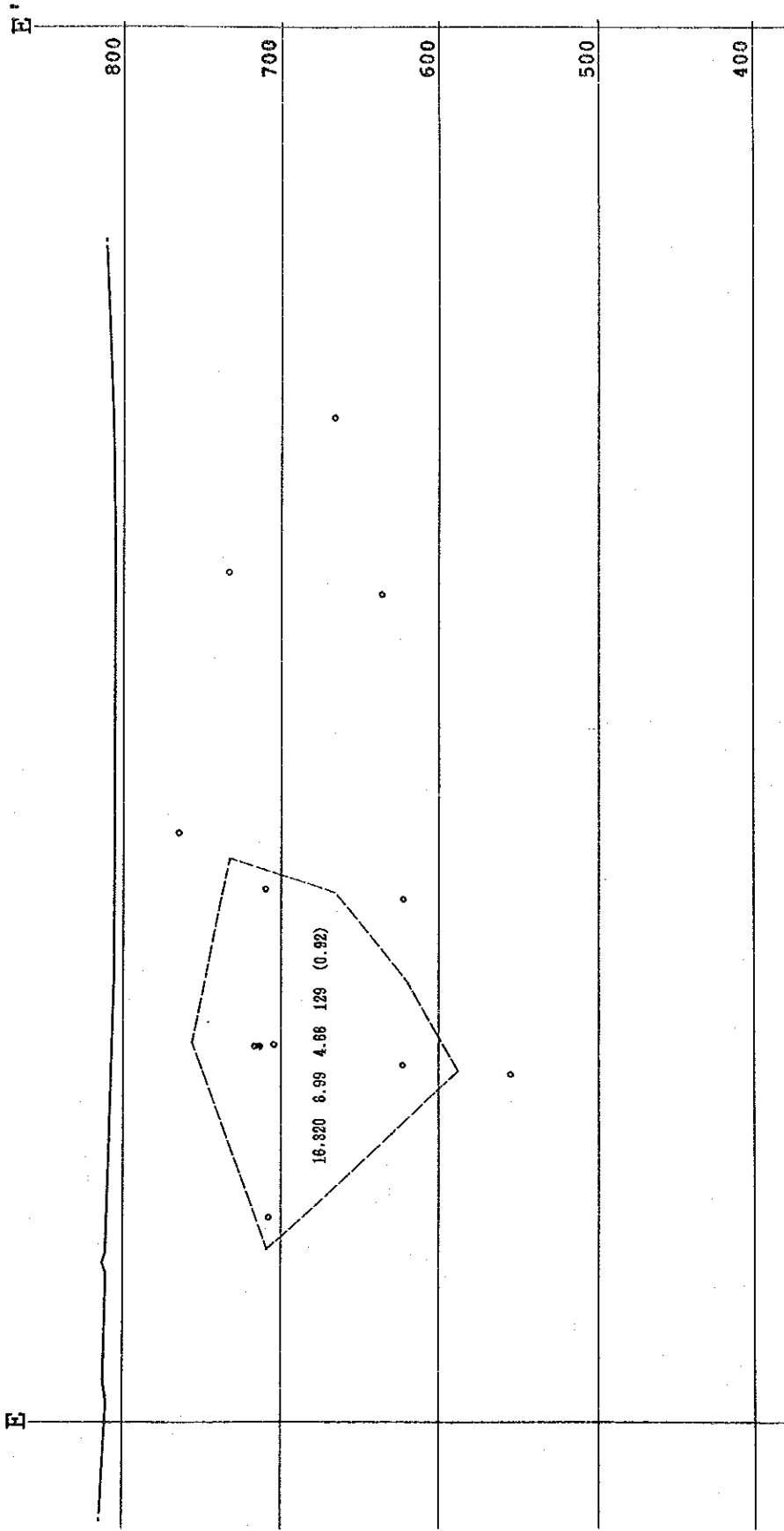


□ Possible Reserve

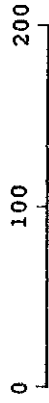
Quantity	Pb %	Zn %	Ag g/t	(width, m)
2,680	2.63	3.18	904	(0.60)

