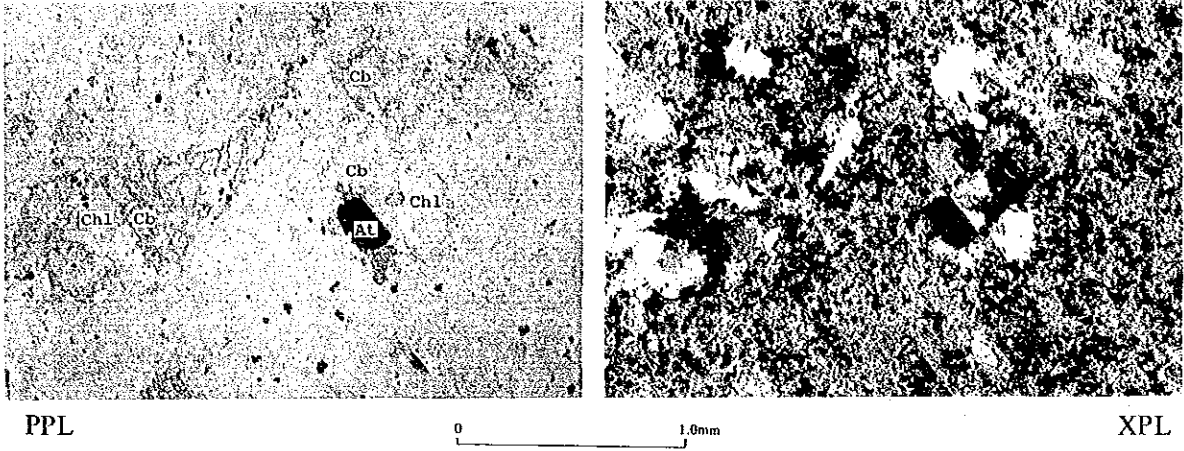


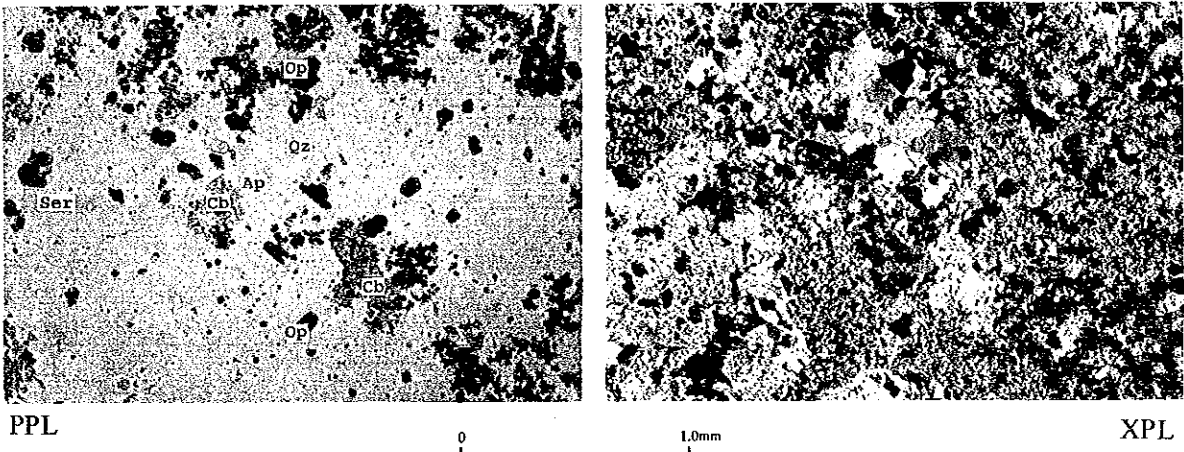
Apx. 2 Microscopic Photographs of Thin Sections

Ap	:	apatite
At	:	anatase
Cal	:	colcite
Cb	:	carbonate
Chl	:	chlorite
Lm	:	limonite
Op	:	opaque
Pl	:	plagioclase
Qz	:	quartz
R	:	rock fragment
Ser	:	sericite
Sp	:	sphalerite
Zr	:	zircon
PPL	:	plain polarized light
XPL	:	crossed polarized light

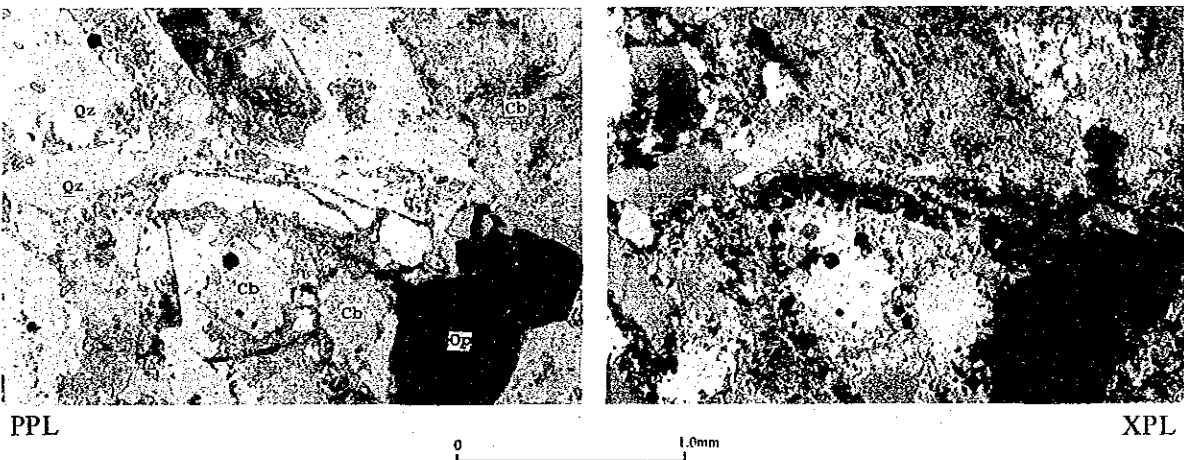
Sample No. C-1 85.05 Chontali Area, Altered tuff



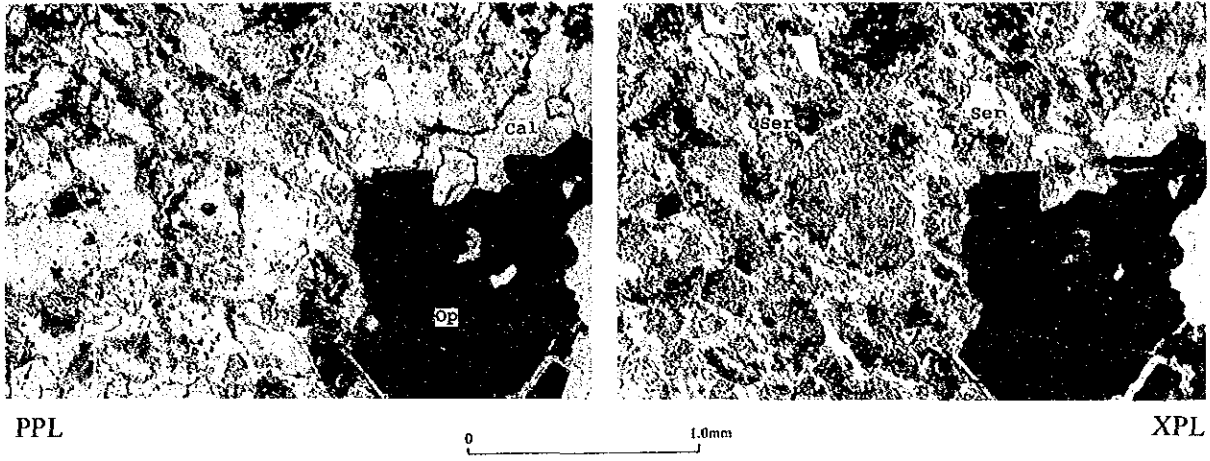
Sample No. C-1 108.55 Chontali Area, Altered tuff with Quartz vein



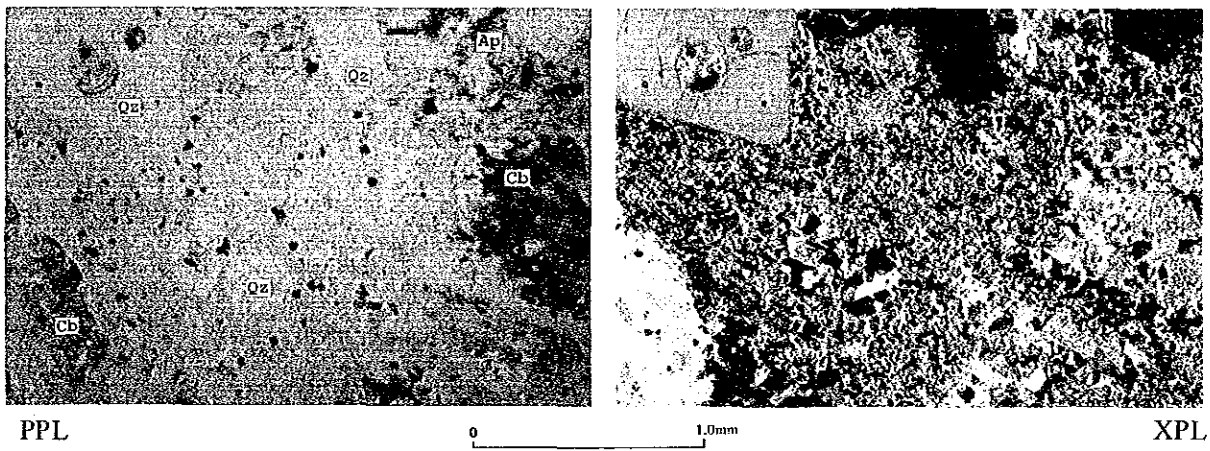
Sample No. C-2 198.10 Chontali Area, Altered tuff with Quartz vein



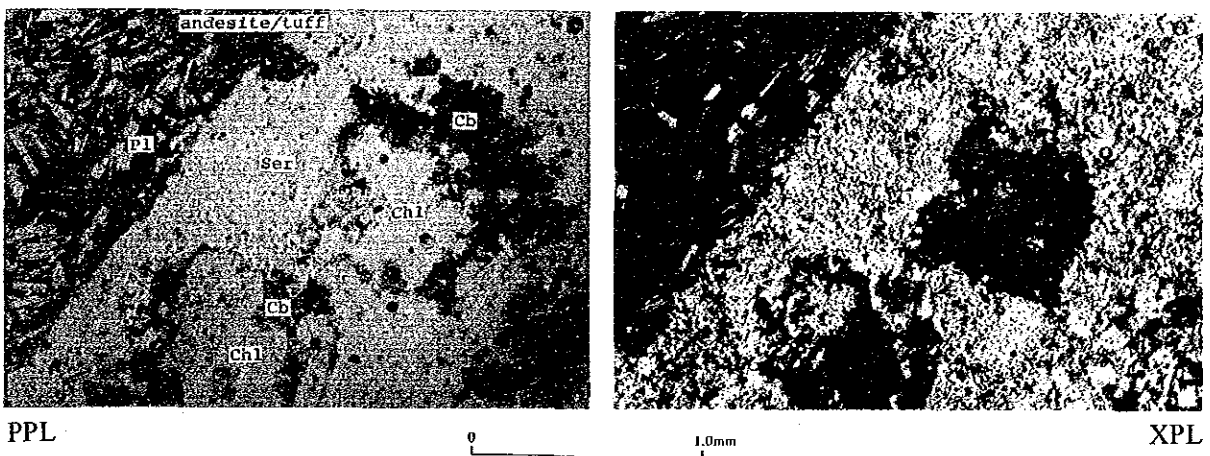
Sample No. C-2 212.40 Chontali Area, Altered tuff with Quartz vein



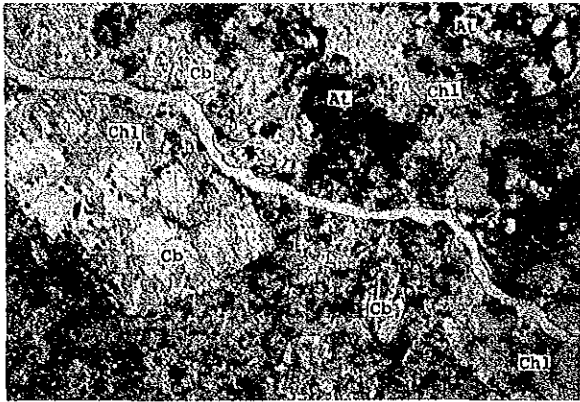
Sample No. C-4 66.53 Chontali Area, Altered tuff



