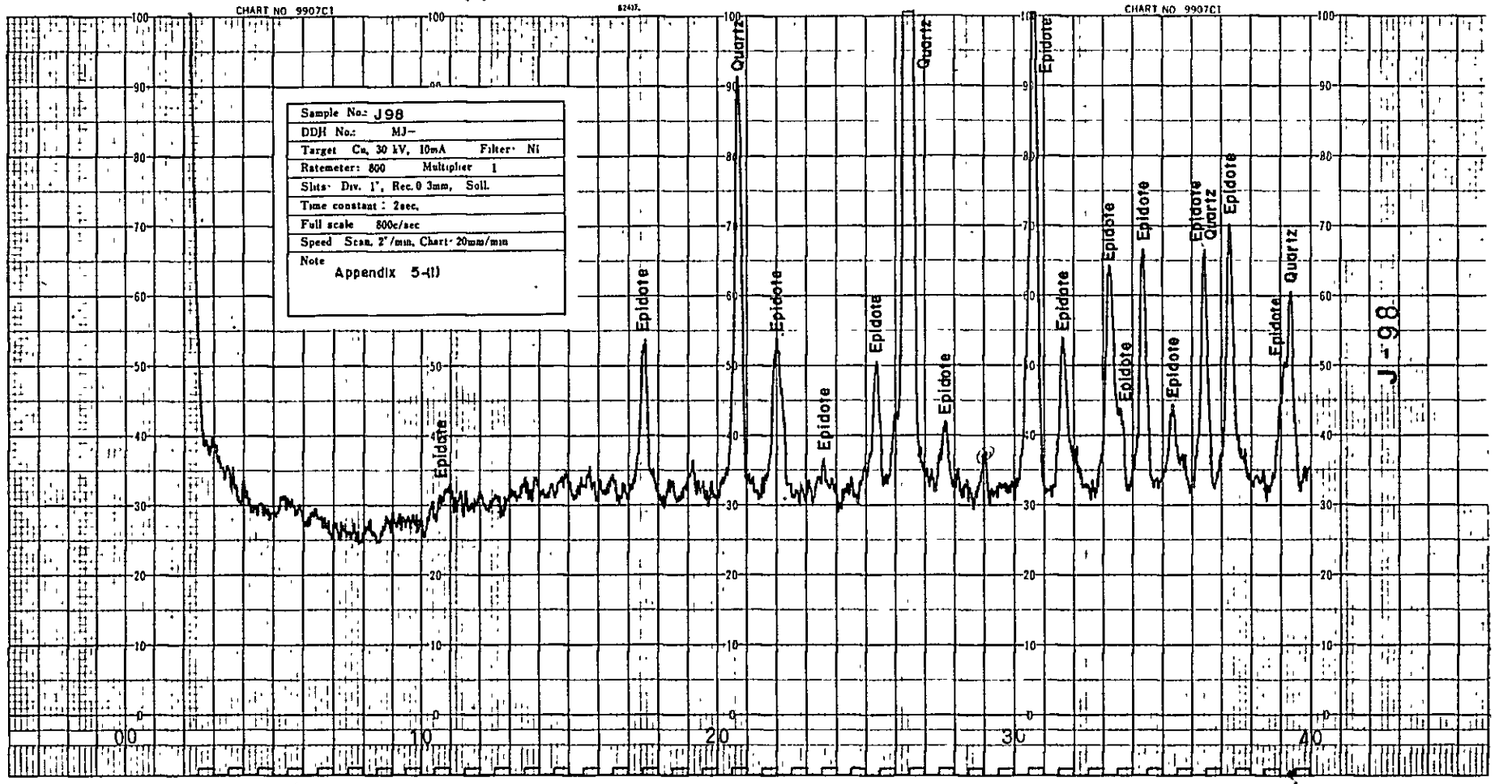
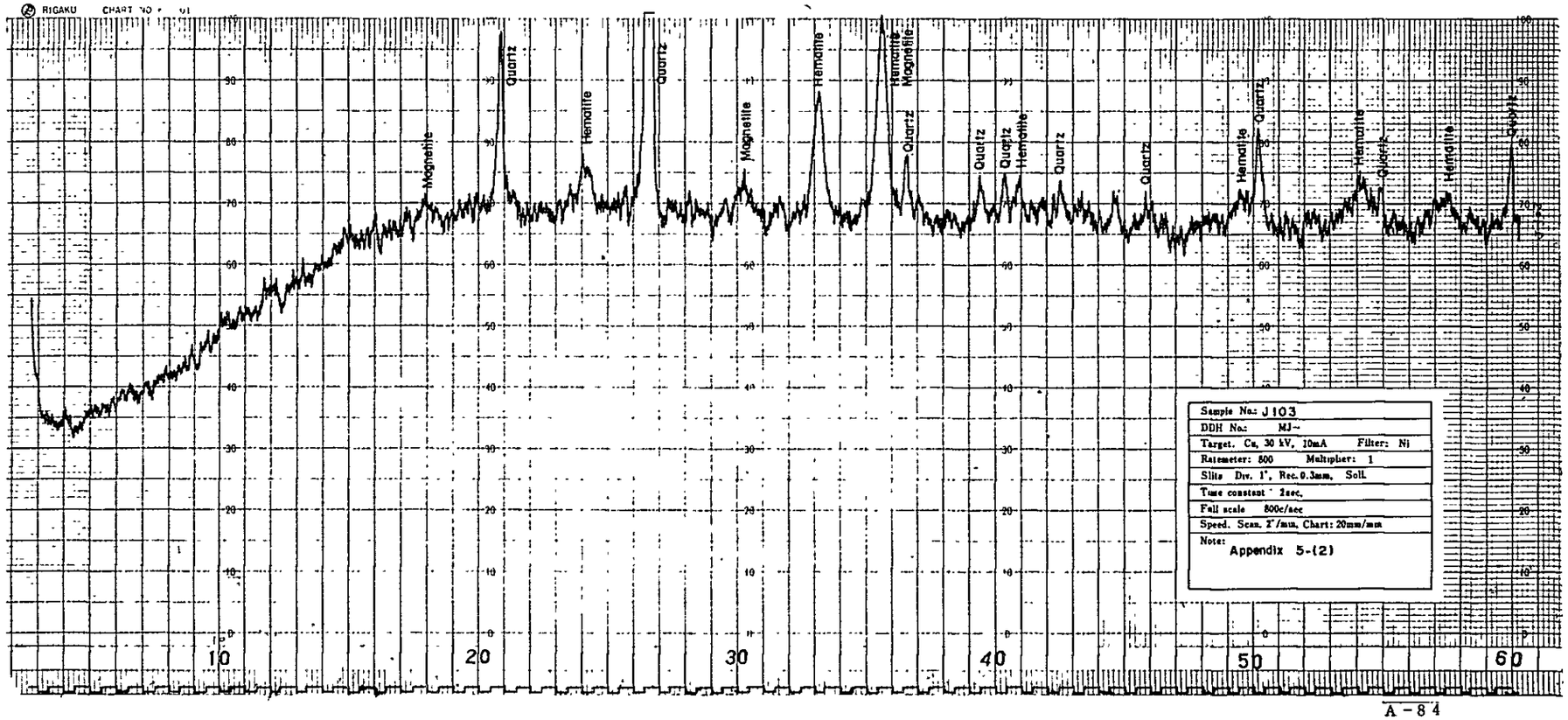
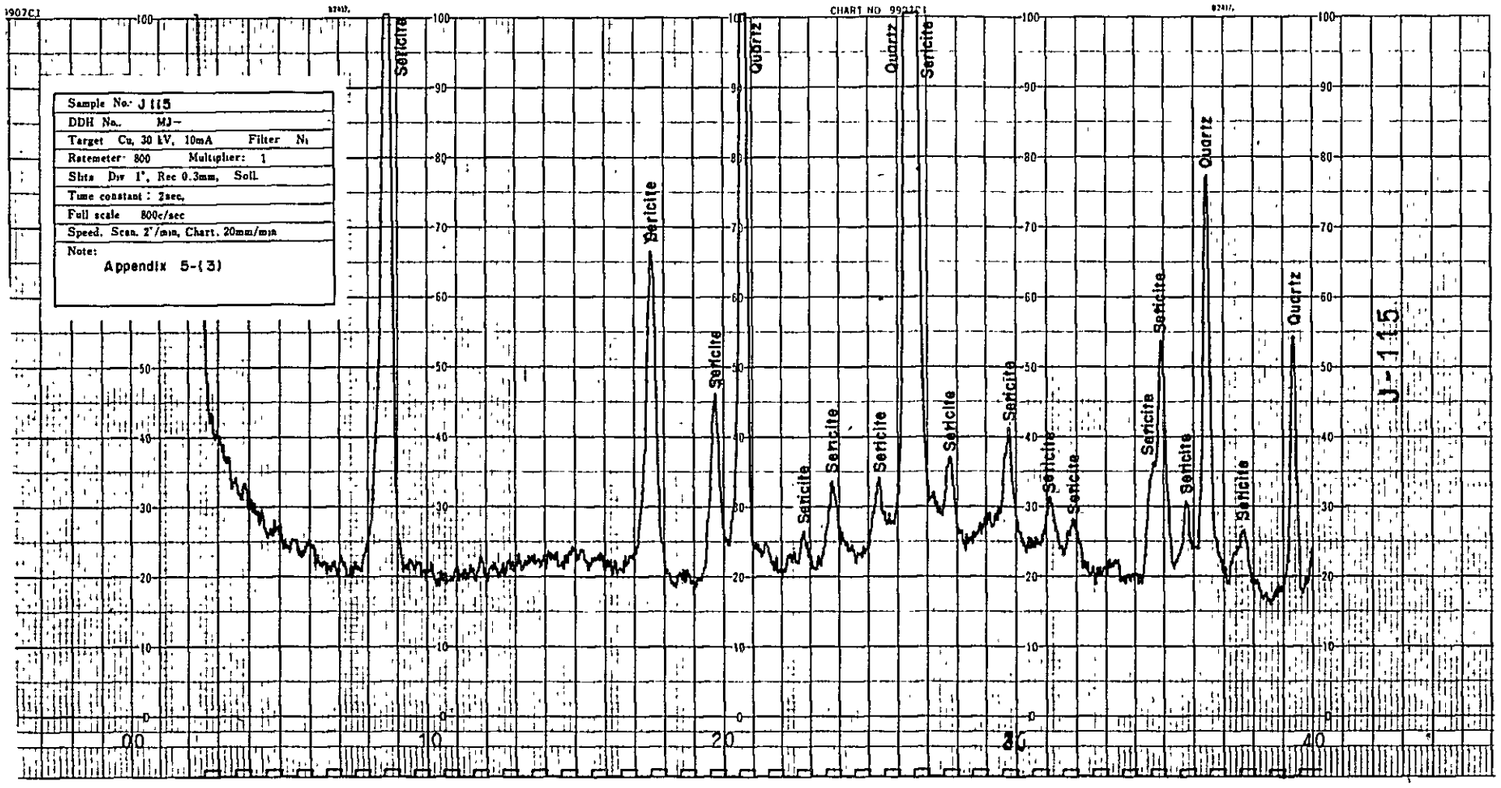
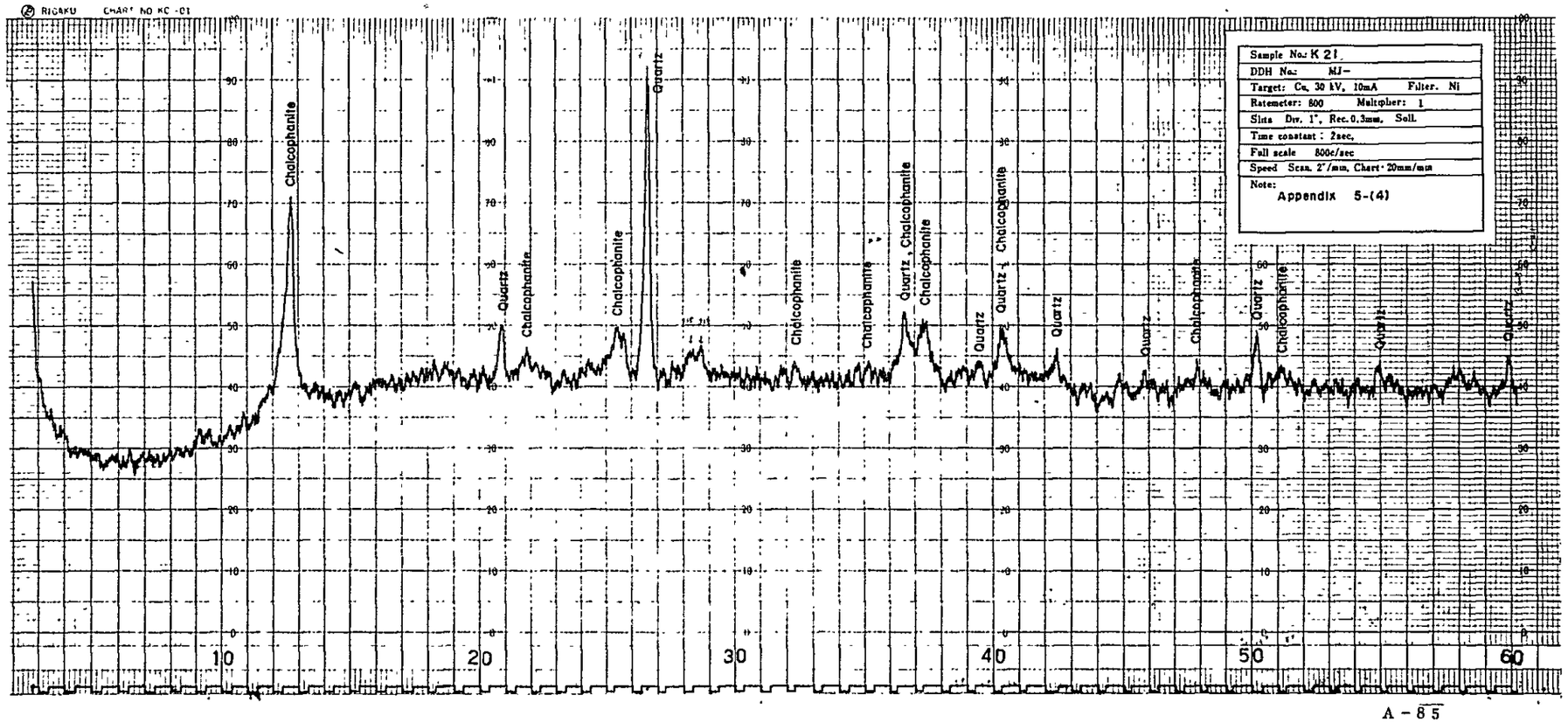
Appendix 5 X-RAY DIFFRACTOMETRY CHARTS






Sample No. J 115
DDH No. MJ-
Target Cu, 30 kV, 10mA Filter Ni
Ratemeter 800 Multiplier: 1
Slits Div 1°, Rec 0.3mm, Soll.
Time constant : 2sec,
Full scale 800c/sec
Speed. Scan. 2°/min, Chart. 20mm/min
Note:
Appendix 5-(3)
Sericite
Quartz
J-115


RIGAKU CHART NO KC-01
Sample No. K 21
DDH No. MJ-
Target: Cu, 30 kV, 10mA Filter. Ni
Ratemeter: 800 Multiplier: 1
Slits Div. 1°, Rec. 0.3mm, Soll.
Time constant : 2sec,
Full scale 800c/sec
Speed Scan. 2°/mm, Chart 20mm/mm
Note:
Appendix 5-(4)
Chalcophanite
Quartz
K-21

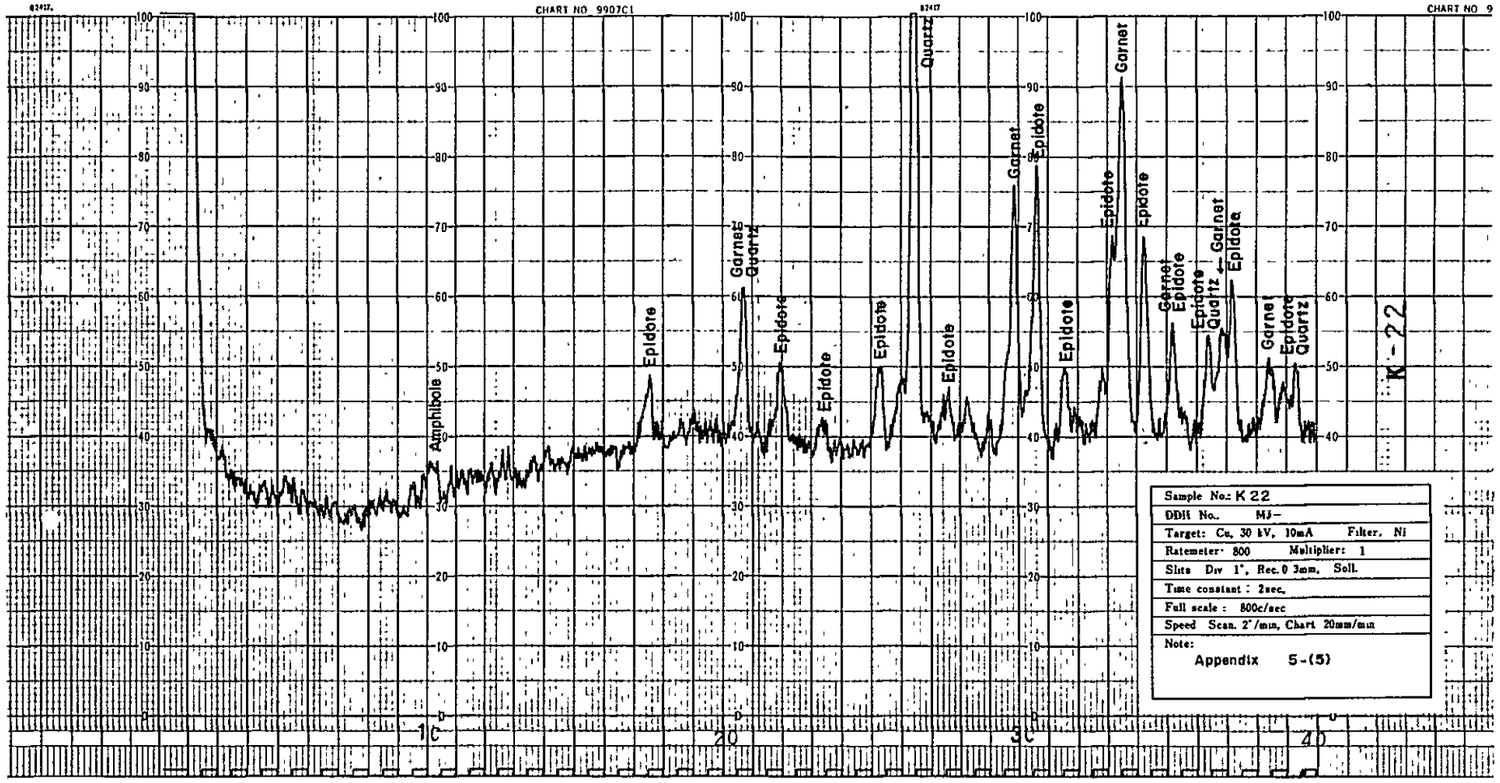
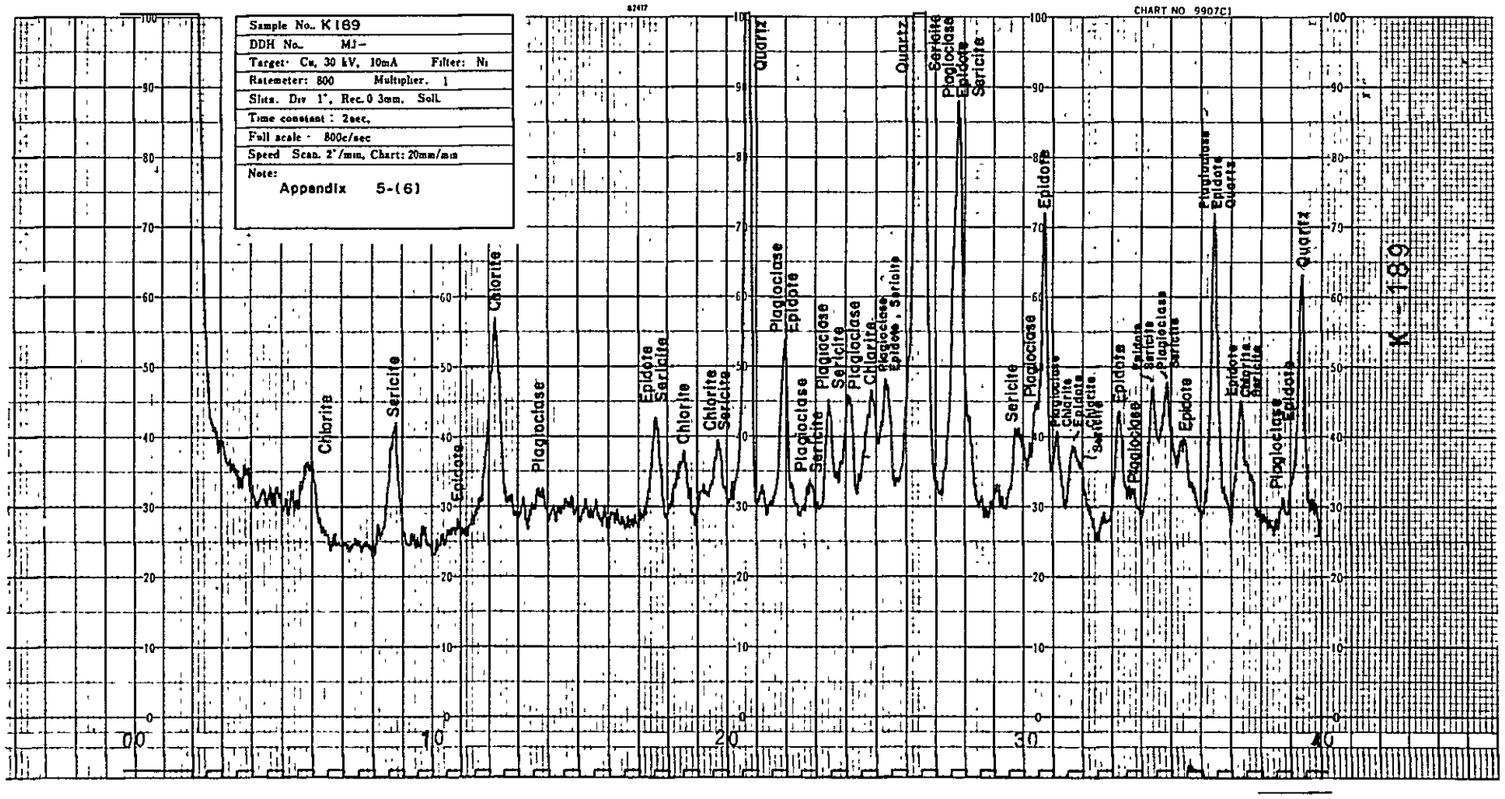


