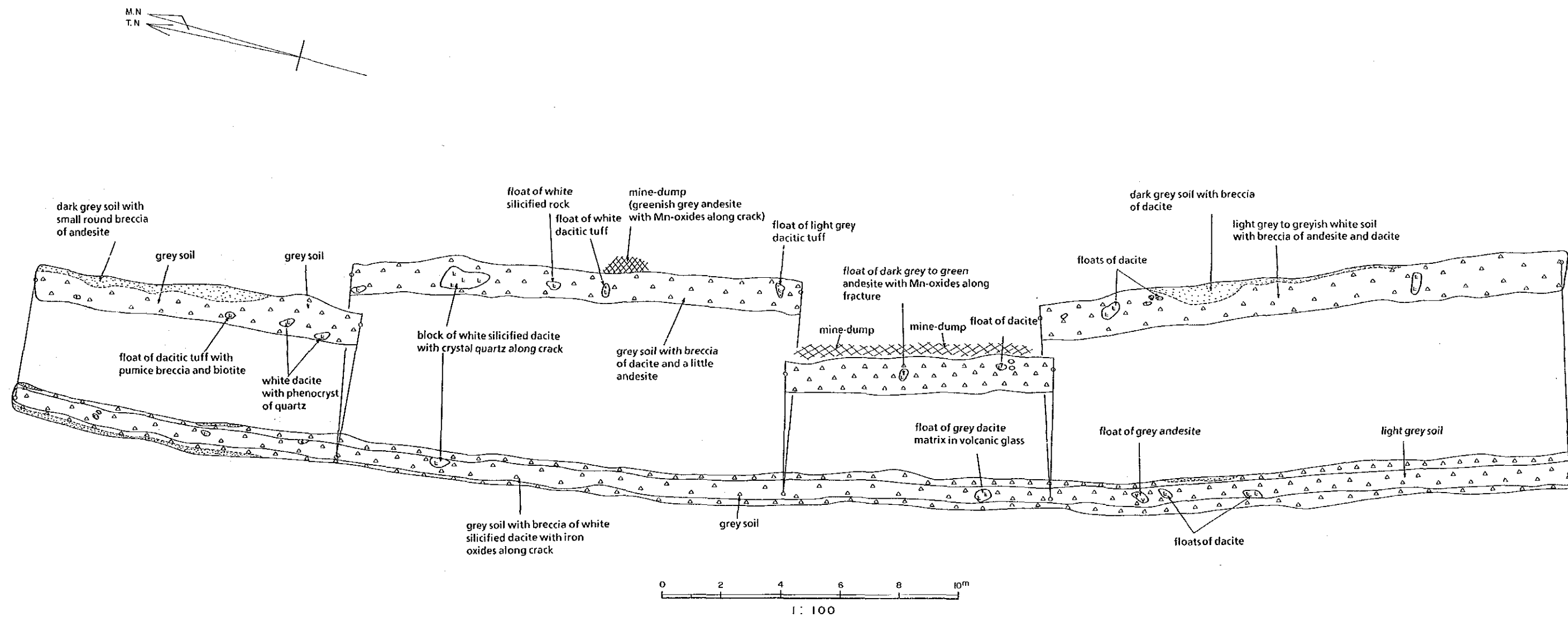


Apx. 21 Geological Sketch Map of Trench TC-2 in South of the Colpar Area

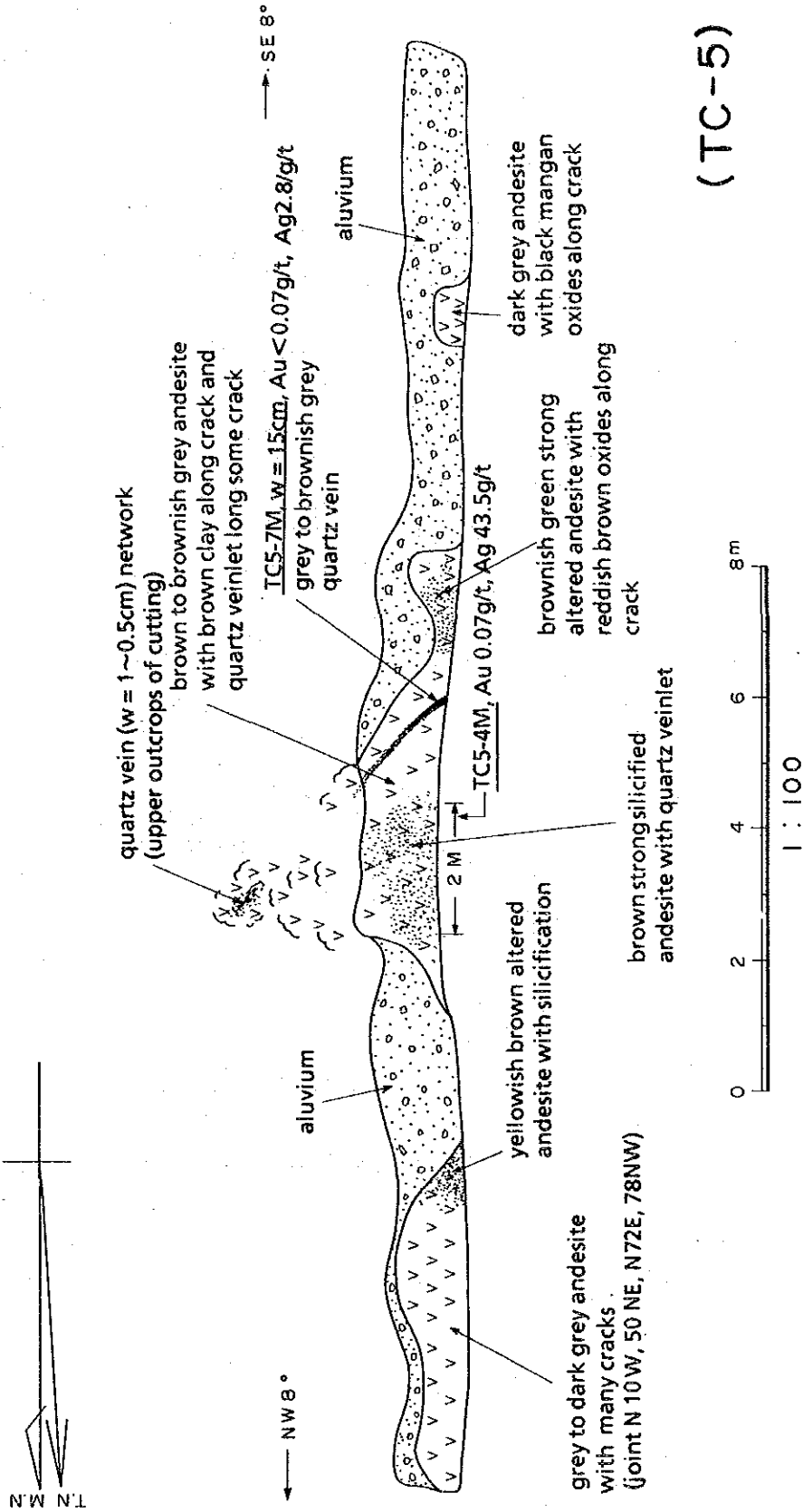


(TC-3)

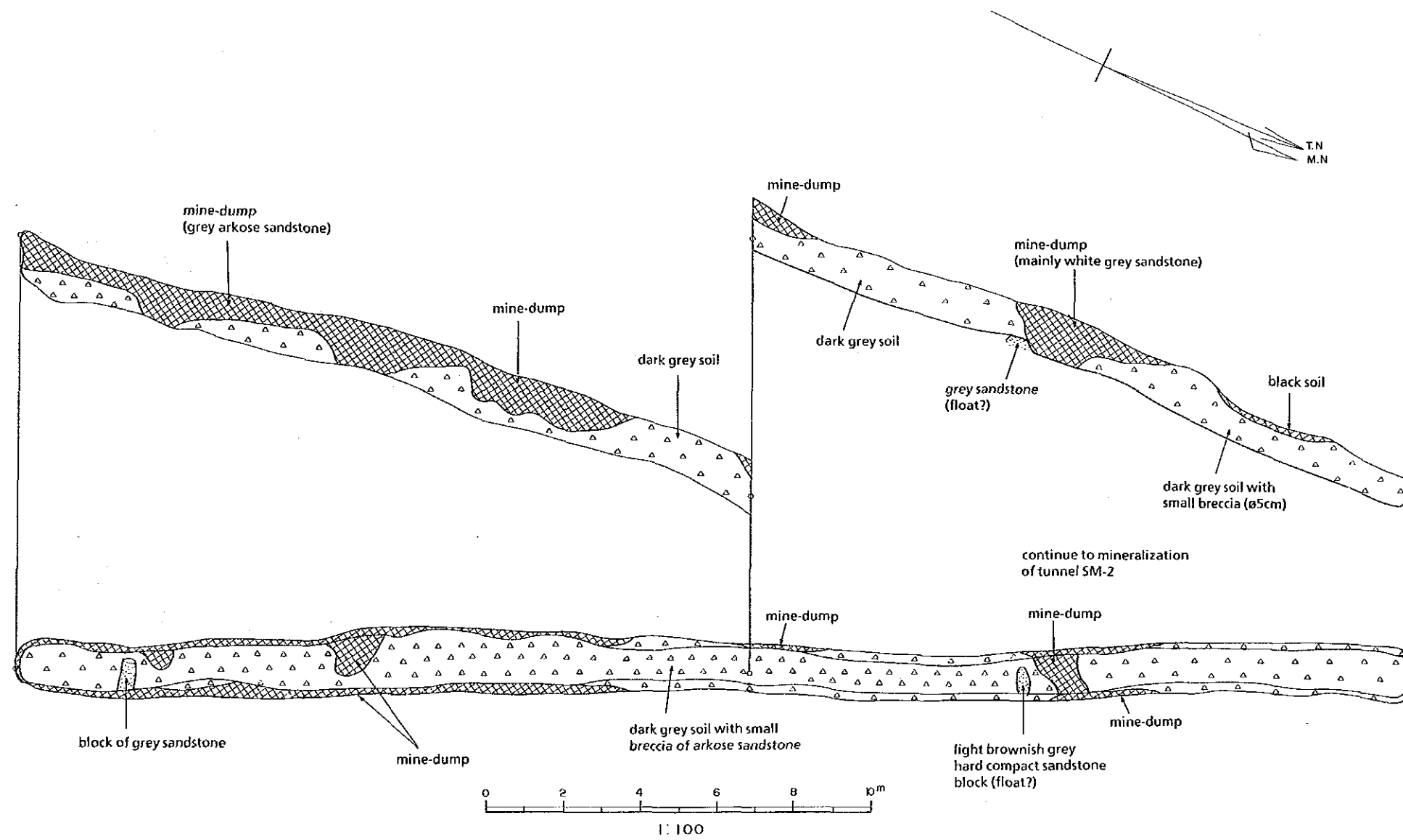
Apx.22 Geological Sketch Map of Trench TC-3 in South of the Colpar Area



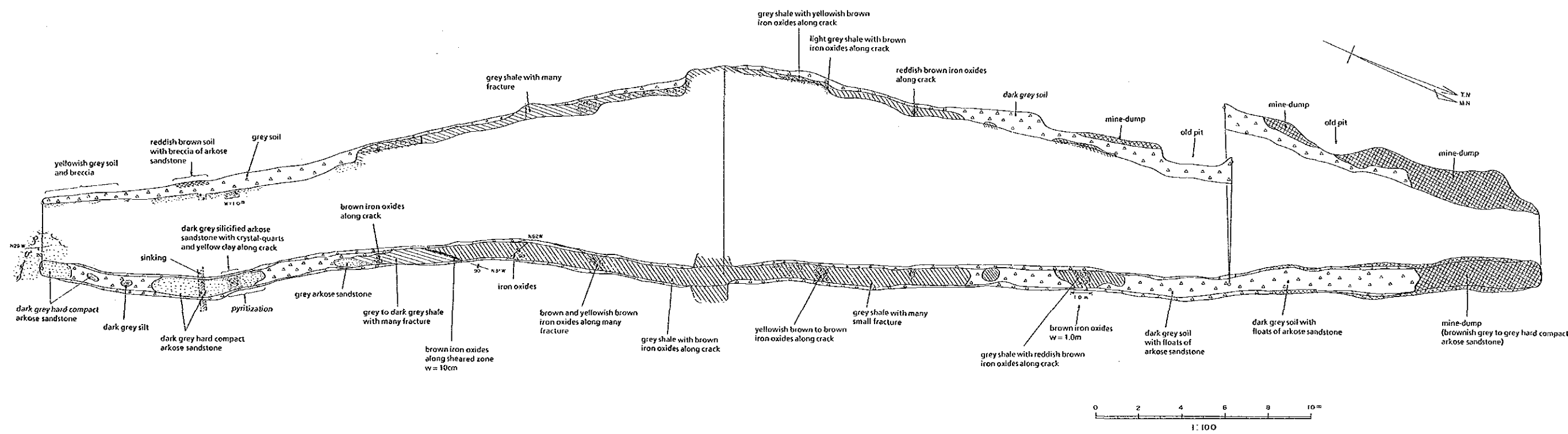
Apx. 23 Geological Sketch Map of Trench TC-4 in North of the Colpar Area



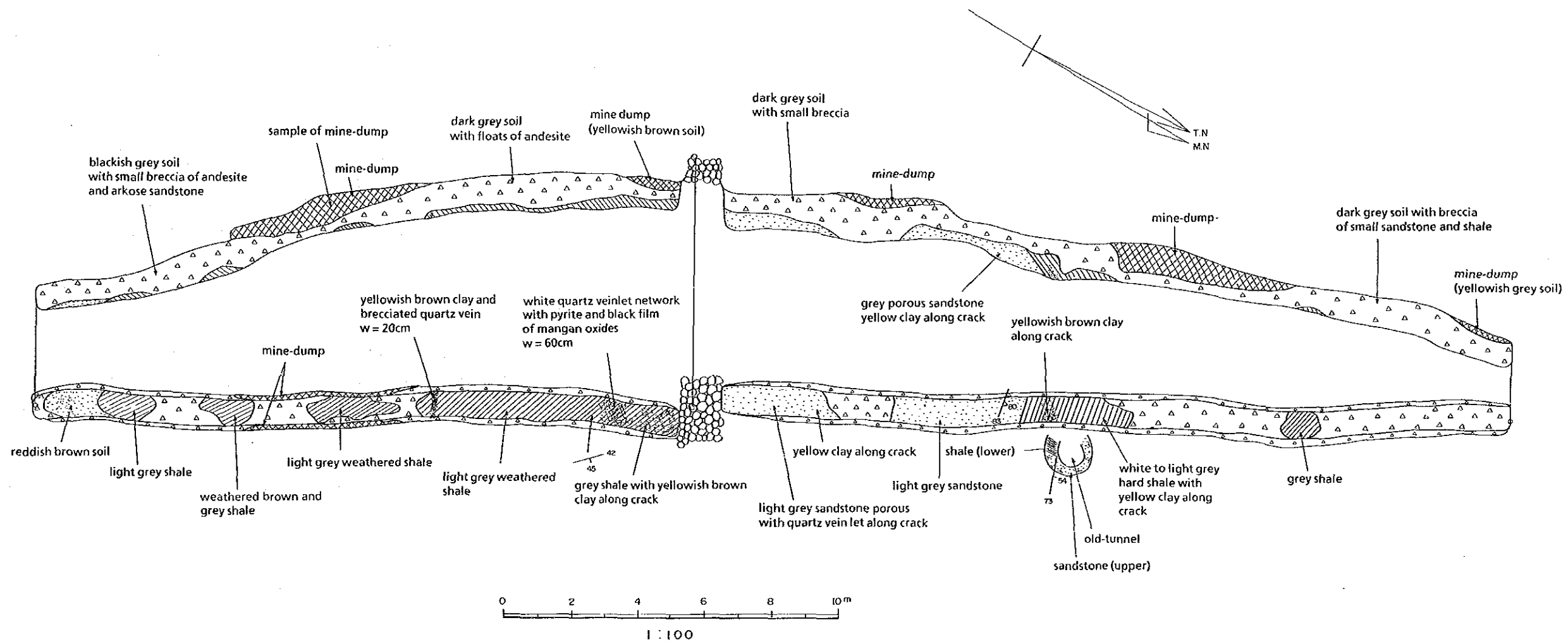
Apx. 24 Geological Sketch Map of Trench TC-5 in North of the Colpar Area



Apx. 25 Geological Sketch Map of Trench MT-1 in the Marcamalata Area



Apx.26 Geological Sketch Map of Trench MT-2 in the Marcamalata Area



Apx.27 Geological Sketch Map of Trench MT-3 in the Marcamalata Area

Apx. 28 (1) Summary of Drilling Results (MJP-11)