A - 4 - 6 Ore Blocks of the No.2B Vein

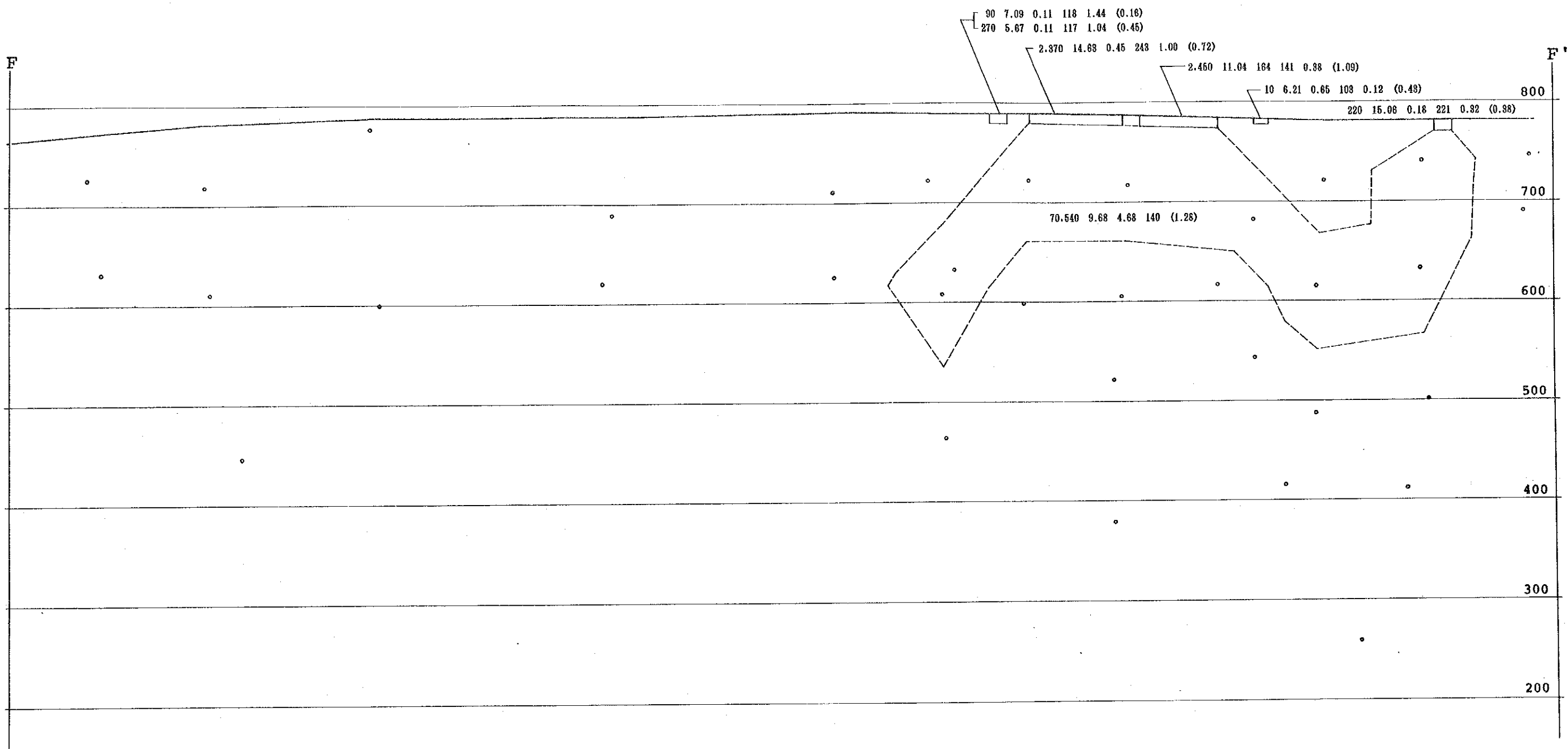


□ Possible Reserve

Quantity Pb % Zn % Ag g/t (width, m)
 2,680 2.63 3.18 904 (0.60)