CHART NO 9907C1
Amphibole
Epidote
Garnet
Quartz
Epidote
Epidote
Epidote
Quartz
Epidote
Garnet
Epidote
Epidote
Epidote
Garnet
Epidote
Epidote
Quartz
Garnet
Epidote
Quartz
K-22
Sample No.: K 22
DDH No.: MJ-
Target: Cu, 30 kV, 10mA Filter: Ni
Ratemeter: 800 Multiplier: 1
Slits Div 1°, Rec. 0.3mm, Soll.
Time constant : 2sec.
Full scale : 800c/sec
Speed Scan. 2°/min, Chart 20mm/min
Note:
Appendix 5-(5)


Sample No. K 189
DDH No.: MJ-
Target: Cu, 30 kV, 10mA Filter: Ni
Ratemeter: 800 Multiplier: 1
Slits Div 1°, Rec. 0.3mm, Soll.
Time constant : 2sec.
Full scale : 800c/sec
Speed Scan. 2°/min, Chart: 20mm/min
Note:
Appendix 5-(6)
CHART NO 9907C1
Chlorite
Sericite
Epidote
Plagioclase
Chlorite
Chlorite
Sericite
Quartz
Quartz
Plagioclase
Epidote
Plagioclase
Sericite
Plagioclase
Chlorite
Sericite
Plagioclase
Epidote
Quartz
Sericite
Plagioclase
Epidote
Sericite
Sericite
Plagioclase
Epidote
Epidote
Sericite
Plagioclase
Sericite
Epidote
Plagioclase
Epidote
Quartz
Epidote
Chlorite
Sericite
Plagioclase
Epidote
Quartz
K-189

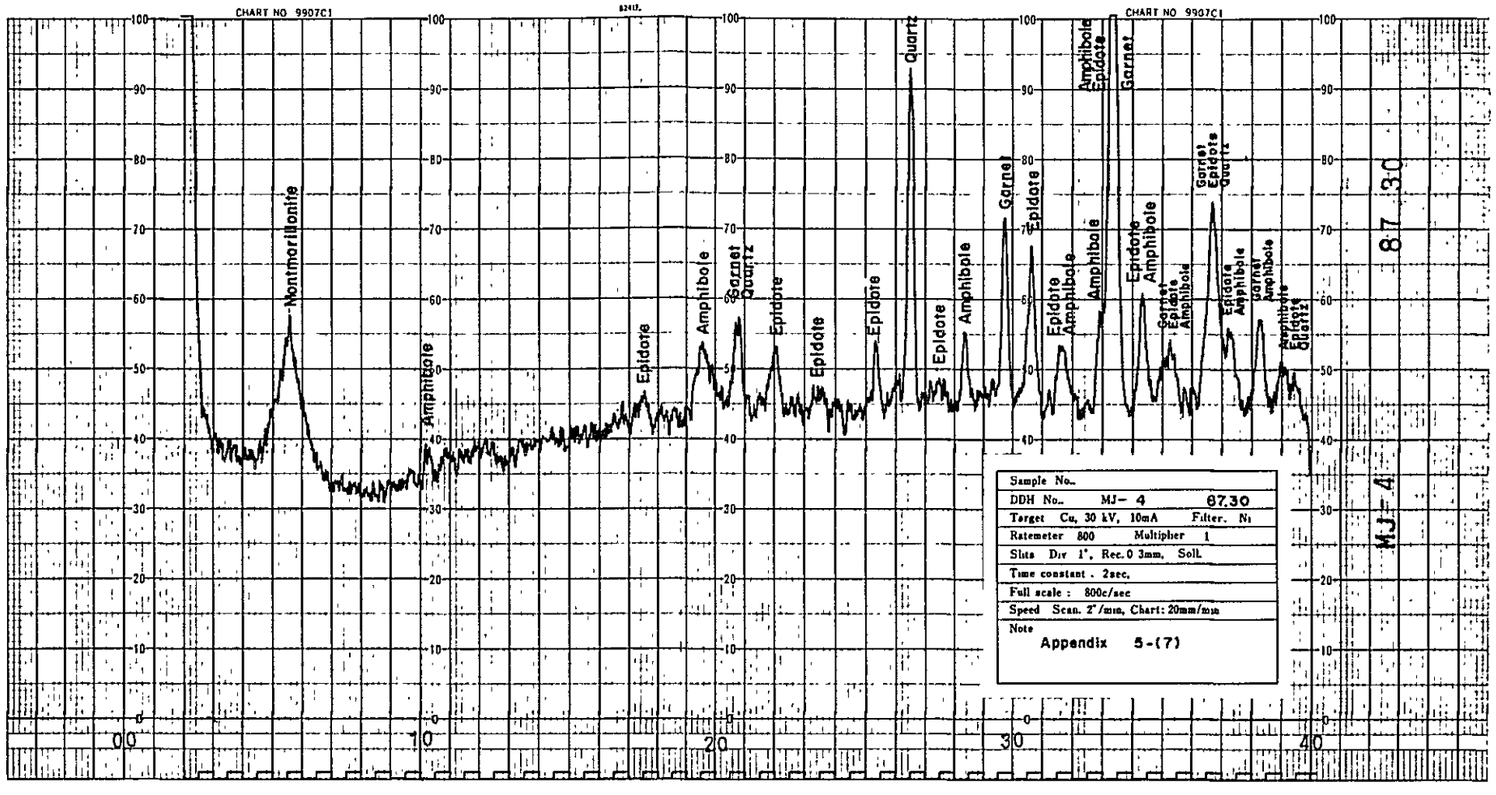


CHART NO 9907C1
Montmorillonite
Amphibole
Epidote
Garnet
Quartz
Sample No.
DDH No. MJ- 4 87.30
Target Cu, 30 kV, 10mA Filter Ni
Ratemeter 800 Multipher 1
Slits Div 1°, Rec. 0 3mm, Soll.
Time constant . 2sec.
Full scale : 800c/sec
Speed Scan. 2°/min, Chart: 20mm/min
Note
Appendix 5-(7)
MJ-4 87.30

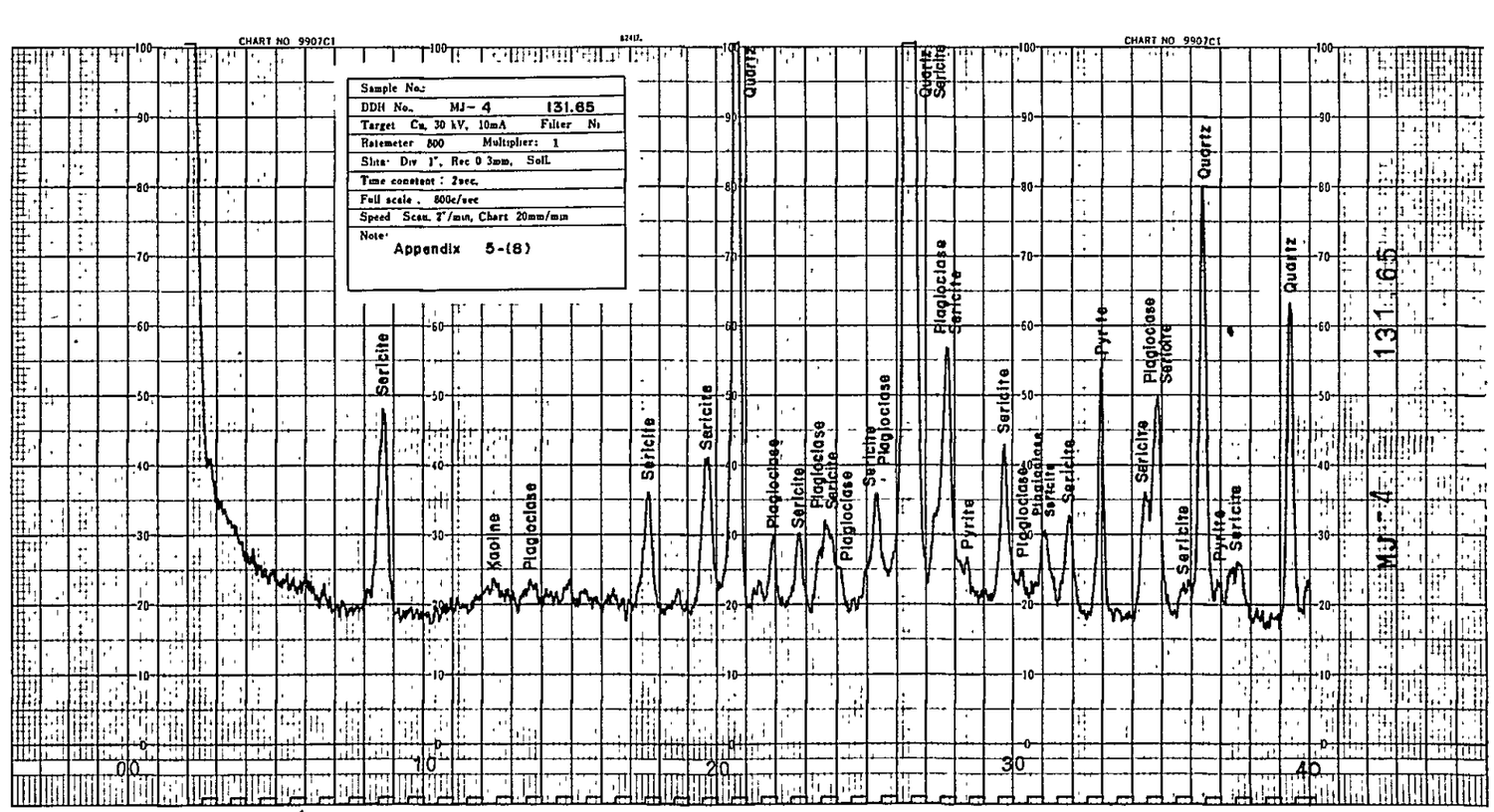


CHART NO 9907C1
Sericite
Kaoline
Plagioclase
Quartz
Pyrite
Sample No.
DDH No. MJ- 4 131.65
Target Cu, 30 kV, 10mA Filter Ni
Ratemeter 800 Multiplier: 1
Slits Div 1°, Rec 0 3mm, Soll.
Time constant : 2sec.
Full scale . 800c/sec
Speed Scan. 2°/min, Chart 20mm/min
Note
Appendix 5-(8)
MJ-4 131.65

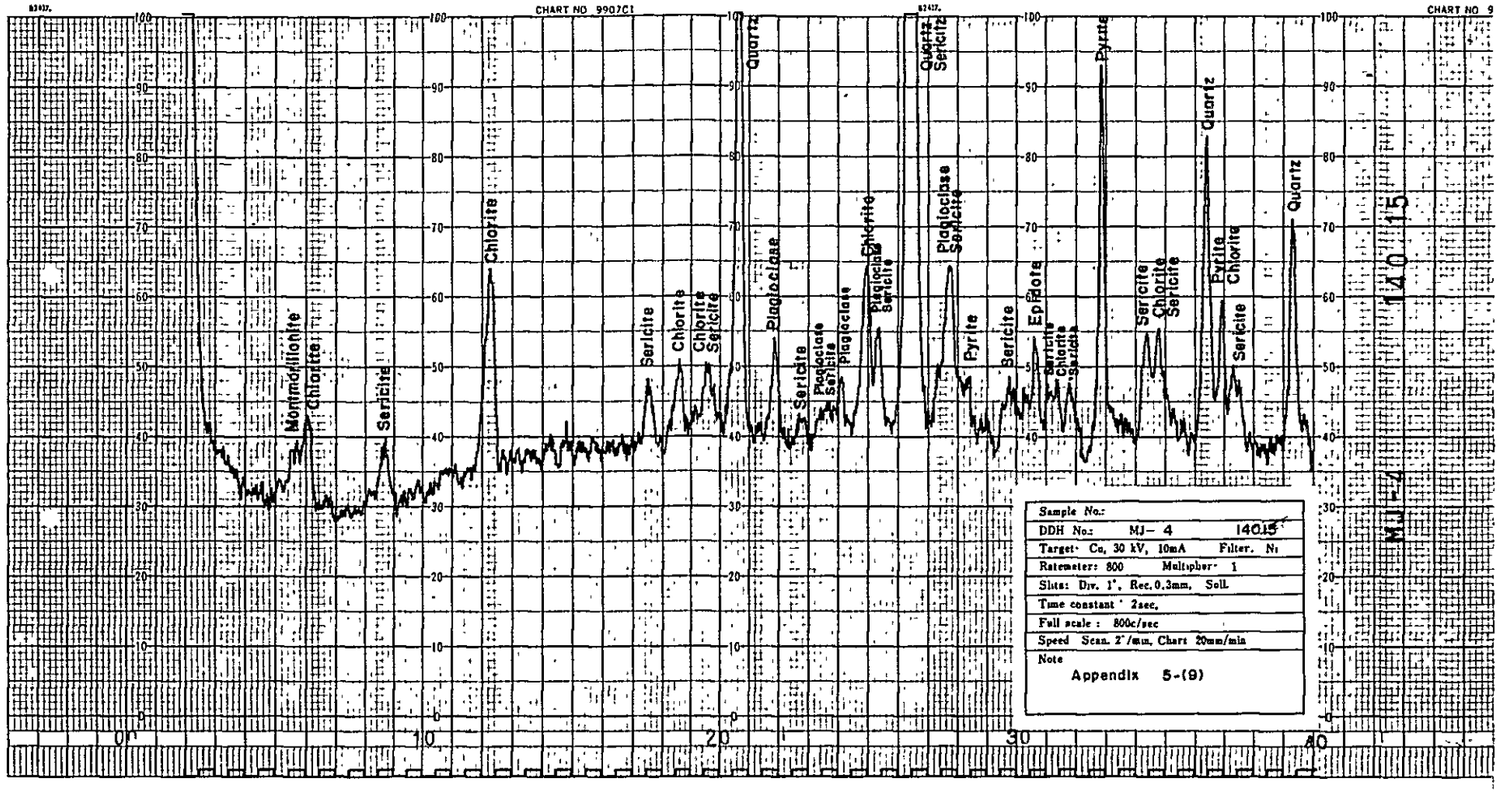
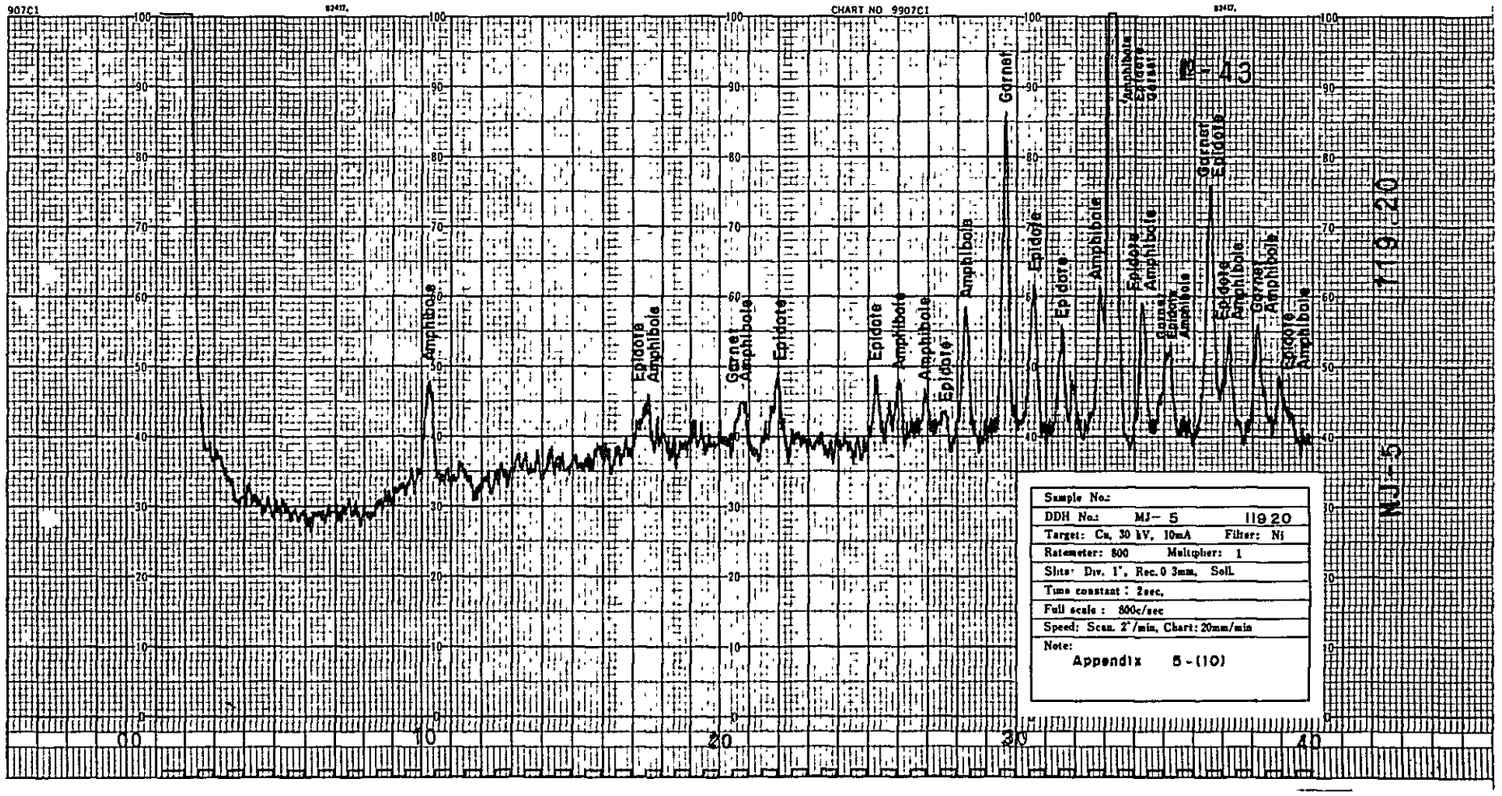