	Item	Working Period		Item of Working Period			Total Number of Workers
		Period	Number of Days	Actual Working Days	No Working Days		
Working period	Preparation	14th Sep. '87-4th Oct. '87		21days	21days	0days	546mans
	Drilling	5th Oct. '87-21th Oct. '87		17	Drilling 17	0	351
					Trouble 0	0	0
	Dismounting						
Total	14th Sep. '87-21th Oct. '87		38	38	0	897	
Drilling length, etc.				Core recovery for each 100m section			
Planned length	250.00m	Over burden	9.60m	Depth of hole	Section	Total	
Increase or decrease in length	1.05m	Core length	246.95m	0 ~ 100m	96.0	96.0	
Length drilled	251.05m	Core recovery	98.4%	100 ~ 200m	100.0	98.0	
Working time	Drilling	178° 15'	48.0%	28.8%	200 ~ 251.05m	99.8	98.4
	Hoisting & lowering rod casing	144° 45'	39.0	23.3	Drilling efficiency		
	Repairing	48° 00'	13.0	7.7	Total drilling length / Working period		14.8m/day
	Sub total	371° 00'	100.0	59.8	Total drilling length / Net working days		14.8m/day
	Preparations	249° 00'		40.2	Total drilling length / Net drilling days		14.8m/day
	Dismounting				Total drilling workers / Total drillig length		1.40man/m
	Others				Remarks		
	Total	620° 00'		100.0	Preparation includes 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.			
	4½" × 11.86	4.7	100				
	NC × 32.80	13.1	100				
	NX × 149.45	59.5	100				

Apx. 28 (2) Summary of Drilling Results (MJP-12)

	Item	Working Period		Item of Working Period			Total Number of Workers
		Period	Number of Days	Actual Working Days	No Working Days		
Working period	Preparation	16th July '87-7th Aug. '87		23days	23days	0days	566mans
	Drilling	8th Aug. '87-12th Sep. '87		36	Drilling 31	0	720
					Trouble 5	0	95
	Dismounting	13th Sep. '87		1	1	0	18
Total	16th July '87-13th Sep. '87		60	60	0	1,399	
Drilling length, etc.				Core recovery for each 100m section			
Planned length	250.00m	Over burden	0m	Depth of hole	Section	Total	
Increase or decrease in length	0.46m	Core length	243.65m	0 ~ 100m	93.4%	93.4%	
Length drilled	250.46m	Core recovery	97.3%	100 ~ 200m	99.8	96.6	
Working time	Drilling	250° 30'	35.5%	26.0%	200 ~ 250.46m	100	97.3
	Hoisting & lowering rod casing	268° 30'	38.1	27.9	Drilling efficiency		
	Repairing	186° 00'	26.4	19.3	Total drilling length / Working period		6.96m/day
	Sub total	705° 00'	100.0	73.1	Total drilling length / Net working days		6.96m/day
	Preparations	254° 00'		26.3	Total drilling length / Net drilling days		8.08m/day
	Dismounting	5° 00'		0.6	Total drilling workers / Total drillig length		2.87man/m
	Others				Remarks		
	Total	964° 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.			
	4½" × 5.65	2.3	100				
	NC × 15.14	6.0	60.4				
	NX × 218.72	87.3	100				

Ap. 28 (3) Summary of Drilling Results (MJP-13)

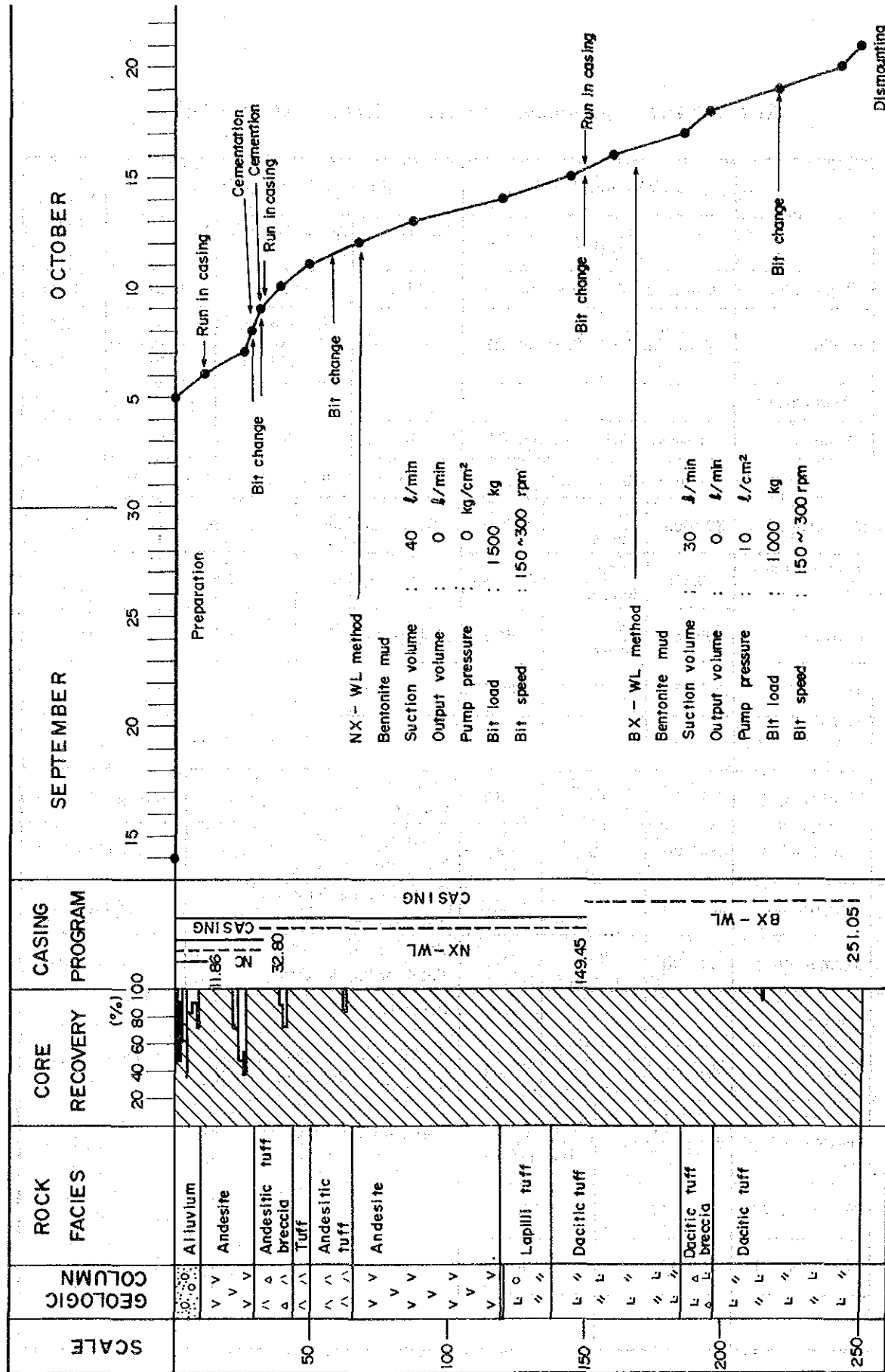
	Item	Working Period		Item of Working Period			Total Number of Workers
		Period	Number of Days	Actual Working Days	No Working Days		
Working period	Preparation	8th Sep. '87 - 28th Sep. '87		21days	21days	0days	301mans
	Drilling	29th Sep. '87 - 29th Oct. '87		31	Drilling 29	0	300
					Trouble 2	0	13
	Dismounting						
Total	8th Sep. '87 - 29th Oct. '87		52	52	0	614	
Drilling length, etc.				Core recovery for each 100m section			
Planned length	250.00m	Over burden	45.55m	Depth of hole	Section	Total	
Increase or decrease in length	0.20m	Core length	228.45m	0 ~ 100m	81.5	81.5	
Length drilled	250.20m	Core recovery	91.3%	100 ~ 200m	96.8	89.1	
Working time	Drilling	219° 30'	32.0%	23.8%	200 ~ 250.20m	100	91.3
	Hoisting & lowering rod casing	323° 30'	47.0	35.0	Drilling efficiency		
	Repairing	144° 00'	21.0	15.6	Total drilling length / Working Period		8.1m/day
	Sub total	687° 00'	100.0	74.4	Total drilling length / Net working days		8.1m/day
	Preparations	237° 00'		25.6	Total drilling length / Net drilling days		8.6m/day
	Dismounting				Total drilling workers / Total drillig length		2.5man/m
	Others				Remarks		
	Total	924° 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.			
	4½" × 12.90	5.2	100				
	NC × 41.15	16.4	100				
	NX × 126.25	50.5	100				

Apx. 28 (4) Summary of Drilling Results (MJP-14)

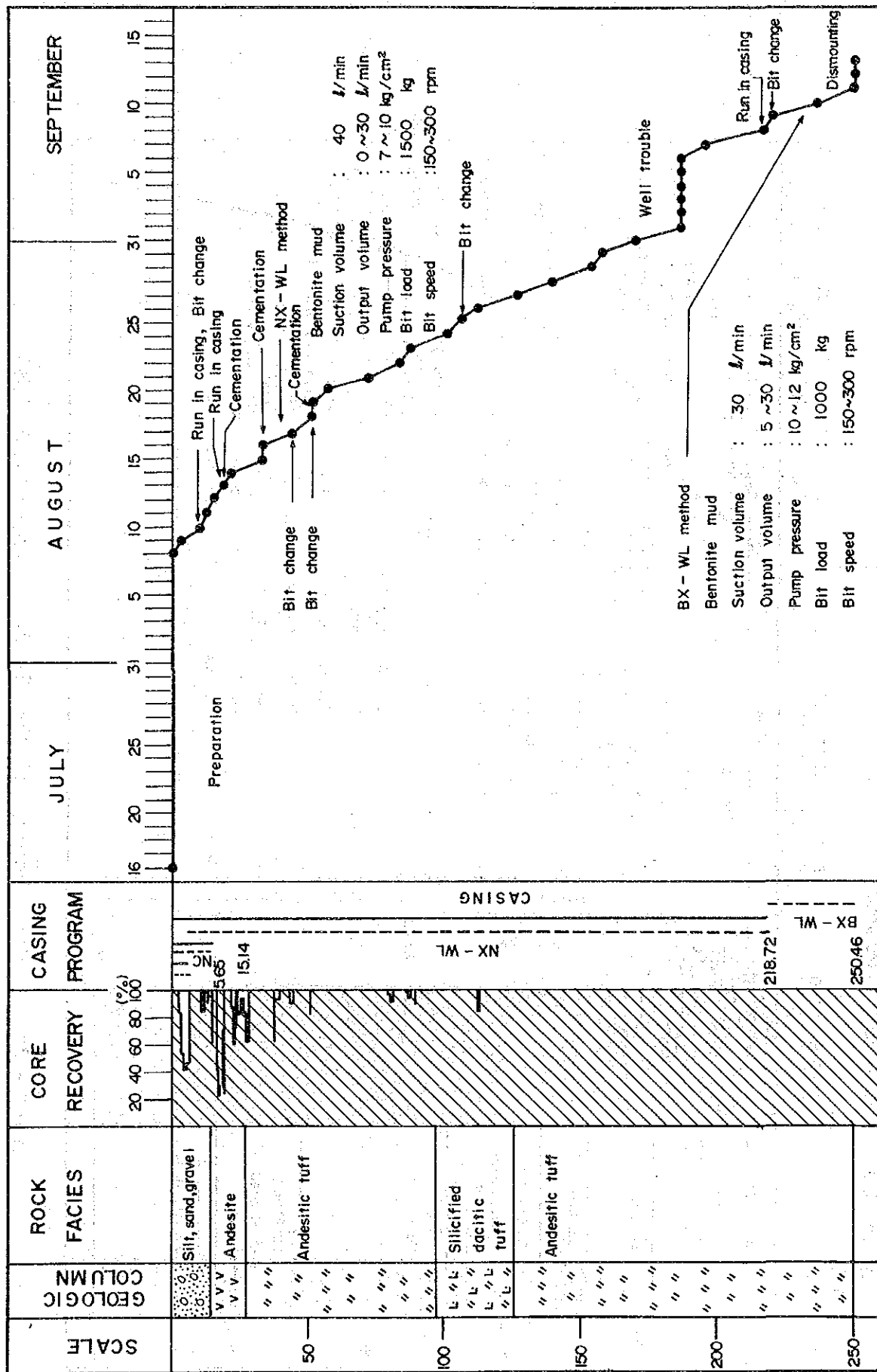
	Item	Working Period		Item of Working Period			Total Number of Workers
		Period	Number of Days	Actual Working Days	No Working Days		
Working period	Preparation	3th Oct. '87-4th Oct. '87		2days	2days	0days	35,5man
	Drilling	5th Oct. '87-20th Oct. '87		16	Drilling 16	0	301.5
					Trouble 0	0	0
	Dismounting						
Total	3th Oct. '87-20th Oct. '87		18	18	0	337	
Drilling length, etc.				Core recovery for each 100m section			
Planned length	200.00m	Over burden	8.90m	Depth of hole	Section	Total	
Increase or decrease in length	0.65m	Core length	192.95m	0 ~ 100m	96.7	96.7	
Length drilled	200.65m	Core recovery	96.2%	100 ~ 200.65m	95.6	96.2	
Working time	Drilling	158° 50'	46.0%	43.8%			
	Hoisting & lowering rod casing	154° 10'	44.7	42.5	Drilling efficiency		
	Repairing	32° 00'	9.3	8.7	Total drilling length / Working period		12.54m/day
	Sub total	345° 00'	100.0	95.0	Total drilling length / Net working days		12.54m/day
	Preparations	18° 00'		5.0	Total drilling length / Net drilling days		12.54m/day
	Dismounting				Total drilling Workers / Total drillig length		0.67man/m
	Others				Remarks		
	Total	363° 00'		100.0	Preparation includes 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 × 9.25	4.6		100			
	NX × 121.65	60.6		100			

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

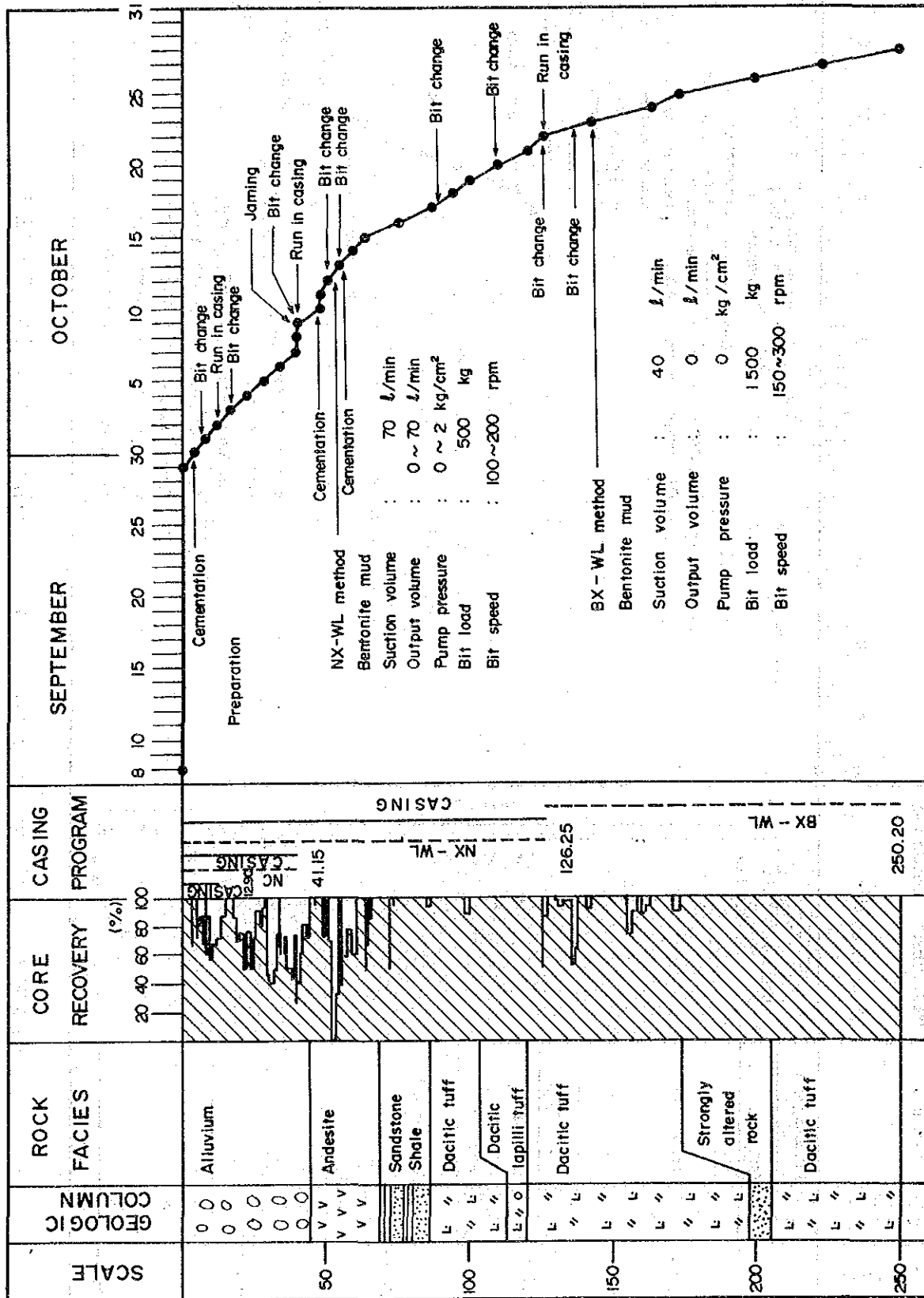
	Item	Working Period		Item of Working Period			Total Number of Workers
		Period	Number of Days	Actual Working Days	No Working Days		
Working period	Preparation	4th Aug. '87-30th Aug. '87		27days	27days	0days	481mans
	Drilling	31th Aug. '87-2th Oct. '87		33	Drilling 28	0	479.5
					Trouble 5	0	85.5
	Dismounting						
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				