Sample No. C-4 85.40 Chontali Area, Tuff and Andesite



Sample No. C-4 156.70 Chontali Area, Altered tuff



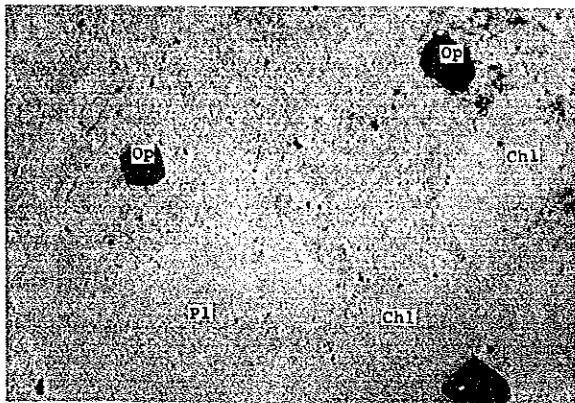
PPL



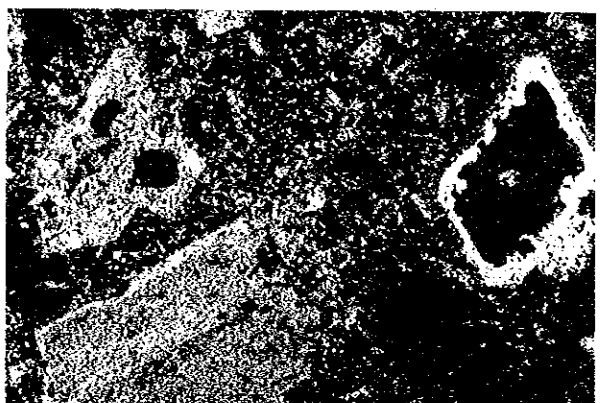
XPL

0 1.0mm

Sample No. C-4 181.58 Chontali Area, Altered tuff



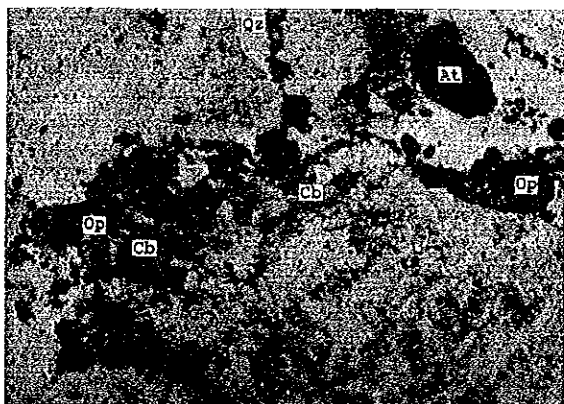
PPL



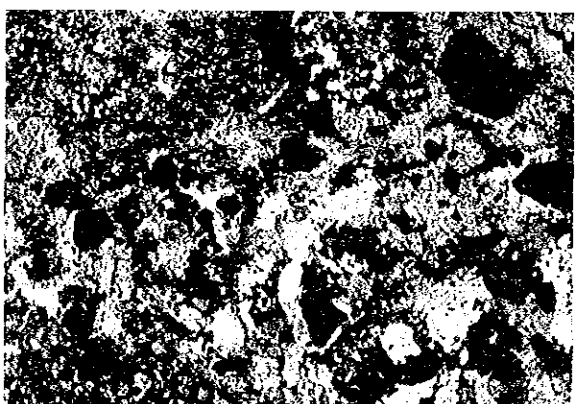
XPL

0 1.0mm

Sample No. C-4 196.30 Chontali Area, Altered tuff with Quartz vein



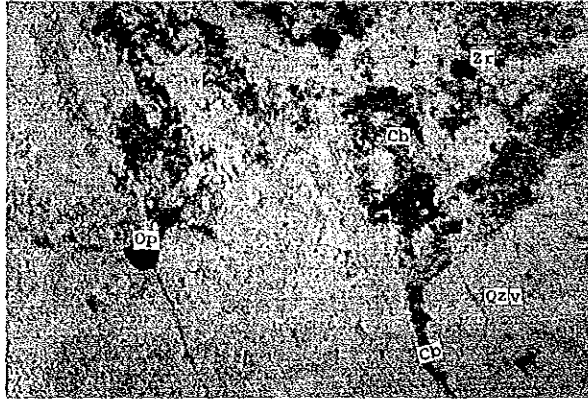
PPL



XPL

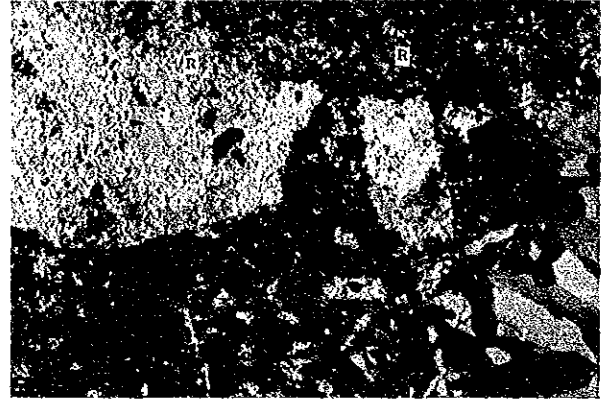
0 1.0mm

Sample No. C-4 268.25 Chontali Area, Altered tuff with Quartz vein



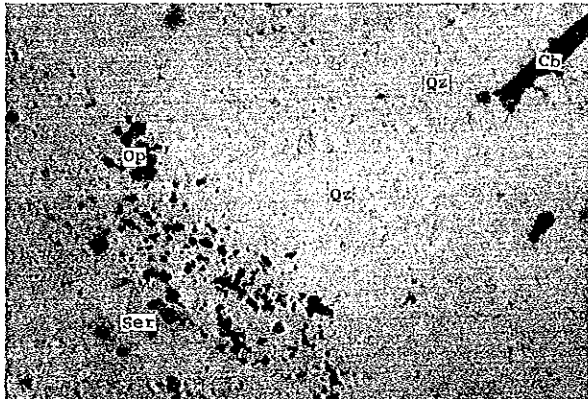
PPL

0 1.0mm



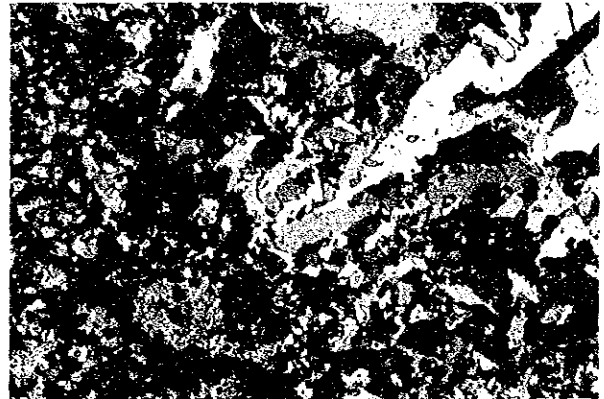
XPL

Sample No. C-5 74.50 Chontali Area, Altered tuff with Quartz vein



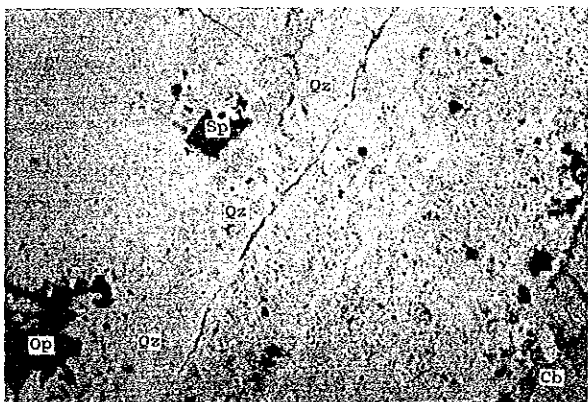
PPL

0 1.0mm



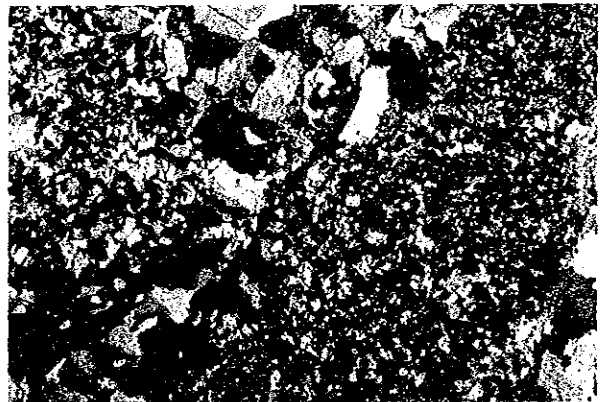
XPL

Sample No. C-6 62.20 Chontali Area, Altered tuff



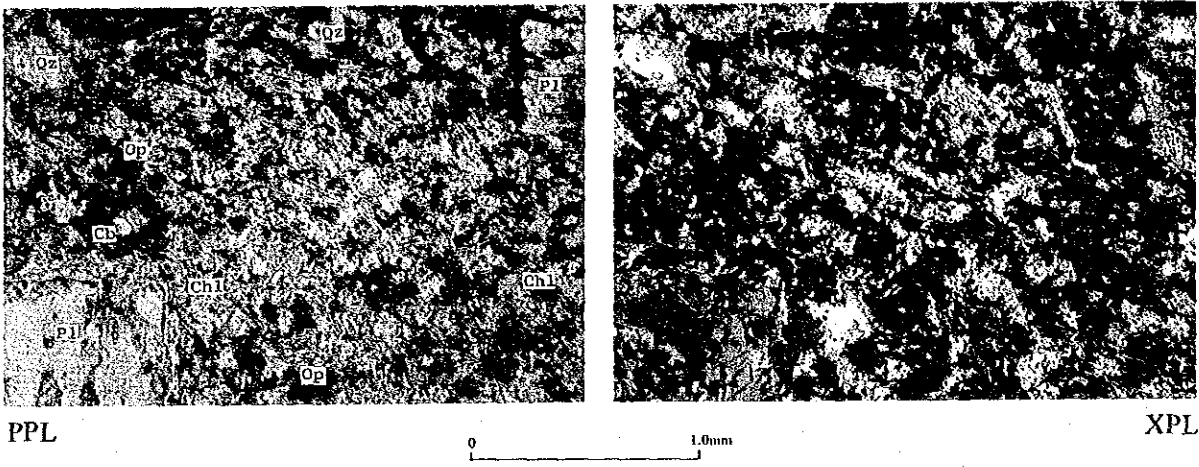
PPL

0 1.0mm

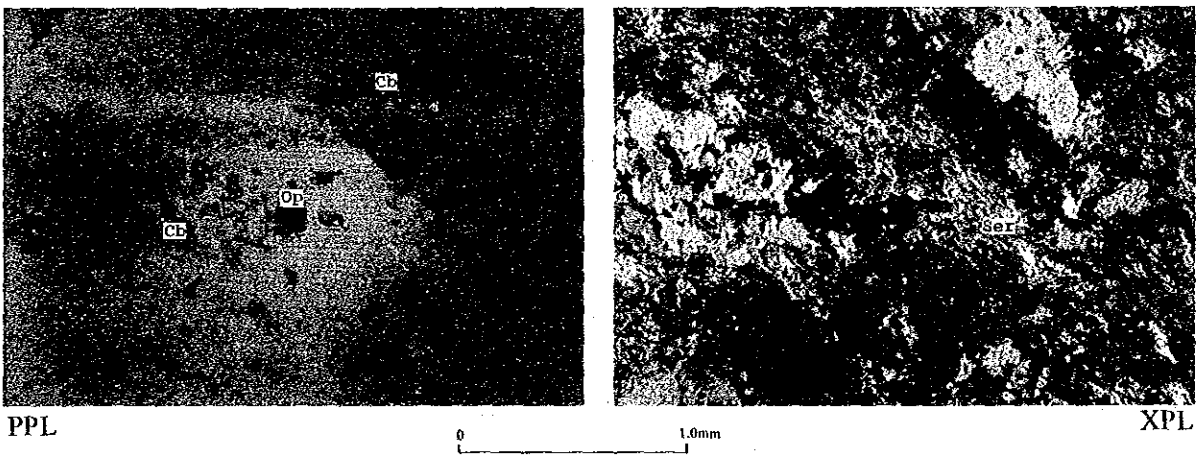
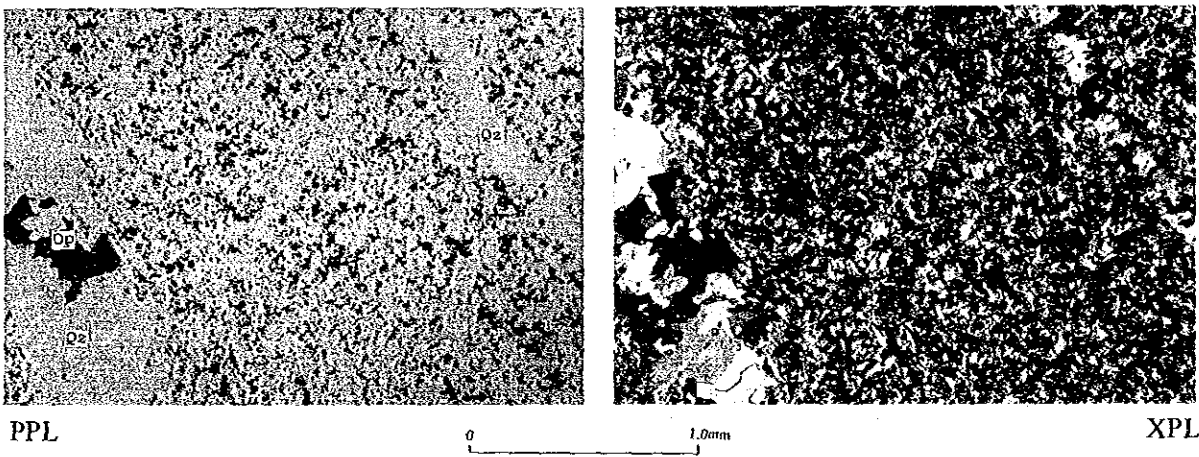


XPL

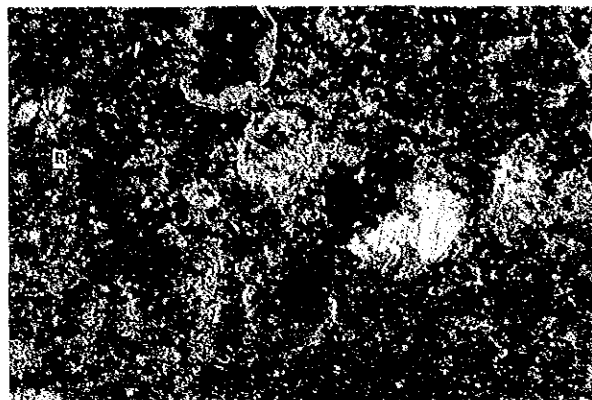
Sample No. C-6 146.30 Chontali Area, Andesite



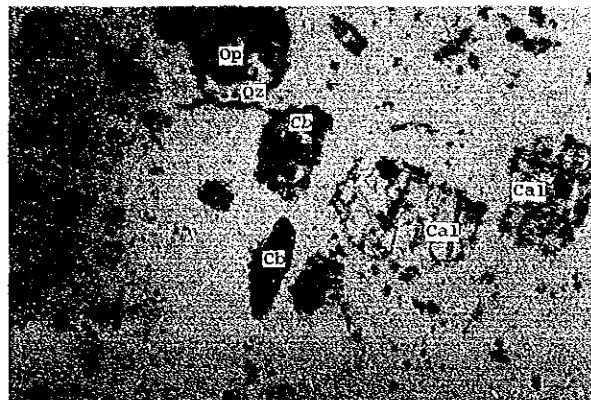
Sample No. C-6 156.60 Chontali Area, Quartzite with Quartz vein