CHART NO 9907C1
Montmorillonite
Chlorite
Sericite
Chlorite
Sericite
Chlorite
Sericite
Plagioclase
Sericite
Plagioclase
Sericite
Plagioclase
Chlorite
Plagioclase
Sericite
Quartz
Sericite
Plagioclase
Sericite
Pyrite
Bericite
Epidote
Sericite
Chlorite
Sericite
Pyrite
Quartz
Sericite
Chlorite
Pyrite
Chlorite
Sericite
Quartz
Sample No.:
DDH No.: MJ- 4 14015
Target: Cu, 30 kV, 10mA Filter, Ni
Ratemeter: 800 Multipher: 1
Slits: Div. 1°, Rec. 0.3mm, Soll
Time constant : 2sec,
Full scale : 800c/sec
Speed Scan. 2°/min, Chart 20mm/min
Note
Appendix 5-(9)
MJ-4 14015


907C1
CHART NO 9907C1
Amphibole
Epidote
Amphibole
Epidote
Amphibole
Garnet
Amphibole
Epidote
Amphibole
Epidote
Amphibole
Epidote
Amphibole
Epidote
Amphibole
Garnet
Amphibole
Epidote
Amphibole
Garnet
Epidote
Epidote
Amphibole
Garnet
Amphibole
Epidote
Amphibole
Garnet
Amphibole
Sample No.:
DDH No.: MJ- 5 11920
Target: Cu, 30 kV, 10mA Filter: Ni
Ratemeter: 800 Multipher: 1
Slits: Div. 1°, Rec. 0 3mm, Soll
Time constant : 2sec,
Full scale : 800c/sec
Speed: Scan. 2°/min, Chart: 20mm/min
Note:
Appendix 5-(10)
MJ-5 11920

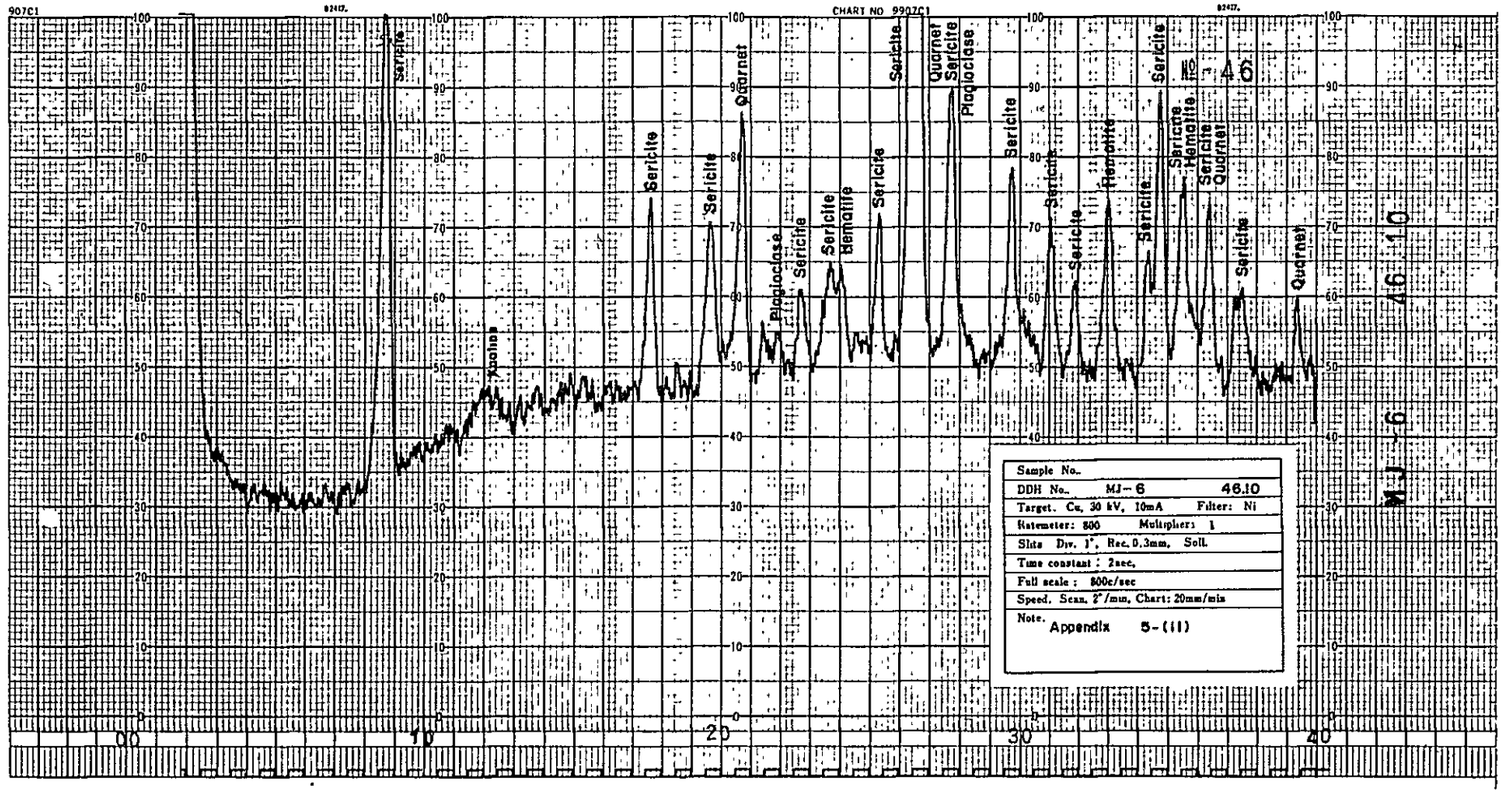
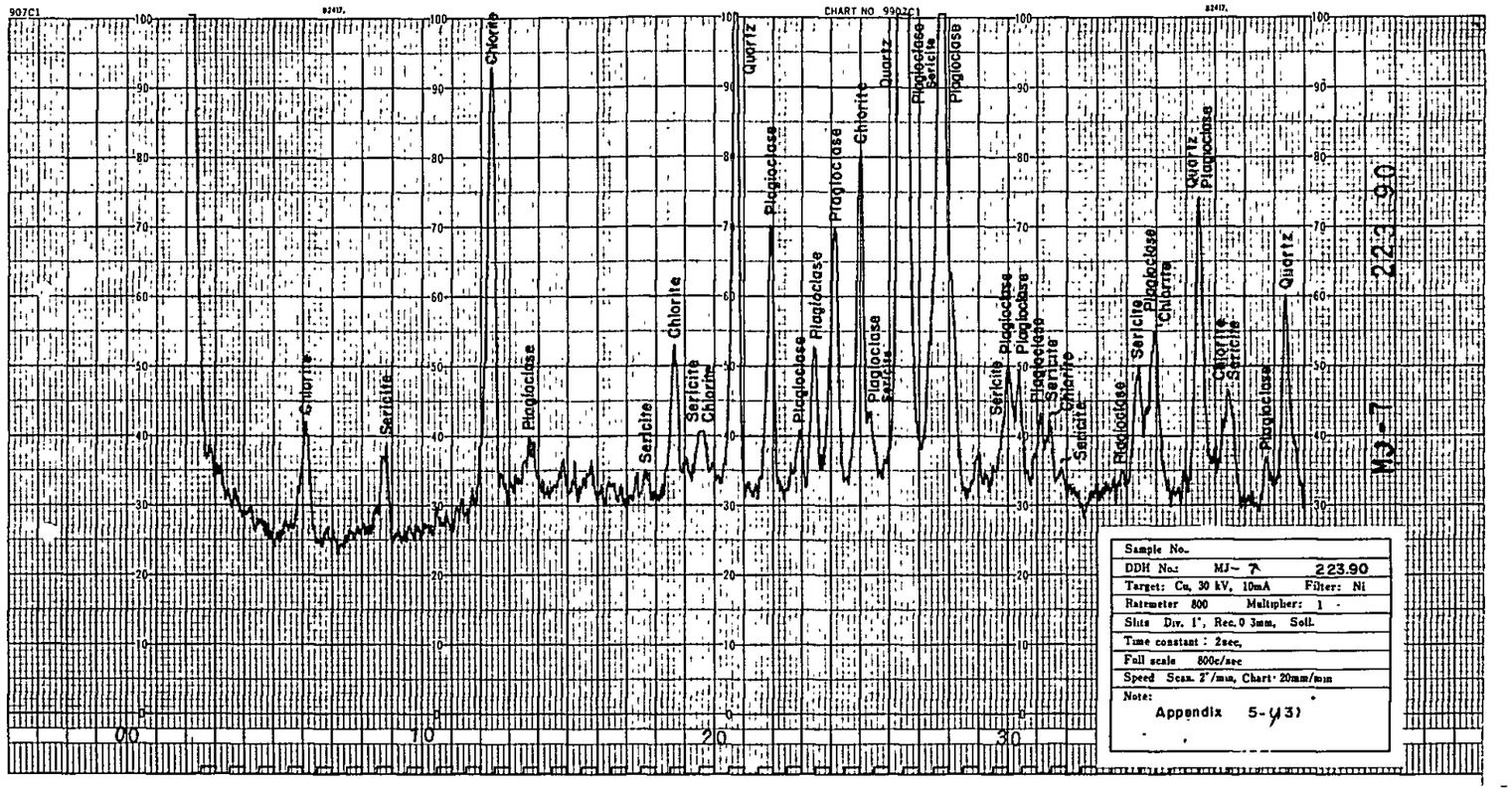


CHART NO 9907C1
Sericite
Quarnet
Plagioclase
Kaolins
Hematite
Quartz
Sample No.
DDH No. MJ-6 46.10
Target. Cu, 30 kV, 10mA Filter: Ni
Ratemeter: 800 Multiplier: 1
Slits Div. 1°, Rec. 0.3mm, Soll.
Time constant : 2sec,
Full scale : 800c/sec
Speed. Scan. 2°/min, Chart: 20mm/min
Note. Appendix 5-(11)
MJ-6 46.10
CHART NO 9907C1
Sericite
Kaoline
Quartz
Sample No.:
DDH No. MJ-7 30.60
Target. Cu, 30 kV, 10mA Filter: Ni
Ratemeter 800 Multipler. 1
Slits. Div. 1°, Rec. 0.3mm, Soll.
Time constant : 2sec.
Full scale : 800c/sec
Speed Scan. 2°/min, Chart: 20mm/min
Note: Appendix 6-(12)
MJ-7 30.60


907C1
CHART NO 9907C1
Chlorite
Plagioclase
Sericite
Quartz
Sericite Chlorite
Plagioclase Sericite
Quartz Plagioclase
Chlorite Sericite
MJ-7
223.90
Sample No.
DDH No.: MJ~ 7 223.90
Target: Cu, 30 kV, 10mA Filter: Ni
Ratemeter 800 Multipher: 1
Slits Div. 1°, Rec. 0 3mm, Soll.
Time constant : 2sec,
Full scale 800c/sec
Speed Scan. 2°/mm, Chart· 20mm/mm
Note:
Appendix 5-(13)

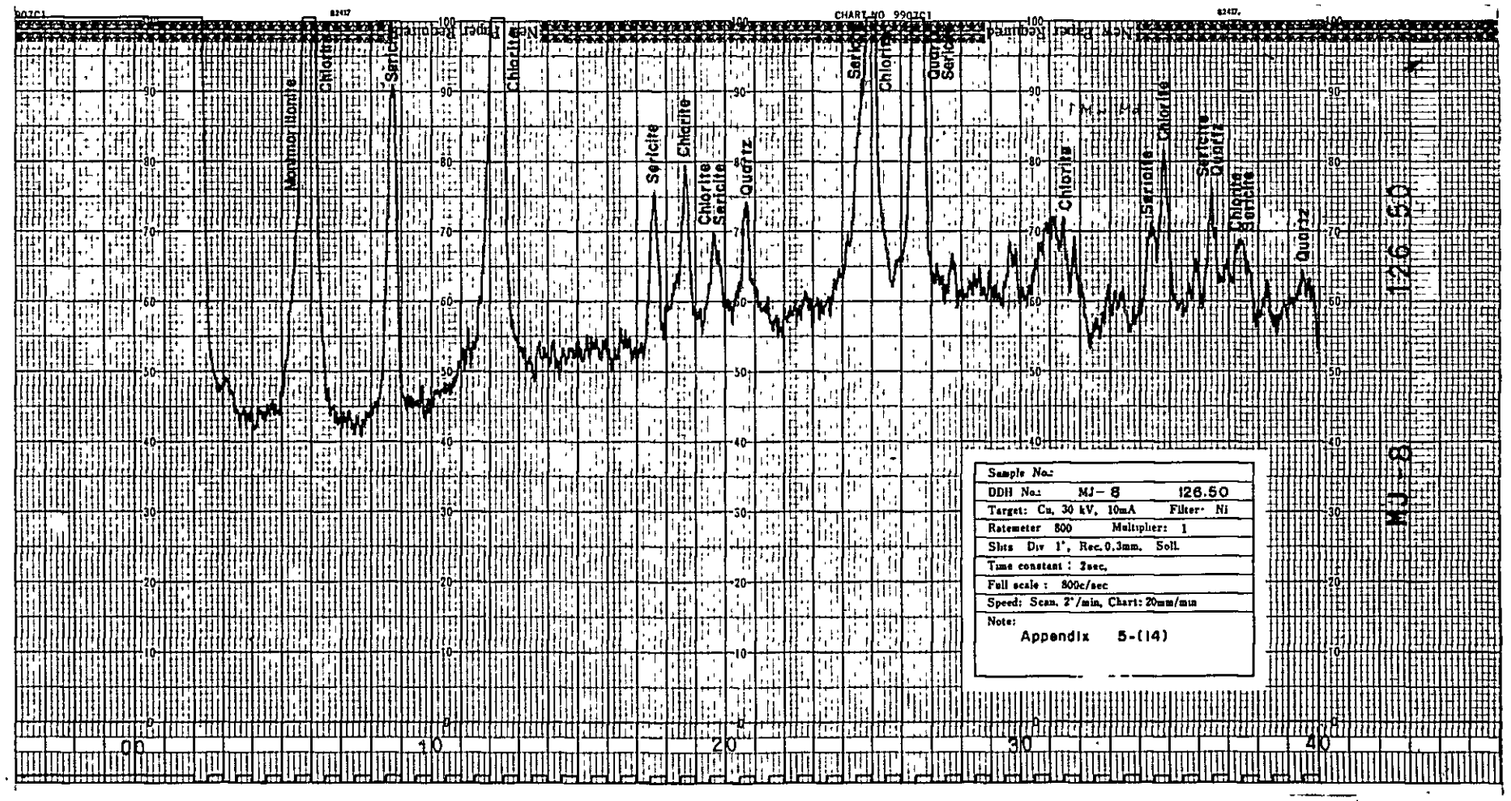


CHART NO 9907C1
Montmorillonite
Chlorite
Sericite
Chlorite Sericite
Quartz
Quartz Sericite
Sericite Chlorite
Chlorite Sericite
MJ-8
126.50
Sample No.:
DDH No.: MJ- 8 126.50
Target: Cu, 30 kV, 10mA Filter: Ni
Ratemeter 800 Multipher: 1
Slits Div 1°, Rec. 0.3mm, Soll.
Time constant : 2sec,
Full scale : 800c/sec
Speed: Scan. 2°/min, Chart: 20mm/mm
Note:
Appendix 5-(14)

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
J 6	1693.87	689.78	Massive limonite	0	3	0.12	0.01	0.04		46.11	0.10	
12	1694.19	689.39	Limonite gossan	-	1	0.02	0.01	0.08	0.19	25.26	0.09	
28	1695.15	688.40	do	-	3	0.04	0.06	0.08	0.16	35.95	0.23	
46	1694.42	687.92	do	-					NAV			
47	1693.43	691.05	Limonite-hematite gossan	-	2	0.01	Tr	0.01	NAV	15.18	0.01	
48	1693.34	690.91	Limonite gossan	-	1	0.01	Tr	0.04	0.15	23.93	0.09	
50	1693.40	691.01	Magnetite-hematite mineralized rock	0	1	Tr	Tr	0.01	0.01	7.62	0.02	
51	1693.45	691.10	Limonite gossan	-	1	0.02	Tr	0.01	0.09	30.77	0.12	Polished section: Appendix 3-1
52	1693.50	691.15	do	-	1	0.01	Tr	0.12	NAV	32.88	0.06	
53	1693.55	691.25	do	-	2	0.10	0.04	0.18	0.11	38.99	0.72	
54	1693.47	691.29	do	-	3	0.05	0.01	0.08	0.07	17.84	1.32	
63	1693.82	691.52	Magnetite mineralized rock	0	1	0.01	Tr	0.01	0.10	29.72	0.12	
64	1693.84	691.46	Magnetite-hematite mineralized rock	0	1	0.01	Tr	Tr	0.11	17.45	0.06	
66	1693.80	691.19	Limonite gossan	-	4	0.08	0.01	0.02	0.24	26.09	0.42	
69	1693.63	691.30	do	-	1	0.01	0.01	0.13	NAV	9.90	0.54	
71	1693.35	691.23	do	-	2	0.01	Tr	0.01	0.12	32.24	0.06	
72	1693.27	691.11	do	-	1	Tr	Tr	0.01	0.04	14.18	0.02	
74	1693.04	691.62	Limonite-hematite gossan	-	2	0.04	0.03	0.01	0.21	41.89	0.33	
97	1693.58	691.12	Hematite-limonite gossan	-	3	0.10	0.02	0.25	0.10	20.49	2.41	
103	1693.85	691.00	Massive magnetite and hematite	-	1	0.01	Tr	0.01	0.02	40.16	0.18	Polished section: Appendix 3-1

- : Not assayed. NAV : Not Available.