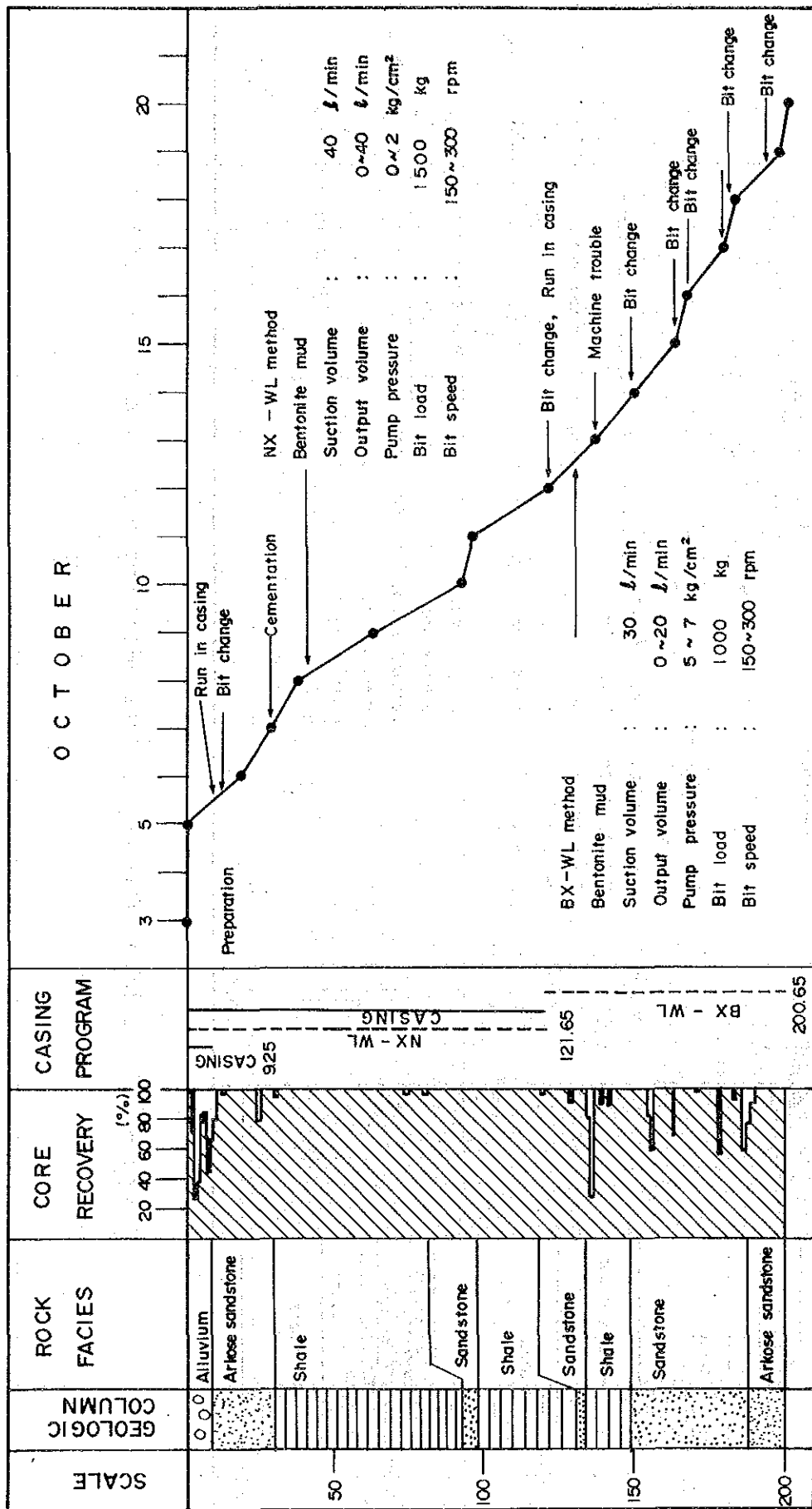
Apx.29(1) Drilling Progress of the Colpar Area (MJP-11)



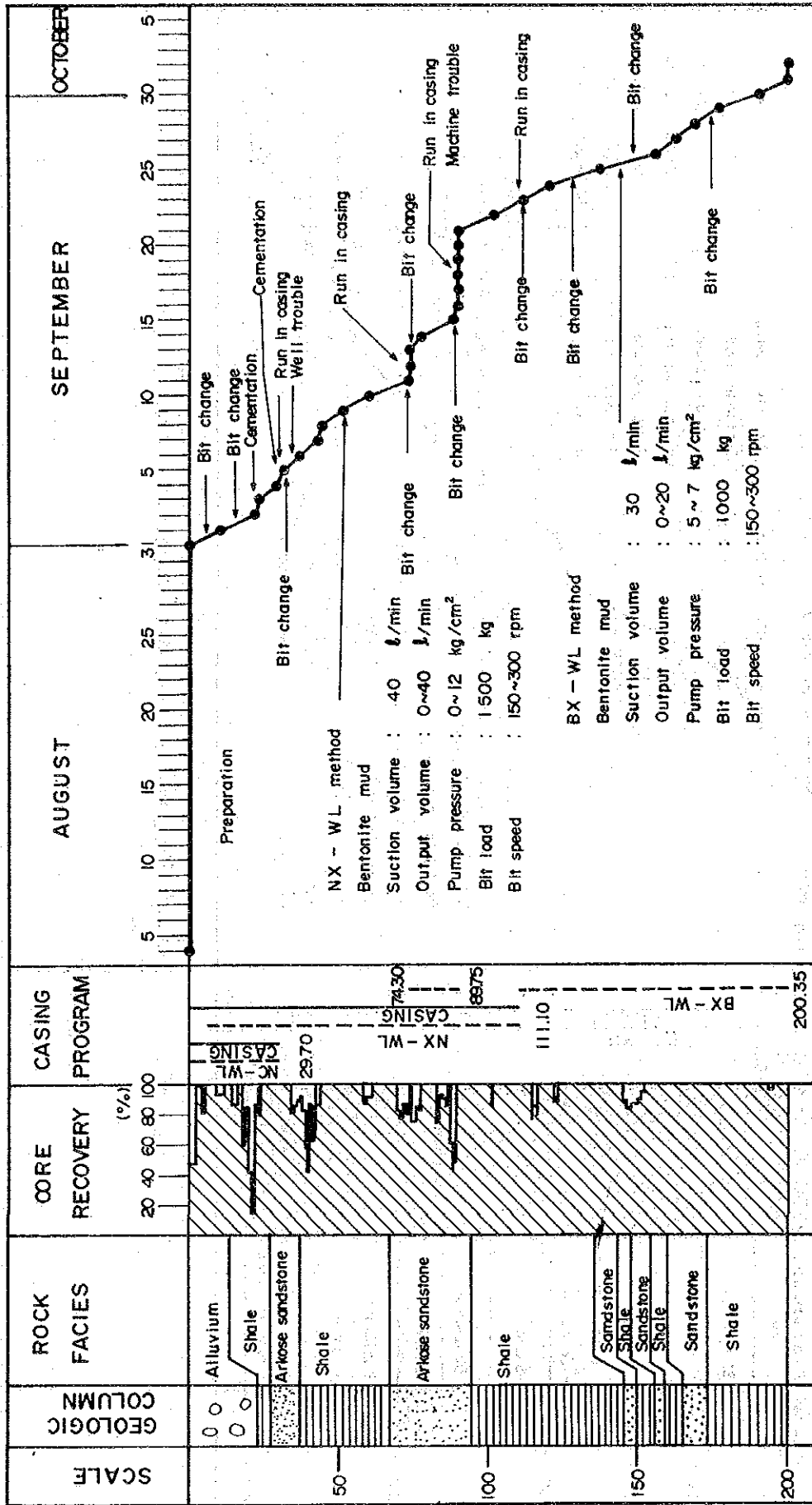
Apx.29(2) Drilling Progress of the Colpar Area (MJP-12)



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



Apx.30(1) Drilling Progress of the Marcamalata Area (MJP - 14)



Apx.30(2) Drilling Progress of the Marcamalata Area (MJP-15)

Ap. 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/c m 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/c m 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	

Ap. 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/cm 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)		0~32.90	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 NCI	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 (%)		78.6	90.4	97.8

* Core recovery includes overburden.

Ap. 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 NCI 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 NCI 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.

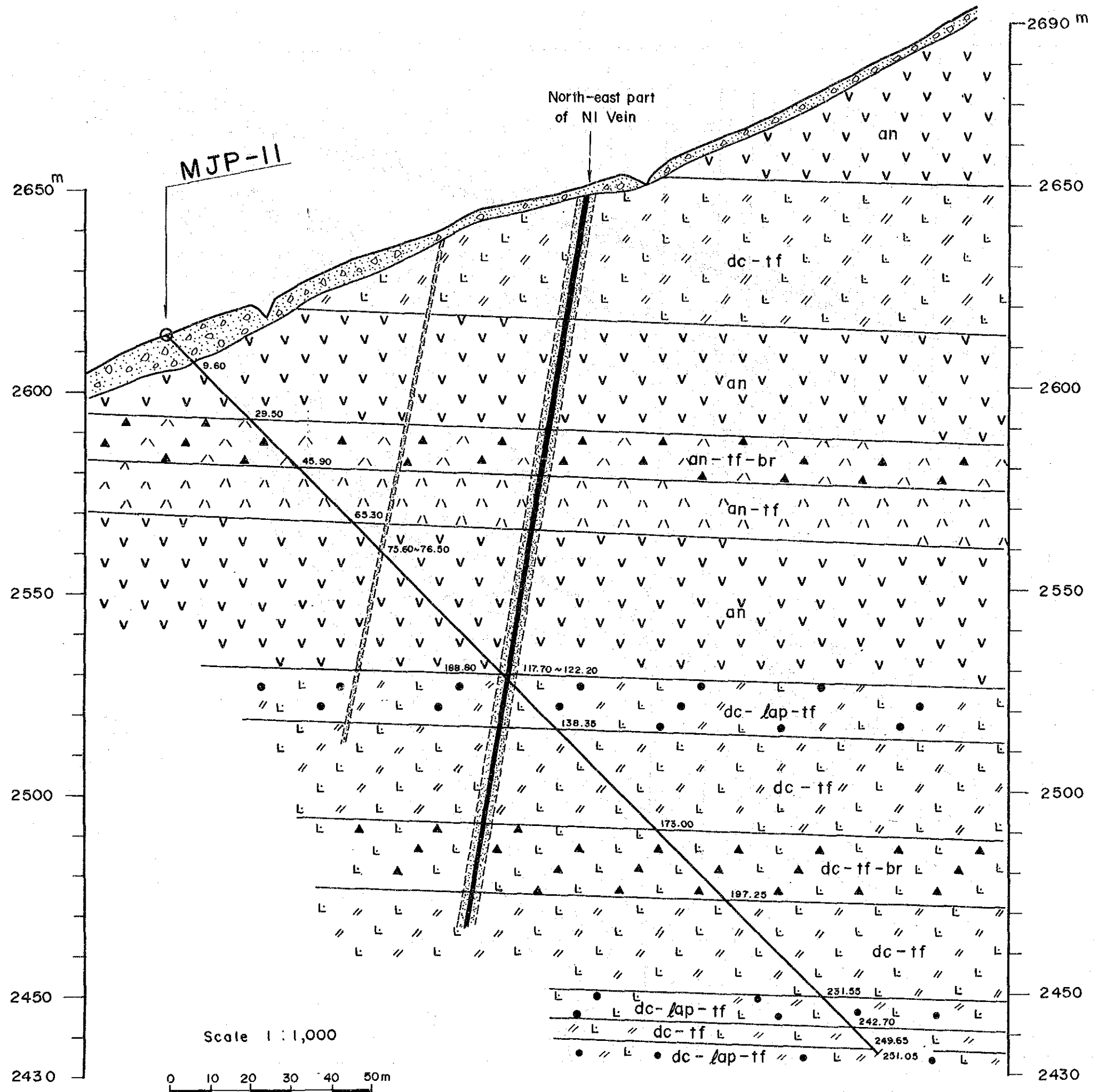
Ap. 37 Consumed Materials (MJP-11~MJP-15)

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

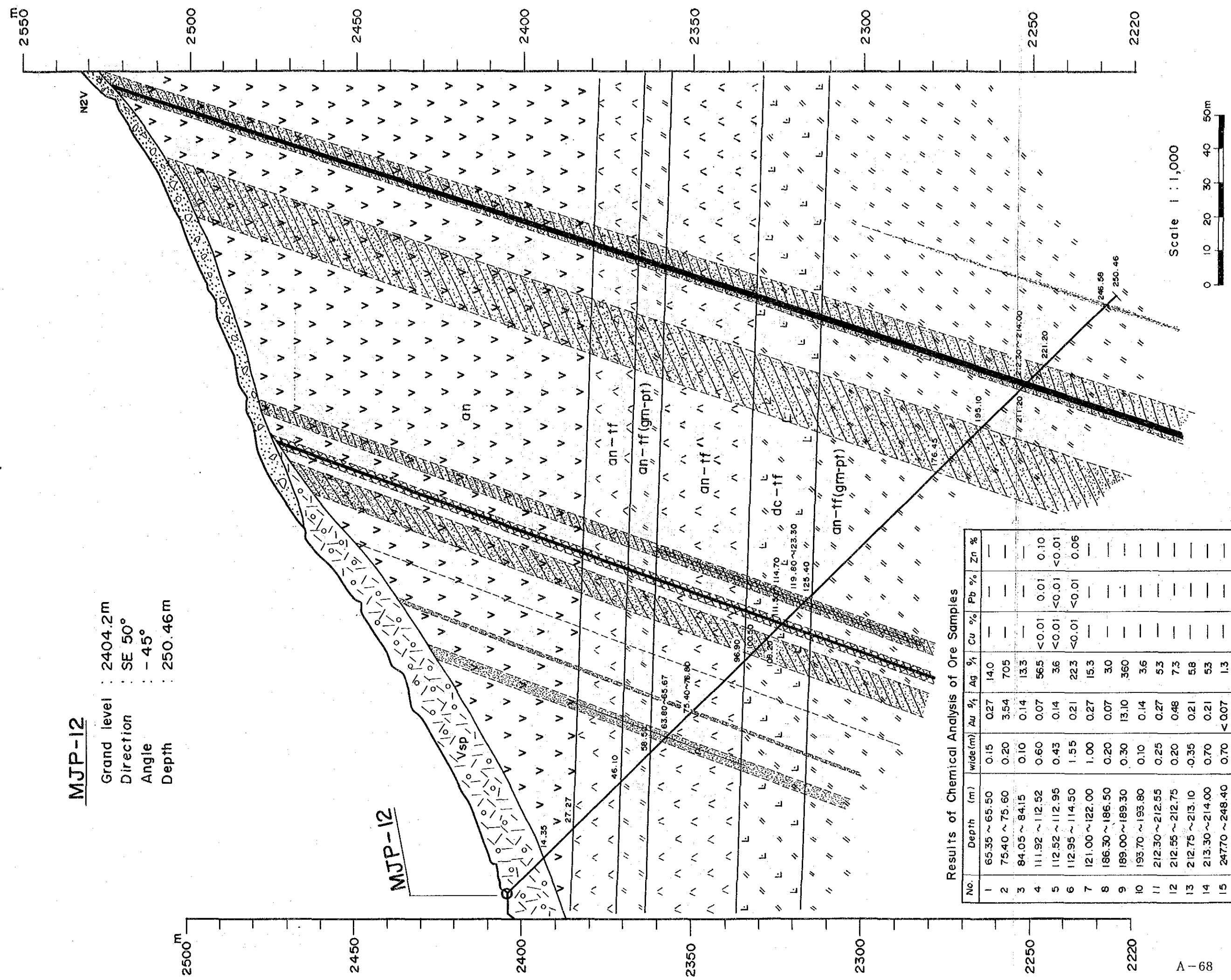
Apx. 38~42 Geological Section of Drilling Holes

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)