Sample No. C-6 222.06 Chontali Area, Altered tuff



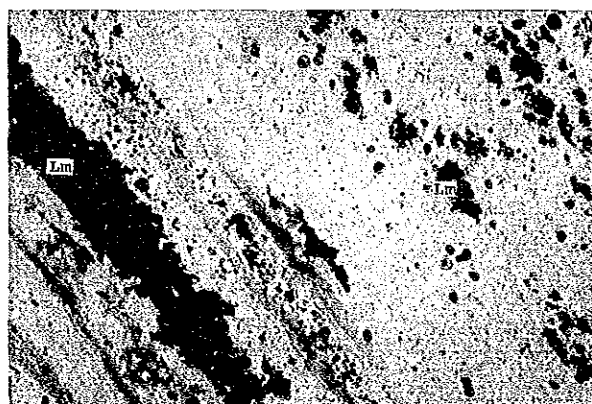
PPL



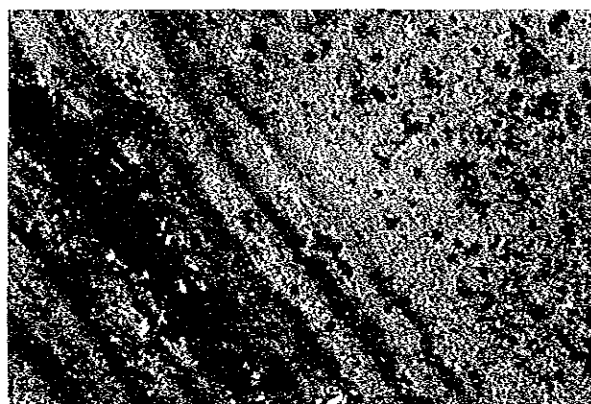
XPL

0 1.0mm

Sample No. J-6 1.55 Jehuamarca Area, Rhyolite



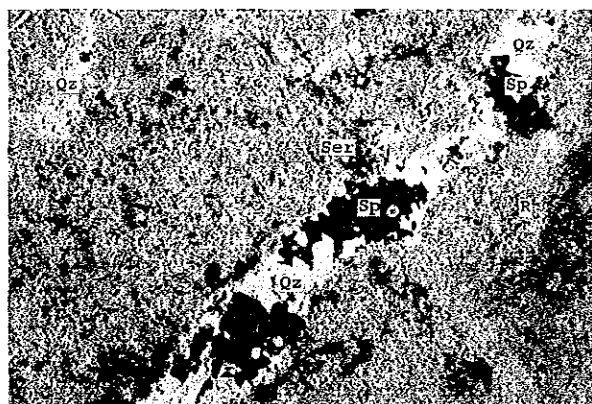
PPL



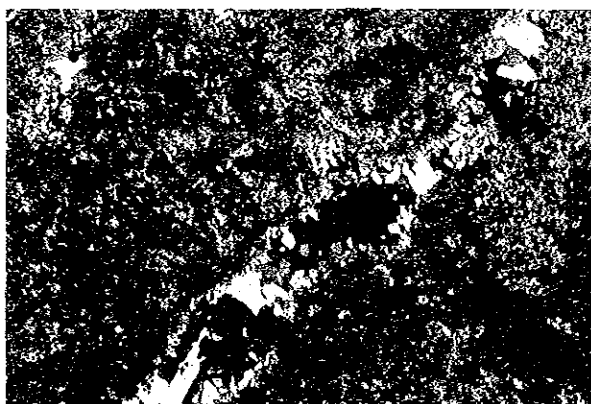
XPL

0 1.0mm

Sample No. J-6 14.85 Jehuamarca Area, Altered tuff



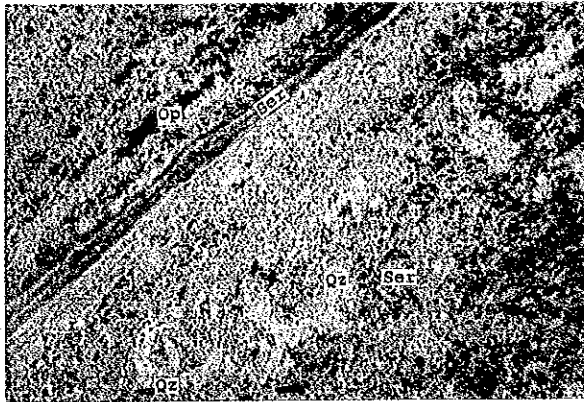
PPL



XPL

0 1.0mm

Sample No. J-11 71.60 Jehuamarca Area, Tuff and Shale



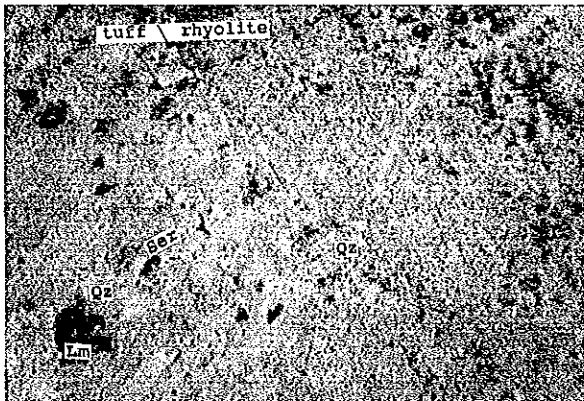
PPL



XPL

0 1.0mm

Sample No. J-12 58.80 Jehuamarca Area, Rhyolite and tuff



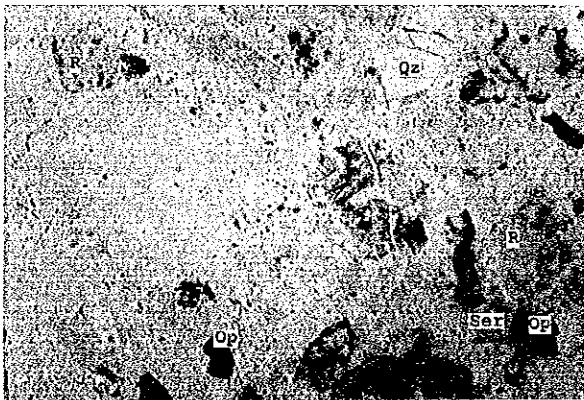
PPL



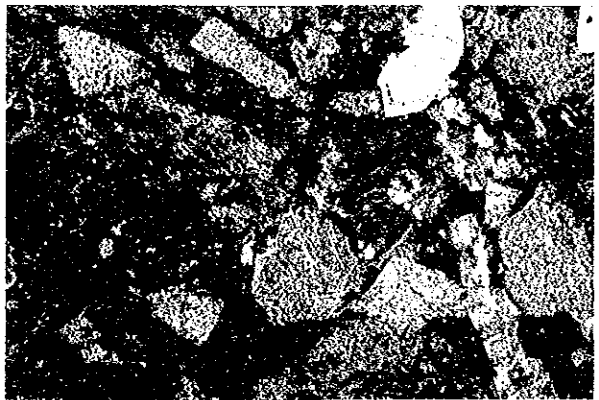
XPL

0 1.0mm

Sample No. R-72505 Jehuamarca Area, Altered tuff



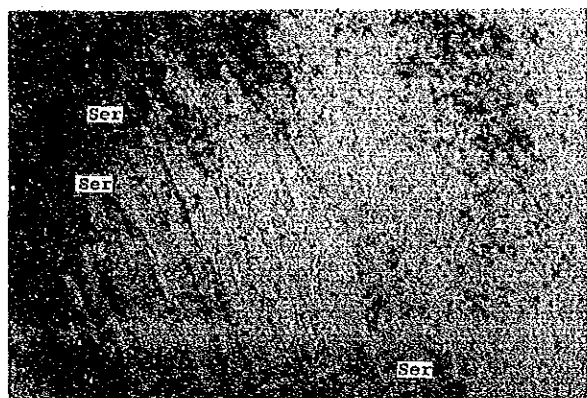
PPL



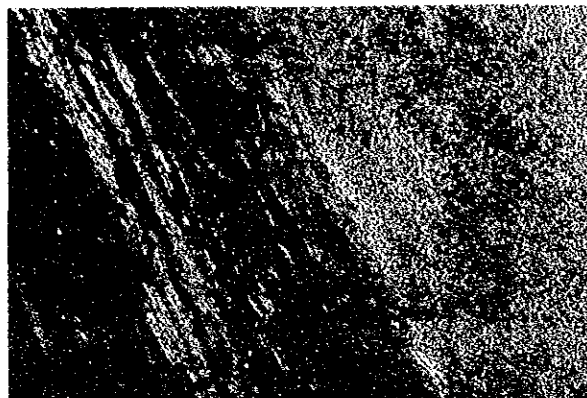
XPL

0 1.0mm

Sample No. R-72605 Jhuamarca Area, Rhyolite



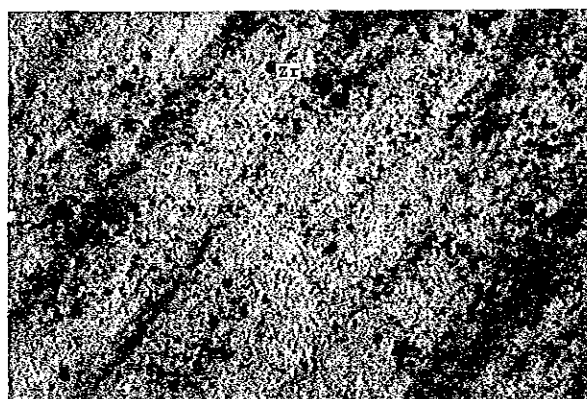
PPL



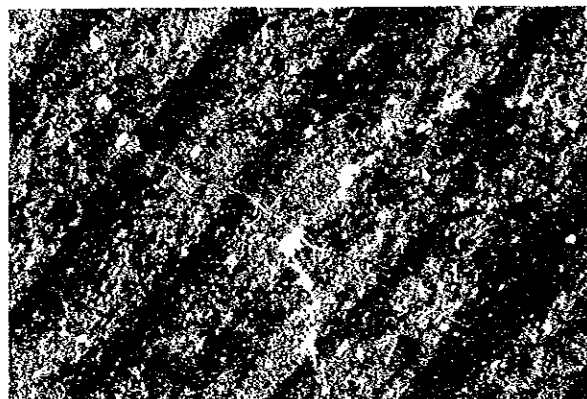
XPL

0 1.0mm

Sample No. R-82302 Jhuamarca Area, Rhyolite



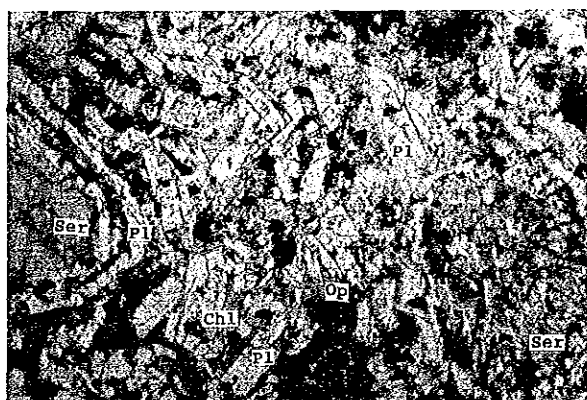
PPL



XPL

0 1.0mm

Sample No. R-82802 Jhuamarca Area, Andesite



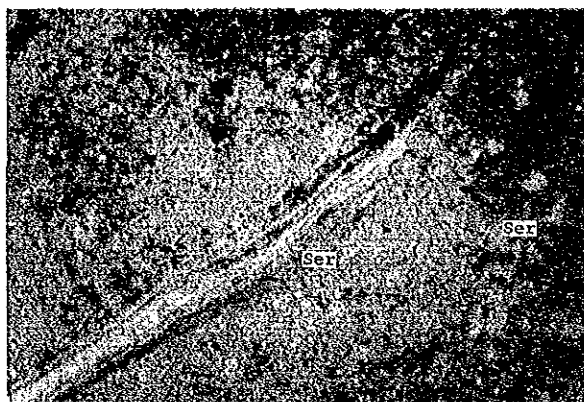
PPL