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
J 106	1693.84	690.84	Limonite gossan	4.5	1	0.04	Tr	0.13	0.00	41.50	0.17	
108	1693.91	690.80	Limonite stain in siltstone	-	1	0.03	Tr	0.01	0.22	26.18	0.03	
112	1693.75	690.64	Granitic rock with limonite stain	-	1	0.08	Tr	0.05	0.28	48.18	0.12	
141	1694.11	689.98	Limonite gossan	-	2	0.02	Tr	0.03	NAV	44.86	0.88	
142	1694.16	689.97	do	-	2	0.03	Tr	0.03	NAV	25.70	0.29	
143	1694.21	689.94	do	-	1	0.04	0.01	0.04	NAV	41.70	0.10	
144	1694.24	689.79	do	-	5	0.01	Tr	0.01	NAV	11.76	0.41	
146	6194.18	689.63	do	-	1	0.01	Tr	0.09	NAV	26.21	0.79	
147	1694.22	689.61	do	-	1	0.04	0.02	0.11	NAV	35.93	0.14	
148	1694.16	689.78	do	-	2	0.05	Tr	0.75	NAV	34.18	0.00	
149	1694.15	689.55	do	-	1	0.03	Tr	1.15	NAV	40.90	0.17	
150	1694.09	689.58	do	-	2	0.01	0.01	0.15	NAV	43.07	0.08	
151	1694.04	689.59	do	-	5	0.01	Tr	0.01	NAV	16.91	0.10	
152	1694.04	689.53	do	-	1	0.05	0.03	0.17	NAV	28.44	0.09	
153	1694.01	689.48	do	-	2	0.10	Tr	0.04	NAV	32.15	0.44	
154	1693.95	689.51	do	-	4	0.10	Tr	0.11	NAV	35.14	0.14	
159	1693.84	689.71	do	-	2	0.08	Tr	0.09	NAV	35.83	0.05	
160	1693.82	689.65	do	-	1	0.01	Tr	Tr	NAV	55.86	0.08	
161	1693.86	689.60	do	-	1	0.01	Tr	0.01	NAV	56.45	0.15	
162	1693.98	689.60	do	-	6	0.04	0.01	0.01	NAV	34.97	0.02	

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
J 163	1693.94	689.65	Limonite gossan	-	2	0.05	0.01	0.02	NAV	33.90	0.14	
164	1693.89	689.66	do	-	3	0.04	Tr	0.03	NAV	38.60	0.05	
165	1693.94	689.75	do	-	6	0.01	0.09	0.02	NAV	30.79	0.47	
166	1693.91	689.88	do	-	2	0.05	0.02	0.02	NAV	51.42	0.00	
167	1693.93	689.94	do	-	1	0.01	Tr	Tr	NAV	16.39	0.08	
K 16	1693.97	690.07	do	-	1	0.04	Tr	0.04	0.22	24.33	0.09	
21	1694.19	690.04	Manganese oxide ore	-	15	0.05	0.24	3.75	0.08	42.03	37.91	
23	1694.33	690.85	Limonite gossan		3	0.13	0.01	0.09			3.03	
43	1694.08	690.55	Limonite gossan	-	1	0.05	0.01	0.03	0.18	26.26	0.12	
44	1693.99	690.40	do	0	2	0.06	0.01	0.02	0.19	48.98	0.12	
46	1693.82	690.40	do	-	3	0.10	0.01	Tr	0.07	33.61	0.09	
66	1695.06	687.71	Limonite stain in siltstone	-	1	0.01	Tr	0.01	0.42	32.10	0.12	
70	1695.09	687.61	Limonite gossan	-	1	0.01	0.01	0.08	0.48	37.31	0.09	
81	1693.25	691.58	do	-	10	0.06	0.10	0.15	0.15	26.74	1.74	
86	1693.52	691.80	do	-	2	0.01	Tr	Tr	0.18	13.79	0.12	
93	1693.09	691.66	Manganese oxide	-	6	0.04	0.02	0.30	0.20	3.79	4.35	
107	1693.00	691.98	Limonite gossan	-	2	0.01	0.06	0.13	0.23	17.12	1.18	
108	1692.96	691.91	do	-	2	0.01	0.05	0.14	0.09	23.74	1.22	
122	1692.54	692.35	Pyrite dissemination in skarn	-	1	0.01	Tr	0.01	0.27	9.77	0.12	
123B	1692.54	692.35	Pyrite dissemination in quartzose rock	-	2	0.01	Tr	Tr	0.21	8.54	0.22	
132	1692.51	692.01	Massive limonite and hematite	-	2	0.02	0.01	0.04	0.08	24.71	0.09	

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
K 133	1692.57	691.98	Limonite gossan	-	3	0.02	0.01	0.05	0.16	28.13	0.01	
135	1692.61	692.08	do	-	6	0.06	0.01	0.04	0.10	42.29	0.17	
159	1695.05	687.78	Skarn with pyrite and magnetite	0	1	0.01	Tr	0.01	4.00	16.92	0.06	Polished section: Appendix 3-1
165	1695.29	687.64	Limonite gossan	-	3	0.01	Tr	0.16	0.22	32.82	0.12	
167	1695.30	687.60	do	-	1	Tr	Tr	0.04	0.00	5.70	1.16	
173	1692.29	692.75	do	-	1	0.11	0.01	0.09	0.21	31.28	0.12	
180	1692.75	691.82	do	-	2	0.08	0.01	0.03	0.06	41.15	0.17	
183	1692.93	691.57	do	-	2	0.06	0.02	0.02	0.20	49.81	0.17	
184	1693.24	691.26	do	-	3	0.01	Tr	0.01	NAV	11.08	0.89	
185	1693.27	691.28	do	-	1	Tr	0.01	0.02	NAV	57.41	0.80	
187	1693.33	691.31	do	-	1	0.04	0.02	0.07	NAV	35.36	0.95	
190	1693.47	691.39	Epidote-quartz rock	-	2	1.08	Tr	0.05	NAV	8.02	0.00	
192	1693.47	691.39	Manganese oxide ore	-	2	1.20	Tr	1.20	NAV	15.28	2.50	Malachite film
193	1693.47	691.39	Siltstone	-	1	1.20	Tr	0.03	NAV	9.14	0.03	
194	1693.47	691.39	Malachite stain in altered rock	-	5	1.04	Tr	0.03	NAV	8.57	0.07	
198	1693.27	691.45	Limonite gossan	-	6	0.20	0.02	0.11	NAV	44.27	0.87	
200	1693.24	691.48	do	-	2	0.11	0.01	0.05	NAV	36.10	0.02	
201	1693.20	691.49	do	-	1	0.01	0.09	0.02	NAV	9.89	0.92	
204	1693.23	691.71	do	-	2	0.01	Tr	0.05	NAV	63.87	0.92	
205	1693.14	691.69	do	-	1	0.12	0.02	0.25	NAV	53.65	0.89	

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
K 206	1693.03	691.75	Limonite gossan	-	1	0.08	0.01	0.20	NAV	50.42	0.02	
207	1692.95	691.67	do	-	3	0.10	0.03	0.06	NAV	46.50	7.03	
208	1692.86	691.71	do	-	1	0.13	0.04	0.04	NAV	33.91	0.38	
209	1692.94	691.77	do	-	1	0.11	0.01	0.02	NAV	45.71	0.08	
210	1692.78	692.01	do	-	-1	0.05	0.02	0.04	NAV	52.19	1.08	
212	1692.74	692.04	do	-	4	0.04	0.01	0.06	NAV	19.50	0.12	
214	1692.66	692.17	Pyrite dissemination in quartzose rock	-	7	0.03	Tr	0.04	NAV	16.55	0.97	
216	1692.80	692.18	Pyrite dissemination in skarn	-	-1	0.01	Tr	0.02	NAV	6.13	1.84	
220	1692.92	692.19	Massive limonite	-	1	0.04	0.06	0.04	NAV	45.59	0.86	
222	1692.88	691.95	Limonite gossan	-	1	0.01	Tr	0.03	NAV	47.93	0.61	
EK 51	1692.78	692.01	Massive magnetite	0	2	0.01	Tr	0.11	NAV	55.15		
S 5	1694.50	689.62	Limonite gossan	-	2	0.01	Tr	0.01	0.21	16.79	0.06	
14	1694.22	689.03	do	-	2	0.02	Tr	0.03	0.18	36.98	0.06	
24	1694.96	688.90	Pyrite dissemination in quartz porphyry	0	1	0.01	Tr	Tr	0.14	8.36	0.09	
26	1694.91	688.89	Limonite gossan	-	2	0.34	Tr	0.03	0.31	41.16	0.12	
28A	1694.68	688.95	Magnetite dissemination in porphyritic rock	0	2	0.04	Tr	0.28	0.51	23.60	0.17	
28B	1694.68	688.95	Pyrite dissemination in skarn	0	2	0.01	Tr	0.15	4.02	24.70	0.64	
28C	1694.68	688.95	Garnet bearing epidote actinolite rock	-	1	0.01	Tr	0.09	0.09	6.00	0.34	
30	1694.55	689.10	Limonite gossan		1	0.12	0.01	0.06	0.16	49.52	0.12	
31	1694.39	688.90	do	-	2	0.06	Tr	0.03	0.22	39.42	0.17	

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
S 35	1694.68	688.65	Limonite gossan	-	2	0.03	Tr	0.15	0.22	43.28	0.06	
37	1693.49	690.78	do	-	13	0.02	Tr	0.01	0.62	13.95	0.09	
42	1693.95	691.28	Magnetite dissemination in epidote skarn	0	1	Tr	Tr	0.01	0.12	28.63	0.20	Polished section: Appendix 3-1
52	1694.22	690.80	Limonite gossan	-	1	0.01	Tr	0.01	0.46	23.50	0.12	
54	1694.14	690.79	Limonite gossan in quartz porphyry	0	2	0.02	Tr	0.02	0.20	39.21	0.06	
56	1693.95	690.74	Magnetite dissemination in altered sandstone	0	5	0.05	0.04	0.55	0.20	58.61	0.17	
91	1693.85	690.47	Limonite gossan	-	1	0.05	Tr	Tr	0.19	24.56	0.12	
93	1693.94	690.31	do	-	2	0.10	Tr	0.02	0.15	41.56	0.12	
96A	1694.08	690.47	do	-	2	0.01	0.02	0.04	0.11	5.35	0.28	
96B	1694.08	690.47	do	-	3	0.02	Tr	0.08	0.79	10.47	0.17	
107	1693.93	689.60	Magnetite dissemination in altered rock	-	1	0.01	Tr	0.03	0.17	62.48	0.09	
123	1694.54	689.24	Limonite gossan	-	2	0.08	0.06	1.00	0.13	47.10	0.17	Polished section: Appendix 3-1
129	1694.35	689.37	do	-	1	0.01	Tr	0.05	NAV	19.14	0.10	
131	1694.39	689.44	do	-	27	0.01	Tr	0.01	NAV	34.53	0.06	
133	1694.51	689.46	do	-	2	0.04	Tr	0.09	NAV	25.79	0.02	
135	1694.58	689.35	do	-	2	0.02	Tr	0.05	NAV	27.74	0.11	
136	1694.59	689.30	do	-	2	0.04	Tr	0.13	NAV	28.23	0.07	
137	1694.66	689.20	Manganese oxide in altered rock	-	7	0.10	0.01	1.70	NAV	10.34	3.53	
138	1694.65	689.03	Limonite gossan	-	1	0.08	0.02	0.08	NAV	41.96	0.09	
139	1694.65	688.91	do	-	1	0.09	Tr	0.03	NAV	41.23	0.03	

Appendix 6-1 Chemical Analysis of Mineralized Samples

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
S 140	1694.66	688.84	Limonite gossan	-	2	0.05	Tr	0.05	NAV	34.15	0.02	
141	1694.66	688.73	do	-	1	0.02	Tr	0.05	NAV	27.47	0.17	
142	1694.65	688.52	do	-	2	0.08	Tr	0.01	NAV	44.10	0.09	
148	1694.45	688.84	do	-	-1	0.01	Tr	0.04	NAV	9.26	0.13	
149	1694.49	688.90	do	-	-1	0.04	Tr	0.03	NAV	27.96	0.05	
154	1694.31	689.17	do	-	1	0.01	Tr	0.10	NAV	44.64	0.00	
155	1694.28	689.04	do	-	1	0.05	Tr	0.01	NAV	32.98	0.01	
158	1694.11	689.20	do	-	1	0.01	Tr	0.02	NAV	6.84	0.16	
159	1694.22	689.33	do	-	3	0.12	0.01	0.02	NAV	42.54	0.02	

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-4													
1	1694.023	689.958	Limonite stain in argillized rock	0.90	0	2	0.04	Tr	0.04	1.70	25.60	0.44	64.70 - 65.60
2	"	"	do	0.30	-	2	0.04	Tr	0.02	0.23	24.78	0.78	65.60 - 65.90
3	"	"	do	0.40	-	2	0.05	Tr	0.05	0.22	31.82	0.69	65.90 - 66.30
4	"	"	do	0.20	-	1	0.01	Tr	0.03	1.57	16.45	0.33	75.75 - 75.95
5	"	"	do	0.40	0	2	0.04	Tr	0.05	2.80	22.08	0.17	81.50 - 81.90
6	"	"	do	0.30	-	-1	0.01	Tr	0.04	4.47	5.78	0.22	83.10 - 83.40
7	"	"	Pyrite veinlets and dissemination in chloritized rock	0.40	-	1	0.02	Tr	0.06	6.08	9.44	0.17	86.00 - 86.40
8	"	"	do	1.00	-	1	0.01	Tr	0.03	7.02	9.55	0.14	86.40 - 87.40
9	"	"	do	1.40	-	2	0.02	Tr	0.11	6.46	18.36	0.31	87.40 - 88.80
10	"	"	do	1.00	-	2	0.02	Tr	0.18	4.99	15.25	0.28	88.80 - 89.80
11	"	"	do	0.40	-	1	0.01	Tr	0.28	5.33	15.71	0.27	89.80 - 90.20
12	"	"	do	0.60	-	1	0.02	Tr	0.12	2.85	11.65	0.41	90.20 - 90.80
13	"	"	Pyrite veinlets and dissemination in epidote rock	1.00	-	1	0.02	Tr	0.09	11.70	12.65	0.33	90.80 - 91.80
14	"	"	do	0.80	0	2	0.01	Tr	0.05	10.68	13.13	0.39	91.80 - 92.60
15	"	"	do	0.30	-	1	0.03	Tr	0.13	17.20	10.20	0.22	92.70 - 93.00
16	"	"	Dense pyrite dissemination in epidote rock	0.80	0	2	0.04	Tr	0.40	28.27	22.16	0.17	93.00 - 93.80
17	"	"	do	2.00	-	1	0.02	Tr	0.45	10.96	18.65	0.37	93.80 - 95.80
18	"	"	do	0.60	0	1	0.05	Tr	0.30	22.94	20.54	0.25	95.80 - 96.40
19	"	"	Pyrite dissemination in siliceous rock	0.90	-	2	0.03	Tr	0.20	7.75	16.61	0.28	96.40 - 97.30

- : Not assayed. NAV : Not available

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-4													
20	1694.023	689.958	Pyrite dissemination in siliceous rock	0.70	-	1	0.04	Tr	0.08	12.84	18.04	0.31	97.30 - 98.00
43	"	"	Pyrite dissemination in argillized rock	1.20	-	1	Tr	Tr	0.02	8.19	9.99	0.09	104.40 - 105.60
21	"	"	Limonite stain in argillized rock	1.20	-	6	0.13	Tr	0.65	1.62	13.03	0.06	112.00 - 113.20
22	"	"	do	0.60	-	3	0.10	Tr	0.40	2.09	11.71	0.36	113.20 - 113.80
23	"	"	Limonite stain and pyrite dissemination in epidote rock	0.85	-	3	0.06	0.01	0.30	4.48	9.62	0.42	113.80 - 114.65
24	"	"	Pyrite dissemination in silicified rock	0.70	-	-1	Tr	Tr	0.03	5.47	5.54	0.11	127.00 - 127.70
25	"	"	do	0.90	-	1	Tr	Tr	0.06	11.24	11.65	0.11	127.70 - 128.60
26	"	"	do	0.70	-	-1	Tr	Tr	0.08	5.69	6.21	0.11	128.60 - 129.30
27	"	"	do	1.00	-	-1	Tr	Tr	0.03	8.92	9.47	0.06	129.30 - 130.30
28	"	"	do	0.90	-	-1	Tr	Tr	0.04	4.56	5.54	0.22	130.30 - 131.20
29	"	"	do	0.50	-	1	Tr	Tr	0.03	6.16	6.89	0.20	131.20 - 131.70
30	"	"	do	1.10	-	1	Tr	Tr	0.02	5.21	5.41	0.25	131.70 - 132.80
31	"	"	do	1.00	-	-1	Tr	Tr	0.02	4.92	5.44	0.20	132.80 - 133.80
32	"	"	Pyrite dissemination in argillized rock	1.40	-	1	Tr	Tr	0.02	6.05	7.91	0.14	133.80 - 135.20
33	"	"	do	0.30	-	-1	Tr	Tr	0.03	5.48	7.71	0.22	135.20 - 135.50
34	"	"	Pyrite dissemination in chloritized rock	1.00	-	2	0.01	Tr	0.22	3.98	9.07	0.41	139.10 - 140.10
35	"	"	Massive pyrite	0.50	-	3	0.01	Tr	0.17	25.20	27.52	0.49	140.10 - 140.60
36	"	"	Pyrite dissemination in silicified rock	0.30	-	1	0.01	Tr	0.40	6.62	13.32	0.39	140.60 - 140.90
37	"	"	Pyrite dissemination in argillized rock	0.30	-	1	Tr	Tr	0.42	10.07	18.48	0.76	140.90 - 141.20