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



MJP-12

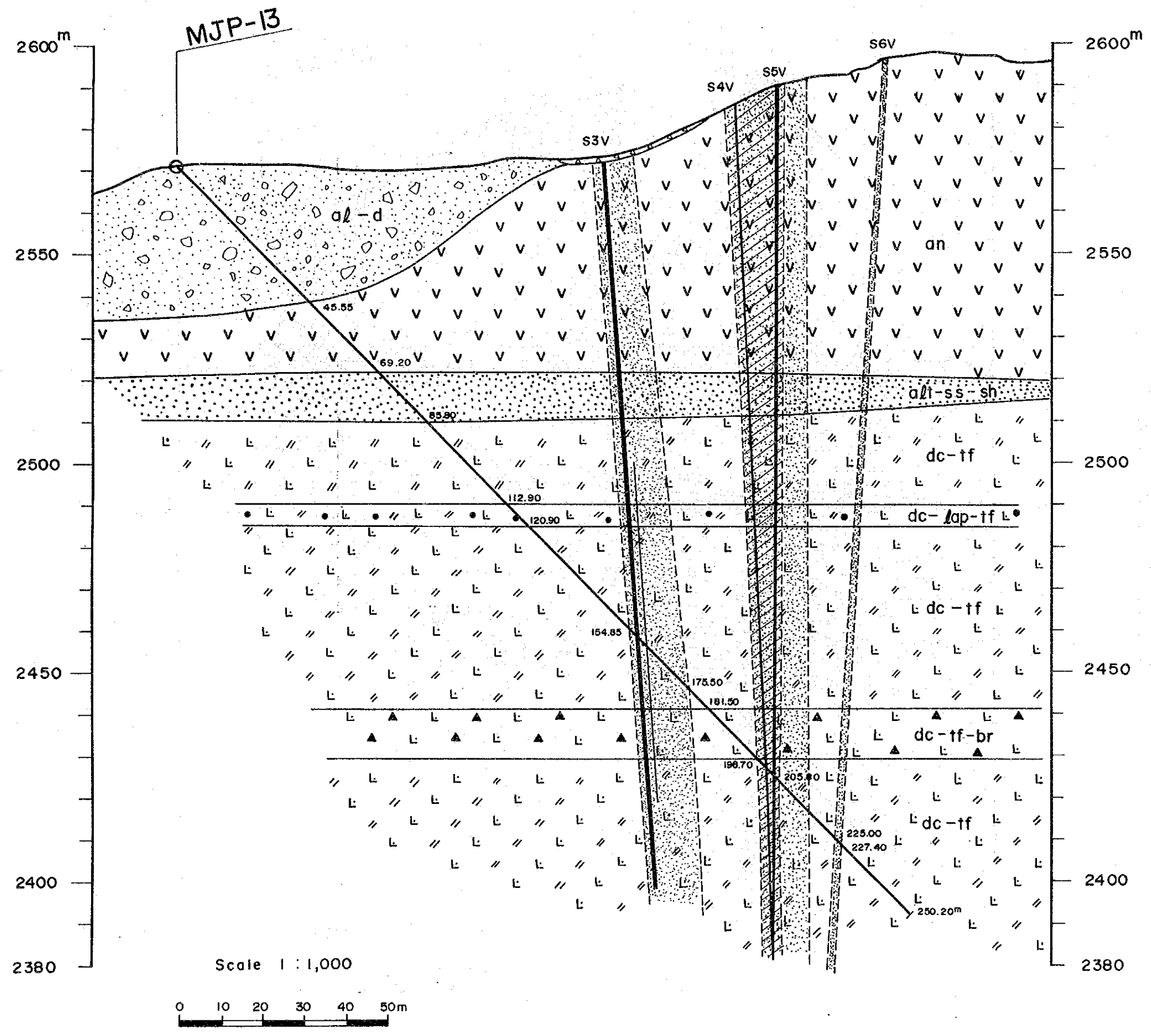
Grand level : 2404.2m
 Direction : SE 50°
 Angle : - 45°
 Depth : 250.46m

MJP-12

Results of Chemical Analysis of Ore Samples

No.	Depth (m)	wider(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	30	—	—	—
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	53	—	—	—
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	5.3	—	—	—
15	247.70 ~ 248.40	0.70	<0.07	1.3	—	—	—

Apx.39 Geological Section of Drilling Hole MJP-12 in the Colpar Area



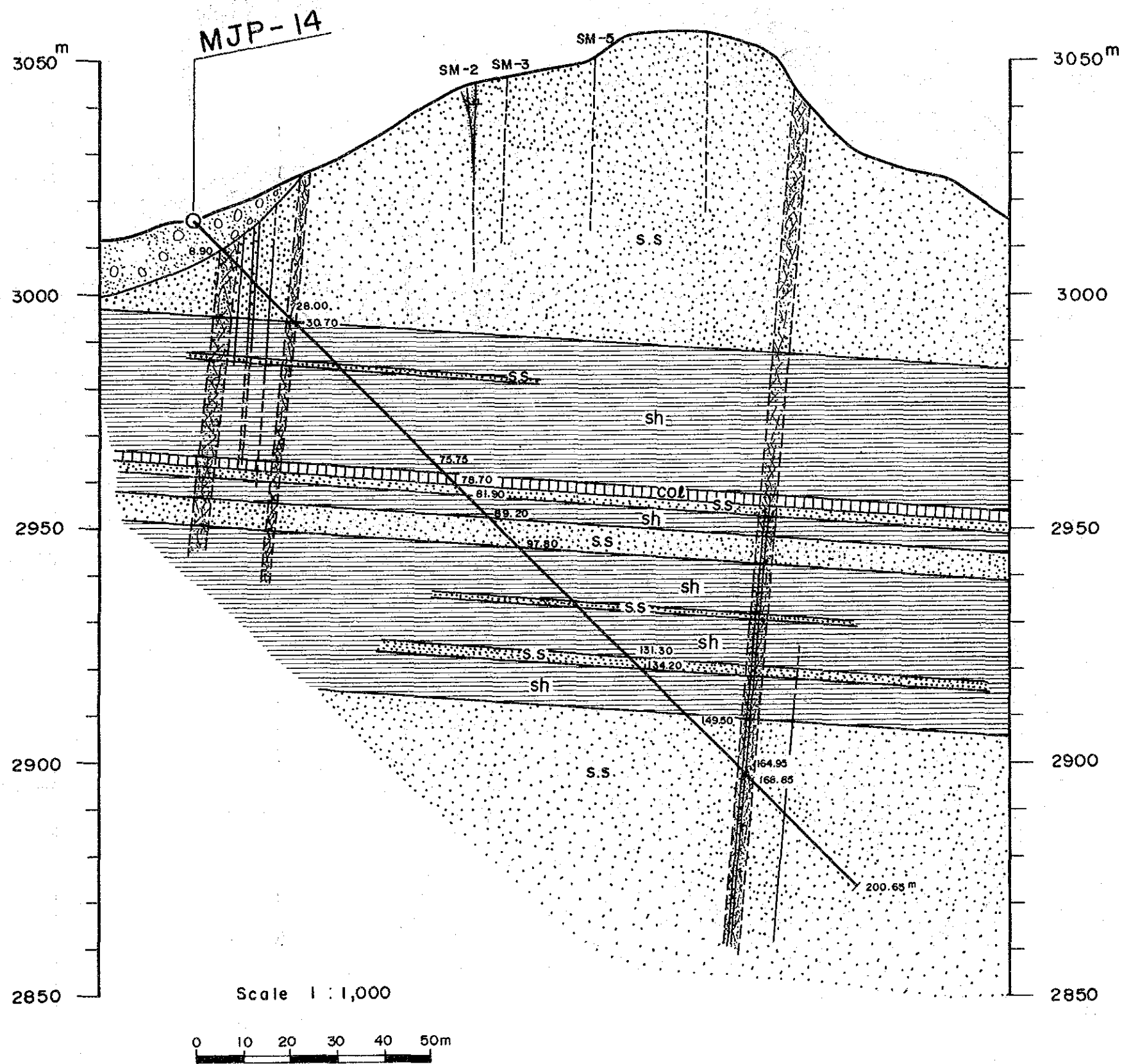
MJP-13

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



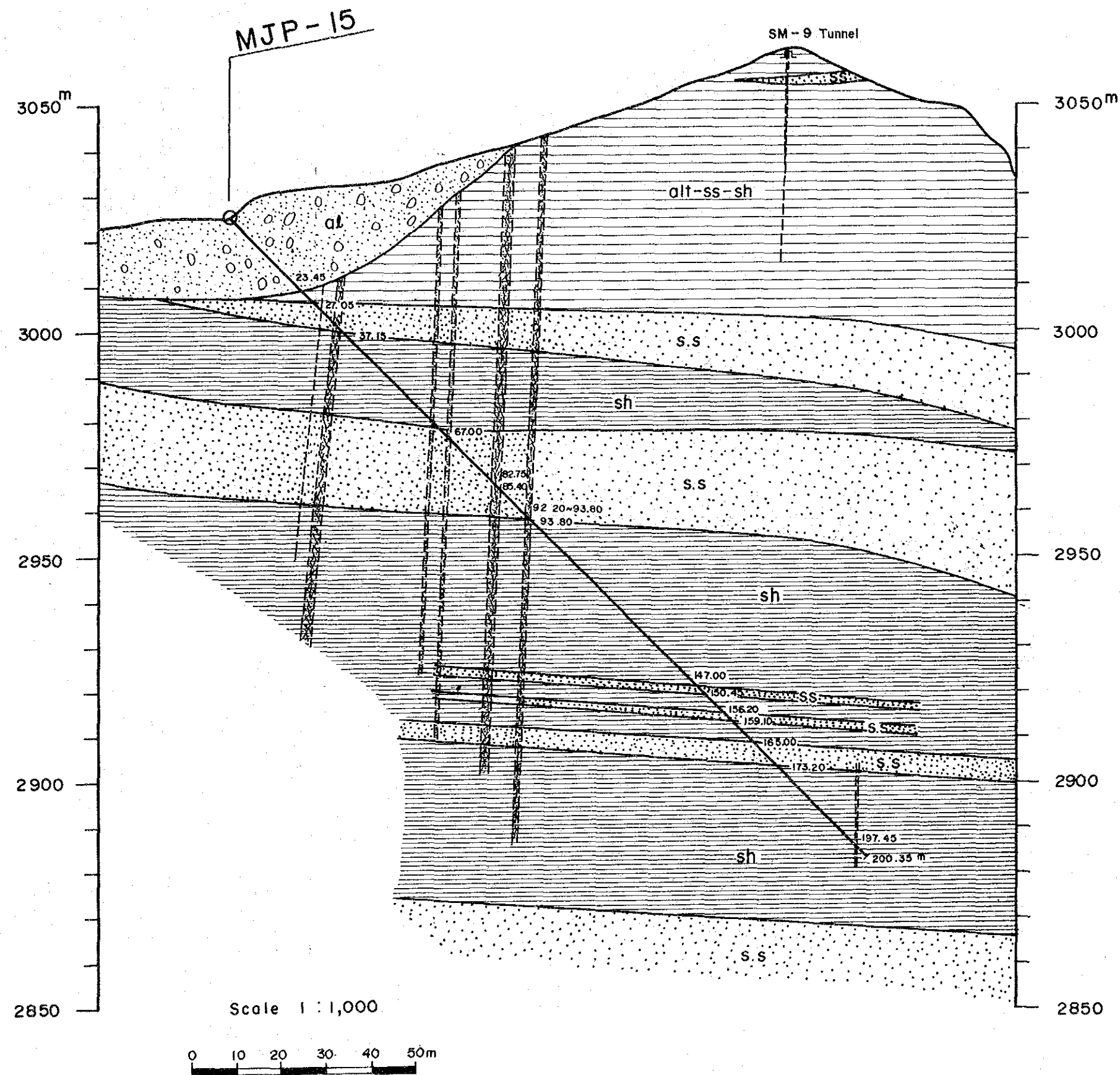
MJP-14

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

Results of Chemical Analysis of Ore Samples

No.	Depth (m)	width(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



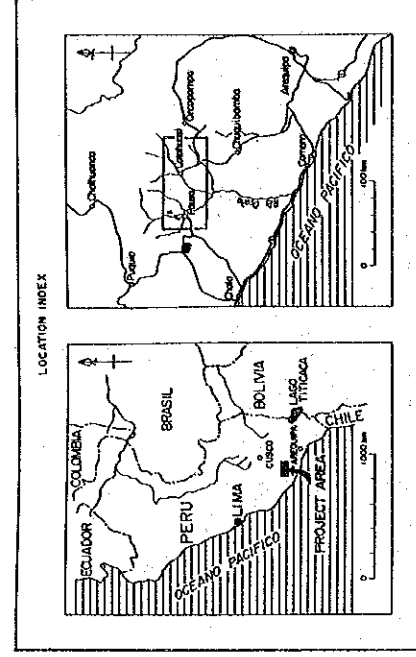
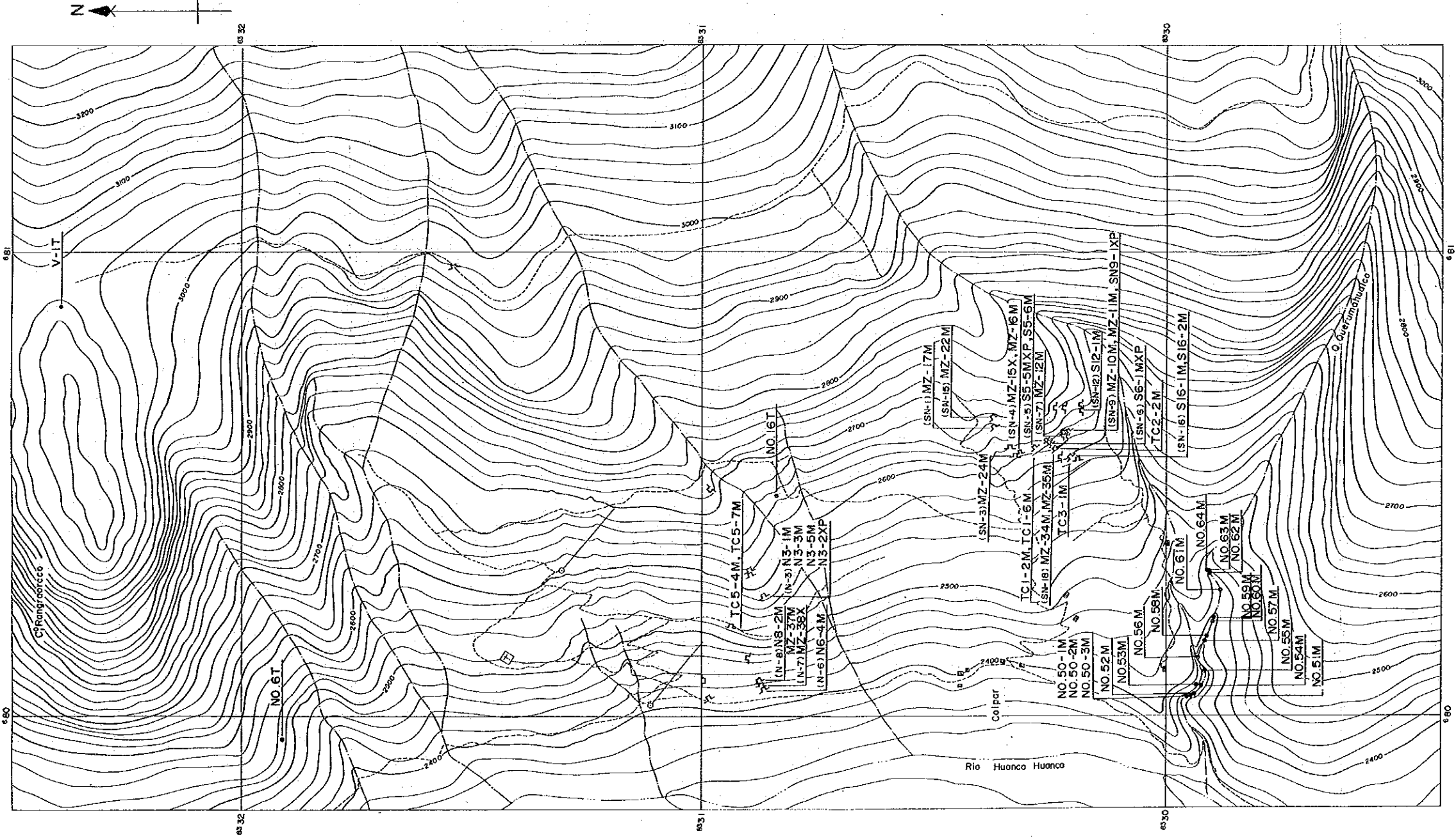
MJP-15

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

Results of Chemical Analysis of Ore Samples

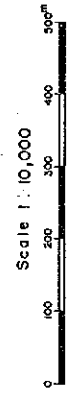
No.	Depth (m)	wide(m)	Au % _f	Ag % _f
1	32.70 ~ 33.45	0.75	< 0.07	1.9
2	33.45 ~ 34.20	0.75	< 0.07	1.0
3	35.00 ~ 36.00	1.00	< 0.07	0.3
4	63.70 ~ 64.00	0.30	0.07	0.3
5	68.35 ~ 69.55	1.20	< 0.07	1.3
6	82.75 ~ 83.80	1.05	< 0.07	0.5
7	84.50 ~ 85.00	0.50	< 0.07	0.8
8	92.20 ~ 93.10	0.90	< 0.07	0.3
9	93.10 ~ 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