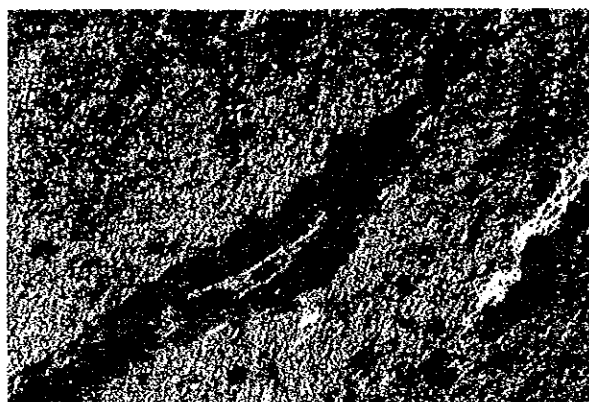
XPL

0 1.0mm

Sample No. R-102902 Jehuamarca Area, Altered tuff



PPL



XPL

0 1.0mm

Apx. 3 Results of Fluid Inclusion Homogenization Temperature Analysis

Apx.3 Results of Fluid Inclusion Homogenization temperature Analysis

No.	Location	Host mineral	NM	Temperature (°C)			Assay (g/t)		*
				Min.	Max.	Mean	Au	Ag	
1	MJPC-1 103.85	Q	10	75	145	105	2.05	13.5	
2	MJPC-1 131.90	Q	8	110	247	168	2.65	35.0	
3	MJPC-2 59.60	Q	10	91	159	126	1.70	13.5	P
4	MJPC-3 149.70	Q	10	102	146	129	1.20	37.0	X
5	MJPC-3 205.33	Q	10	89	128	102	1.65	20.0	
6	MJPC-4 202.13	Q	20	110	204	144	0.75	13.5	P
7	MJPC-4 244.00	Q	10	125	173	144	0.35	10.5	
8	MJPC-4 278.93	Q	4	120	159	140			
		C	4	110	143	125			
		Average	8	110	159	133	0.10	8.0	
9	MJPC-5 74.50	Q	10	88	158	111	2.30	7.5	P, T
10	MJPC-5 123.45	Q	10	114	291	194	1.25	41.0	P
11	MJPC-6 97.20	Q	10	125	186	147	0.40	12.5	P
12	MJPC-6 159.00	Q	10	136	164	145	1.70	45.5	P

Q: quartz, C: calcite, NM: number of measured fluid inclusions

* P:polished section observed, T:thin section observed, X:x-ray diffraction examined

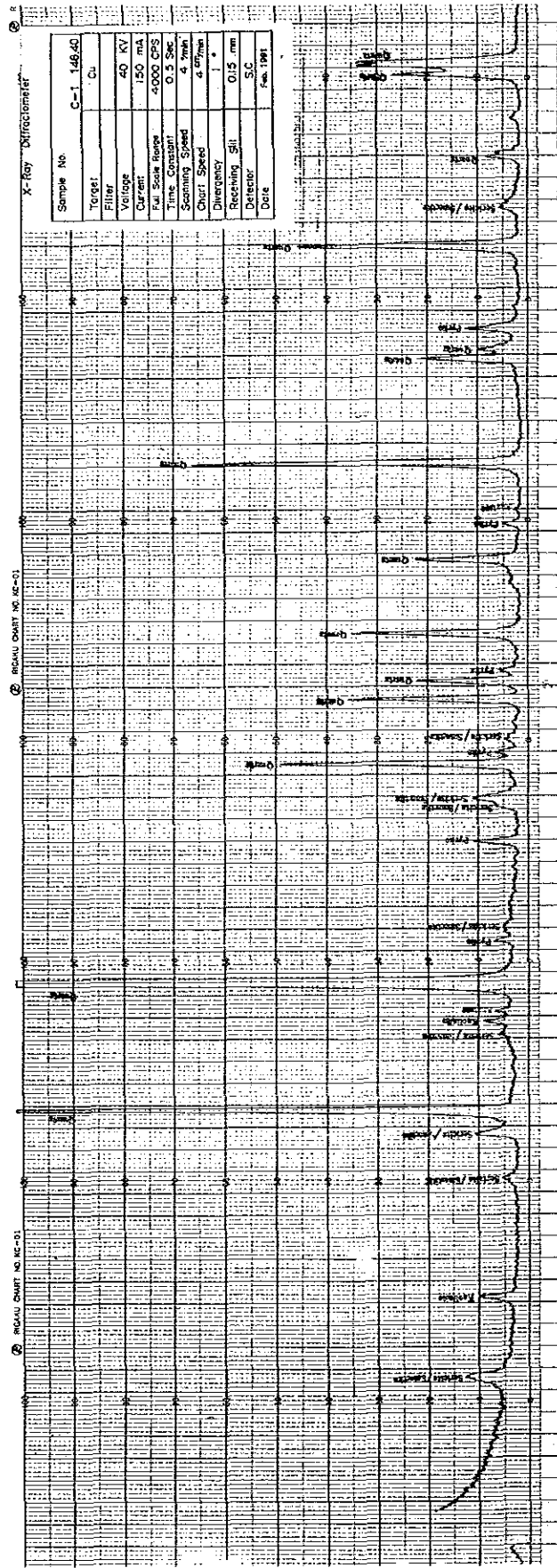
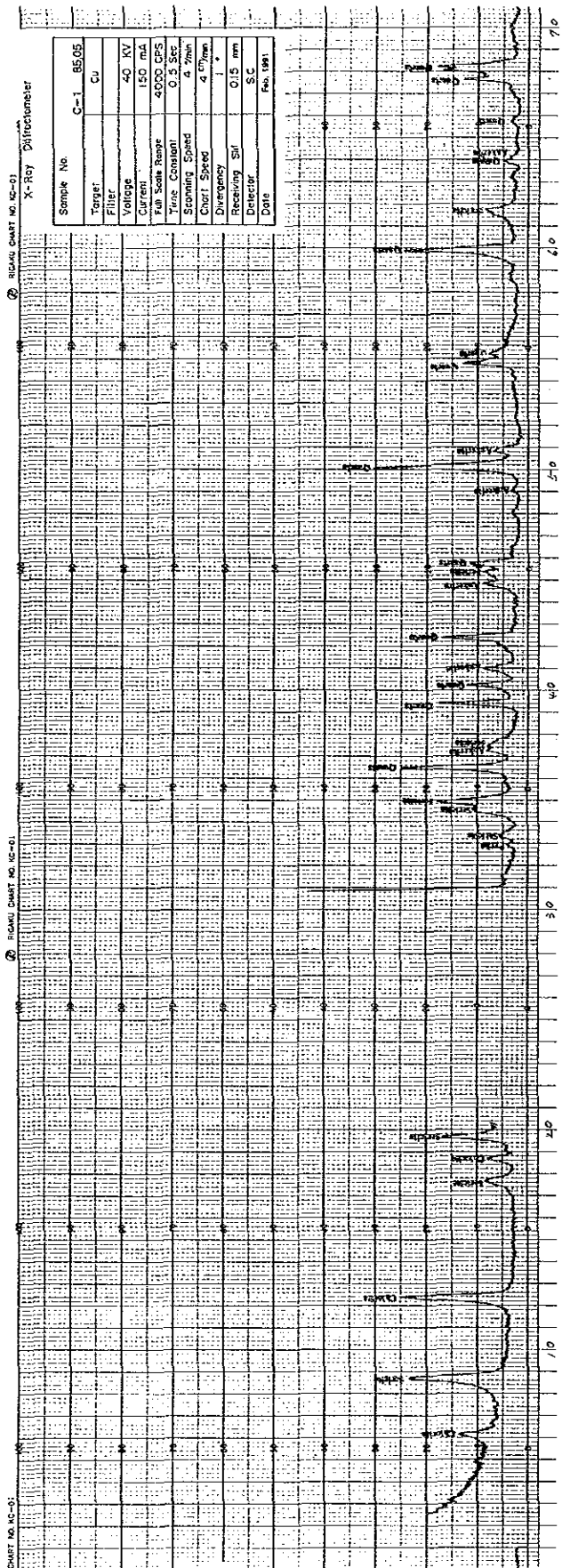
Apx. 4 Results of X-ray diffractive Analysis