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-4													
38	1694.023	689.958	Vein-form pyrite in silicified rock	0.50	-	1	Tr	Tr	0.18	6.15	9.23	0.42	141.20 - 141.70
39	"	"	Pyrite dissemination in chloritized rock	0.40	-	1	Tr	0.02	0.06	4.13	6.73	0.17	142.80 - 143.20
40	"	"	Pyrite dissemination in epidote rock	0.60	-	2	0.01	Tr	0.55	9.97	15.80	0.83	147.40 - 148.00
41	"	"	Pyrite dissemination in fractured zone	0.40	-	1	0.01	Tr	0.22	6.06	11.79	0.47	148.00 - 148.40
42	"	"	Pyrite dissemination in argillized rock	0.40	-	-1	Tr	Tr	0.06	7.23	8.53	0.19	149.80 - 150.20
DDH No.MJ-5													
1	1693.927	690.113	Limonite stain in granitic rock	0.50	-	1	0.01	Tr	0.01	0.31	5.56	0.33	24.80 - 25.30
2	"	"	do	0.40	-	-1	Tr	Tr	0.01	0.18	5.00	0.25	62.90 - 63.30
3	"	"	Pyrite dissemination in epidote rock	0.50	-	-1	0.06	Tr	0.01	7.47	12.89	0.31	80.30 - 80.80
4	"	"	do	0.80	0	1	0.08	Tr	0.01	10.75	15.69	0.20	80.80 - 81.60
5	"	"	do	0.70	-	1	0.07	Tr	Tr	8.86	12.62	0.22	83.20 - 83.90
6	"	"	do	0.70	-	1	0.04	Tr	0.02	6.30	9.36	0.17	84.60 - 85.30
7	"	"	Pyrite dissemination in altered siltstone	0.30	0	1	Tr	Tr	0.02	18.05	17.68	0.14	91.90 - 92.20
8	"	"	do	1.30	-	1	0.02	Tr	0.05	21.40	11.96	0.22	92.20 - 93.50
9	"	"	do	0.70	-	1	Tr	Tr	Tr	2.15	22.01	0.11	93.50 - 94.20
10	"	"	do	0.60	0	1	Tr	Tr	Tr	16.40	16.67	0.14	100.50 - 101.10
11	"	"	Pyrite dissemination in epidote rock	0.10	-	1	0.04	Tr	0.08	23.67	26.13	0.33	116.40 - 116.50
12	"	"	do	1.00	-	2	0.06	Tr	0.03	10.18	20.23	0.72	116.50 - 117.50
13	"	"	do	1.80	-	2	0.03	Tr	0.03	5.58		1.16	117.50 - 119.30

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-5													
14	1693.927	690.113	Pyrite dissemination in dastic rock	0.15	-	3	0.03	Tr	0.13	17.42	28.56	1.16	119.30 - 119.45
15	"	"	Pyrite dissemination in epidote rock	0.95	-	2	0.03	Tr	0.06	6.06	15.46	0.58	119.45 - 120.40
16	"	"	do	0.90	3	1	0.04	Tr	0.03	4.63	10.34	0.33	120.40 - 121.30
17	"	"	Pyrite dissemination in chloritized rock	0.70	-	1	0.03	Tr	0.03	4.37	10.39	0.44	130.60 - 131.30
DDH No.MJ-6													
1	1694.009	690.848	Siltstone	2.30	-	1	0.01	Tr	0.08	Tr	5.80	0.36	22.50 - 24.80
2	"	"	Magnetite dissemination in siltstone	0.50	-	-1	Tr	Tr	0.01	0.19	8.11	0.02	45.80 - 46.30
3	"	"	Quartz porphyry	0.80	-	-1	0.01	Tr	0.01	0.15	5.61	0.11	56.40 - 57.20
4	"	"	Pyrite dissemination in quartz-chlorite vein	0.10	-	-1	Tr	Tr	0.01	3.47	7.87	0.11	89.00 - 89.10
5	"	"	Quartz-chlorite vein	0.50	-	-1	Tr	Tr	Tr	0.10	3.63	0.17	92.00 - 92.50
6	"	"	Pyrite-chlorite-quartz vein	0.40	-	-1	0.01	Tr	0.01	4.46	5.82	0.28	109.80 - 110.20
DDH No.MJ-7													
1	1693.890	690.260	Limonite stain in porous rock	0.80	-	2	0.10	Tr	Tr	0.20	27.00	0.08	15.00 - 15.80
2	"	"	do	0.50	-	2	0.07	Tr	Tr	0.23	21.81	0.12	15.80 - 16.30
3	"	"	do	0.70	-	2	0.12	Tr	0.01	0.26	23.34	0.14	16.30 - 17.00
4	"	"	Limonite stain in siltstone	0.40	-	1	0.03	Tr	Tr	0.09	17.39	0.11	17.00 - 17.40
5	"	"	do	1.50	-	2	Tr	Tr	Tr	0.17	7.39	0.06	17.40 - 18.90
6	"	"	Quartz veinlets with limonite stain in siltstone	0.60	-	1	0.01	Tr	Tr	0.12	6.48	0.17	34.60 - 35.20
7	"	"	Pyrite dissemination with limonite stain in argillized rock	0.60	-	1	0.02	Tr	Tr	4.27	4.29	0.08	51.70 - 52.30

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-7													
8	1693.890	690.260	Pyrite dissemination in fractured zone	0.20	-	1	0.02	0.01	0.01	13.34	13.38	0.06	75.60 - 75.80
9*	"	"	Magnetite dissemination in chlorite-epidote rock	1.15	-	2	0.09	Tr	0.02	9.95	20.22	0.17	81.60 - 82.75
10	"	"	Pyrite dissemination in silicified rock	0.10	-	2	0.07	Tr	0.01	13.21	25.93	0.49	84.00 - 84.10
13	"	"	Galena impregnation in silicified rock	0.90	-	-1	Tr	0.05	0.01	3.66	4.88	0.08	84.10 - 85.00
11	"	"	Pyrite dissemination in silicified rock	0.60	-	-1	0.01	Tr	0.01	9.80	10.26	0.06	88.70 - 89.30
14	"	"	do	0.30	-	1	0.01	Tr	0.01	6.50	8.75	0.03	92.80 - 93.10
12	"	"	do	0.50	-	-1	Tr	Tr	0.01	9.52	9.48	0.08	100.10 - 100.70
15*	"	"	Magnetite dissemination in epidote rock	1.30	0	2	0.01	Tr	0.14	NAV	26.54	0.22	122.30 - 123.60
16	"	"	Pyrite dissemination in epidote rock	1.10	0	1	Tr	Tr	0.13	NAV	13.35	0.22	124.50 - 125.60
17	"	"	Pyrite dissemination in epidote rock	0.80	0	1	0.01	Tr	0.12	NAV	17.38	0.29	125.60 - 126.40
18	"	"	Pyrite dissemination in garnet rock	0.60	0	1	0.04	Tr	0.06	NAV	18.39	0.20	126.40 - 127.00
19	"	"	Magnetite-pyrite dissemination in epidote-garnet rock	0.90	0	1	0.05	Tr	0.03	NAV	12.19	0.19	127.00 - 127.90
20	"	"	Pyrite stringer in epidote rock	0.90	0	1	Tr	Tr	0.01	NAV	5.87	0.07	127.90 - 128.80
21	"	"	Pyrite dissemination in epidote rock	0.60	0	1	0.01	Tr	0.01	NAV	8.87	0.09	143.10 - 143.70
22	"	"	do	0.60	0	1	0.01	Tr	0.03	NAV	9.56	0.16	161.20 - 161.80
23	"	"	do	0.70	0	1	0.01	Tr	0.03	NAV	8.18	0.20	166.50 - 167.20
24	"	"	Magnetite-pyrite stringer in altered siltstone	2.00	0	1	Tr	Tr	0.01	NAV	5.76	0.14	172.70 - 174.70
25	"	"	Magnetite stringer in chloritized rock	0.90	0	1	Tr	Tr	0.01	NAV	7.53	0.23	178.70 - 179.60
26	"	"	Magnetite dissemination in silicified rock	0.40	0	1	Tr	Tr	0.01	NAV	8.73	0.13	180.70 - 181.10

* Polished section: Appendix 3-1.

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-7													
27	1693.890	690.260	Magnetite dissemination in silicified rock	0.20	0	1	0.01	Tr	0.04	NAV	13.11	0.26	187.90 - 188.10
28	"	"	Magnetite-pyrite dissemination in silicified rock	0.30	0	1	0.01	Tr	0.02	NAV	7.85	0.19	188.10 - 188.40
29	"	"	do	0.70	0	1	0.01	Tr	0.01	NAV	12.35	0.05	191.00 - 191.70
30*	"	"	do	0.70	0	1	0.02	Tr	0.01	NAV	9.45	0.05	191.70 - 192.40
31	"	"	Magnetite dissemination in silicified rock	0.40	0	1	0.04	Tr	0.02	NAV	26.12	0.20	192.40 - 192.80
32	"	"	do	0.60	0	1	Tr	Tr	0.01	NAV	8.83	0.18	192.80 - 193.40
33	"	"	do	0.50	1	1	Tr	Tr	0.01	NAV	7.56	0.13	248.20 - 248.70
DDH No.MJ-8													
1	1694.198	690.400	Limonite stain in siltstone	0.30	-	-1	Tr	Tr	0.02	0.08	4.93	0.11	12.00 - 12.30
2	"	"	do	0.70	-	-1	0.01	Tr	0.02	0.07	4.64	0.22	70.00 - 70.70
3	"	"	Mottled magnetite in sandstone	0.70	-	1	0.02	Tr	0.01	0.07	5.95	0.08	96.30 - 97.00
6	"	"	do	0.80	-	-1	Tr	Tr	Tr	0.40	7.02	0.14	100.70 - 101.50
5	"	"	Pyrite dissemination in chloritized rock	1.15	-	1	Tr	Tr	0.01	1.13	10.83	0.17	125.60 - 126.75
4	"	"	Limonite stain in sandstone	0.30	-	-1	Tr	Tr	0.01	0.23	12.73	0.20	144.60 - 144.90
DDH No.MJ-9													
39	1693.511	691.075	Limonite stain in siltstone	1.20	0	2	0.18	0.01	0.10	NAV	25.25	0.28	36.20 - 37.40
40	"	"	Pyrite dissemination in siltstone	0.10	0	4	2.20	Tr	0.08	NAV	22.02	0.98	54.70 - 54.80
1	"	"	Pyrite-limonite-manganese oxide	0.60	1	11	3.80	0.01	0.80	NAV	34.32	0.19	82.30 - 82.90
2	"	"	Limonite stain in argillized rock	0.25	0	3	0.10	Tr	8.79*	NAV	28.51	0.46	88.60 - 88.85

* Polished section: Appendix 3-1.

* Check analysis by wet method

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-9													
3	1693.511	691.075	Limonite stain in argillized rock	0.25	0	3	0.06	0.01	1.65*	NAV	22.08	0.15	88.85 - 90.10
4	"	"	Massive pyrite and argillized rock	1.00	0	5	0.14	0.01	3.80*	NAV	26.40	0.03	90.10 - 91.10
5	"	"	Massive pyrite	0.90	0	4	0.15	Tr	21.52*	NAV	30.18	0.11	91.10 - 92.00
6	"	"	do	0.50	0	3	0.08	Tr	15.36*	NAV	30.96	0.10	92.00 - 92.50
7	"	"	do	0.50	0	4	0.10	Tr	17.12*	NAV	29.08	0.16	92.50 - 93.00
8	"	"	do	0.50	0	4	0.07	Tr	11.63*	NAV	29.25	0.46	93.00 - 93.50
9	"	"	do	0.60	0	3	0.08	Tr	10.56*	NAV	29.83	0.39	93.50 - 94.10
10	"	"	do	1.00	0	1	0.02	Tr	1.58*	NAV	14.95	0.21	94.10 - 95.10
11	"	"	do	1.30	0	6	0.60	Tr	16.92*	NAV	19.45	0.05	95.10 - 96.40
12	"	"	do	1.30	0	6	0.12	Tr	30.66*	NAV	18.04	0.13	96.40 - 97.70
13	"	"	Pyrite dissemination in argillized rock	0.40	0	3	0.70	Tr	4.93*	NAV	11.35	0.19	97.70 - 98.10
14	"	"	Pyrite dissemination in chloritized rock	0.20	0	2	0.01	Tr	0.90	NAV	16.75	0.57	98.10 - 98.30
15	"	"	Pyrite dissemination in epidote rock	0.30	0	1	Tr	Tr	0.20	NAV	14.78	0.15	98.30 - 98.60
16	"	"	Pyrite dissemination in silicified rock	0.25	0	1	Tr	Tr	0.15	NAV	9.82	0.34	98.60 - 98.85
17	"	"	Large idiomorphic pyrite in chloritized rock	0.10	0	2	0.01	Tr	0.95	NAV	22.03	0.17	98.85 - 98.95
18	"	"	Pyrite dissemination in epidote rock	0.35	0	1	0.02	0.08	0.45	NAV	20.66	0.12	98.95 - 99.30
19	"	"	Pyrite dissemination in silicified rock	0.60	0	1	Tr	Tr	0.08	NAV	9.31	0.27	99.30 - 99.90
20	"	"	Pyrite dissemination in epidote rock	0.90	0	2	0.03	Tr	0.11	NAV	27.94	0.08	99.90 - 100.80
21	"	"	Massive pyrite	0.40	0	1	0.01	Tr	0.45	NAV	23.91	0.17	100.80 - 101.20

* Check analysis by wet method

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-9													
22	1693.511	691.075	Pyrite dissemination in epidote rock	1.30	0	2	0.06	Tr	0.45	NAV	24.51	0.15	101.20 - 102.50
23	"	"	Limonite stain in argillized rock	1.00	0	2	0.01	Tr	0.60	NAV	25.35	0.17	102.50 - 103.50
24	"	"	Massive pyrite and argillized rock	1.10	0	1	0.10	Tr	0.85	NAV	30.20	0.09	103.50 - 104.60
25	"	"	Large idiomorphic pyrite in argillized rock	0.40	0	2	0.07	Tr	1.40	NAV	26.55	0.17	104.60 - 105.00
26	"	"	Pyrite-specularite in quartzose rock	0.40	0	2	0.08	Tr	0.95	NAV	16.19	0.07	105.00 - 105.40
27	"	"	do	0.50	0	3	0.10	Tr	2.50	NAV	21.97	0.53	105.40 - 105.90
28	"	"	Pyrite dissemination in chlorite-epidote rock	0.70	0	2	0.02	Tr	0.65	NAV	17.27	0.48	105.90 - 106.60
29	"	"	do	0.40	0	1	0.01	Tr	0.25	NAV	15.81	0.26	106.60 - 107.00
30	"	"	do	0.45	0	1	Tr	Tr	0.20	NAV	15.64	0.42	110.85 - 111.30
31	"	"	do	0.60	0	3	0.14	Tr	0.20	NAV	22.89	0.86	122.90 - 123.50
32	"	"	Limonite stain in siltstone	1.30	0	1	0.01	Tr	1.25	NAV	18.33	0.68	128.20 - 129.50
33	"	"	Pyrite vein and aggregate in epidote rock	0.25	0	1	Tr	Tr	0.15	NAV	10.11	1.34	138.40 - 138.65
34	"	"	do	0.55	0	2	0.02	Tr	0.15	NAV	16.02	0.39	138.65 - 139.20
35	"	"	do	0.80	0	2	0.04	Tr	1.30	NAV	14.93	0.28	139.20 - 140.00
38	"	"	Pyrite dissemination in chlorite-epidote rock	0.30	0	1	0.03	Tr	0.05	NAV	12.74	0.40	141.70 - 142.00
36	"	"	Pyrite dissemination in silicified rock	1.40	0	2	0.16	Tr	0.05	NAV	31.44	0.23	144.80 - 146.20
37	"	"	do	0.40	0	2	0.01	Tr	0.10	NAV	15.32	0.41	146.20 - 146.60
DDH No.MJ-10													
1	1694.175	690.135	Argillized rock	1.00	0	1	0.16	Tr	0.80	NAV	15.15	2.43	6.90 - 7.90

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-10													
2	1694.175	690.135	Epidotized rock	0.50	-	1	0.03	Tr	0.90	NAV	8.27	1.63	10.40 - 10.90
3	"	"	do	1.00	-	2	0.01	Tr	0.50	NAV	8.80	0.90	10.90 - 11.90
4	"	"	Massive hematite	1.20	-	-1	0.02	0.01	0.13	NAV	21.98	0.07	45.70 - 46.90
5	"	"	do	3.00	-	1	0.03	0.01	0.25	NAV	31.97	0.09	46.90 - 49.90
6	"	"	Massive pyrite	0.90	-	2	Tr	Tr	Tr	NAV	28.69	0.04	53.60 - 54.50
7	"	"	do	1.10	-	2	Tr	Tr	Tr	NAV	30.70	0.03	54.50 - 55.60
8	"	"	do	0.50	-	2	Tr	Tr	Tr	NAV	32.30	Tr	55.60 - 56.10
9*	"	"	do	1.00	-	2	Tr	Tr	Tr	NAV	33.69	Tr	56.10 - 57.10
10	"	"	do	1.00	-	2	Tr	Tr	Tr	NAV	39.65	Tr	57.10 - 58.10
11	"	"	Pyrite veinlets in argillized rock	0.80	-	1	0.01	Tr	Tr	NAV	27.66	0.04	58.10 - 58.90
12	"	"	Pyrite dissemination in argillized rock	1.00	-	1	Tr	Tr	Tr	NAV	18.11	0.07	58.90 - 59.90
13	"	"	do	1.00	-	1	Tr	Tr	Tr	NAV	7.51	0.06	59.90 - 60.90
14	"	"	Pyrite-hematite dissemination with magnetite stringer in argillized rock	1.10	-	1	0.01	Tr	Tr	NAV	27.84	0.04	61.90 - 63.00
15	"	"	do	0.50	-	1	0.01	Tr	Tr	NAV	28.98	0.04	63.00 - 63.50
16	"	"	Pyrite dissemination in argillized rock	0.40	-	-1	0.01	Tr	0.01	NAV	12.52	0.14	63.50 - 63.90
17	"	"	do	0.20	-	-1	Tr	Tr	0.01	NAV	6.05	0.10	63.90 - 64.10
18	"	"	do	0.60	-	-1	0.01	Tr	Tr	NAV	12.90	0.09	71.10 - 71.70
19	"	"	do	0.10	-	1	0.10	Tr	0.09	NAV	15.46	0.12	78.70 - 78.80
20	"	"	do	0.40	-	-1	0.03	Tr	0.01	NAV	4.66	0.43	79.90 - 80.30

Appendix 6-2 Chemical Analysis of Mineralized Samples (Drill Core)

Sample No.	Location (Coordinate) N	Location (Coordinate) E	Occurence	Length	Au g/t	Ag g/t	Cu %	Pb %	Zn %	S %	Fe %	Mn %	Remarks
DDH No.MJ-10													
21	1694.175	690.135	Pyrite dissemination in argillized rock	1.50	-	-1	0.01	Tr	0.02	NAV	10.38	0.05	98.70 - 100.20
22	"	"	Pyrite dissemination in silicified rock	0.50	-	-1	Tr	Tr	Tr	NAV	5.76	0.05	100.20 - 100.70
23	"	"	do	0.70	-	-1	0.10	Tr	0.02	NAV	1.38	0.31	100.70 - 101.40
24	"	"	do	0.30	-	-1	0.01	Tr	0.01	NAV	8.49	0.06	108.20 - 108.50

APPENDIX-7 DIAMOND DRILL OPERATION

1. Introduction

During the present phase, 7 DDHS totaling 1,203.0m were carried out in the alteration-mineralization zone in the Llano del Coyote prospect (Table-3, Fig. 10, PL-1-2, PL-3).
DDHs comprise a 300m-class hole, and six 150-class holes.

The drilling operation was carried out in an 112-day period between June and October, 1978.

Two diamond drill rigs, a Tone TGM-5A, and a Boyles Bros BBS -1 were used in the operation.

Five Japanese and two Guatemalan (DGMH) drillers, four Guatemalan assistants (DGMH), and ten local helpers were organized into two crews, and the operation was carried out in two (day and and night) shifts a day.

2. Drilling Method and Equipments used

Wire-line method was adopted with NQ-and BQ-size bits. Either "Libonite" mud water, or cutting oil was used to protect the bore wall, and either casing, or cementing was adopted wherever circulation of water was lost, or caving took place.