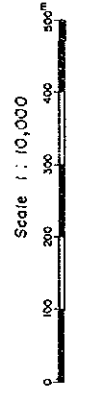
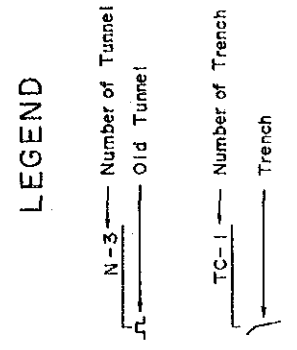
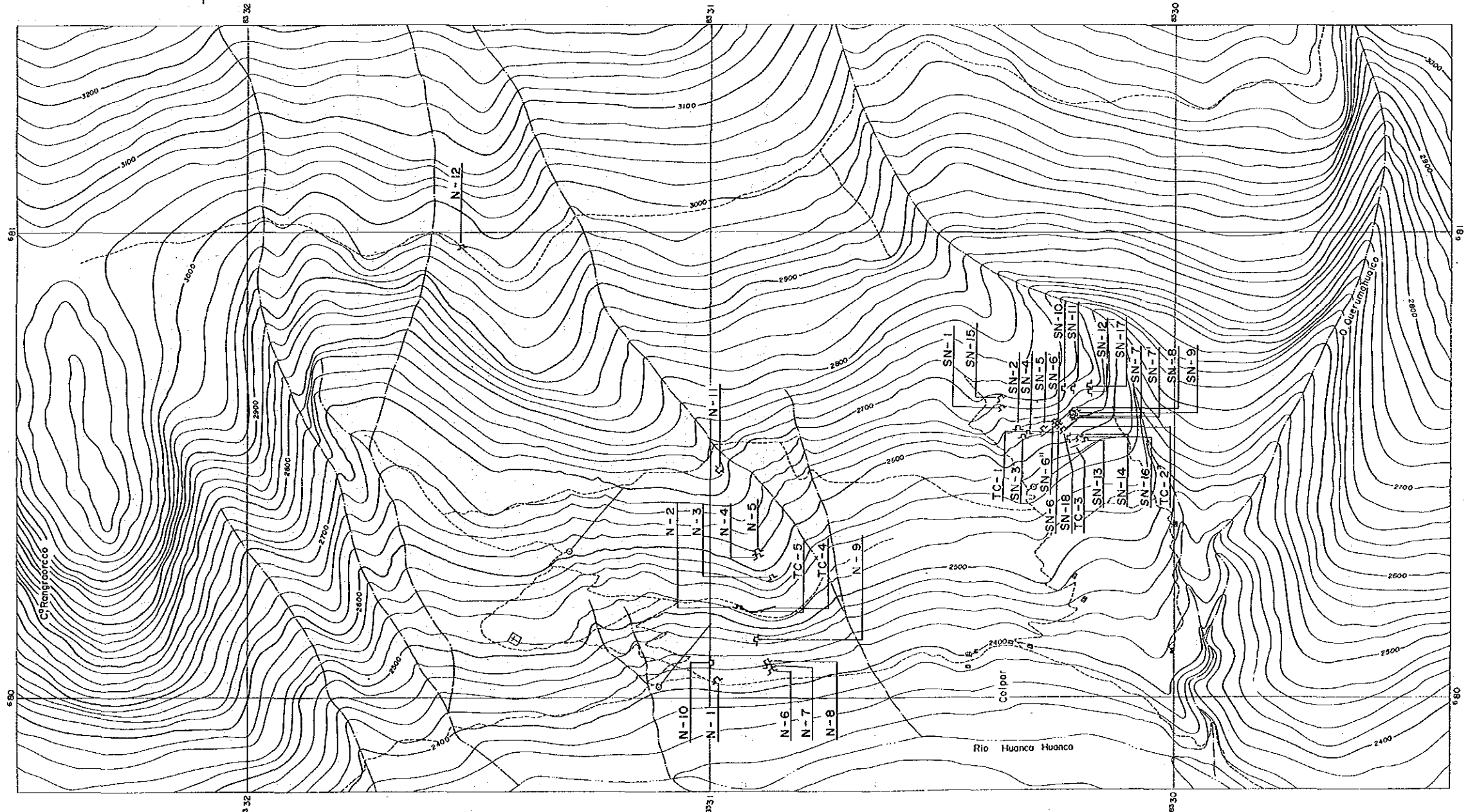
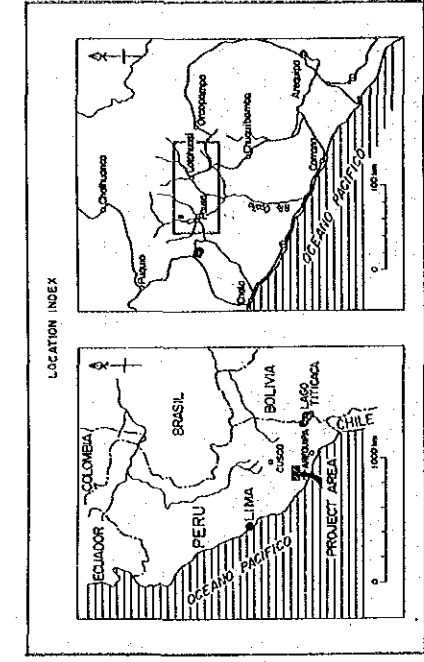


LEGEND

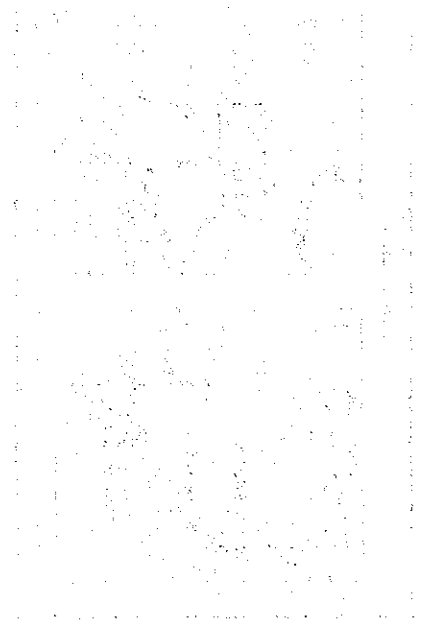
- (P) : Polished Section
 - (T) : Thin Section
 - (X) : X-Ray Powder diffraction
 - (M) : Chemical Analysis of Ore
- (SN-1) MZ-17M
 ↳ _____ Number of tunnel
 ↳ _____ Number of sample



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

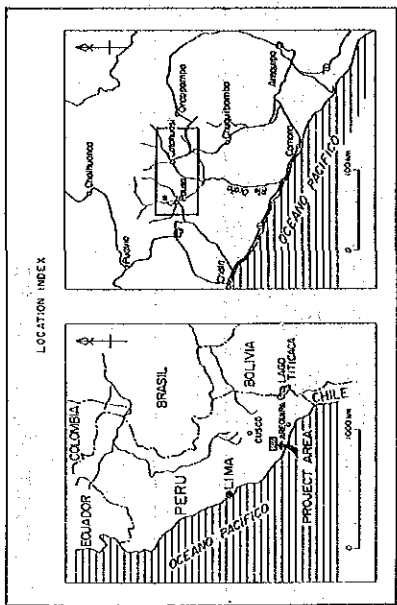
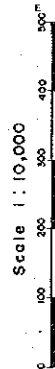
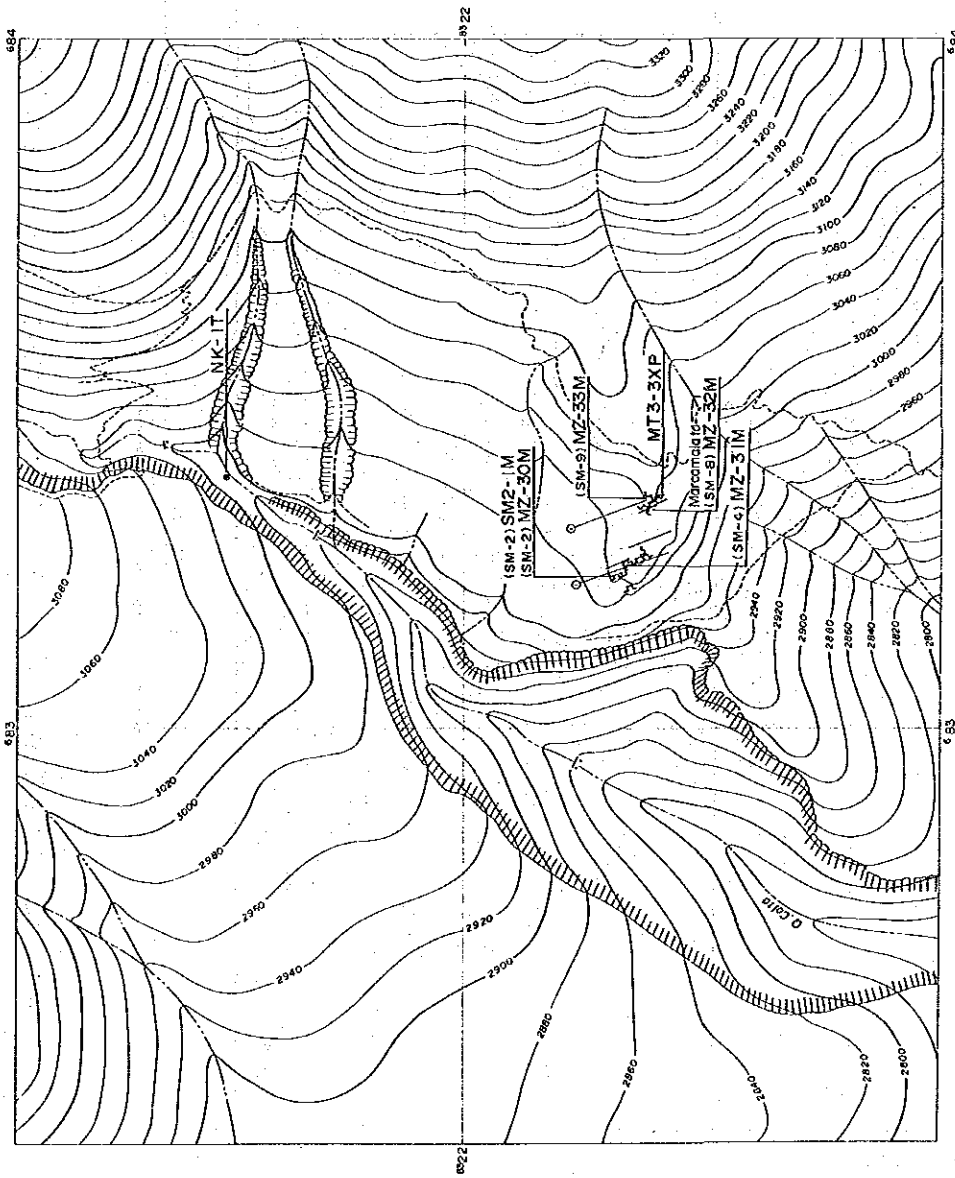


Apx.44 Location Map of Old Tunnels and Trenches in the Colpar Area



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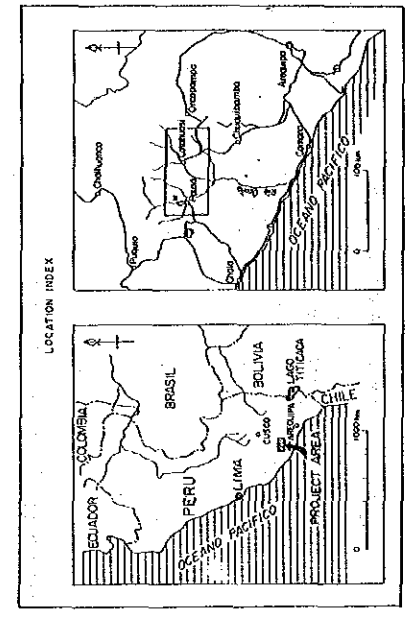
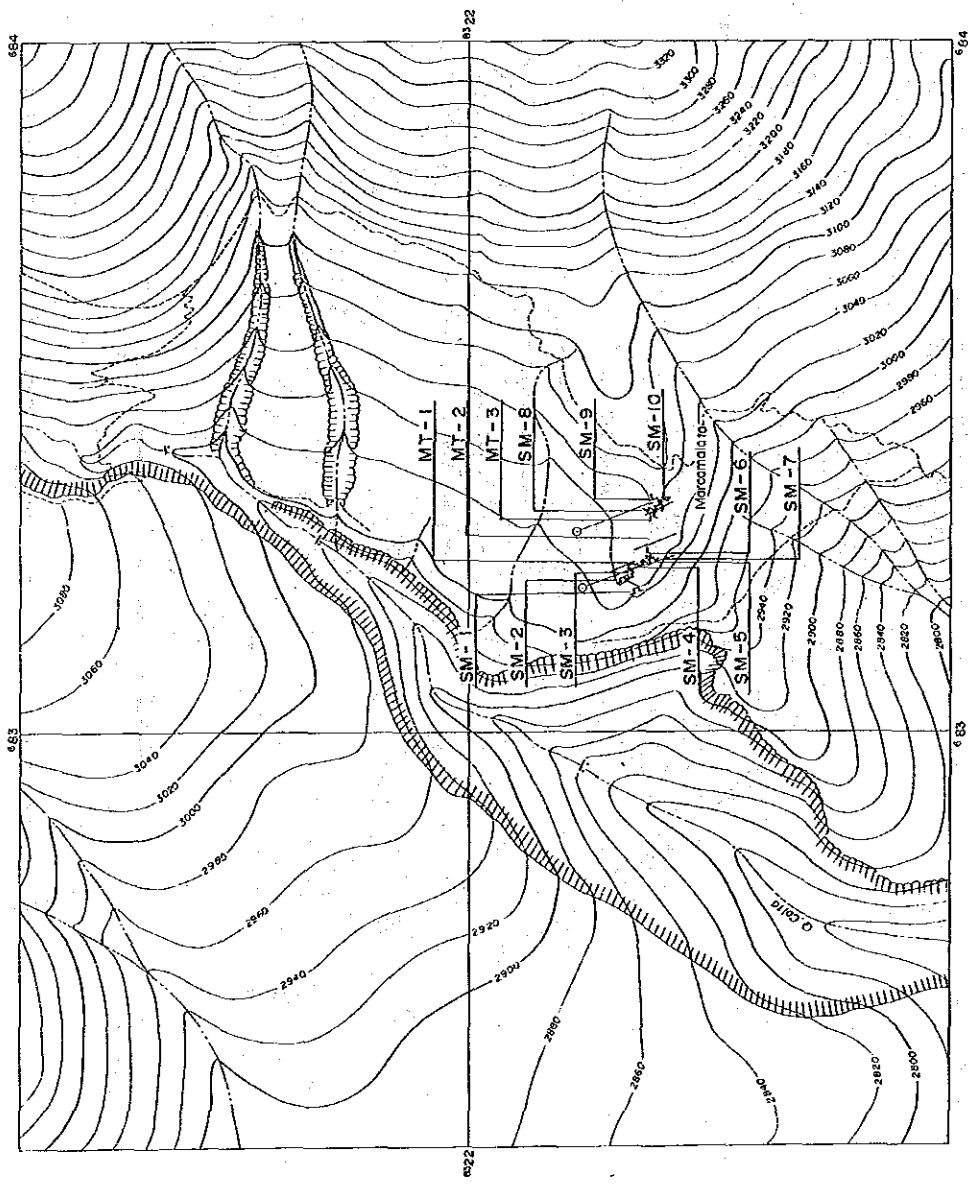




LEGEND

- (P) : Polished Section
 - (T) : Thin Section
 - (X) : X-Ray Powder diffraction
 - (M) : Chemical Analysis of Ore
- ┌───┐ Number of tunnel
 └───┘ Number of sample
 (SM-2) MZ-30M

Apx. 45 Location Map of Rock and Ore Samples of the Marcamalata Area



LEGEND

- SM-2 — Number of Tunnel
- SM-1 — Old Tunnel
- MT-1 — Number of Trench
- MT-2 — Trench