Apx. 4 Results of X-ray Diffractive Analysis

Sample No.	Drill Hole	Depth(m)	Rock Name	Silicates										Carbonates			Sulfides				Oxides, Hydroxide			Remarks		
				Quartz	Clay Minerals			Talc	K-feldspar	Halotrichite	Calcite	Dolomite	Ankerite	Siderite	Pyrite	Sphalerite	Galena	Chalcopyrite	Tennantite	Arsenopyrite	Marcasite	Hematite	Goethite		Gibbsite	Anatase
Chontali Area Drilling Core Samples																										
C-1	85.05	MJPC-1	85.05	sil arg chl lp tf	⊙	△	△								⊙										T	
C-1	146.40	"	146.40	qtz v	⊙	△	△									△									P	
C-2	109.30	MJPC-2	109.30	arg sil lp tf	⊙	△	△									△										
C-2	175.75	"	175.75	qtz v	⊙	△	△									△										
C-2	198.10	"	198.10	sil arg tf bre w/qtz net	⊙	△	△									△									T	
C-2	212.40	"	212.40	sil arg tf bre w/hematite	⊙	△	△									△									T	
C-2	244.85	"	244.85	qtz v	⊙	△	△									△										
C-3	55.81	MJPC-3	55.81	carbonate v	⊙		△	△								⊙	△									
C-3	149.70	"	149.70	qtz v	⊙											⊙									F/I	
C-3	219.95	"	219.95	sheared zone	△	△	⊙									△	△									
C-4	66.53	MJPC-4	66.53	fault bre w/qtz	⊙	△	△									⊙	△								T	
C-4	156.70	"	156.70	sil chl tf bre	△	△	△								⊙										T	
C-4	181.58	"	181.58	sil chl tf bre	⊙	△	△								⊙										T	
C-4	196.30	"	196.30	sil arg tf bre	⊙	△	△								△										T	
C-4	268.25	"	268.25	fault bre	⊙	△	△								⊙										T	
C-4	301.70	"	301.70	qtz v	⊙										⊙											
C-5	121.70	MJPC-5	121.70	qtz v	⊙	△										⊙										
C-6	62.20	MJPC-6	62.20	fault bre	⊙			△																	T	
C-6	156.60	"	156.60	qtz net v	⊙		△									△									P, T	
C-6	201.90	"	201.90	sil arg chl lp tf	⊙		⊙								⊙										T	
Jhuamarca Area Drilling Core Samples																										
J-5	3.10	MJPC-5	3.10	sil bre w/sulfides	⊙										△	⊙	△		△							P
J-7	87.40	MJPC-7	87.40	sil arg lp tf w/qtz v, sp	⊙	△										△										P
J-8	31.05	MJPC-8	31.05	sil arg lp tf bre w/chalcocite	⊙	△										△									P	
J-8	68.45	"	68.45	sil arg lp tf w/tennantite	⊙											⊙									P	
J-13	18.35	MJPC-13	18.35	sil arg tf bre w/tennantite	⊙	△										△									P	
Jhuamarca Area Geochemical Samples																										
R72101				dr sil bre	⊙																					
R72104				dr sil bre	⊙																					
R72503				arg sil chl tf	⊙		△	△																		
R72505				arg sil chl lp tf	⊙		△																	△		T
R72704				dr sil bre	⊙																					
R80102				limo dr qtz v	⊙																					
R80103				dr sil rock	⊙																					
R80105				limo qtz v	⊙																					
R80201				sil bre	⊙		△																			
R80305				med sil bre	⊙		△																			
R80306				med sil bre	⊙																					
R80309				qtz v	⊙																					
R80402				dr qtz v	⊙																					
R80403				sil rock	⊙		△																			
R80605				limo med sil bre	⊙																					
R80609				dr sil rock	⊙																					
R82302				rhyolite	⊙		△																			T
R82401				sil chl tf	⊙	△			⊙							△	△									
R82403				arg qtz v	⊙	△																				
R72602				dr sil rock	⊙																					
R102902				sil arg chl lp tf	⊙		△																			TT
T101	trench-1			arg lp tf w/pyrite	⊙		△									△										
T112	"			arg lp tf w/pyrite	⊙	△										△										P

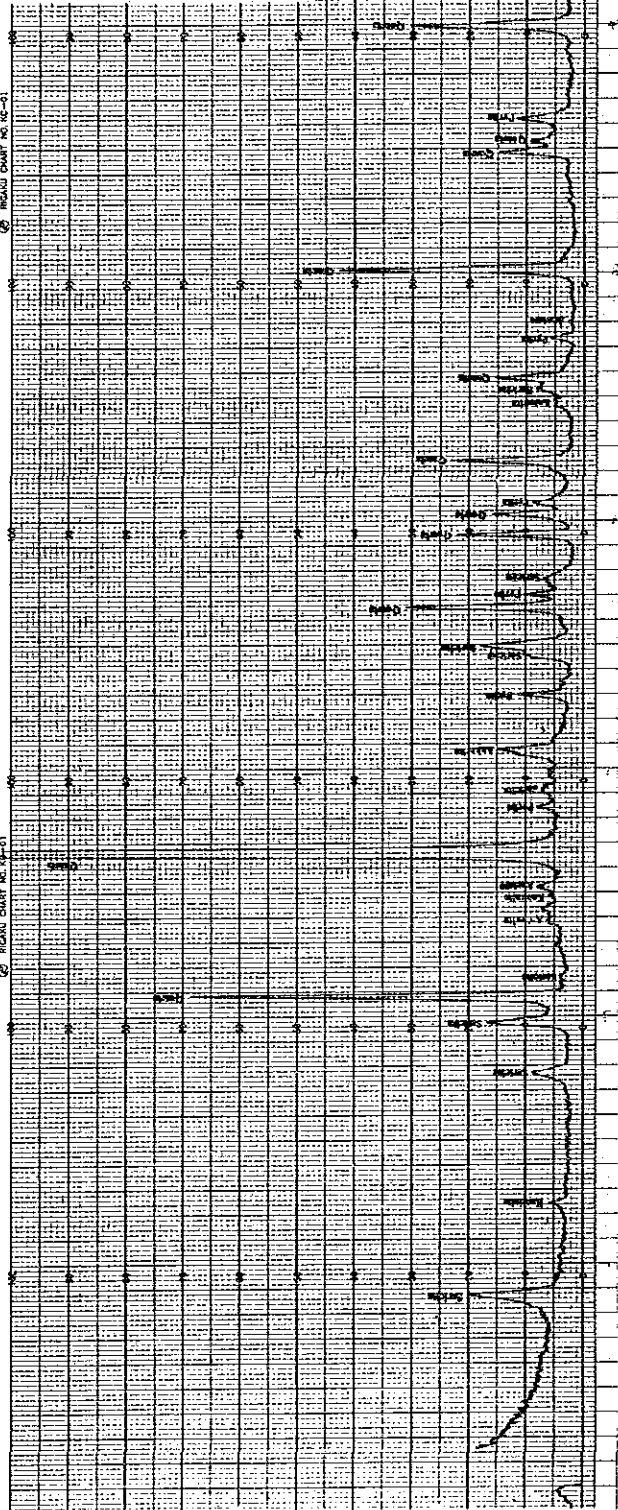
⊙:many ○:intermediate △:few ·:rare *Sulfate
 Abbreviations arg:argilized, bre:breccia, chl:chloritized, dr:drusy, limo:limonitized, lp:lapilli, med:medium, net:network,
 qtz:quartz, sil:silicified, sp:sphalerite, tf:tuff, v:vein, w:with
 F/I:fluid inclusion examined, P:polished section observed, T:thin section observed