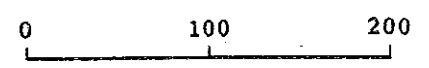


A - 4 - 7 Ore Blocks of the No. 2HW Vein

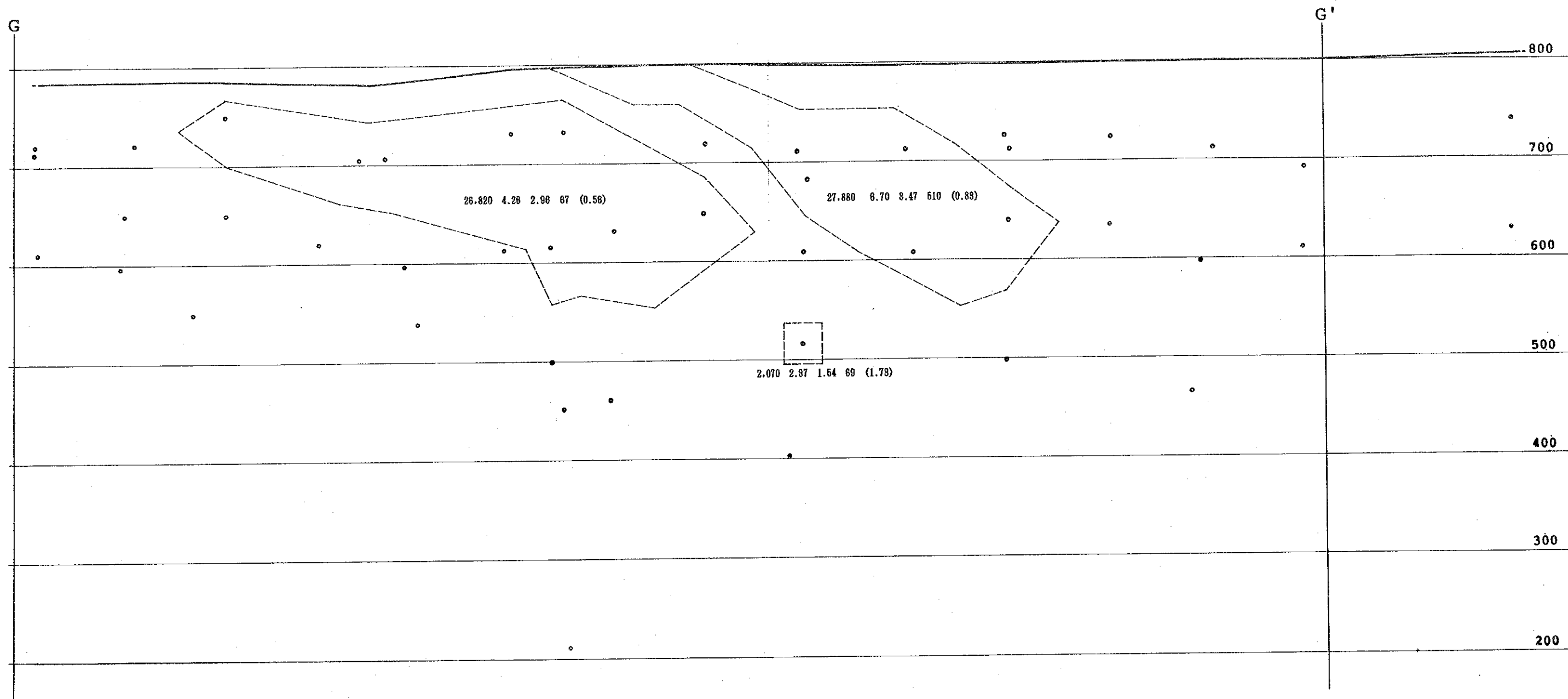


Probable Reserve
 Possible Reserve

Quantity	Pb %	Zn %	Ag g/t	(width, m)
2,680	2.63	3.18	904	(0.60)

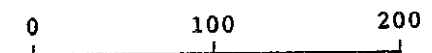


A - 4 - 8 Ore Blocks of the No.6 Vein (North)