Apx.46 Location Map of Old Tunnels and Trenches in the Marcamalata Area

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

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 (g/t)	SiO ₂ (%)	Fe (%)		
0-0.50		0.00-0.50	Altitude 0.00-1.50m: grey soil and small (2-4cm) gravel 1.50-3.00m: mainly gravel (2-10cm) with grey silt, gravel - grey and light grey dacite, and...															
9.60-11.50		9.60-11.50	grey to greenish grey porphyritic andesite with many fractures															
17.30-18.80		17.30-18.80	9.60-11.50m, 17.30-18.80m, 19.60-22.90m: many fracture zones															
23.70-29.50		23.70-29.50	yellowish brown weathered andesite tuff breccia 23.70-29.50m: strongly sheared zone with clay, 30.40-32.90m: sheared zone (many fractures)															
30.40-32.90		30.40-32.90	grey andesitic tuff breccia breccia: light grey porphyritic andesite (2-5cm) matrix: grey andesitic tuff															
42.25-43.20		42.25-43.20	brown to dark brown iron oxides along many cracks															
43.25-43.20		43.25-43.20	white calcite vein network															
43.25-43.20		43.25-43.20	grey dacitic lapilli tuff with quartz grains lapilli: white grey dacite (2.0-2.5cm)															
43.25-43.20		43.25-43.20	grey hard compact andesitic fine tuff 43.25m: white lenticular calcite vein															
43.25-43.20		43.25-43.20	grey andesitic tuff breccia breccia: mainly light grey porphyritic andesite (2.0-2.5cm)															
43.25-43.20		43.25-43.20	greenish grey hard compact andesitic tuff															
53.20-54.40		53.20-54.40	greenish grey andesitic tuff breccia with dissemination of pyrite															
54.40-57.00		54.40-57.00	dark grey hard massive andesitic fine tuff															
57.00-57.00		57.00-57.00	light greenish grey andesitic tuff															
60.50-61.00		60.50-61.00	light greenish grey andesitic lapilli tuff 61.75m: white calcite veinlets															
61.75-61.75		61.75-61.75	dark grey hard massive andesite matrix mineral changed to chlorite															
69.00-69.00		69.00-69.00	69.00m: calcite veinlet (w=0.3cm)															
75.60-76.50		75.60-76.50	light grey weakly altered andesite 76.40m: lenticular pyrite vein 76.05m: white calcite vein (w=1.0cm) with crystal of calcite															
83.20-83.20		83.20-83.20	dark grey hard massive andesite with calcite veinlet															
83.20-83.20		83.20-83.20	83.20m: white calcite veinlet (w=0.1-0.2cm) 83.20m: calcite vein (w=0.5cm)															
83.20-83.20		83.20-83.20	83.20m: calcite veinlet															
83.20-83.20		83.20-83.20	83.20-83.25m: six calcite veinlets (w=0.2cm under) in andesite 83.25m: calcite vein															
94.10-94.10		94.10-94.10	dark grey hard massive andesite matrix mineral changed to chlorite															
94.10-94.10		94.10-94.10	94.10-94.10m: white calcite veinlet 95.10-96.40m: calcite veinlet and network															
95.10-96.40		95.10-96.40	95.10m: white calcite vein (w=0.5cm) 95.90m: calcite vein (w=0.3cm)															

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

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 (g/t)	SiO ₂ (%)	Fe (%)		
104.75-104.75		104.75-104.75	dark grey hard massive andesite with reddish brown iron oxides along cracks, matrix mineral changed to chlorite															
104.75-104.75		104.75-104.75	104.75m: white calcite veinlet (w=0.5cm)															
104.75-104.75		104.75-104.75	104.75-104.75m: brown iron oxides along many cracks															
111.25-111.25		111.25-111.25	111.25m: calcite veinlet															
117.00-117.00		117.00-117.00	117.00-118.80m: grey to light grey bleached andesite with dissemination of pyrite crystal															
118.80-118.80		118.80-118.80	118.80-122.70m: light grey strongly altered lapilli tuff breccia of strong silicified rock and disseminated matrix mineral (Py, Fe, Ca, Py) 118.80-122.70m: light grey strongly silicified lapilli tuff with many quartz veinlets contain matrix mineral (Py, Fe, Ca, Py) 120.70-120.75m: light grey to dark grey brecciated quartz vein with dissemination of pyrite 120.75-120.75m: light grey strongly silicified 120.75-122.20m: light grey strongly bleached lapilli tuff															
120.70-120.75		120.70-120.75	120.70-120.75m: light grey strongly bleached lapilli tuff															
120.75-120.75		120.75-120.75	light greenish grey dacitic lapilli tuff lapilli: angular to subangular lapilli (2.0-2.0cm) of andesite and dacite matrix: greenish grey tuff with quartz grains															
120.75-120.75		120.75-120.75	dark greenish grey dacitic lapilli tuff lapilli: green porphyritic andesite (2cm under) matrix: dark greenish grey tuff with quartz grains															
120.75-120.75		120.75-120.75	gradual change light greenish green dacitic tuff with green lenticular patch and quartz grains															
151.55-151.55		151.55-151.55	151.55m: white quartz vein (w=0.7cm)															
151.55-151.55		151.55-151.55	light greenish green dacitic tuff with small breccia of green andesite tuff, green lenticular patch and quartz grains (2.0cm)															
151.55-151.55		151.55-151.55	gradual change green dacitic tuff with small (2.0-2.4cm) breccia of green andesite > light grey dacite and quartz grains in matrix * no contain lenticular green patch															
151.55-151.55		151.55-151.55	gradual change green dacitic lapilli tuff lapilli: angular, dark green andesite, grey andesite and light grey dacite (2cm under, w=0.5-1cm) matrix: small fragments of rock and quartz grains															
151.55-151.55		151.55-151.55	light greenish green dacitic tuff breccia breccia: 40cm under, some kind of andesite matrix: rock fragments and quartz grains															
151.55-151.55		151.55-151.55	light green dacitic fine tuff green dacitic lapilli tuff green to light green dacitic tuff breccia breccia: 40cm under, grey andesite white dacite etc. matrix: rock fragments and quartz grains															
151.55-151.55		151.55-151.55	white grey hard compact dacitic tuff breccia breccia: 40cm under, white grey dacite matrix: rock fragments and quartz grains * weakly silicified rock, dissemination of pyrite															
151.55-151.55		151.55-151.55	light green dacitic tuff with light green lenticular patch															

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

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 (g/t)	SiO ₂ (%)	Fe (%)		
201.40-201.40		201.40-201.40	light green dacitic tuff with light green lenticular patch															
201.40-201.40		201.40-201.40	201.40-201.40m: white grey weakly altered dacitic tuff (bleached)															
211.40-211.40		211.40-211.40	light greenish grey dacitic tuff with green patch and quartz grains in matrix 211.40-212.00m: white and grey lenticular quartz vein															
220.40-220.40		220.40-220.40	220.40m: small fragment grey clay (blackness 3cm)															
220.40-220.40		220.40-220.40	light green dacitic tuff with small fragments (2-3cm under) of andesite and dacite > lenticular green patch, and quartz grains in matrix															
231.55-231.55		231.55-231.55	gradual change light green dacitic lapilli tuff lapilli: 40cm under, dark green and grey andesite, white grey dacite and a little of green patch matrix: small fragments of rock and quartz grains															
242.70-242.70		242.70-242.70	green dacitic tuff breccia light green dacitic tuff with small fragments (2-3cm under) of andesite and dacite, and quartz grains in matrix															
249.65-249.65		249.65-249.65	light green dacitic lapilli tuff															

Ap.47(1) Geological Log of Diamond Drilling Hole (MJP-11) A-76

MJP-12(1) 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 (g/t)	Mo (g/t)		
0		0	Peena Sediments silt, sand, gravel silt and sand; white to light gray buffaceous silt and gravel; size under 20 cm, bio-herc, light green andesite, dark grey andesite.														
10		10	dark grey hard compact andesite with weak chloritization.														
20		20	18.34-19.05 m: brown iron oxides along cracks. 19.54-19.90 m: strongly sheared zone with brown and white clay. 21.15-24.85 m: light grey weakly altered andesite with iron oxides. 24.35-24.85 m: argillaceous zone with iron oxides. 24.85-27.27 m: dark grey to light grey hard compact brecciated andesite. 25.35-25.47 m: brown iron oxides.														
30		30	27.27-39.55 m: light greenish grey weakly altered andesitic tuff. 26.40-29.10 m 30.30-30.60 m: strongly sheared zone fault breccia with clay. 33.30-35.90 m: brown iron oxides along cracks and quartz veins (w=0.5 cm).														
40		40	39.55-43.52 m: light grey hard compact brecciated andesitic tuff with pyrite and brown iron oxides along crack. 43.52-46.19 m: brownish grey strongly sheared zone.														
50		50	greenish grey hard compact andesite tuff with hercynitic green patches and a little breccia of andesite (1-3 cm), yellowish brown iron oxides along crack.														
60		60	light greenish grey hard compact andesite tuff with a little breccia of grey andesite (1-3 cm). 63.80-65.87 m: grey to light grey strongly silicified rock with dissemination of pyrite. 65.35-65.48 m: grey quartz veinlet network.														
70		70	light greenish grey hard compact andesite tuff with small breccia (10-5 cm) of grey andesite. 75.40-76.60 m: light grey strongly silicified rock with dissemination of pyrite. 75.47-76.60 m: very strongly silicified zone with quartz veins (w=2 cm, 0.5 cm, 0.5 cm).														
80		80	greenish grey weakly altered andesitic tuff. 84.06-84.14 m: white grey quartz vein.														
90		90	88.00-88.08 m: grey quartz vein. 88.07-88.15 m: grey quartz vein. 99.02 m: dark grey breccia vein with a little Cp. and many pyrite crystals. 91.60 m: black mineral and pyrite along crack. grey to light grey silicified andesite tuff with dissemination of pyrite. light greenish grey silicified rock (diabase tuff) with phenocryst of quartz grains (1-0.5 mm).														

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 (g/t)	Mo (g/t)		
100		100	white grey very strongly silicified rock (diabase tuff) with phenocryst of quartz grains and tabular breccia. light grey strongly silicified diabase tuff with phenocryst of quartz. 111.50-112.95 m: light grey very strongly silicified rock with black mineral (Sp, Cr, Ag) along cracks. 112.95-113.95 m: dark grey quartz vein with black mineral and pyrite. 113.95-114.70 m: light grey strongly silicified rock with black mineral (Sp, Ag) along open crack. 119.30-121.00 m: light grey strongly silicified rock with black vein along crack. 121.00-122.00 m: grey very strongly silicified rock with black vein network and pyrite vein along crack. 122.00-123.30 m: light grey strongly silicified rock with black vein along crack. light greenish grey hard compact andesite tuff with hercynitic green patch. 131.30-131.40 m: strongly silicified zone. 131.37 m: quartz veinlet (w=0.5 cm) along crack. 136.40 m: quartz veinlet (w=0.2 cm). light greenish grey hard compact andesite tuff with hercynitic green patch and a little breccia of andesite (1 cm). 145.97 m: black mineral (Sp, Ag) and Cp along crack. 151.55 m: white calcite veinlet (w=0.2 cm). 152.10-152.20 m: grey clay vein with pyrite vein (w=0.2-0.3 cm). light greenish grey silicified andesite tuff with hercynitic green patch. 158.00-158.05 m: white grey strongly silicified zone. 164.50 m: white quartz-calcite veinlet (w=0.5 cm). 165.05 m: white quartz-calcite veinlet (w=0.5 cm). 166.60 m: white quartz veinlet (w=0.8-1.0 cm). 167.12 m: white quartz veinlet (w=0.5 cm). 174.30 m: white quartz vein (w=1 cm). 176.45 m: quartz veinlet (w=0.1 cm). light grey medium to strongly silicified andesite tuff, blacked. 180.77-184.10 m: strongly sheared zone with grey clay along crack. 181.50 m: fault breccia with grey clay. 185.30 m: black mineral (Mg, Sp) irregular vein. 186.30-187.70 m: dots and veinlet of black mineral. 189.30 m: black mineral (Sp, Mg, Mn, Py) hercynitic vein (w=3 cm). 192.70-193.50 m: white grey to grey quartz chlorite vein with black mineral. 193.30-193.90 m: grey clay and silicified rock. 193.90-194.00 m: grey clay. grey silicified andesite tuff with hercynitic green patch.														

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 (g/t)	Mo (g/t)		
200		200	200.10 m: dots of black mineral. 202.25 m: quartz veinlet with reddish brown mineral. 203.35-203.38 m: white quartz vein with black mineral (w=2.5 cm). 204.15-204.80 m: quartz veinlet network with black mineral. 206.00-206.78 m: grey to white quartz vein network. 208.95-207.06 m: black and reddish brown vein (w=1.5 cm). light greenish grey andesite tuff with hercynitic green patch. white grey strongly silicified andesite tuff with dots of black mineral. 212.30-212.60 m: breccia bearing dark grey quartz vein. 212.60-212.75 m: black veinlet (w=7 cm) with white calcite veinlet (0.1 cm). 212.75-213.10 m: dark grey quartz vein with black mineral. 213.10-213.30 m: grey strongly silicified rock. 213.30-214.00 m: grey quartz vein with white quartz veinlet network. 216.37-216.37 m: hercynitic black vein. 216.50 m: 200.80 m: black veinlet and dots. 220.95-221.05 m: white quartz veinlet (w=0.2 cm). 221.20-221.30 m: white quartz veinlet and black veinlet. 222.55 m: hercynitic black vein (w=1.0 cm). 224.55 m: black vein with pyrite (w=0.5 cm). 225.35 m: grey and black quartz veinlet (w=1.5 cm). light greenish grey medium silicified andesite tuff with hercynitic green patch. 230.05 m: grey quartz vein with reddish brown mineral and pyrite. 230.20-230.50 m: quartz veinlet network. 235.83-236.65 m: white quartz vein network. greyish green hard compact andesite tuff with hercynitic green patch and small breccia of grey andesite. 246.68-246.75 m: grey quartz fold pair vein. 247.70-248.00 m: white quartz vein network. 248.40-248.00 m: andesite tuff breccia.														

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

MJP-13(1) Direction: SE 35°, Angle: -45°, Depth: 250.20m

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS											CORE RECOVERY (%)	LITHOLOGICAL SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	As (%)	Mo (%)	Co (%)		
0-100	Altitude		0.00-1.00 m: grey sand and pebble gravel of dacite 1.00-3.00 m: pebble gravel of dacite and grey soil 3.00-3.40 m: pebble and pebble gravel of light grey dacite, bi-hyalitic, and vesiculate tuff.															
10			8.40-8.90 m: grey sand and gravel 8.90-13.53 m: pebble gravel of dacite lapilli tuff and porphyritic dacite 13.53-18.40 m: block of light grey to light brownish grey dacite 18.40-26.10 m: boulder (max. 40 cm) and pebble gravel of grey andesite, yellowish grey dacite and light grey dacite 26.10-29.30 m: block and pebble gravel of dacite 29.30-38.35 m: pebble gravel of light grey dacite, greenish grey andesite and porphyritic grey dacite (max. 40 cm) 38.35-39.05 m: block of porphyritic grey dacite 39.05-41.3 m: pebble of grey andesite and a little bit of porphyritic dacite 41.3-44.66 m: grey soil and pebble gravel 44.66-45.55 m: dark grey weakly weathered andesite with smallish green andesite (40 cm) 45.55-48.65 m: grey clay with small chips of andesite 48.65-51.95 m: dark grey porphyritic andesite with many cracks, phenocryst of plagioclase (10 cm) 51.95-61.15 m: siliceous grey andesite 61.15-61.95 m: siliceous grey andesite 61.95-69.20 m: dark brownish grey tuffaceous shale with many fractures 69.20-73.50 m: grey tuffaceous coarse grained sandstone 73.50-76.60 m: dark brownish grey tuffaceous shale with many fractures 76.60-79.45 m: grey tuffaceous coarse to fine grained sandstone with thin bedded brownish grey shale 79.45-80.65 m: grey tuffaceous conglomerate pebbles subangular, 4-8 cm 80.65-83.80 m: brownish grey shale with dark grey tuffaceous sandstone 83.80-87.00 m: light green fine grained tuff, weakly argillification 87.00-92.90 m: light green massive dacite tuff with green lenticular patch and quartz grain green patch: 40 cm x 0.3 cm under, lenticular quartz grain: 40 cm x 2 cm 92.90 m: brown iron oxides along crack 95.10-95.75 m: weakly argillification 95.75-98.80 m: dacite tuff with brown iron oxides along crack and stain.															