Two drill rigs, a Tone TGM-5A and a Boyles Bros BBS-1 were utilized. The specifications of the rings as well as those of ancillary equipments, tools, and consumables are shown in Tables D1-1, D1-2, and D2.

The drilling camp was established at Aguacatán which is situated about 10 km west of Llano del Coyote, where drill sites were located (about 20 minutes by car).

Most of ordinary supplies and consumables, such as food, fuels, etc. are purchased in Huehuetenango, except particular items.

Table D1-1 Equipments

Tone Model "IGM-5A"

Article	Model	Specification	Quantity
Drilling machine	Model "TGM-5A" (Tone Boring, Co.)	Capacity: BQ-WL 550m	1 set
		Dimensions: Height 1,520mm	
		Length 2,430mm	
		Width 990mm	
		Weight (without power units):	
		1,200kg	
	Swivel Head	Spindle Speed:	
		140, 340, 530, 700 r.p.m.	
	Hoist	Type: Planetary Gear type	
		Capacity: 4,500kg	
	Oil Pump	Type: Gear type, Two-steps	
		Variable Delivery Vane type	
		Capacity: 60 1/min	
		Pressure: Max. 30kg/cm^2	
		Ord. 20kg/cm^2	
Motor	Model "F3L912" (Mitsui-Deut. Co.)	Diesel Engine: 3 cycle Air Cool Type	1 set
		Revolution: 1,500∿2,000 r.p.m.	
		Related power: 31.5 ∿ 41 p.s.	
Drilling Pump	Model "NAS-3B" (Tone Boring Co.)	Diesel Engine (Yanmar NS-110C)	1 set
		Weight (without power unit) 325kg	
		Piston Diameter: 60, 70 mm	
		Stroke: 50mm	
		Max. Capacity: 71,100 1/min.	
		Max. Pressure: 50, 35.5 kg/cm^2	
Water Supply Pump	Yanmar New Hope	Diesel Engine (Yanmar "NS-50")	2 sets
		Revolution: 2,000 r.p.m.	
		Related Power: 45 p.s.	
Derrick	Wood tripod	Prepared from Drill-site	1 set
Generator	GA-201M-A	115v, 2kw	1 set
Wire line hoist	WHS-100	Attached to Drilling machine	1 set
Drill Rod		NQ-3m	70 pcs
		NQ-1.50m	2 pcs
		BQ-3m	130 pcs
		BQ-1.50m	2 pcs
Casing pipe		NW-3m	10 pcs
		NW-1m	2 pcs
		BW-3m	70 pcs
		BW-1m	2 pcs
Rod safety lamp		RH-85 type	1 set
Water swivel		EH type No.5	1 set
Hoisting swivel		B type No.5	1 set
Water tank	Plastic	3m^3	2 pcs
-do-	Iron	3m^3	1 pc
Mad Mixer	MCE-100		1 pc

Table D1-2 Equipments

Boyles Model "BBS-1"

Article	Model	Specification	Quantity
Drilling Machine	Model "BBS-1" (BOYLES)	Capacity: BQ-WL 275m	1 set
		Dimensions: Height 1,702mm	
		Length 1,700mm	
		Width 940mm	
		Weight (Without power units)	
		140.6kg	
	Swivel Head	Spindle Speed:	
		30, 110, 150, 2,000 r.p.m.	
	Hoist	Type: Differential geared	
	Oil Pump	Type: Vickers variable volume	
		displacement	
		Capacity: 15 g:p:m (U.S) at 1,800 r.p.m.	
		Pressure: Max. 1,500 p.s.i.	
		Ord. 1,000 p.s.i.	
Motor	Model "VG-4D"	Gasoline Engine: 4 Cylinder air-cold type	1 set
		H.P. 37 at 2,400 r.p.m.	
		Torque: 94ft. lbs.at 1,500r.p.m.	
Drilling Pump	Model "BBP-25" (Briggs & Stratton)	Gasoline Engine	1 set
		Weight (Without power unit): 165 lbs.	
		Plunger Size: 1-5/8 in	
		Pump Output I.G.P.H: 560	
		Max. Engine R.P.M. : 190	
		Max. Pressure p.s.i: 1,000	
Water Supply Pump		Diesel Engine (Yanmar "NS-50")	1 set
		Revolution: 2,000 r.p.m.	
		Related Power: 45 ps	
Derrick	Wood tripod	Prepared from drill site	1 set
Generator	GA-201M-A	115V 2KW	1 set
Wire Line Hoist		Attached to drilling machine	1 set
Drill Rod		NQ-3m	50 pcs
		BQ-3m	80 pcs
Casing Pipe		NW-3m	10 pcs
		NW-1m	15 pcs
		BW-3m	60 pcs
		BW-1m	3 pcs
Rod Safety Clamp		RH-85 type	1 set
Water Swivel		EH type No.5	1 set
Hoisting Swivel		B type No.5	1 set
Water Tank	Plastic	3 m^3	2 pcs

Table D-2 Consumables

(1)

Article	Specification	Unit	Quartity							
			MJ-4 (53-1)	MJ-5 (53-3)	MJ-6 (53-6)	MJ-7 (53-5)	MJ-8 (53-4)	MJ-9 (53-7)	MJ-10 (53-2)	Total
Gasoline	Regular	L		730	650		880	1200	1400	4860
Diesel Fuel	For Engine	L	2500	30	20	4600	40	60	50	7300
Mobil Oil	Sea No.30	L	80	40	10	80	10	10	10	240
Transmission Oil	No.90	L	40	20	10	20			20	110
Hydraulic Fluid	No.10	L	60	20	20	40	10	10	20	180
Grease	All purpose	Kg	30	10	10	20	5	5	10	90
Bentonite	Aguagel	Kg	2500	150	150	2800	550	500	800	7450
Libonite		Kg	100			100			40	240
C.M.C.		Kg	50	5	5	50	5	5	20	140
Cutting Oil	Texco	L	100	40	40	200	40	80	80	580
Metal Crown	101m/m	pc	1	1	1	1	1		1	7
-do-	BW	pc								5
Single Core Tube	101m/m x 1.00m	set								2
-do-	101m/m x 0.50m	set								2
Double Core Tube	NQ-WL	set								3
-do-	BQ-WL	set								3
Casing Head	NW	pc								2
-do-	BW	pc								2
Cement		sx	39	27	8	40	24	39	33	180

(2)

Core Box		pc	15	15	18	37	18	18	15	136
Annealed Iron Wire	10	Kg								60
-do-	12	Kg								60
Nails		Kg								20
Vinyl Rope		pc								4
Wire Rope		roll								2
Core Lifter	NQ-WL	pc								12
-do-	BQ-WL	pc								18
Core Lifter Case	NQ-WL	pc								10
-do-	BQ-WL	pc								20
WL-Accessary	NQ-WL	set								2
-do-	BQ-WL	set								2
Lighting Fixture		set								20
Pressure Gauge		pcs								2
Snatch Block		pcs								2

3. Drilling Operation

3-1 Preparatory works

The drill crew arrived at the Aguacatán camp on June 28, 1978 and immediately commenced to arrange camp facilities, to lease lands of proposed drill sites, and to hire local helpers. Subsequently, drill rigs were transported by trucks up to the nearest accessible spots in the proximity of the drill sites. Simultaneously with these works, check and maintenance of equipments, fabrication of a water tank to be mounted on a pick-up truck, excavation of water storage vugs, site preparation, and assembling of tripods were carried out.

Drilling water was transported by a pick-up truck mounted with a 3 cu.m-water tank from the Río Blanco up to the storage vugs nearest to the drill sites, from where siphoned or pumped to the sites.

3-2 Moving operation

The rigs and ancillary equipments were moved from a site to another through either existed or newly built tracks. The haulage was done by means of either a truck, self-crawling, or manpower, depending on the condition of available tracks. Details of moving operation are tabulated in Table D3-1.

3-3 Withdrawal of rigs

Drilling operation was terminated on October 15, 1978, when the last hole MJ-10 was completed. Subsequently, casing pipes were pulled and the tripods was disassembled. The rig was hauled by self-crawling up to the nearest motorable track, and ancillary equipments and tools were carried by manpower up to the track. After check and maintenance of the rigs were finished, the rigs were transported on three 8-ton trucks to the warehouse of DGMH in Guatemala City.

3-4 Drilling operation

Progress and performance of drilling operation of each hole are diagramatically shown in Figs. D-1 through D-7, and are also summarized in Tables D4-1 through D4-7. Specifications of bits are shown in Table D5-2, and drilling metrage but each bit is in D5-1.

Table D3-1 Details of Moving Operation

Item	Hole No.	MJ-4 (53-1)		MJ-5 (53-3)		MJ-6 (53-6)		MJ-7 (53-5)		MJ-8 (53-4)		MJ-9 (53-7)		MJ-10 (53-2)		TOTAL	
Moving Operation	In	June 23,1978		June 29,1978		July 20,1978		Aug.05,1978		Aug.05,1978		Aug.22,1978		Sep.07,1978			
		July 04,1978		July 10,1978		Aug. 04,1978		Aug.15,1978		Aug.20,1978		Sep.05,1978		Sep.25,1978			
	Out	Aug. 11,1978		Aug. 01,1978		Aug. 15,1978		Sep.26,1978		Aug.30,1978		Sep.20,1978		Oct.15,1978			
		-		-		-		Oct.20,1978		-		-		Oct.26,1978			
Preparation		Day	Men	Day	Men	Day	Men	Day	Men	Day	Men	Day	Men	Day	Men	Day	Men
	Road Reinstatement	5	50	7	77	12	46	7	44	13	95	12	128	15	100	68	540
	Haulege	2	32	2	28	2	32	2	32	2	24	2	32	2	32	14	212
	Installation	2	32	2	15	1	18	2	16	1	16	1	16	2	32	11	145
	Test Run etc.	3	16	1	10	0	0	0	0	0	0	0	0	0	0	4	26
	Total	12	130	12	130	15	96	11	92	16	135	15	176	19	164	100	923
Removal	Dismounting	1	18	1	10	1	15	3	66	1	18	1	16	2	12	10	155
	Road Reinstatement							2	20					1	10	3	30
	Pay off							0	0					0	0	0	0
	Others							20	146					9	42	29	188
	Total	1	18	1	10	1	15	25	232	1	18	1	16	12	64	42	373
Grand Total		13	148	13	140	16	111	36	324	17	153	16	192	31	228	142	1296

Table D5-1 Drilling Meterage by Diamond Bit, Reaming Shell & Casing Shoe Bit

(1)

Item	Size	Bit No.	Drilling Meterage								Remarks
			MJ-4 (53-1)	MJ-5 (53-3)	MJ-6 (53-6)	MJ-7 (53-5)	MJ-8 (53-4)	MJ-9 (53-7)	MJ-10 (53-2)	Total	
Bit	NQ-WL	81538				59.60				59.60	Resetting
	do	81539					35.00			35.00	do
	do	81541	16.60							16.60	do
	do	81542				42.00				42.00	do
	do	81543						11.00		11.00	do
	do	81544	10.60							10.60	do
	do	81545	24.70							24.70	do
	do	81546					39.00			39.00	do
	do	81547				36.70				36.70	do
	do	81548			36.50					36.50	do
	do	81549				11.70		58.00		69.70	do
	do	N 50	12.10							12.10	do
	do	N480		23.80	33.50					57.30	do
	do	8835							28.90	28.90	do
	do	E3820		49.20						49.20	do
	do	SNQ230-2							20.10	20.10	do
	BQ-WL	Ⓣ 536	30.50							30.50	do
	do	Ⓣ 691			26.40			2.70		29.10	do
	do	Ⓣ 692	35.90							35.90	do
	do	Ⓣ 693	12.80							12.80	do
	do	Ⓣ 694		23.20						23.20	do
	do	Ⓣ 695					35.20			35.20	do
	do	Ⓣ 696				9.90	37.00			46.90	do
	do	Ⓣ 697			45.40			11.80		57.20	do
	do	Ⓣ 698				34.80				34.80	do
	do	73881		49.10						49.10	do
	do	2295							34.00	34.00	do
	do	2296				9.70				9.70	do

Bit	BQ-WL	2297							33.80	33.80	Resetting
	do	2298				19.70				19.70	do
	do	T2306				14.20				14.20	do
	do	T2307				35.60				35.60	do
	do	T2308						15.40		15.40	do
	do	T2309							16.90	16.90	do
	do	T2310				22.20			10.50	32.70	do
	do	T2311						44.30		44.30	do
	TOTAL		143.20	145.30	141.80	296.10	146.20	143.20	144.20	1,160	
Reaming -Shell	NQ-WL	800269	36.90			78.70				115.60	Resetting
	do	800488				11.70			49.00	60.70	do
	do	800490		73.00	70.00					143.00	do
	do	800491					74.00	69.00		143.00	do
	do	EG3836	27.20			59.60				86.80	do
	BQ-WL	Ⓣ GR699						62.20		62.20	do
	do	Ⓣ GR700				79.20				79.20	do
	do	Ⓣ GR701			17.50				44.30	61.80	do
	do	Ⓣ GR703							34.00	34.00	do
	do	Ⓣ GR704					72.20	12.00		84.20	do
	do	Ⓣ GR705				66.90				66.90	do
	do	Ⓣ GR706			54.30				16.90	71.20	do
	do	700793		72.30						72.30	do
	do	700867	79.10							79.10	do
	TOTAL		143.20	145.30	141.80	296.10	146.20	143.20	144.20	1,160	
Casing Shoe bit	NW	Ⓣ 497	o			o				2	Keep in drillsite
	do	Ⓣ 707		o	o		o	o	o	5	Resetting
	BW	T 500	o							1	do
	do	Ⓣ 709							o	1	do
	do	Ⓣ 710	o							1	Abundonment
	do	2987				o				1	Resetting
	TOTAL		3	1	1	2	1	1	2	11	

Table D5-2 Specifications of Diamond bits, Reaming Shells & Casing Shoe bits

Item	Size	Type	Carats	Matrix	Diamond Size	Water-Way	Quantity (pcs)
Bit	N	NQ-WL	480 cts	E.Z.T_1	1/20	4	16
	B	BQ-WL	400		1/20	4	20
	Total		880				36
Reaming -Shell	N	NQ-WL	40	D.Y.T_0	1/15∿1/20		5
	B	BQ-WL	54		1/15∿1/20		9
	Total		94				14
Casing -Shoe	N	NW	36	D.Y.T_0	1/20		2
	B	BW	36		1/20		4
	Total		72				6
Grand Total			1,046				56

The drilling operation of each hole is briefly described below.

DDH No. MJ-4

0.0-7.0m: Started with a 101m/m single metal crown, and NX-sized casing pipes were inserted. The run between 7.0m and 16.0m was drilled by NQ-WL, and followed by NX-size casing.

7.0-16.0m : Drilled by NQ-WL, and followed by NX-size casing.

16.0-71.1m: Drilled by NQ-WL. Bridging materials and cement were forcedly injected, as water circulation was lost frequently and wall caved here and there. BX-size casing pipes were inserted down to 71.1m, as mud water and completely lost at 64.5m.

71.10-150.20m: Drilled by BQ-WL. Cement was injected, as caving took place between 104.0m and 105.0m, but was not effective. To break through this section, BX-casing was attempted; reaming by NQ-WL was performed, after BX-casing pipes that had been inserted were pulled, and then BX-casing pipes were extended down to 104.0m.

The section between 104.0m and 150.2m, where lost circulation of water and caving frequently occurred as in the upper sections, was drilled by the use of high-viscosity mud water and cement injection.

"Libonite" was used for circulation mud water.

DDH No. MJ-5

0.0-6.0: Drilled with a 101m/m single metal crown, and NX-casing pipes were inserted.

6.0-25.0m: Drilled by NQ-WL, and reamed by NX-casing to break through the caved section around 6.0m.

25.0-55.0m: Drilled by NQ-WL. Circulation water was totally lost at around 50.0m to cause vibration of rods.

The section was broken through by cementing.

550.0-79.0m: Advanced comparatively smooth.

79.0-151.3m: Drilled by BQ-WL. Progress was relatively smooth, as there were few sever cavings, though the core barrel was frequently chocked.

DDH No. MJ-6

0.0-9.0m: Drilled with a 101m/m single metal crown, and NX-casing pipe were inserted.

9.0-25.0: Drilled by NQ-WL, and reamed by NX-casing.

85.0-79.0m: Drilled by NQ-WL, and BX-casing pipes were inserted. Cementing was carried out to prevent lost circulation and caving.

79.0-150.3m: Drilled by BQ-WL. Progress was smooth, as few choking tooke place.

Cutting oil or bentonite mud water was used for circulating wat

DDH No. MJ-7

0.0.4-0m: Drilled with a 101m/m single metal crown, and NX-casing pipes were inserted.

4.0-35.0m: Drilled by NQ-WL. Circulating water was totally lost at around 30.0m. Forced injection of bridging material was attempted, but not effective. To break through this section, reaming by NX-casing was tried, but the rods were jammed around 29.0m. The jammed rods were knocked up by a chain hammer and recovered. NX-casing were extended down to 35.0, while lost circulation and caving were being prevented by injection of bridging material and cement.

35.0-154.0m: Drilled by NQ-WL. Cementing was performed several times, as caving occurred between 112.5m and 121.0m. Core barrel was often choked between 121.0m and 154.0m.

154.0-300.1m: BX-casing pipes were inserted down to 154.0m, and drilled by BQ-WL. Cement was injected several times, as caving took place at several loci and core barrel was choked frequently.

DDH No. MJ-8

0.0-4.0m: Drilled with a 101m/m single metal crown, and subsequently NX-casing pipes were inserted.

4.0-78.0m: Drilled by NQ-WL. NX-casing pipes were inserted down to 25.0m, as caving occurred around the depth between 25.0 and 78.0m. The section was drilled fairly smooth.

78.0-150.2m: Drilled by BQ-WL, after BX-size casing pipes had been inserted down to 78.0m.

Cutting oil was used for circulating water, and bentonite mud water was also used in some sections.

DDH No. MJ-9

0.0-9.0m: Drilled with a 101m/m single metal crown, and NX-size casing pipes were inserted.

9.0-25.0m: Drilled by NQ-WL, and followed by NX-casing pipes, as lost circulation and caving took place here and there.

25.0-76.0m: Drilled by NQ-WL, being accomapied with cementing as lost circulation and caving seriously occurred. Bx-size casing pipes were inserted.

76.0-150.2m: Drilled by BQ-WL. Forced injection of bridging material and injection of cement were repeatedly tried several times, as circulating water totally lost around 82.3m. However, no conspicuous effect was obtained. Drilling was accordingly obliged to continue without circulation down to 88.0m.

Subsequently, BX-size casing pipes were extended down to the depth.

88.0-150.2m: Drilled by BQ-WL. Caving and lost circulation occurred in the meanwhile, but were managed to break through by cementing or high-viscosity mud water.

Cutting oil and "libonite" mud water were used for circulating water.

DDH No. MJ-10

0.0-6.0m: Drilled with a 101m/m single metal crown, and NX-size casing pipes were inserted.

6.0-20.0m: Drilled by NQ-WL, and followed by NX-size casing pipes.

20.0-55.0m: Drilled by NQ-WL. Cementing was performed.

55.0-150.2: Tried to drill by BQ-WL, after BX-size casing pipes had been inserted down to 55.0m, However, reaming by NQ-Wl was obliged to adopt, as caving occurred between 65.0 and 76.0m. The section was managed to break through by repeating cementing several times, and NQ-WL was continued down to 82.0m. BX-size casing pipes were extended to the depth. Cementing was often performed by end of the hole, as caving occurred frequenly.