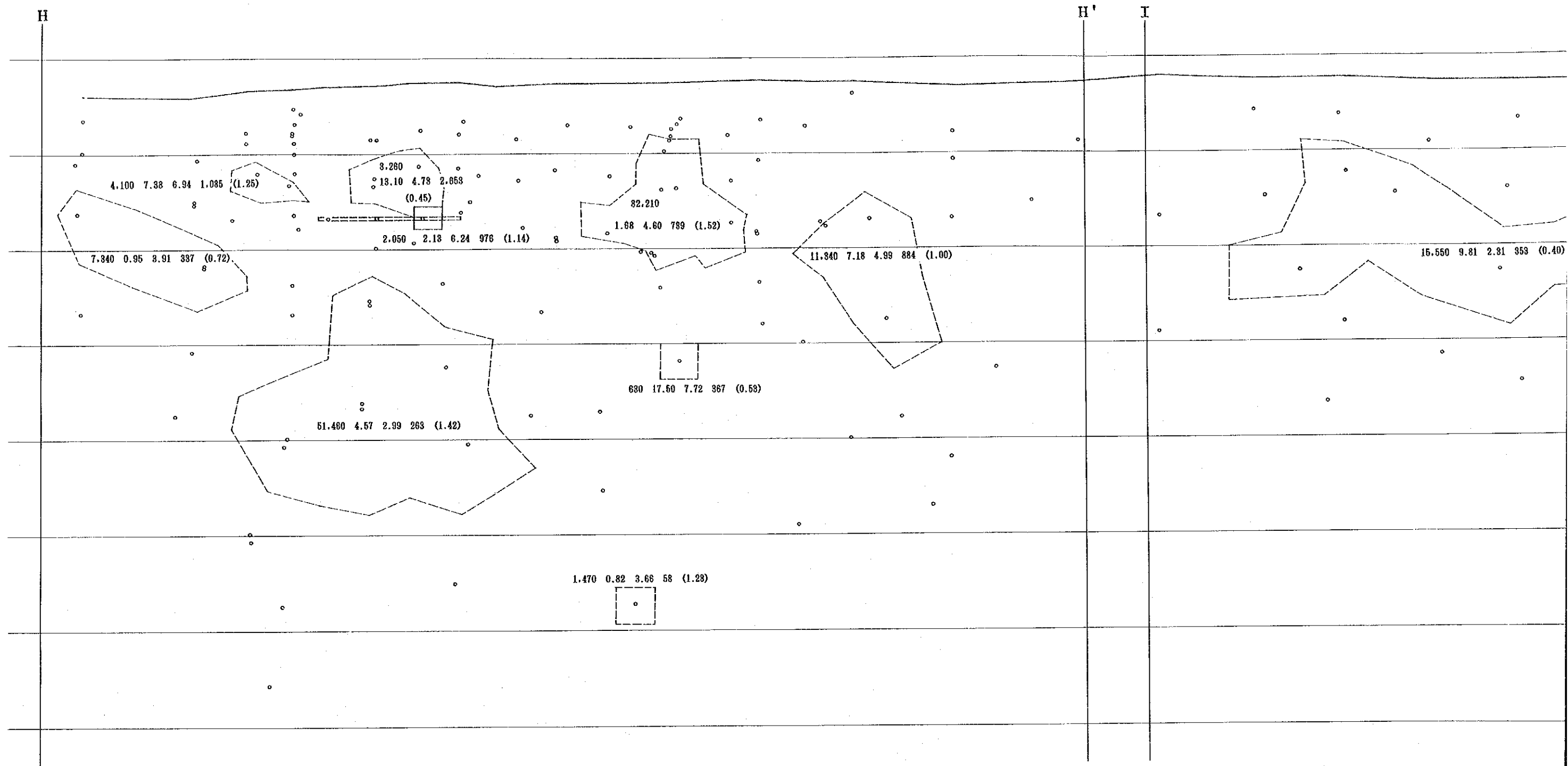


Probable Reserve
 Possible Reserve

Quantity	Pb %	Zn %	Ag g/t	(width, m)
2,680	2.63	3.18	904	(0.60)

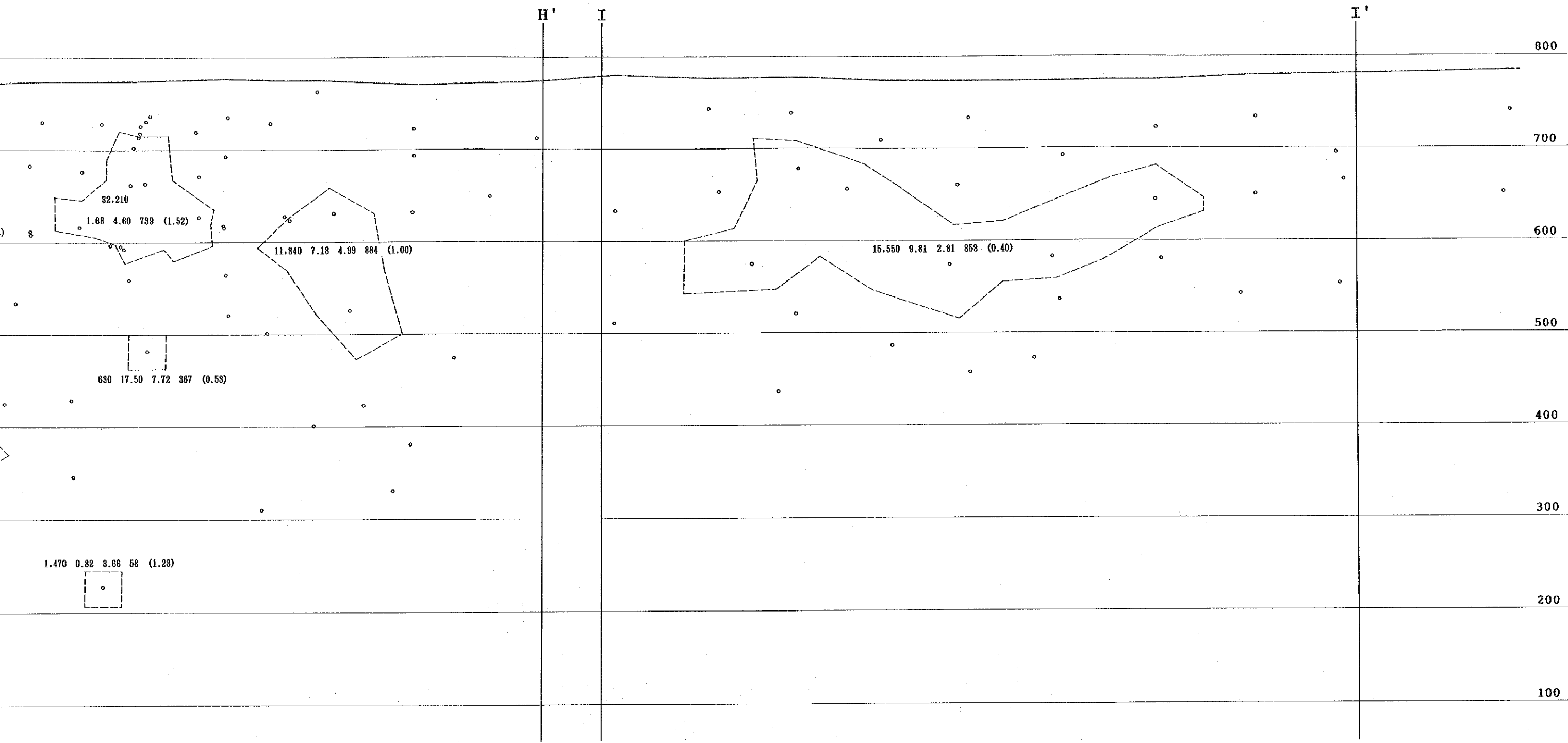


A - 4 - 9 Ore Blocks of the No. 6 Vein (South)