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

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS											CORE RECOVERY (%)	LITHOLOGICAL SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	As (%)	Mo (%)	Co (%)		
100			103.60-104.00 m: light green dacite fine tuff															
110			gradual change light green massive dacite lapilli tuff with lenticular green patch (4) 3 cm x 0.3 cm and quartz grain															
120			gradual change light green dacite tuff with green patch (4) 0.3 cm x 0.3 cm under 131.70 m: white quartz vein (w=0.5 cm) gradual change light green dacite fine tuff 136.25 m: light green dacite tuff with green patch (4) 1 cm x 0.3 cm, 2 138.90 m: white quartz vein (w=0.3 cm) with pyrite gradual change light green dacite tuff with a little small green patch 139.50 m: light green dacite tuff with green patch and andesite breccia (0.4 cm under) of grey green light brown gradual change dacite lapilli tuff with quartz grain lapilli: 40 cm under, lapilli of andesite light green massive dacite tuff with a little breccia (4) 1 cm x 1 of white dacite and green andesite gradual change white grey bleached dacite tuff with quartz grain 156.90-157.35 m: dark grey strongly altered rock with white quartz veinlet network and grey clay 159.00-160.10 m: reddish brown iron oxides network 160.10-160.40 m: dark grey strongly altered rock with white quartz veinlet network white grey bleached dacite tuff with white lenticular patch and quartz grain 166.90-167.35 m: dark grey strongly altered rock with white quartz veinlet network 167.35-168.90 m: dark grey strongly altered rock with white quartz veinlet network 168.90-169.40 m: dark grey strongly altered rock with white quartz veinlet network 169.40-169.60 m: dark grey strongly altered rock with white quartz veinlet network 169.60-170.40 m: dark grey strongly altered rock with white quartz veinlet network 170.40-171.00 m: dark grey strongly altered rock with white quartz veinlet network 171.00-171.60 m: dark grey strongly altered rock with white quartz veinlet network 171.60-172.20 m: dark grey strongly altered rock with white quartz veinlet network 172.20-172.80 m: dark grey strongly altered rock with white quartz veinlet network 172.80-173.40 m: dark grey strongly altered rock with white quartz veinlet network 173.40-174.00 m: dark grey strongly altered rock with white quartz veinlet network 174.00-174.60 m: dark grey strongly altered rock with white quartz veinlet network 174.60-175.20 m: dark grey strongly altered rock with white quartz veinlet network 175.20-175.80 m: dark grey strongly altered rock with white quartz veinlet network 175.80-176.40 m: dark grey strongly altered rock with white quartz veinlet network 176.40-177.00 m: dark grey strongly altered rock with white quartz veinlet network 177.00-177.60 m: dark grey strongly altered rock with white quartz veinlet network 177.60-178.20 m: dark grey strongly altered rock with white quartz veinlet network 178.20-178.80 m: dark grey strongly altered rock with white quartz veinlet network 178.80-179.40 m: dark grey strongly altered rock with white quartz veinlet network 179.40-180.00 m: dark grey strongly altered rock with white quartz veinlet network 180.00-180.60 m: dark grey strongly altered rock with white quartz veinlet network 180.60-181.20 m: dark grey strongly altered rock with white quartz veinlet network 181.20-181.80 m: dark grey strongly altered rock with white quartz veinlet network 181.80-182.40 m: dark grey strongly altered rock with white quartz veinlet network 182.40-183.00 m: dark grey strongly altered rock with white quartz veinlet network 183.00-183.60 m: dark grey strongly altered rock with white quartz veinlet network 183.60-184.20 m: dark grey strongly altered rock with white quartz veinlet network 184.20-184.80 m: dark grey strongly altered rock with white quartz veinlet network 184.80-185.40 m: dark grey strongly altered rock with white quartz veinlet network 185.40-186.00 m: dark grey strongly altered rock with white quartz veinlet network 186.00-186.60 m: dark grey strongly altered rock with white quartz veinlet network 186.60-187.20 m: dark grey strongly altered rock with white quartz veinlet network 187.20-187.80 m: dark grey strongly altered rock with white quartz veinlet network 187.80-188.40 m: dark grey strongly altered rock with white quartz veinlet network 188.40-189.00 m: dark grey strongly altered rock with white quartz veinlet network 189.00-189.60 m: dark grey strongly altered rock with white quartz veinlet network 189.60-190.20 m: dark grey strongly altered rock with white quartz veinlet network 190.20-190.80 m: dark grey strongly altered rock with white quartz veinlet network 190.80-191.40 m: dark grey strongly altered rock with white quartz veinlet network 191.40-192.00 m: dark grey strongly altered rock with white quartz veinlet network 192.00-192.60 m: dark grey strongly altered rock with white quartz veinlet network 192.60-193.20 m: dark grey strongly altered rock with white quartz veinlet network 193.20-193.80 m: dark grey strongly altered rock with white quartz veinlet network 193.80-194.40 m: dark grey strongly altered rock with white quartz veinlet network 194.40-195.00 m: dark grey strongly altered rock with white quartz veinlet network 195.00-195.60 m: dark grey strongly altered rock with white quartz veinlet network 195.60-196.20 m: dark grey strongly altered rock with white quartz veinlet network 196.20-196.80 m: dark grey strongly altered rock with white quartz veinlet network 196.80-197.40 m: dark grey strongly altered rock with white quartz veinlet network 197.40-198.00 m: dark grey strongly altered rock with white quartz veinlet network 198.00-198.60 m: dark grey strongly altered rock with white quartz veinlet network 198.60-199.20 m: dark grey strongly altered rock with white quartz veinlet network 199.20-199.80 m: dark grey strongly altered rock with white quartz veinlet network 199.80-200.00 m: dark grey strongly altered rock with white quartz veinlet network															

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

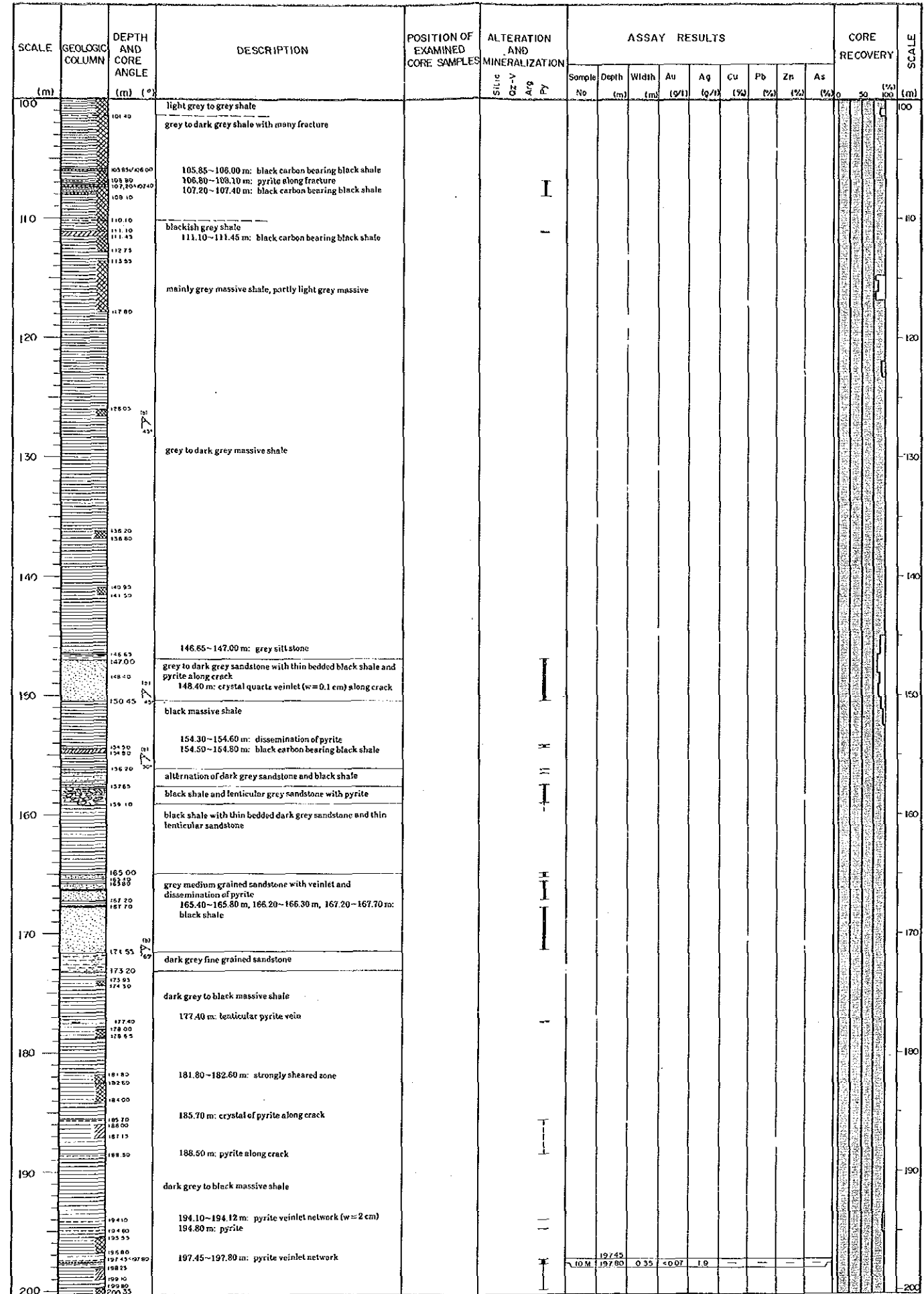
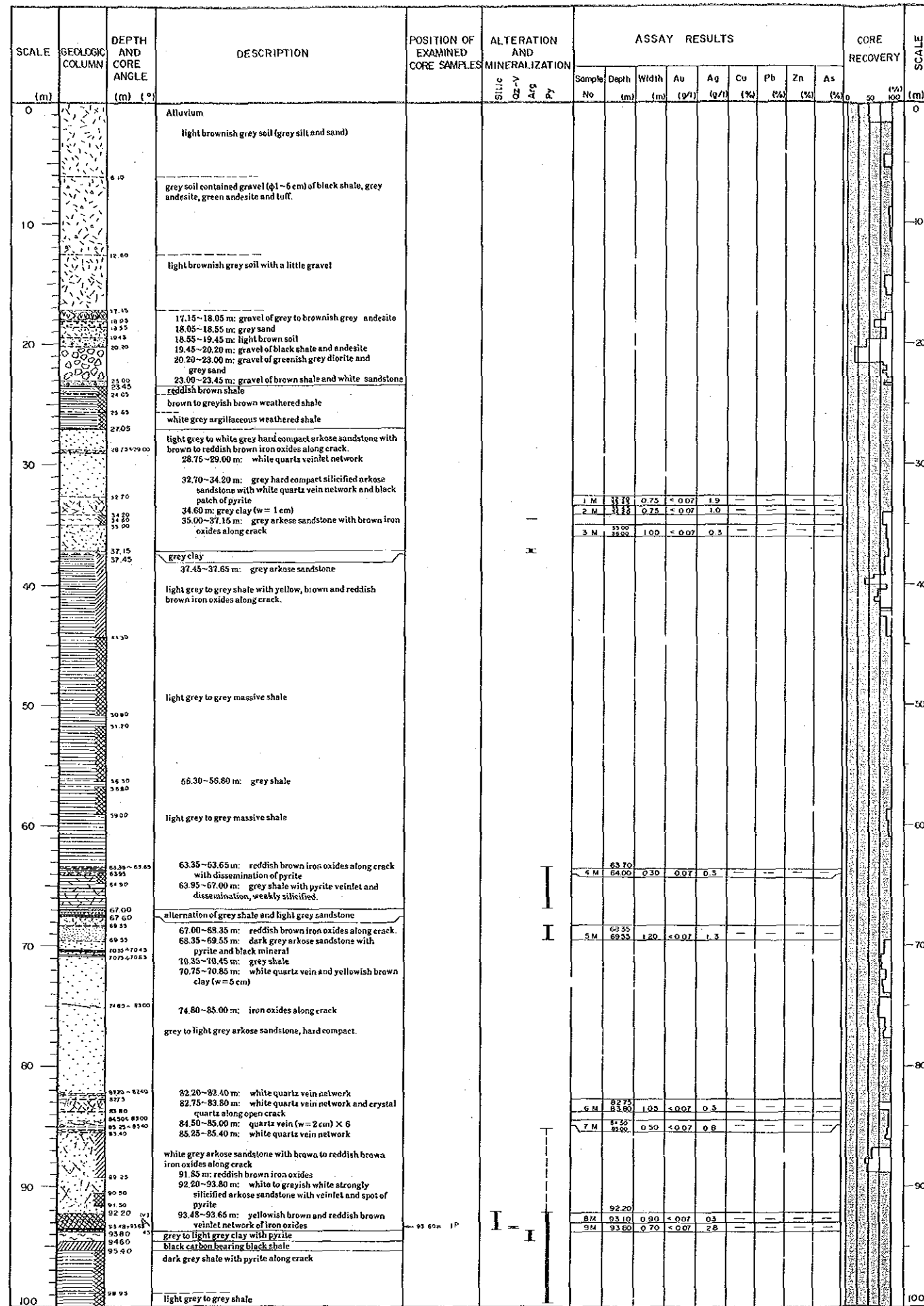
SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION	ASSAY RESULTS											CORE RECOVERY (%)	LITHOLOGICAL SCALE (m)
						Sample No.	Depth (m)	Width (cm)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	As (%)	Mo (%)	Co (%)		
200			white grey strongly altered rock 200.00 m: lenticular vein of Sp, Cp, Ga and Py 201.14-201.20 m: white quartz vein network with black 201.20-201.35 m: Sp, Ga, Cp, Py mineral 201.35-201.50 m: strongly altered rock with partly lenticular veinlet of Sp and Cp 201.50-204.90 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 light grey weakly altered dacite tuff with breccia of light green lenticular andesite (4) 3 mm and partly white quartz veinlet 225.00-227.60 m: dissemination of pyrite and black fine veinlet light grey weakly altered bleached dacite tuff with light green andesite and quartz grain, partly white quartz veinlet sometimes contains breccia (4) 2 cm of green porphyritic andesite 249.25 m, 249.35 m: white quartz veinlet (w=0.1-0.3 cm) light grey weakly altered dacite tuff with quartz grain and small (4) 3 mm light green andesite															

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

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION Silice Ox-y A/P P/Y	ASSAY RESULTS								CORE RECOVERY % 50 100 (m)	SCALE (m)
						Sample No	Depth (m)	Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)		
0		0	Alluvium												
		2.20	0.00-2.20 m: dark grey soil with small root												
		5.95	2.20-5.95 m: brownish grey soil with a little gravel of quartzite												
		8.90	6.95-8.90 m: gravel of quartzite and dacite												
10		9.90	white grey hard compact arkose sandstone												
		12.75	8.90-12.75 m: light grey quartz vein network, likely breccia vein.												
		14.15	14.15-14.25 m: white quartz vein with druse												
		17.40	17.40-17.50 m: light grey quartz vein, partly brown quartz and black band												
		18.42	18.42-18.47 m: light grey quartz vein with black fine band												
		23.15	white grey hard compact arkose sandstone												
		23.25	23.15-23.25 m: light grey to grey quartz vein with dissemination of pyrite and white clay												
		28.00	28.00-30.70 m: light grey arkose sandstone with brown to reddish brown iron oxides along many cracks												
		30.70	grey to dark grey shale												
		32.00	30.70-32.00 m: grey shale with small chips of black shale												
		36.75	32.00-36.75 m: dark grey shale, sheared												
		43.00	36.75-43.00 m: grey to dark grey massive shale												
		43.90	43.00-43.90 m: alternation of grey fine sandstone and dark grey shale												
		44.50	43.90-44.50 m: light grey fine sandstone												
		47.00	black to dark grey massive shale												
		47.55	47.00-47.55 m: strongly sheared zone, black clay and small chip of black shale												
		57.40	grey to dark grey hard massive shale												
		57.50	57.40-57.50 m: lenticular pyrite vein												
		64.80	grey to dark grey hard massive shale												
		65.15	64.80-65.15 m: black carbon bearing black shale												
		69.25	grey to dark grey massive shale												
		75.75	black massive shale												
		77.30	black carbon bearing black shale												
		78.50	77.30-78.50 m: black coal												
		81.90	alternation of black shale and grey fine to medium grained sandstone												
		87.60	mainly black shale, partly intercalated with very thin bedded fine sandstone and lenticular sandstone												
		87.70	87.60-87.70 m: pyrite veinlet												
		92.95	alternation of black shale and grey to dark grey sandstone												
		93.15	92.95-93.15 m: grey sandstone with many pyrite												
		97.80	grey to dark grey medium grained sandstone with calcite veinlet.												
		200.65	dark grey massive shale												

SCALE (m)	GEOLOGIC COLUMN	DEPTH AND CORE ANGLE (m) (°)	DESCRIPTION	POSITION OF EXAMINED CORE SAMPLES	ALTERATION AND MINERALIZATION Silice Ox-y A/P P/Y	ASSAY RESULTS								CORE RECOVERY % 50 100 (m)	SCALE (m)
						Sample No	Depth (m)	Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)		
100		101.40	dark grey massive shale												
		107.10	black massive shale with thin calcite veinlet												
110		107.10	grey massive shale												
		112.00	dark grey massive shale												
		113.70	113.70-114.30 m: alternation of black shale and grey sandstone												
		114.30	114.30-115.20 m: grey fine to medium grained sandstone with thin bedded black shale												
		115.20	115.20-115.60 m: grey shale with many pyrite												
		115.60	115.40-115.60 m: grey shale with many pyrite												
		121.90	dark grey massive shale												
		122.80													
		123.30													
		127.15	127.25-128.15 m: dark grey shale with many pyrite veinlet network												
		128.45													
130		130.30	grey to dark grey fine grained sandstone with very thin bedded black shale												
		131.50	133.15 m: brown iron oxides along crack												
		134.20	black to dark grey massive shale												
		139.40													
140		141.35	141.35-141.70 m: grey fine grained sandstone												
		141.70	141.50-141.60 m: concentrated pyrite												
		141.70	black to dark grey massive shale												
		145.75	145.75-146.90 m: dissemination and veinlet of pyrite												
		146.90	145.60-148.65 m: black carbon bearing black shale												
		149.50	grey to dark grey fine sandstone with pyrite along crack												
		150.30	150.30 m, 151.35 m: quartz veinlet												
		151.35	151.45-152.40 m: black shale with a little carbon stain and thin bedded sandstone												
		152.40	153.00-153.20 m: disseminated pyrite												
		156.45	gradual change												
		156.95	grey hard massive medium grained sandstone with white quartz veinlet (w<0.5 cm)												
		161.95	161.95-162.05 m: white quartz vein network with brown iron oxides along crack												
		164.95	164.95-165.30 m: light grey silicified sandstone												
		165.30	165.30-165.40 m: quartz vein with brown iron oxides												
		165.40	165.40-165.70 m: light grey strongly silicified sandstone												
		165.70	165.70-166.40 m: light grey and light brown very strongly silicified sandstone with quartz vein network												
		166.40	166.40-166.55 m: white quartz vein with druse												
		166.55	166.55-167.30 m: grey to light grey silicified sandstone with white quartz veinlet.												
		167.30	167.30-167.85 m: light brown very strongly silicified sandstone with quartz veinlet.												
		167.85	167.85-168.85 m: light grey silicified sandstone with white quartz veinlet.												
		171.40	grey hard massive medium grained sandstone												
		171.80	171.40 m: white quartz vein network (w=1 cm)												
		171.80	171.80 m: white quartz vein (w=2 cm)												
		179.22	179.22-179.40 m: white and grey quartz vein												
		179.40	179.40-180.00 m: light grey silicified sandstone with white quartz veinlet												
		183.60	183.60 m: white quartz vein (w=0.5 cm)												
		184.75	184.75 m: white quartz vein (w=0.5 cm)												
		186.40	gradual change												
		187.40	light grey hard massive fine to medium grained arkose sandstone with brown iron oxides along crack.												
		196.75	gradual change												
		200.65	white grey hard massive fine grained arkose sandstone												
200		200.65	200.40-200.50 m: white quartz veinlet network												