Apx. 5 X-ray Diffraction Chart



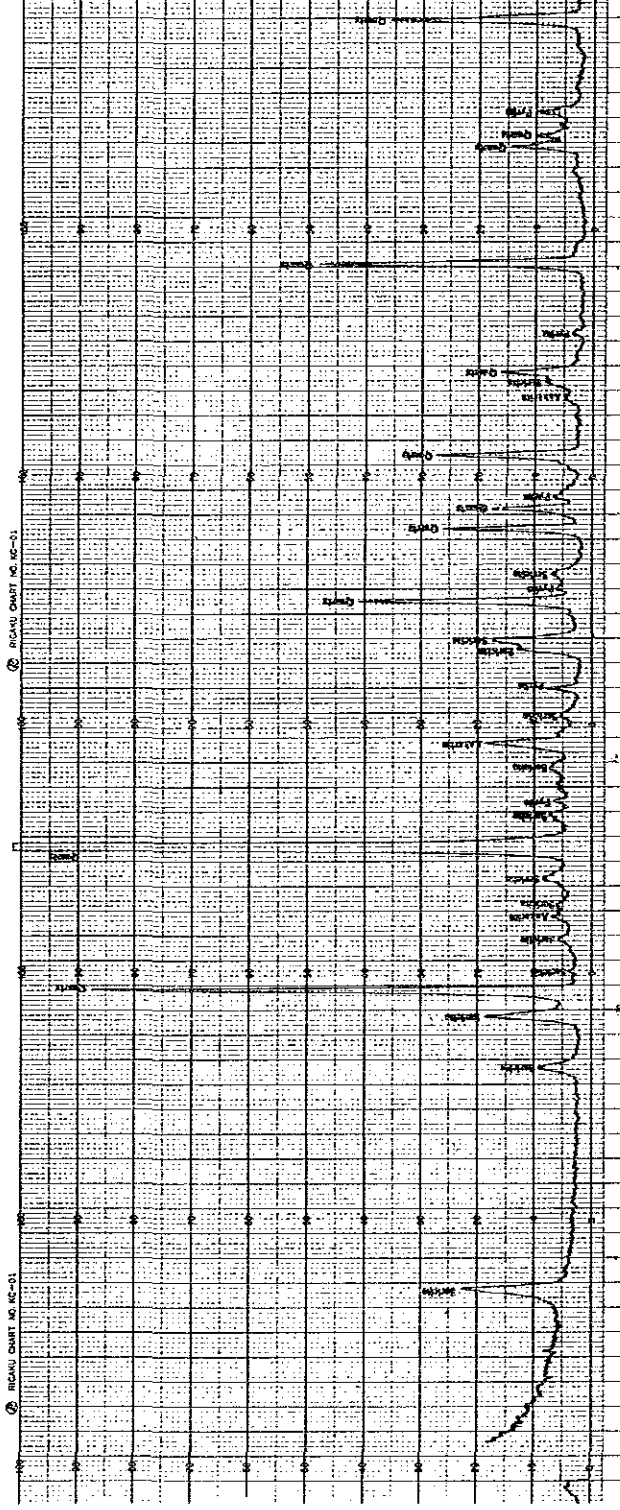
"X-Ray" Diffractometer

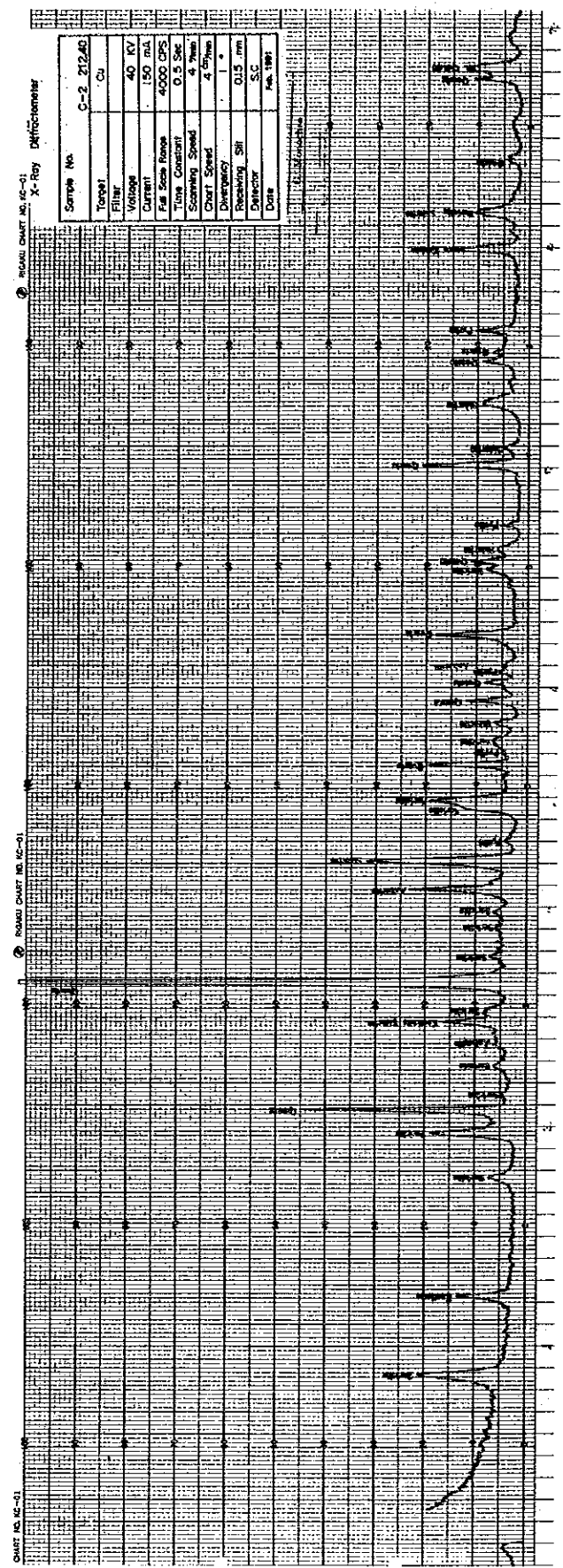
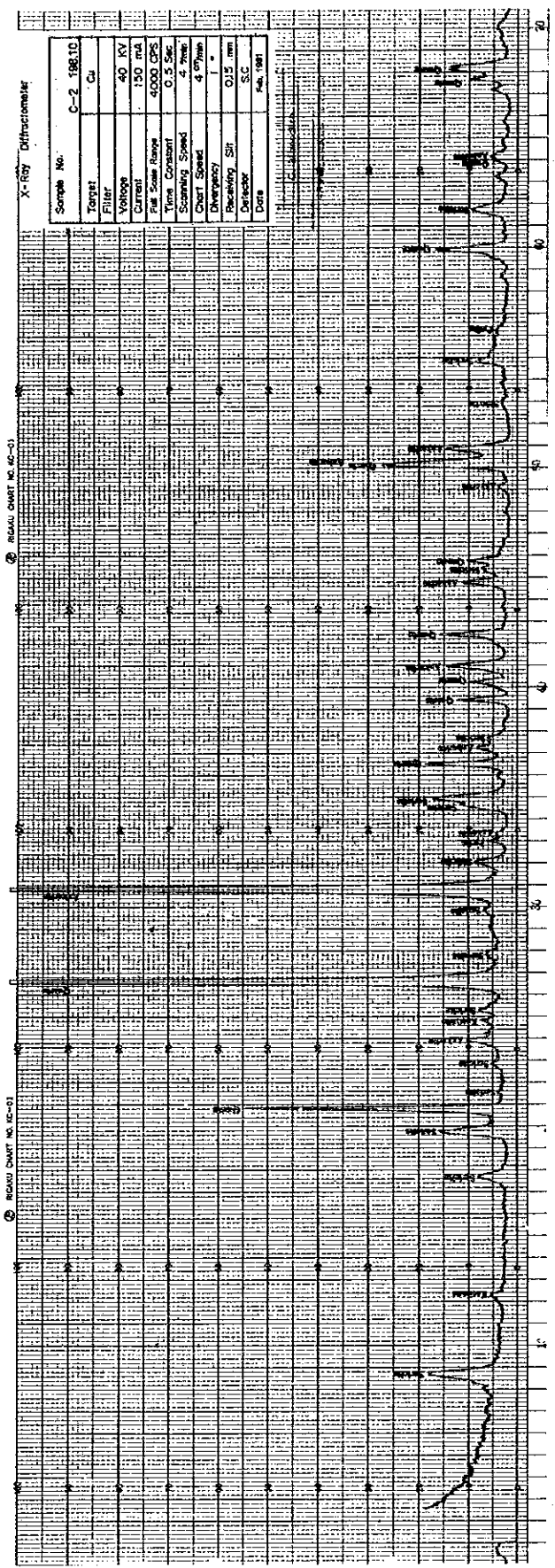
Sample No.	C-2 10920
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 $\frac{2\theta}{min}$
Chart Speed	1 $\frac{1}{min}$
Divergency	1 $^{\circ}$
Receiving Slit	0.15 mm
Detector	S.C
Date	Feb. 1961

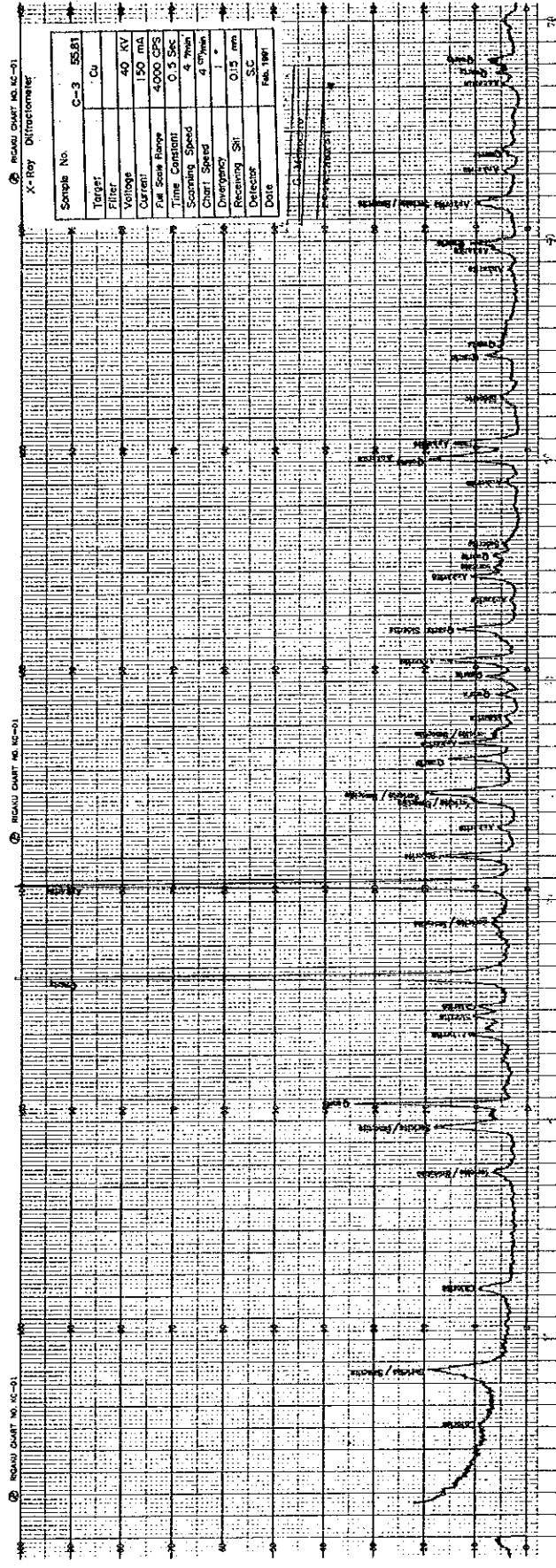
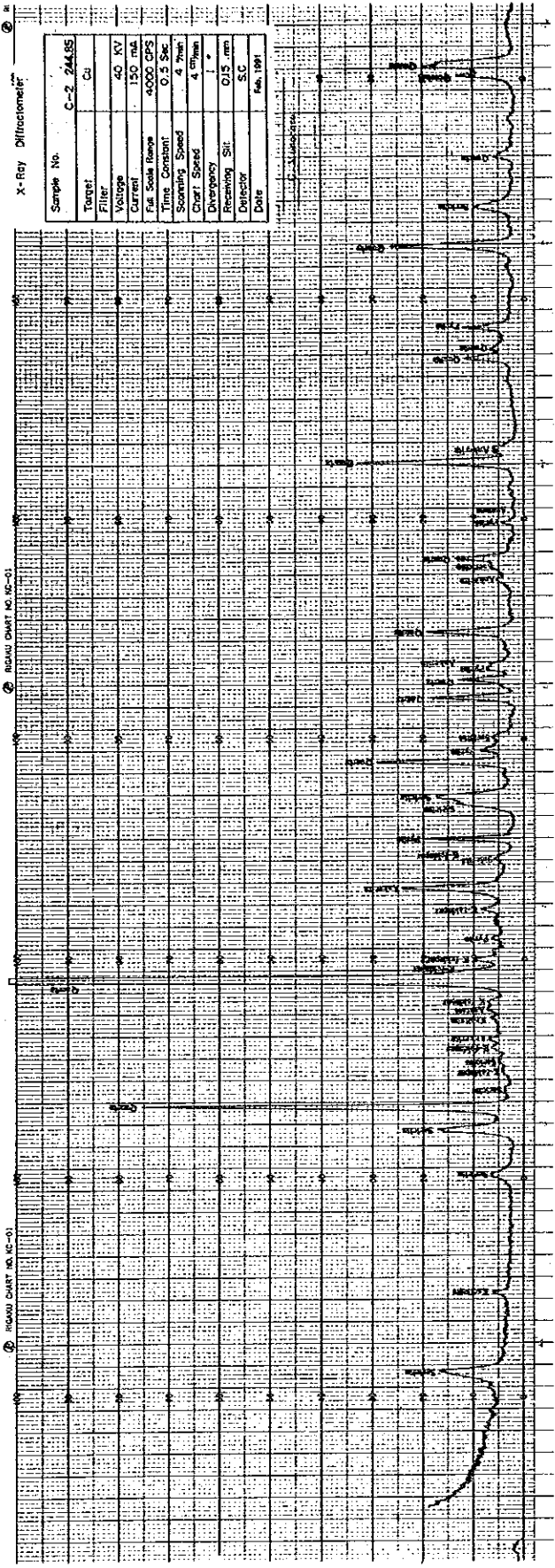


"X-Ray" Diffractometer

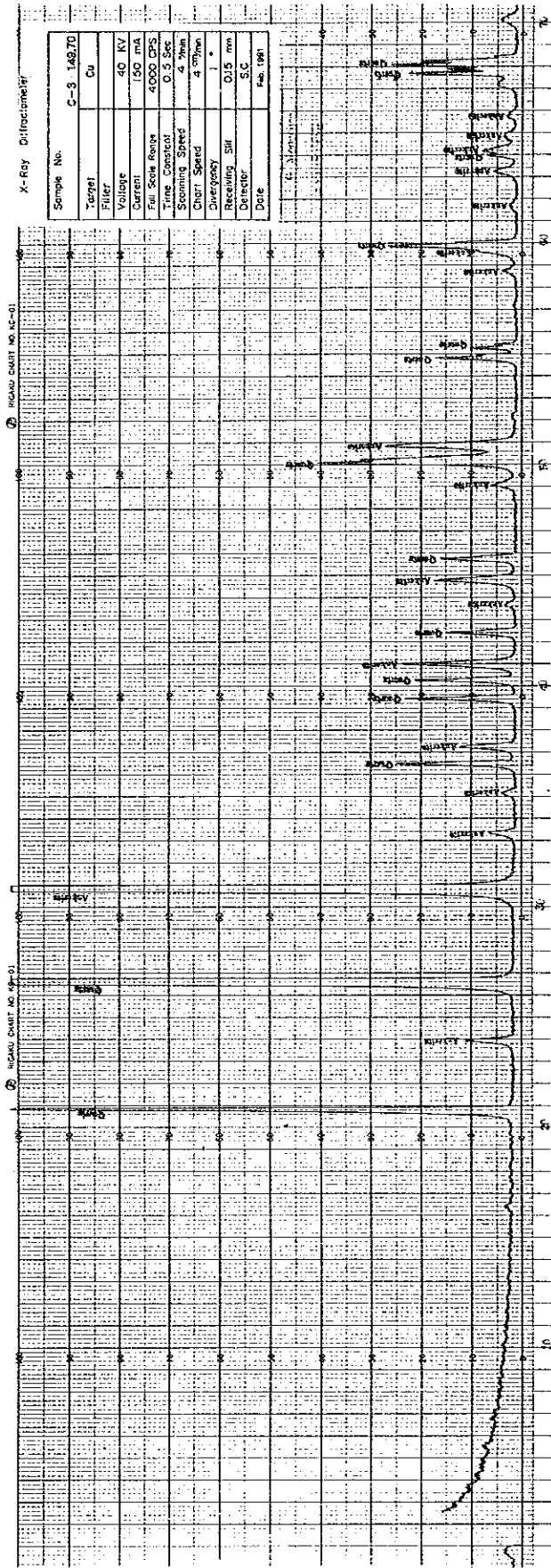
Sample No.	C-2 17575
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 $\frac{2\theta}{min}$
Chart Speed	1 $\frac{1}{min}$
Divergency	1 $^{\circ}$
Receiving Slit	0.15 mm
Detector	S.C
Date	Feb. 1961