	Probable Reserve	Quantity	Pb %	Zn %	Ag g/t	(width, m)
	Possible Reserve	2,680	2.63	3.18	904	(0.60)

A - 4 - 10 Ore Blocks of the No.8 Vein



32.210
1.68 4.60 739 (1.52)

11.840 7.18 4.99 884 (1.00)

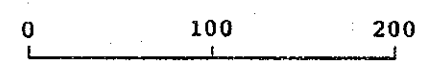
15.550 9.81 2.31 958 (0.40)

680 17.50 7.72 367 (0.58)

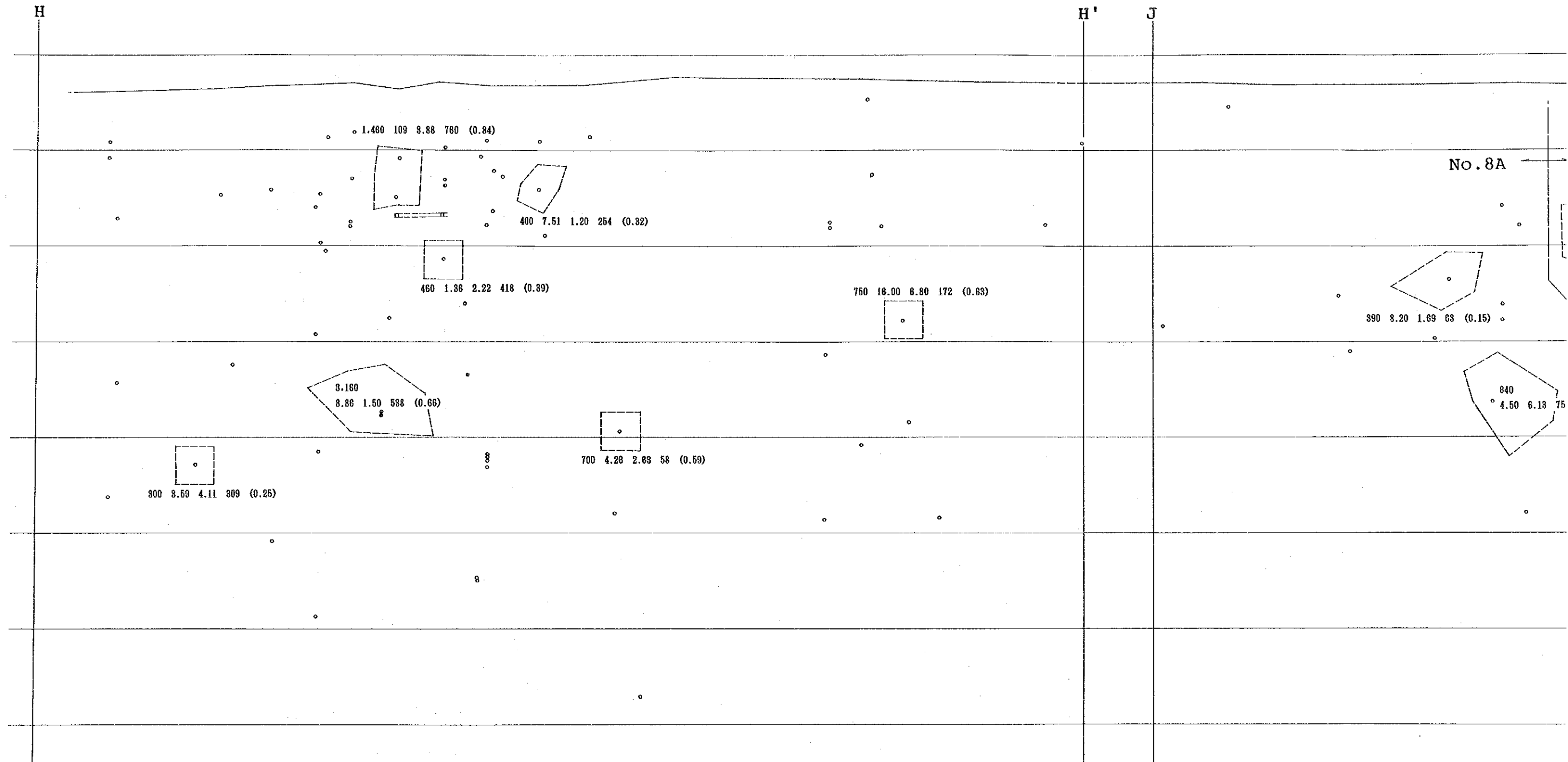
1.470 0.82 3.66 58 (1.28)