"Libonite" mnd water was used for circulating water.

Table D3-2 Summary of Drilling Performance

DDH No.	Machine Type	Drilling Period	Drilling Length (m)	Core Recovered		Number of drilling Shifts			Drilling Speed		Remarks
				Length (m)	Recovery (%)	Drilling	Casing etc.	Total	m/Shift *	m/Shift **	
MJ-4 (53-1)	TGM-5A	June 23,1978 ~Aug.13,1978	150.20	88.95	59.2	38	29	67	2.24	3.95	
MJ-5 (53-3)	BBS-1	June 29,1978 ~Aug.02,1978	151.30	121.00	80.0	28	6	34	4.45	5.40	
MJ-6 (53-6)	BBS-1	Aug.03,1978 ~Aug.17,1978	150.80	96.45	64.0	16	2	18	8.38	9.42	
MJ-7 (53-5)	TGM-5A	Aug.14,1978 ~Oct.20,1978	300.10	238.80	79.0	57	18	75	4.00	5.26	
MJ-8 (53-4)	BBS-1	Aug.18,1978 ~Sep.01,1978	150.20	95.70	64.0	15	1	16	9.39	10.01	
MJ-9 (53-7)	BBS-1	Sep.02,1978 ~Sep.22,1978	150.20	95.50	64.0	17	6	23	6.53	8.84	
MJ-10 (53-2)	BBS-1	Sep.23,1978 ~Oct.26,1978	150.20	65.75	44.0	26	14	40	3.76	5.78	
Total			1,203.00	802.15	66.7	197	76	273	4.41	6.11	

* Drilling Length per shift covering total works operated.

** Drilling Length per shift covering net drilling operated.

Table D4-1 Drilling Performance Record: DDH No. MJ-4 (53-1)

		Periods	Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	June 23, 1978 ∿ July 04, 1978	12	11	1	130
	Drilling	July 05, 1978 ∿ Aug. 10, 1978	37	33	4	420
	Removing	Aug. 11, 1978	1	1	0	18
	Total	June 23, 1978 ∿ Aug. 11, 1978	50	45	5	568

Drilling Length	Planned Length	150.00m	Overburden	7.00m	Core Recovery for Each 50 m Interval
	Increase or Decrease in Length	+0.20m	Core Length	88.95m	Interval (m) / Recovery % / Cumulative Recovery %
	Drilling Length	150.20m	Core Recovery	59.20%	0 ∿ 50.0: 39.0 % / 39.0 %

Working Time	Drilling	103h 20 min	23.0 %	17.0 %	50.0 ∿100.0: 72.0 % / 56.0 %
	Accompanying Works	219h 40 min	48.0 %	36.0 %	100.00∿150.00: 74.0 % / 62.0 %
	Repairing	132h 00 min	29.0 %	21.0 %	Drilling Efficiency
	Total	455h 00 min	100.0 %	74.0 %	
	Preparation	40h 00 min		6.4 %	150.20m/37 days — Total Length / Drilling Period: 4.06 m/day
	Moving	8h 00 min		1.3 %	150.20m/33 days — Total Length / Working Days: 4.6 m/day
	Others	114h 00 min		18.3 %	150.20m/21 days — Total Length / Net Drilling Day: 7.1 m/day
	Grand Total	617h 00 min		100.0 %	252 men/m — Net Drilling Workers / Total Length: 1.7 men/m

	Pipe Size & Set Depth	$\frac{\text{Set Depth}}{\text{Drilling Length}} \times 100\%$	Recovery of Casing Pipe(%)	Remarks
Details of Casing set	NW 16.00 m	11.0 %	100 %	
	BW 98.00 m	65.0 %	100 %	

Fig. D - 1 DRILLING PROGRESS CHART MJ-4 (53-1)

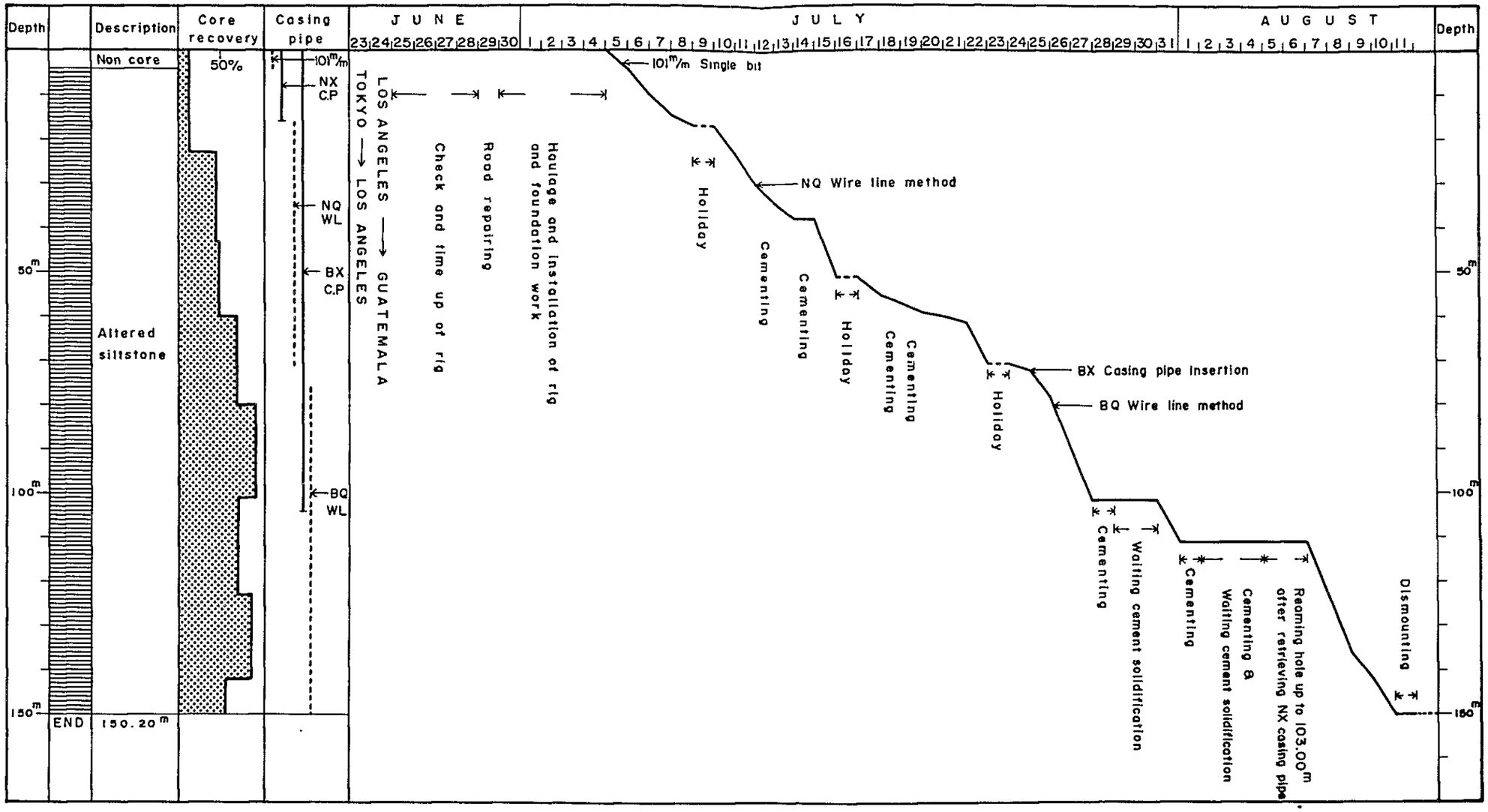


Table D4-2 Drilling Performance Record: DDH No. MJ-5 (53-3)

		Periods			Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	June 29, 1978 ∿ July 10, 1978			12	10	2	130
	Drilling	July 11, 1978 ∿ July 31, 1978			21	18	3	106
	Removing	Aug. 01, 1978			1	1	0	10
	Total	June 29, 1978 ∿ Aug. 01, 1978			34	29	5	246
Drilling Length	Planned Length	150.00m	Overburden	6.00m	Core Recovery for Each 50 m Interval			
	Increase or Decrease in Length	+ 1.30m	Core Length	121.00m	Interval (m)	Recovery %	Cumulative Recovery %	
	Drilling Length	151.30m	Core Recovery	80.0 %	0∿ 50.0m	71.0 %	71.0 %	
Working Time	Drilling	74h 40 min	32.0 %	19.0 %	50.0∿100.0	93.0 %	87.0 %	
	Accompanying Works	119h 50 min	52.0 %	30.0 %	100.0∿150.0	76.0 %	83.0 %	
	Repairing	36h 30 min	16.0 %	9.0 %	Drilling Efficiency			
	Total	231h 00 min	100.0 %	58.0 %				
	Preparation	120h 00 min		30.0 %	151.30m/21 days	Total Length Drilling Period		7.2 m/day
	Moving	8h 00 min		2.0 %	151.30m/18 days	Total Length Working Days		8.4 m/day
	Others	38h 00 min		10.0 %	151.30m/17 days	Total Length Net Drilling Day		8.9 m/day
	Grand Total	397h 00 min		100 %	170 men/151.30m	Net Drilling Workers Total Length		1.12 men/m

Details of Casing set	Pipe Size & Set Depth	Set Depth / Drilling Length x 100%	Recovery of Casing Pipe(%)	Remarks
	NW 25.00	16.0 %	100 %	
	BW 79.00	52.0 %	100 %	

Fig. D-2 DRILLING PROGRESS CHART MJ-5 (53-3)

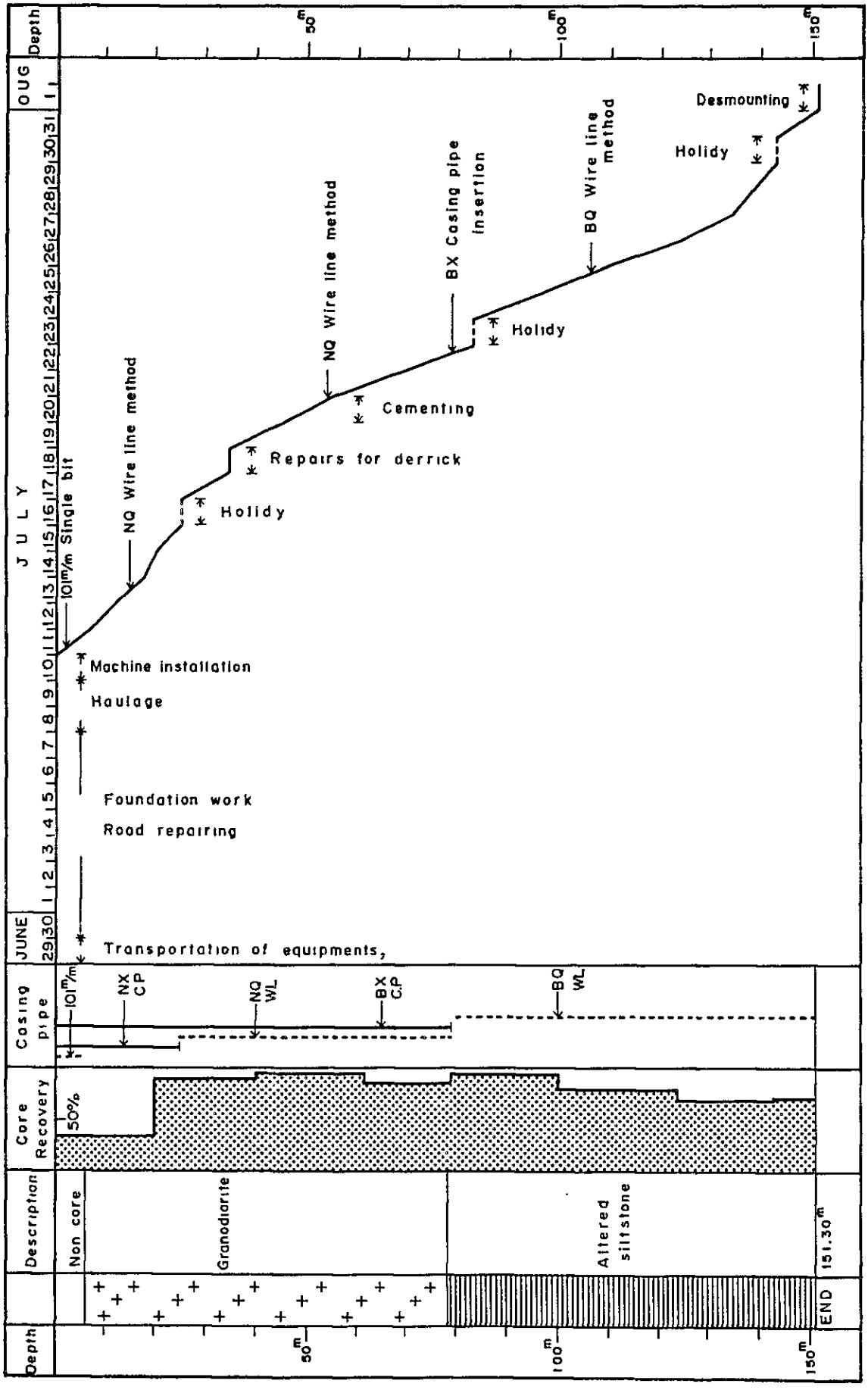


Table D4-3 Drilling Performance Record: DDH No. MJ-6 (53-6)

		Periods			Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	July 20, 1978 ∿ Aug. 04, 1978			12	11	1	96
	Drilling	Aug. 05, 1978 ∿ Aug. 14, 1978			10	9	1	96
	Removing	Aug. 15, 1978			1	1	0	15
	Total	July 20, 1978 ∿ Aug. 15, 1978			23	21	2	207
Drilling Length	Planned Length	150.00m	Overburden	9.00m	Core Recovery for Each 50 m Interval			
	Increase or Decrease in Length	+ 0.80m	Core Length	96.45m	Interval (m)	Recovery %	Cumulative Recovery %	
	Drilling Length	150.80m	Core Recovery	64.0 %	0 ∿ 50.0m	29.0 %	29.0 %	
Working Time	Drilling	48h 40 min	40.0 %	20.5 %	50.0∿100.0	85.0 %	57.0 %	
	Accompanying Works	70h 00 min	57.0 %	29.0 %	100.0∿150.0	88.0 %	49.0 %	
	Repairing	3h 20 min	3.0 %	1.3 %	Drilling Efficiency			
	Total	122h 00 min	100 %	50.8 %				
	Preparation	88h 00 min		36.5 %	150.80m/21 days	Total Length / Drilling Period		4.4 m/day
	Moving	8h 00 min		3.2 %	150.80m/ 9 days	Total Length / Working Days		16.7 m/day
	Others	23h 00 min		9.5 %	150.80m/ 9 days	Total Length / Net Drilling Day		16.7 m/day
	Grand Total	241h 00 min		100 %	90 men/150.80m	Net Drilling Workers / Total Length		0.6 men/m

	Pipe Size & Set Depth	Set Depth / Drilling Length x 100%	Recovery of Casing Pipe(%)	Remarks
Details of Casing set	NW 15.00 m	10.0 %	100 %	
	BW 79.00 m	52.0 %	100 %	

Fig.D-3 DRILLING PROGRESS CHART MJ-6 (53-6)

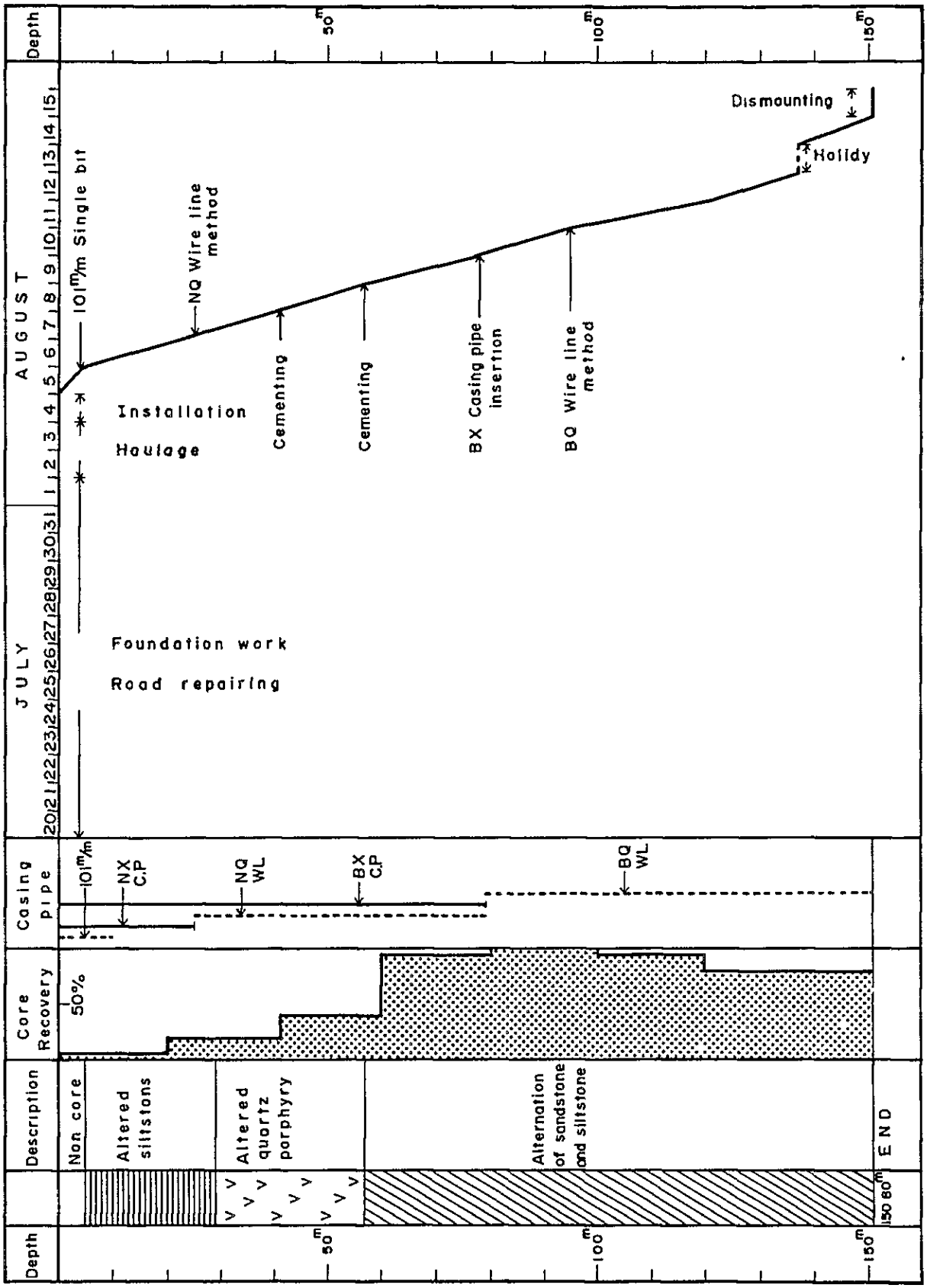


Table D4-4 Drilling Performance Record: DDH No. MJ-7 (53-5)