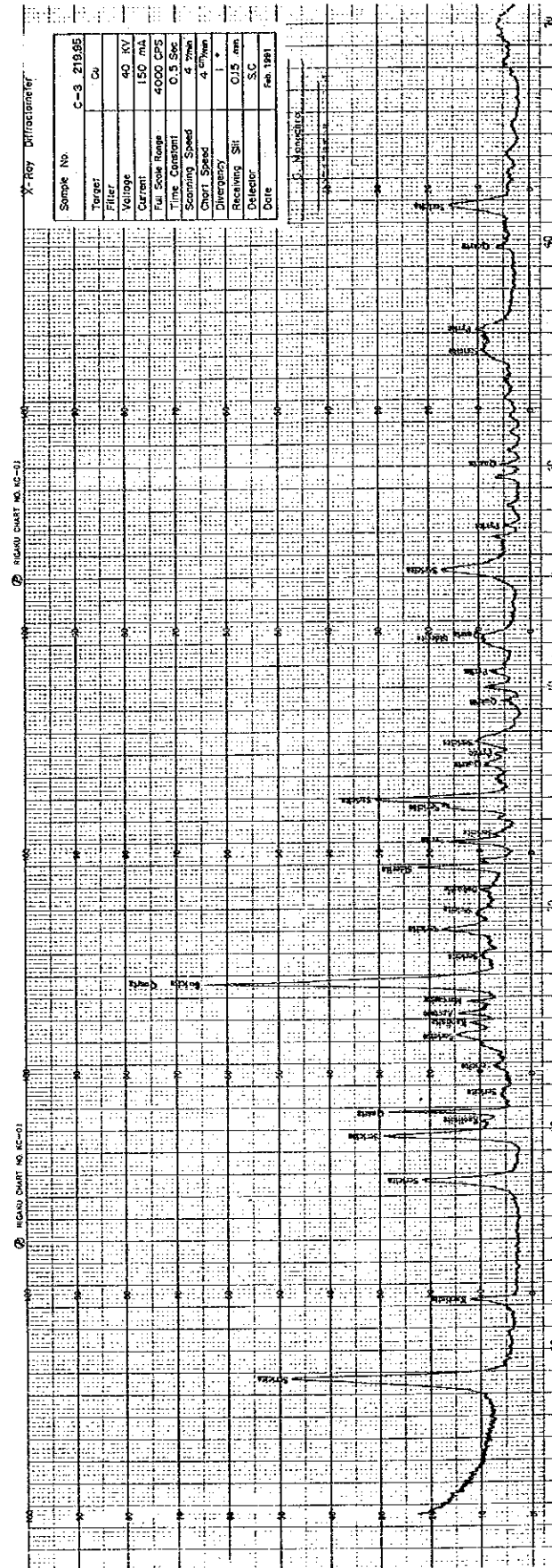




X-Ray Diffractometer

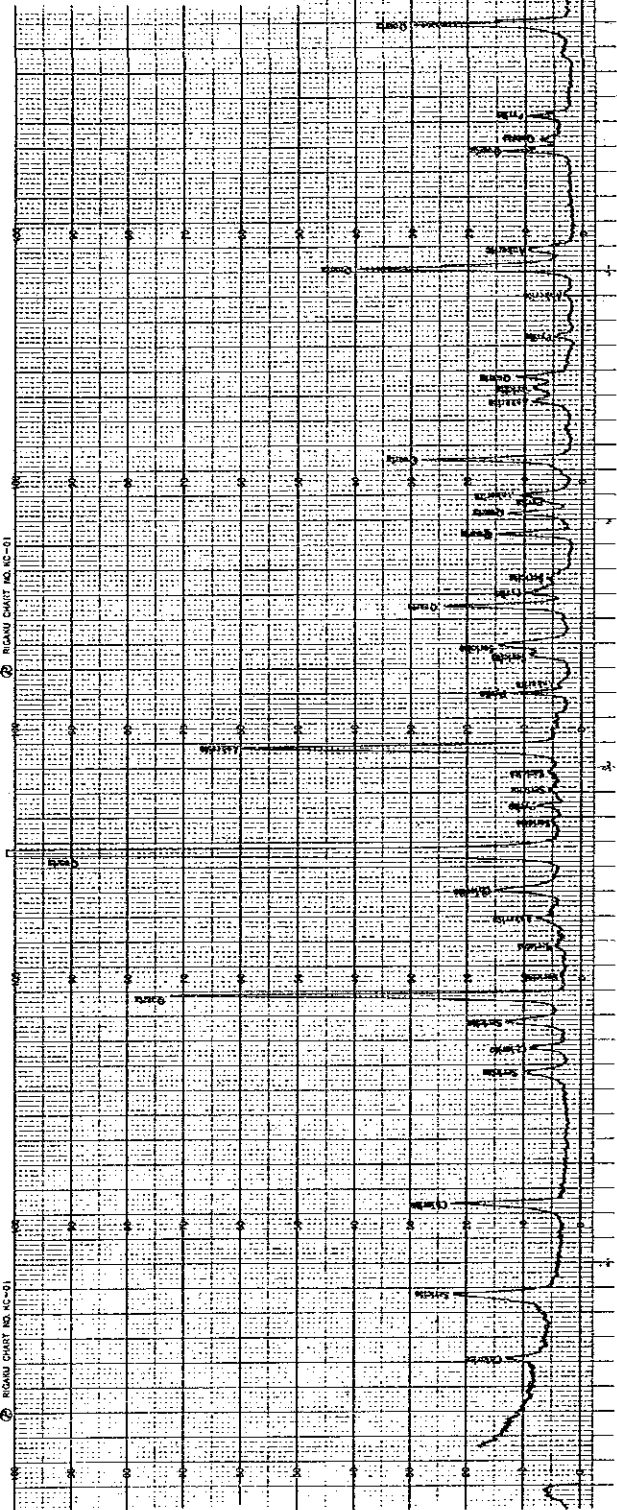


X-Ray Diffractometer



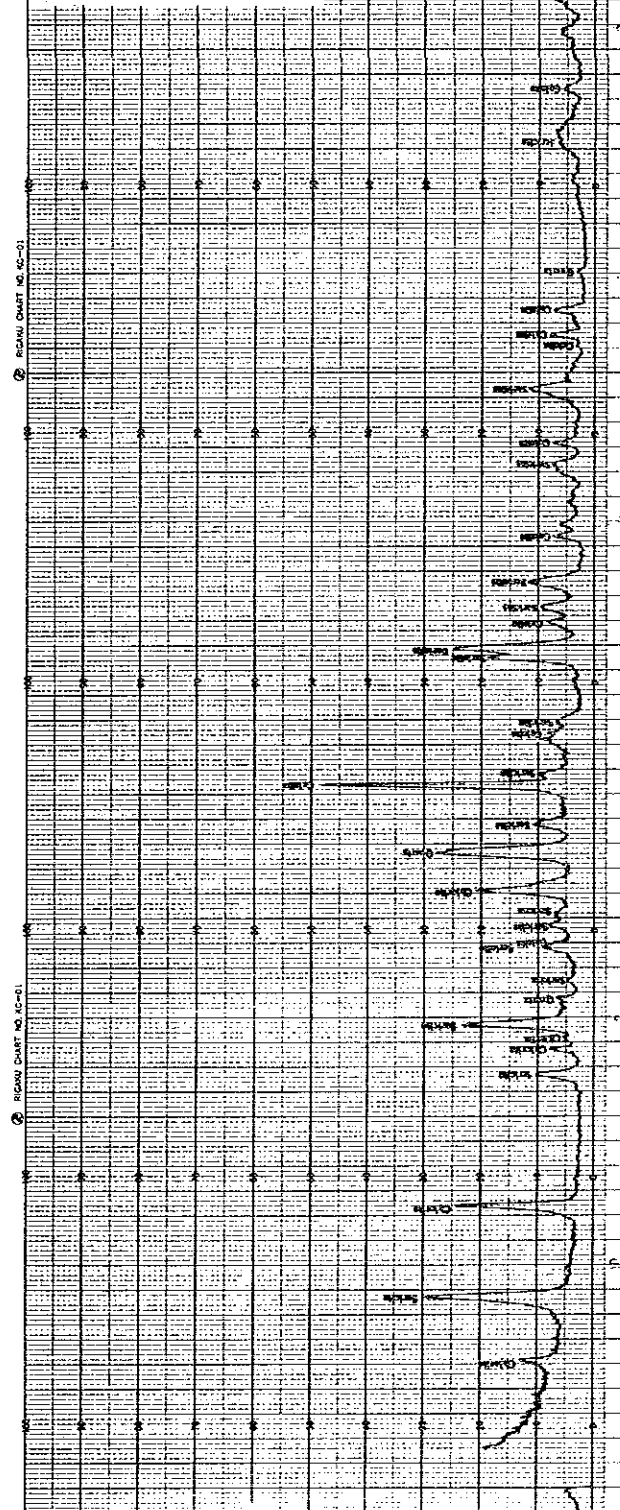
RIGAU CHART NO. 18-01
X-Ray Diffractometer

Sample No.	C-4, 8853
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.3 Sec
Scanning Speed	4 θ /min
Chart Speed	4 θ /min
Quenching	1 *
Receiving Slit	0.15 mm
Detector	S.C
Date	Feb. 1961



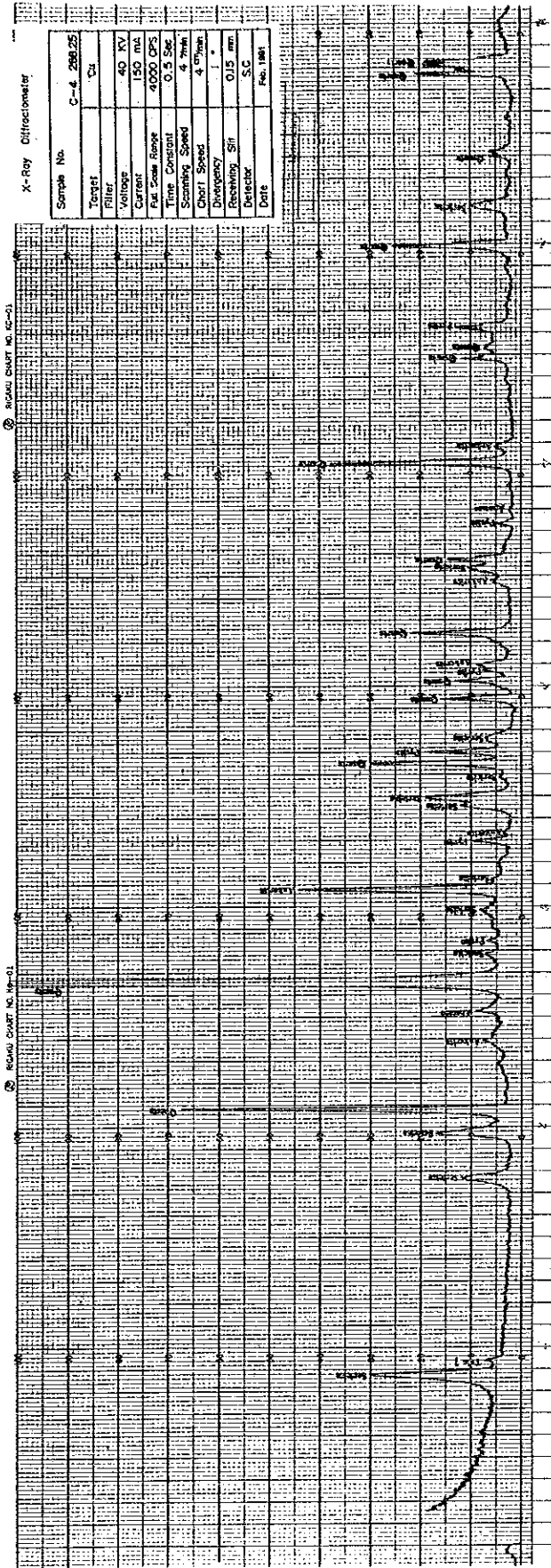
RIGAU CHART NO. 18-01
X-Ray Diffractometer

Sample No.	C-4, 18670
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.3 Sec
Scanning Speed	4 θ /min
Chart Speed	4 θ /min
Quenching	1 *
Receiving Slit	0.15 mm
Detector	S.C
Date	Feb. 1961