Probable Reserve
 Possible Reserve

Quantity	Pb %	Zn %	Ag g/t	(width, m)
2,680	2.63	3.18	904	(0.60)

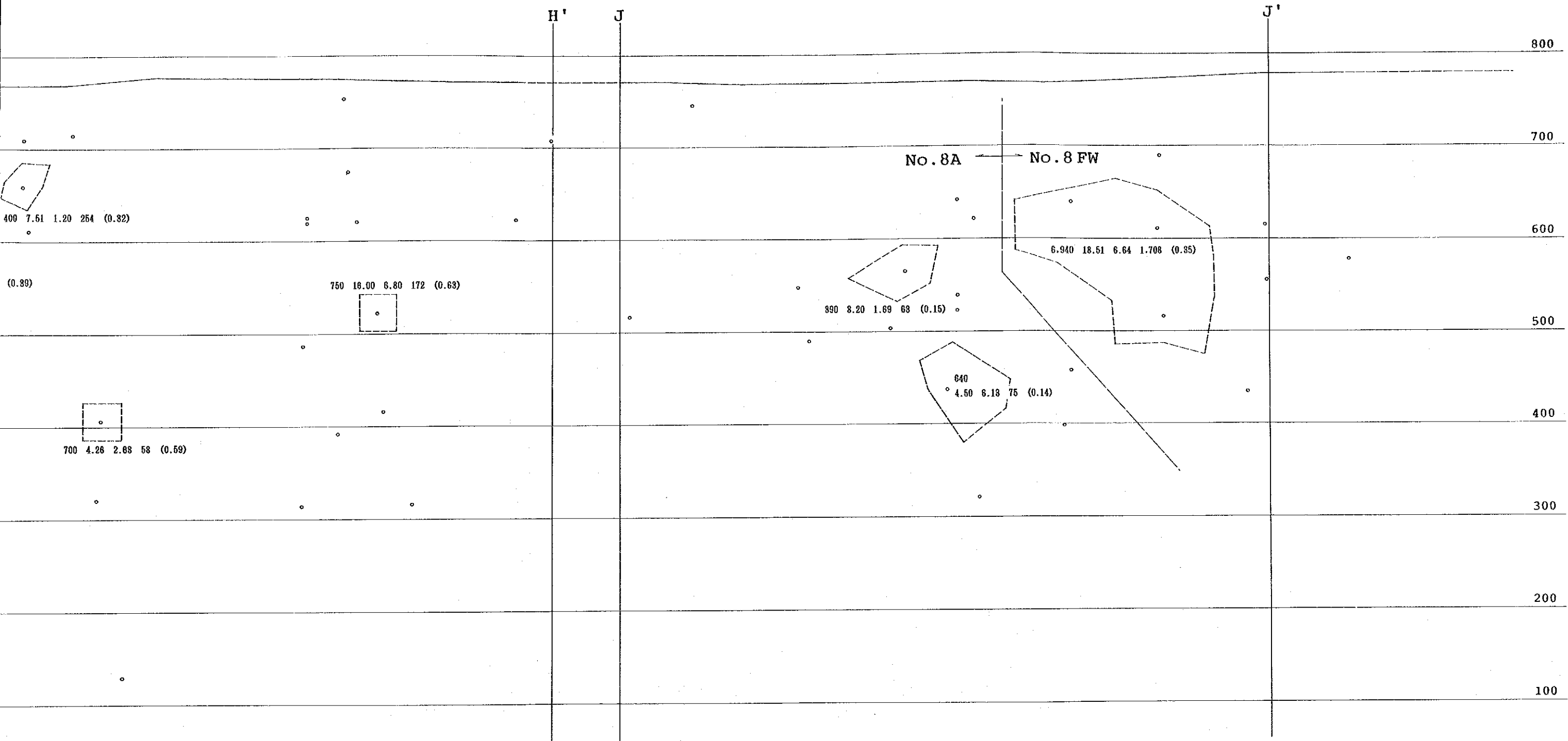


A - 4 - 10 Ore Blocks of the No.8 Vein



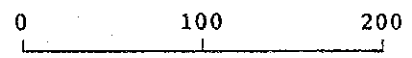
	Probable Reserve	Quantity	Pb %	Zn %	Ag g/t	(width, m)
	Possible Reserve	2,680	2.63	3.18	904	(0.60)