Apx.47(4) Geological Log of Diamond Drilling Hole (MJP-14)



Apx.47(5) Geological Log of Diamond Drilling Hole (MJP-15)

Apx. 48 X-ray Powder Diffraction Charts

Abbreviations

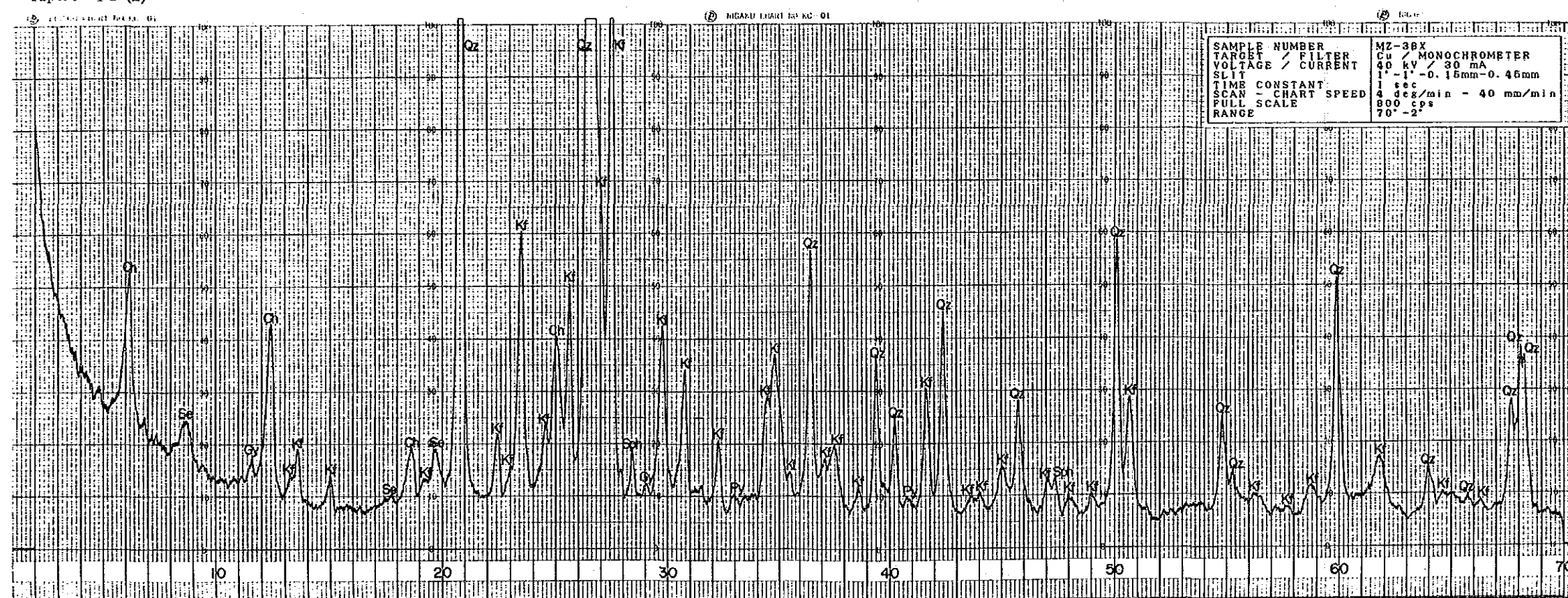
Mineral

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)



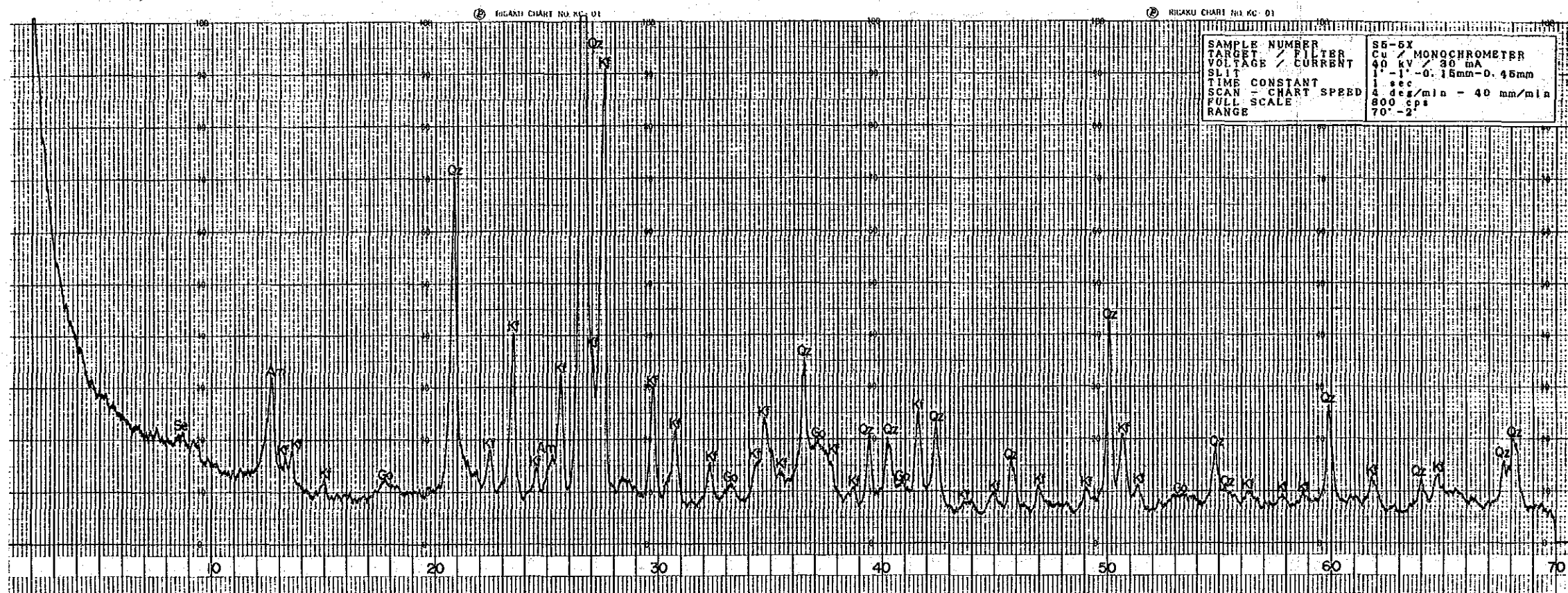
Apx. 48 (2)



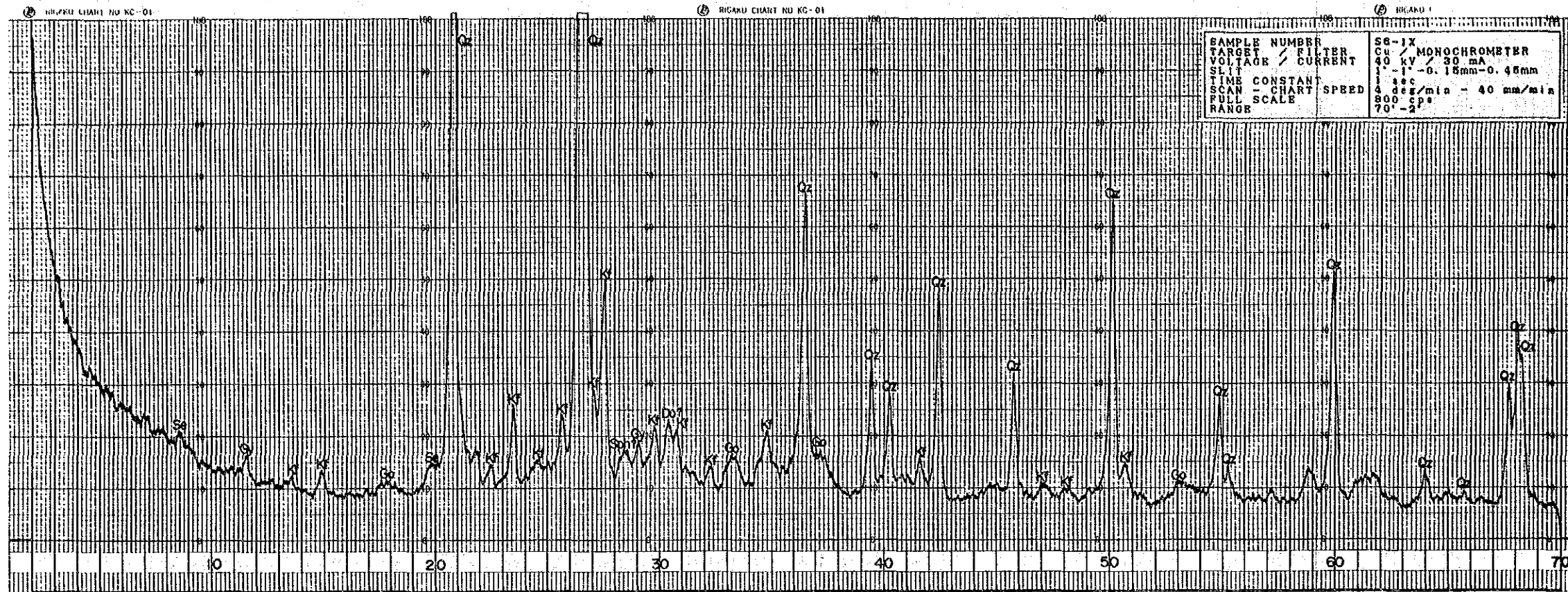
Apx. 48 (3)



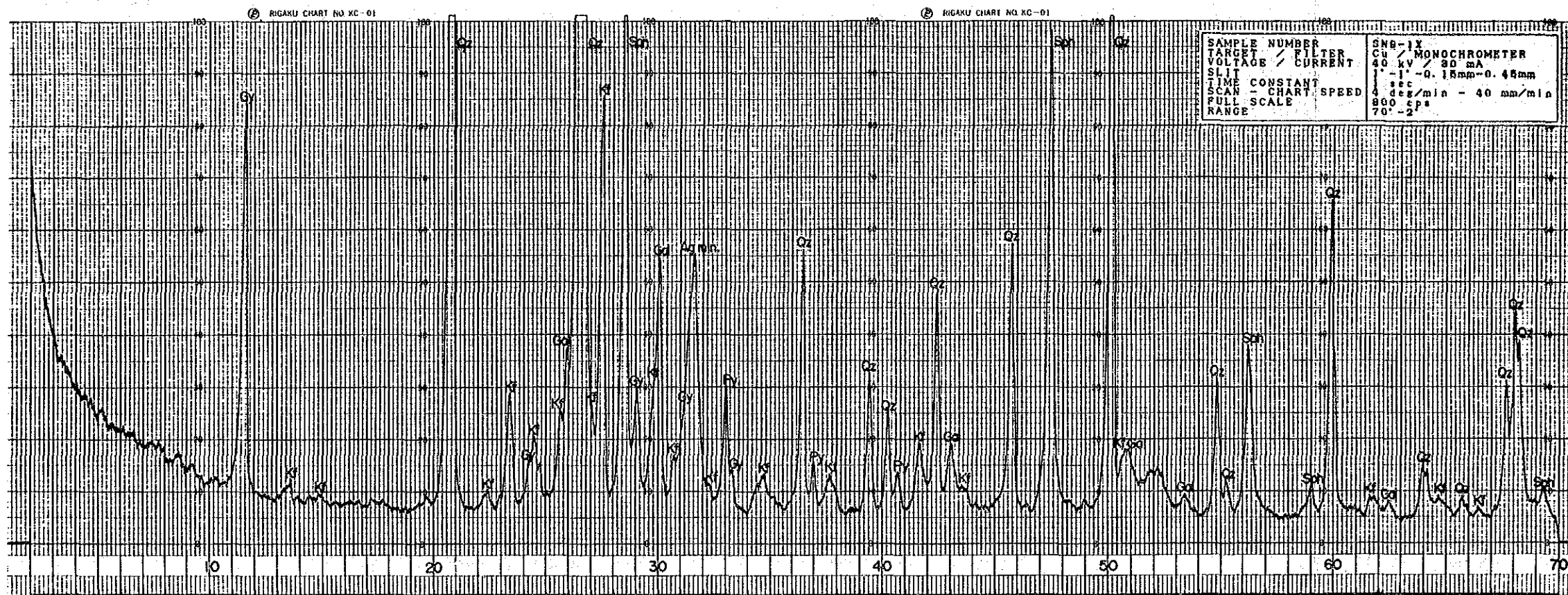
Apx. 48 (4)



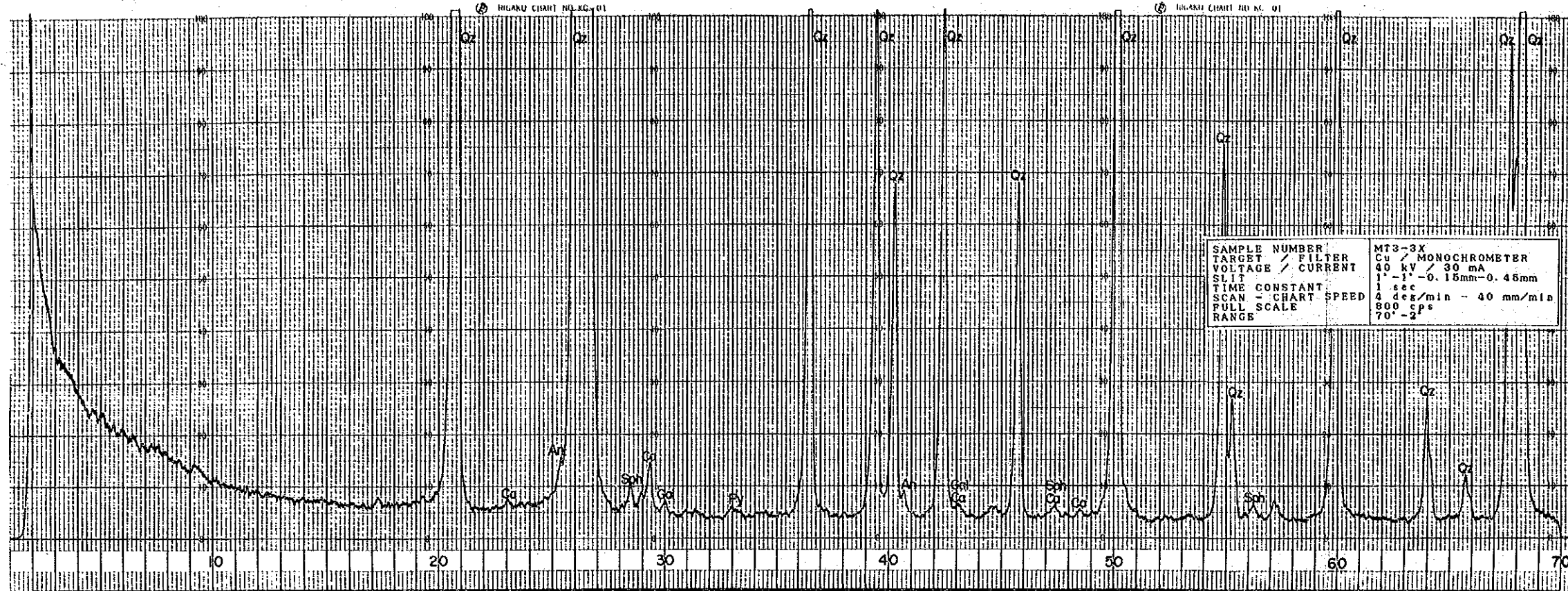
Apx. 48 (5)



Apx. 48 (6)



Apx. 48 (7)



Apx. 48 (8)