		Periods			Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	Aug. 05, 1978 ∿ Aug. 15, 1978			11	10	1	92
	Drilling	Aug. 16, 1978 ∿ Sep. 25, 1978			41	35	6	478
	Removing	Sep. 26, 1978 ∿ Oct. 20, 1978			25	24	1	232
	Total	Aug. 05, 1978 ∿ Oct. 20, 1978			77	69	8	802
Drilling Length	Planned Length	300.00m	Overburden	4.00m	Core Recovery for Each 50 m Interval			
	Increase or Decrease in Length	+0.10m	Core Length	238.80m	Interval (m)	Recovery %	Cumulative Recovery %	
	Drilling Length	300.10m	Core Recovery	79.0m	0 ∿ 50.0m	86.0 %	86.0 %	
Working Time	Drilling	114h 30 min	24.0 %	14.0 %	50.0∿100.0	88.0 %	88.0 %	
	Accompanying Works	230h 45 min	48.0 %	28.0 %	100.0∿150.0	74.0 %	83.0 %	
	Repairing	132h 45 min	28.0 %	16.0 %	150.0∿200.0	77.0 %	82.0 %	
	Total	478h 00 min	100 %	58.0 %	200.0∿250.0	76.0 %	81.0 %	
	Preparation	14h 00 min		9.7 %	250.0∿300.0	80.0 %	81.0 %	
	Moving	98h 00 min		16.5 %	Drilling Efficiency			
	Others	130h 00 min		15.8 %	300.10m/41 days	Total Length / Drilling Period		7.3 m/day
	Grand Total	720h 00 min		100 %	300.10m/35 days	Total Length / Working Days		8.6 m/day
Details of Casing set	Pipe Size & Set Depth	Set Depth / Drilling Length x 100%		Recovery of Casing Pipe(%)	300.10m/29 days	Total Length / Net Drilling Day		10.3 m/day
	NW 35.00 m	12.0 %		34.0 %	478 men/300.10m	Net Drilling Workers / Total Length		1.2 men/m
	BW 154.00 m	51.0 %		100 %				

Fig. D - 4 DRILLING PROGRESS CHART MJ-7 (53-5)

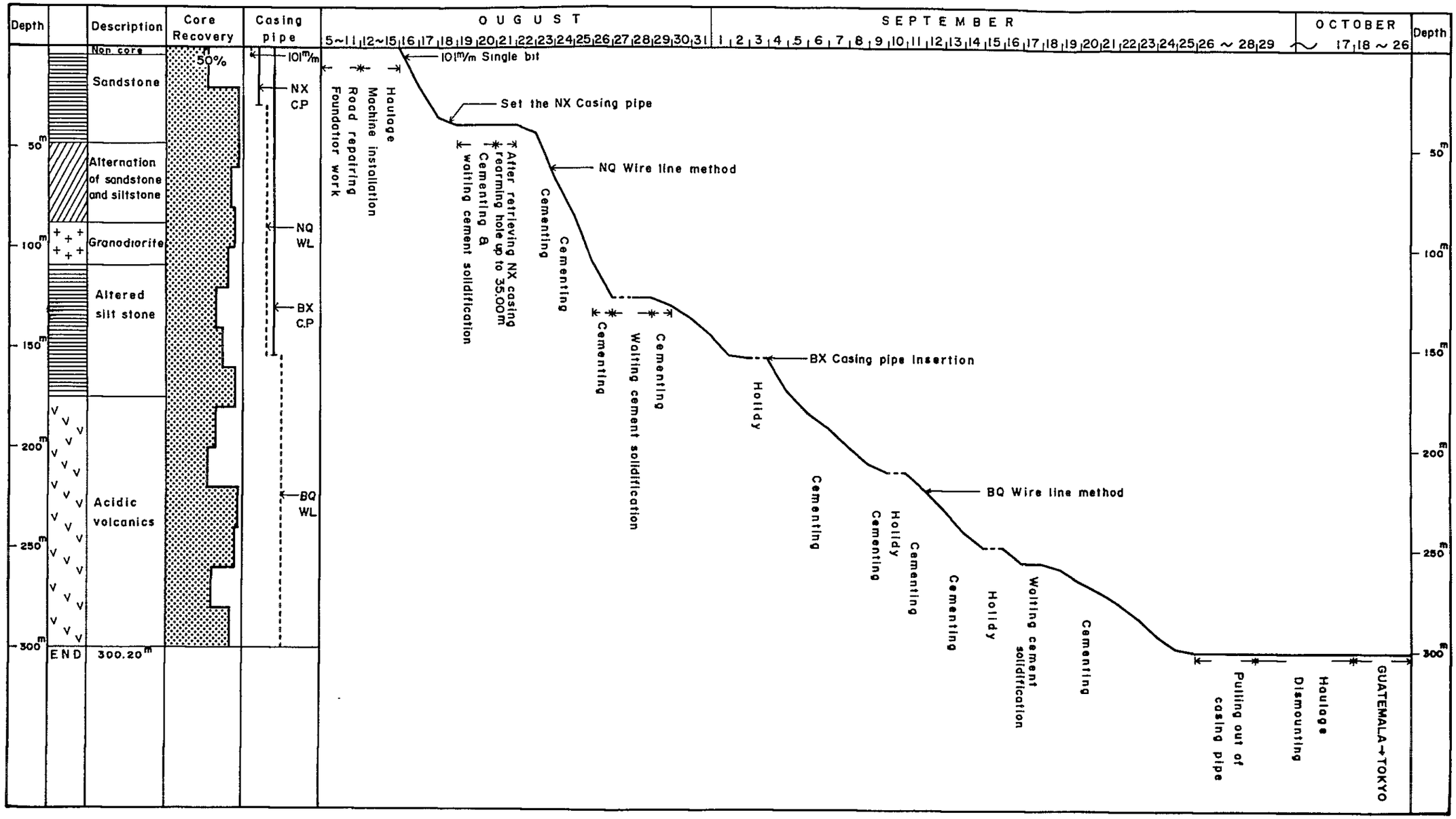


Table D4-5 Drilling Performance Record: DDH No. MJ-8 (53-4)

		Periods			Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	Aug. 05, 1978 ∿ Aug. 20, 1978			16	14	2	135
	Drilling	Aug. 21, 1978 ∿ Aug. 29, 1978			9	8	1	86
	Removing	Aug. 30, 1978			1	1	0	18
	Total	Aug. 05, 1978 ∿ Aug. 30, 1978			26	23	3	239
Drilling Length	Planned Length	150.00m	Overburden	4.00m	Core Recovery for Each 50 m Interval			
	Increase or Decrease in Length	+ 0.20m	Core Length	95.70m	Interval (m)	Recovery %	Cumulative Recovery %	
	Drilling Length	150.20m	Core Recovery	64.0 %	0∿ 50.00m	33.0 %	33.0 %	
Working Time	Drilling	50h 10 min	46.0 %	22.0 %	50.0∿100.0	86.0 %	60.0 %	
	Accompanying Works	51h 50 min	47.0 %	22.7 %	100.0∿150.0	75.0 %	65.0 %	
	Repairing	8h 00 min	7.0 %	3.5 %	Drilling Efficiency			
	Total	110h 00 min	100 %	48.2 %				
	Preparation	72h 00 min		32.0 %	150.20m/9 days	Total Length Drilling Period		16.7 m/day
	Moving	8h 00 min		3.5 %	150.20m/8 days	Total Length Working Days		18.7 m/day
	Others	37h 00 min		16.3 %	150.20m/8 days	Total Length Net Drilling Day		18.7 m/day
	Grand Total	227h 00 min		100 %	80 men/m	Net Drilling Workers Total Length		0.5 men/m

Details of Casing set	Pipe Size & Set Depth	$\frac{\text{Set Depth}}{\text{Drilling Length}} \times 100\%$	Recovery of Casing Pipe(%)	Remarks
	NW 24.00 m	16.0 %	100 %	
	BW 78.00 m	52.0 %	100 %	

Fig. D-5 DRILLING PROGRESS CHART MJ-8 (53-4)

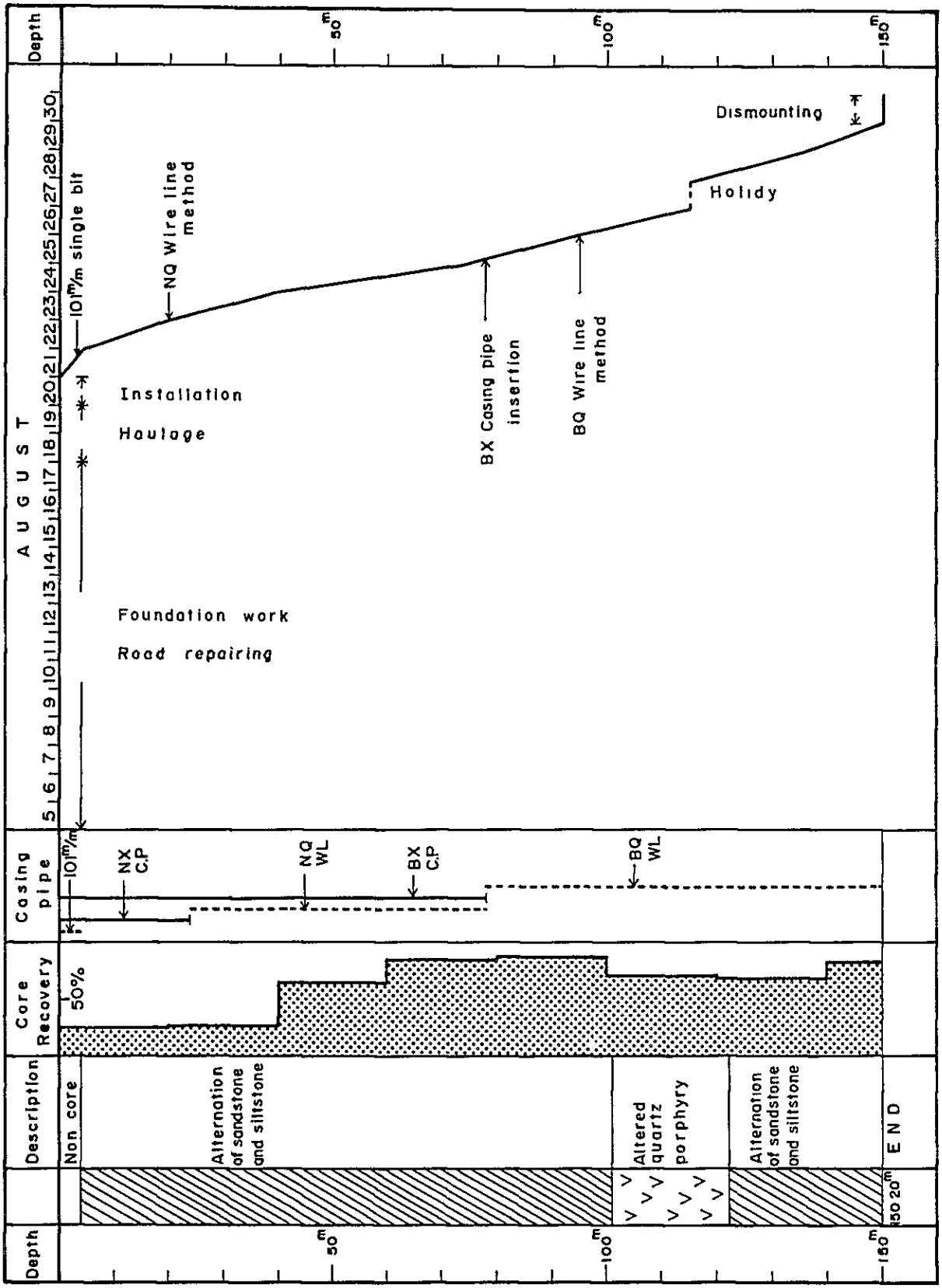


Table D4-6 Drilling Performance Record: DDH No. MJ-9 (53-7)

		Periods			Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	Aug. 22, 1978 ∿ Sep. 05, 1978			15	14	1	176
	Drilling	Sep. 06, 1978 ∿ Sep. 19, 1978			14	11	3	136
	Removing	Sep. 20, 1978			1	1	0	16
	Total	Aug. 22, 1978 ∿ Sep. 20, 1978			30	26	4	328
Drilling Length	Planned Length	150.00 m	Overburden	7.00m	Core Recovery for Each 50 m Interval			
	Increase or Decrease in Length	+0.20 m	Core Length	95.50m	Interval (m)	Recovery %	Cumulative Recovery %	
	Drilling Length	150.20 m	Core Recovery	64.0 %	0 ∿ 50	53.0 %	53.0 %	
Working Time	Drilling	38h 55 min	30.0 %	13.0 %	50.0∿100.0	61.0 %	53.0 %	
	Accompanying Works	63h 25 min	50.0 %	22.0 %	100.0∿150.0	74.0 %	64.0 %	
	Repairing	24h 40 min	20.0 %	8.3 %	Drilling Efficiency			
	Total	127h 00 min	100 %	43.3 %				
	Preparation	120h 00 min		41.0 %	150.20m/14 days	Total Length / Drilling Period		10.7 m/day
	Moving	8h 00 min		2.7 %	150.20m/11 days	Total Length / Working Days		13.6 m/day
	Others	39h 00 min		13.0 %	150.20m/10 days	Total Length / Net Drilling Day		15.0 m/day
	Grand Total	294h 00 min		100 %	100 men/150.20m	Net Drilling Workers / Total Length		0.7 men/m
Details of Casing set	Pipe Size & Set Depth	Set Depth / Drilling Length x 100%		Recovery of Casing Pipe(%)	Remarks			
	NW 25.00 m	17.0 %		100 %				
	BW 88.00 m	59.0 %		100 %				

Fig.D-6 DRILLING PROGRESS CHART MJ-9 (53-7)

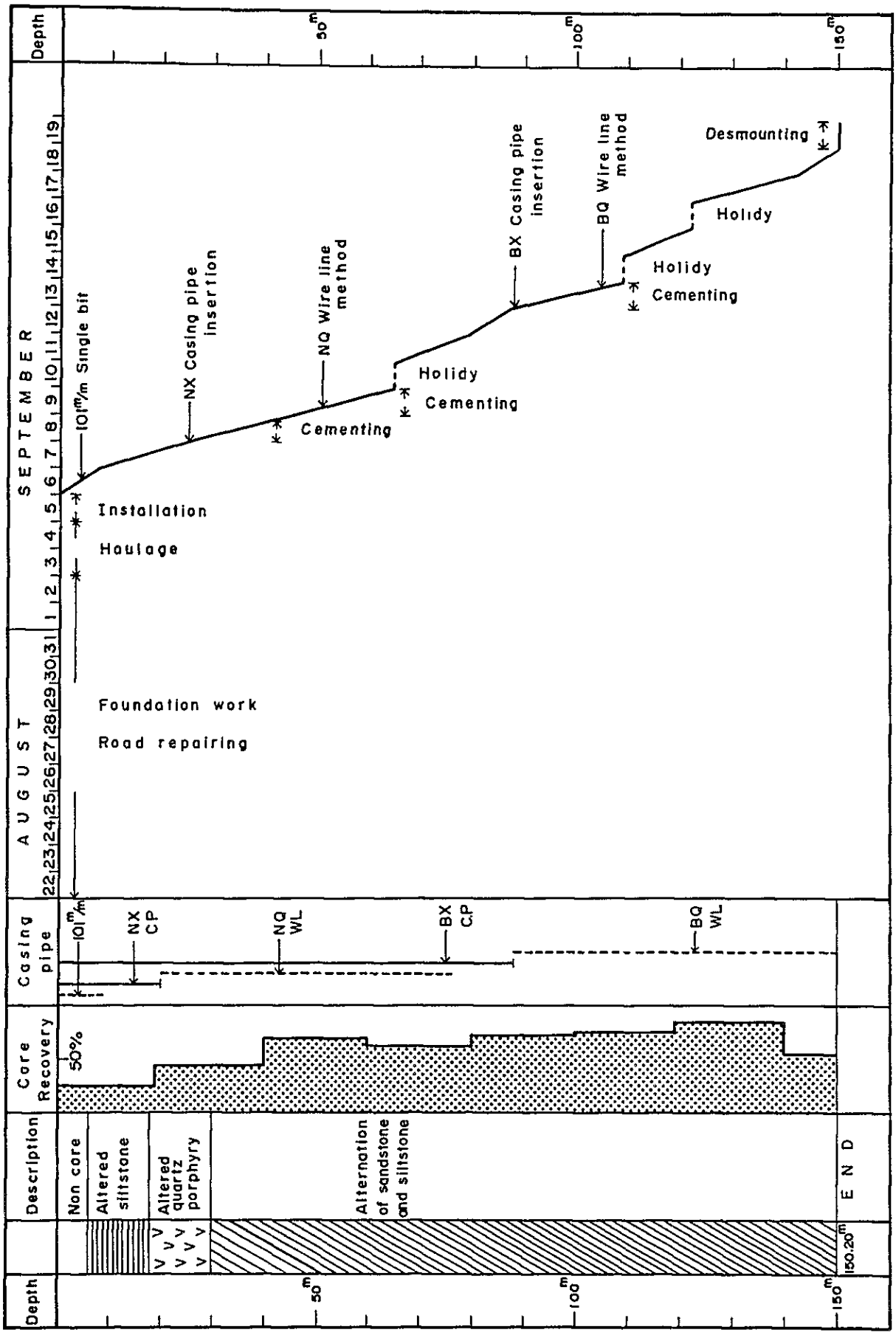


Table D4-7 Drilling Performance Record: DDH No. MJ-10 (53-2)

		Periods			Number of Days	Actural Working Days	Pay off	Total Number of Workers
Drilling Period	Preparation	Sep. 07, 1978 ∿ Sep. 25, 1978			19	15	4	164
	Drilling	Sep. 26, 1978 ∿ Oct. 14, 1978			19	19	0	190
	Removing	Oct. 15, 1978 ∿ Oct. 26, 1978			12	12	0	64
	Total	Sep. 07, 1978 ∿ Oct. 26, 1978			50	46	4	418
Drilling Length	Planned Length	150.00m	Overburden	6.00m	Core Recovery for Each 50 m Interval			
	Increase or Decrease in Length	+0.20m	Core Length	65.75m	Interval (m)	Recovery %	Cumulative Recovery %	
	Drilling Length	150.20m	Core Recovery	44.0 %	0∿ 50	13.0 %	13.0 %	
Working Time	Drilling	53h 30 min	20.0 %	10.3 %	50.0∿100.0	87.0 %	52.0 %	
	Accompanying Works	67h 00 min	24.0 %	12.0 %	100.0∿150.0	51.0 %	52.0 %	
	Repairing	159h 30 min	56.0 %	28.5 %	Drilling Efficiency			
	Total	284h 00 min	100 %	50.8 %				
	Preparation	112h 00 min		20.0 %	150.20m/19 days	Total Length / Drilling Period		7.9 m/day
	Moving	40h 00 min		7.2 %	150.20m/19 days	Total Length / Working Days		7.9 m/day
	Others	123h 00 min		22.0 %	150.20m/13 days	Total Length / Net Drilling Day		11.5 m/day
	Grand Total	559h 00 min		100	130 men/150.20m	Net Drilling Workers / Total Length		0.8 men/m
Details of Casing set	Pipe Size & Set Depth	Set Depth / Drilling Length x 100%		Recovery of Casing Pipe(%)	Remarks			
	NW 16.00 m	11.0 %		100 %				
	BW 82.00 m	54.0 %		100 %				

Fig.D-7 DRILLING PROGRESS CHART MJ-10 (53-2)