A - 4 - 11 Ore Blocks of the No.8A and 8FW Vein

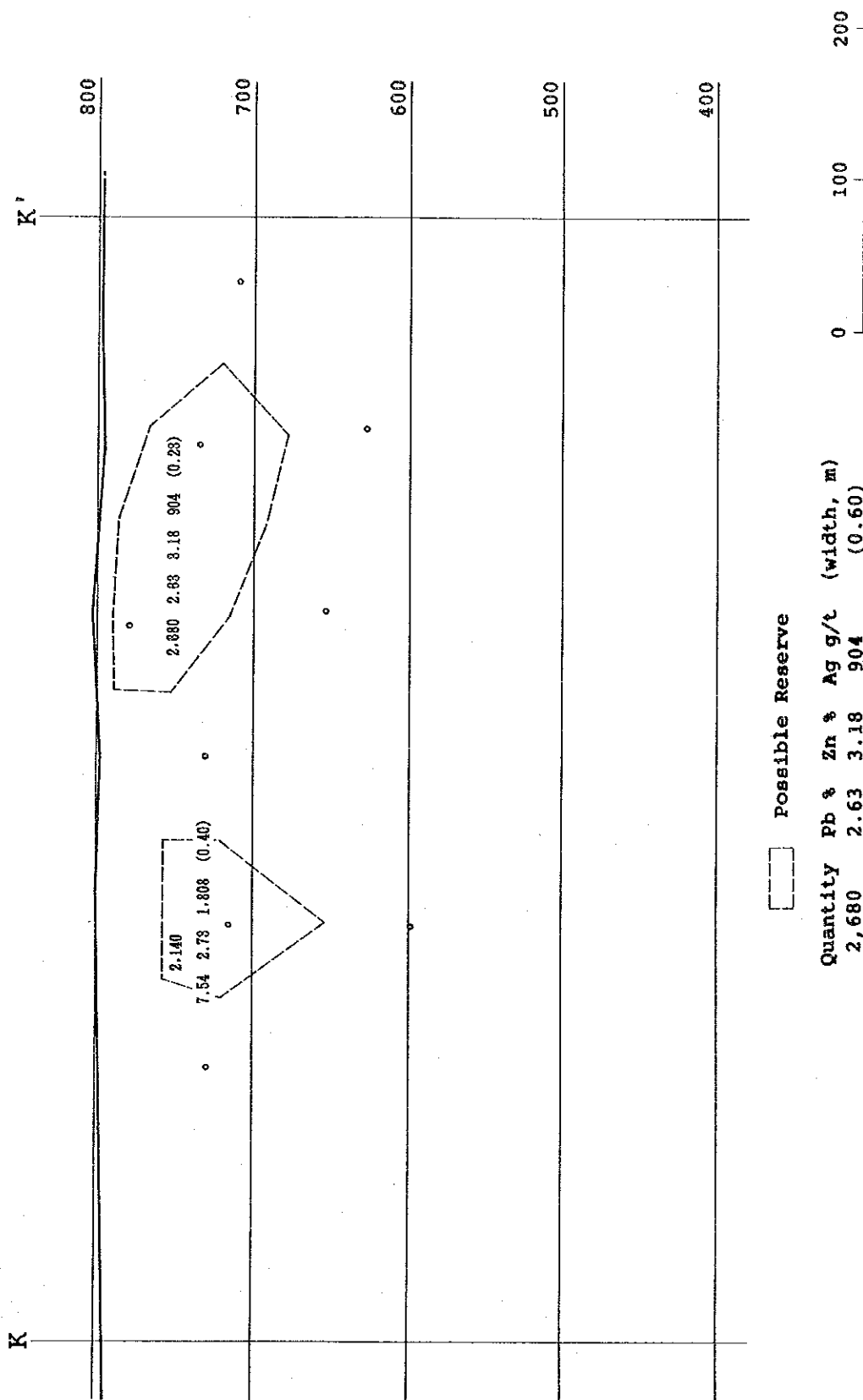


Probable Reserve
 Possible Reserve

Quantity	Pb %	Zn %	Ag g/t	(width, m)
2,680	2.63	3.18	904	(0.60)