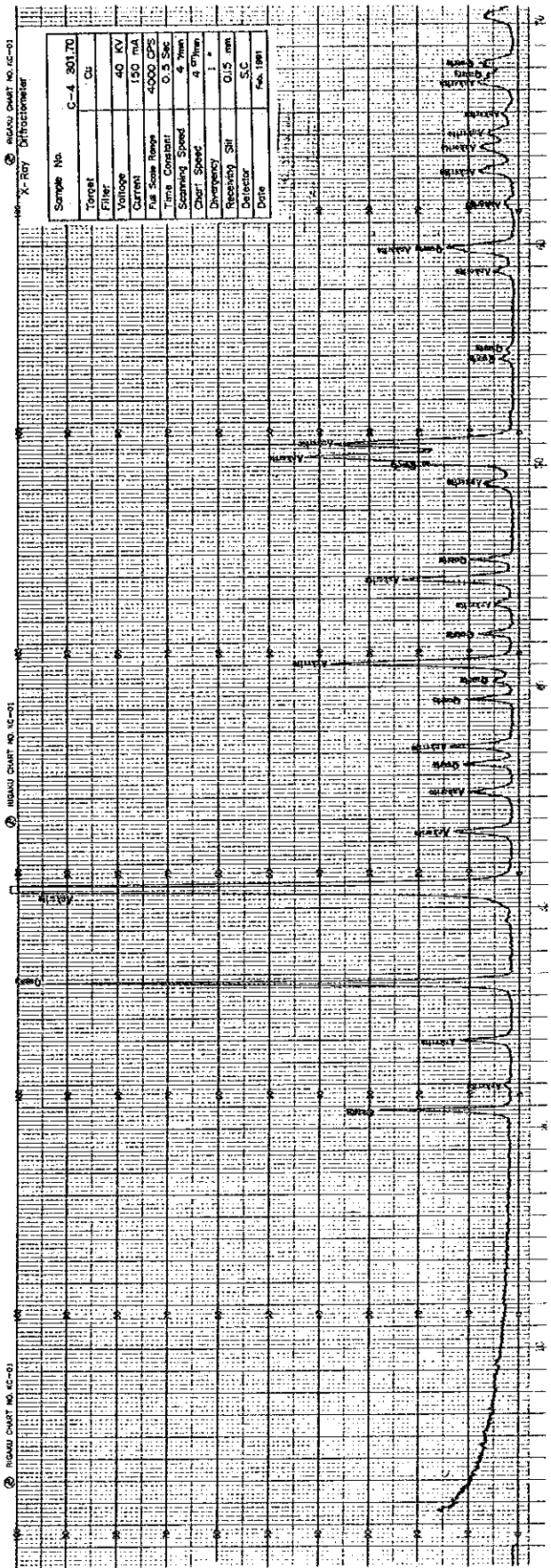
X-Ray Diffractometer

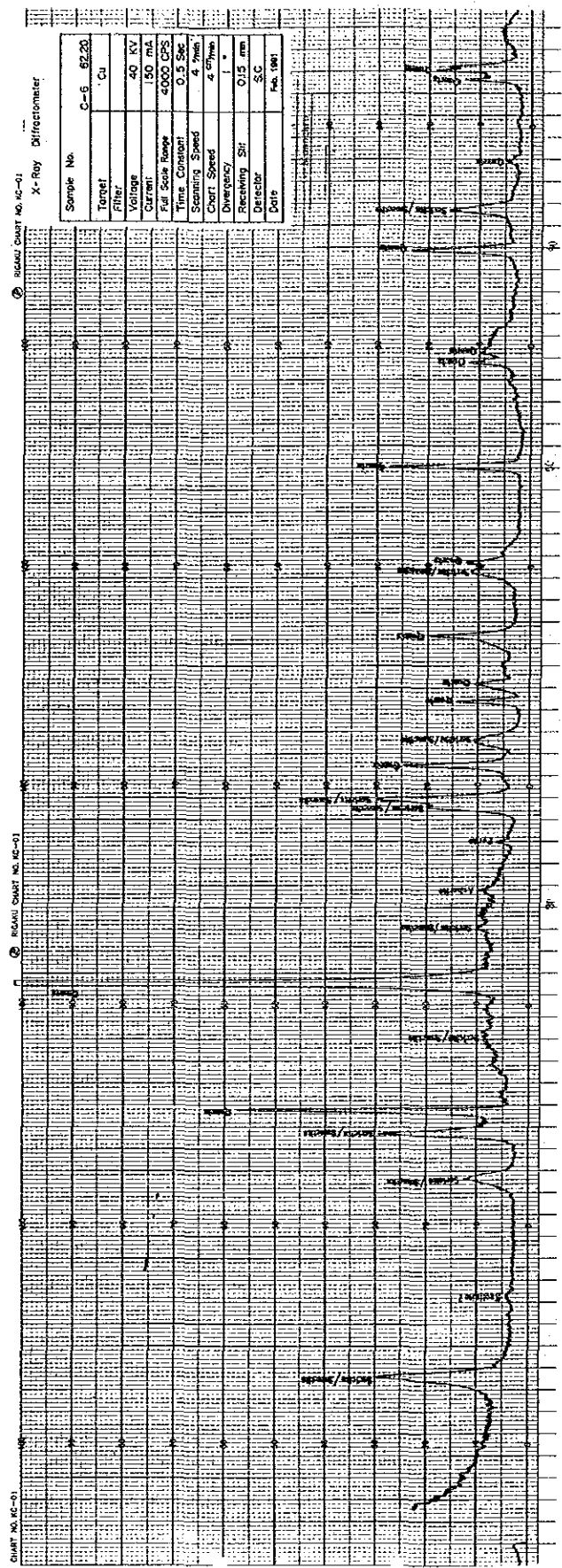
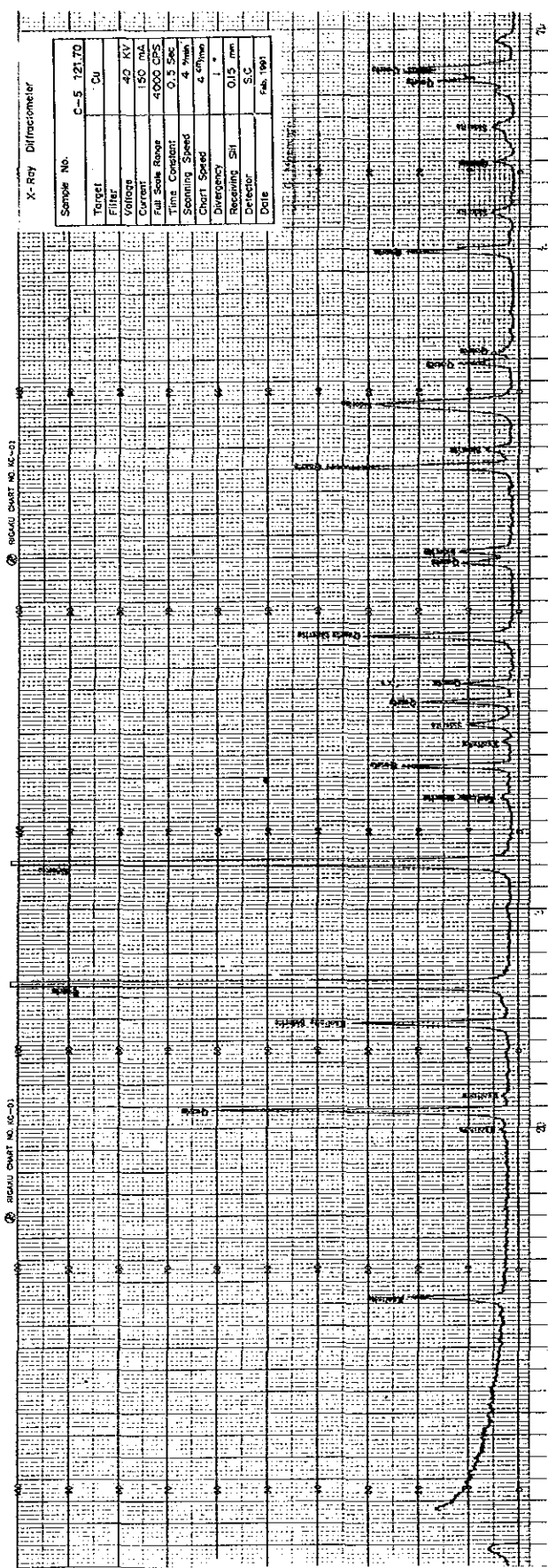
Sample No.	C-4 298.25
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 °/min
Chart Speed	4 °/min
Divergency	1 °
Receiving Slit	0.15 mm
Detector	S.C
Date	Feb. 1961



X-Ray Diffractometer

Sample No.	C-4 301.70
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 °/min
Chart Speed	4 °/min
Divergency	1 °
Receiving Slit	0.15 mm
Detector	S.C
Date	Feb. 1961



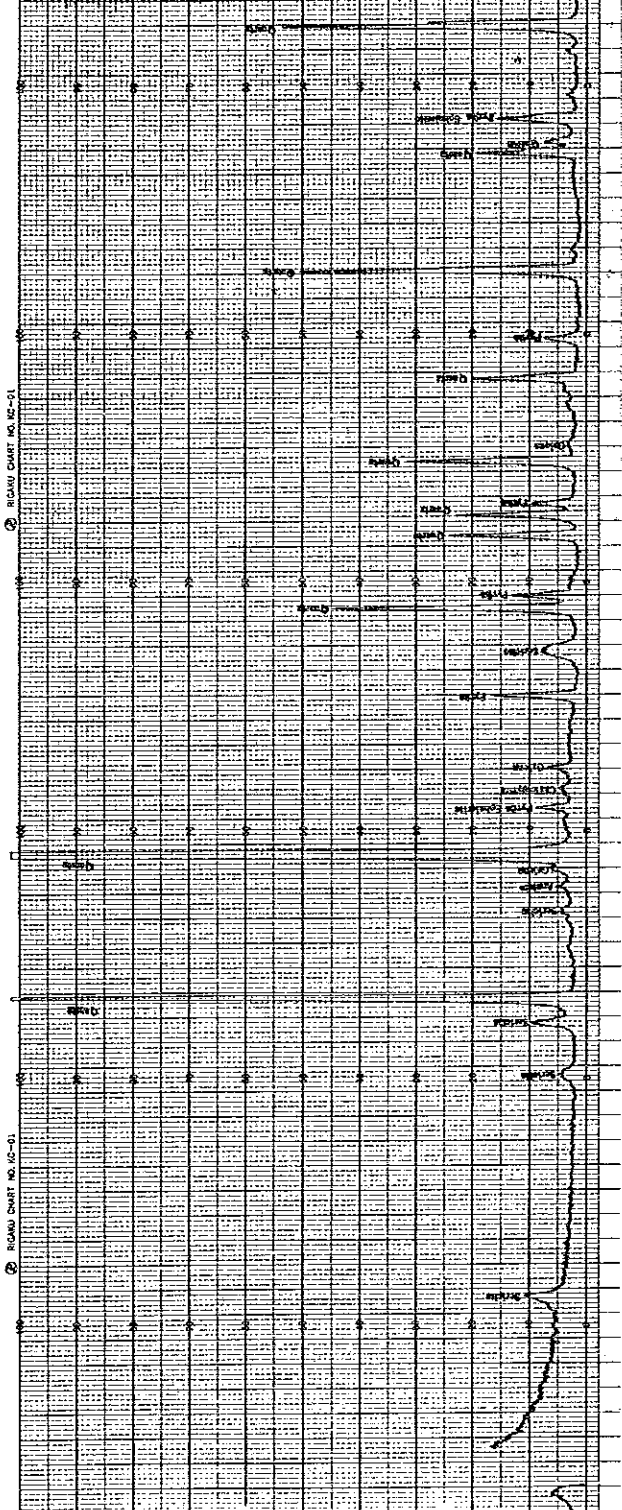


X-Ray Diffractometer

RIGAUDI CHART NO. KC-01

RIGAUDI CHART NO. KC-01

Sample No.	C-6 19660
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 2/min
Chart Speed	4 1/min
Divergency	1 °
Receiving Slit	0.5 mm
Detector	S.C
Date	Feb. 1961



X-Ray Diffractometer

RIGAUDI CHART NO. KC-01

RIGAUDI CHART NO. KC-01

Sample No.	C-6 20190
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	4000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 2/min
Chart Speed	4 1/min
Divergency	1 °
Receiving Slit	0.5 mm
Detector	S.C
Date	Feb. 1961