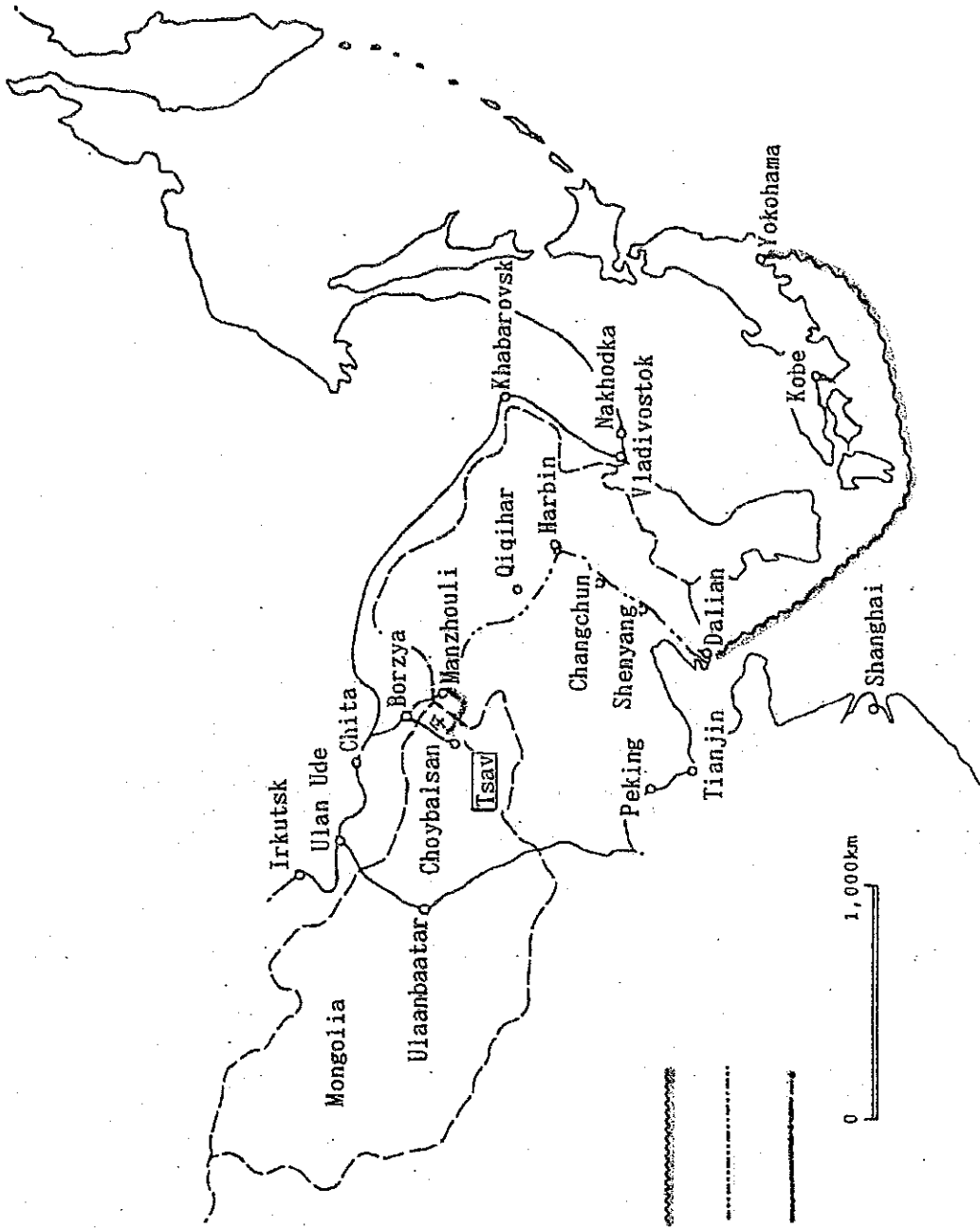
A - 4 - 11 Ore Blocks of the No. 8A and 8FW Vein



A - 4 - 12 Ore Blocks of the No.10 Vein

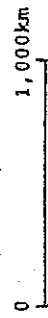
B - 1 Table of Equipment and Materials

Items	Specifications	Units	Quantity
1. Distribution power plant			
Cables:	3kV CE 60mm ² -3C	m	180
	3kV CE-MAXV 38mm ² -3C	m	600
High-tension cable terminal treatment	3kV outdoor 60mm ² -3C	No. of them	6
	3kV indoor 38mm ² -3C	"	8
2. Distribution panel equipment			
Transmission panel:	Indoor self-supporting type (Metal enclosed type)	No. of panels	1
High-tension switch panel A:	Indoor self-supporting type (Metal enclosed type)	"	1
High-tension switch panel B:	Indoor self-supporting type (Metal enclosed type)	"	1
Deep well pump control panel:	Indoor wall type (Metal enclosed type)	"	1
3. Generator equipment			
Generator panel:	Indoor self-supporting type (Metal enclosed type)	"	1
Spare generator panel:	Indoor self-supporting type (Metal enclosed type)	"	1
4. Temporary construction materials			
(1) Insulating materials:	t = 50mm	m ²	149
	t = 50mm, ϕ = 50mm	m	460
	t = 50mm, ϕ = 100mm	m	134
(2) For loading			
Unit bathes:	Showers, valves used for both hot and cold water, lighting, Materials FRP	No. of bathes	3
Toilet units:	Flushing, Japanese style, no special type for men's use	No. of units	3
Boilers for hot water supply	100V, 50Hz	No. of boilers	3
Wash stands:	Valves used for both hot and cold water, mirror stands, lighting	No. of stands	6
Sewage purifier:	Purifier for 21 people	No. of purifiers	1
Valves:	2'bronze valve (5k screw type) used for various places	No. of valves	20
40m/m Zn-plated steel pipes	Zn-plated steel pipes	No. of pipes	25



Legends

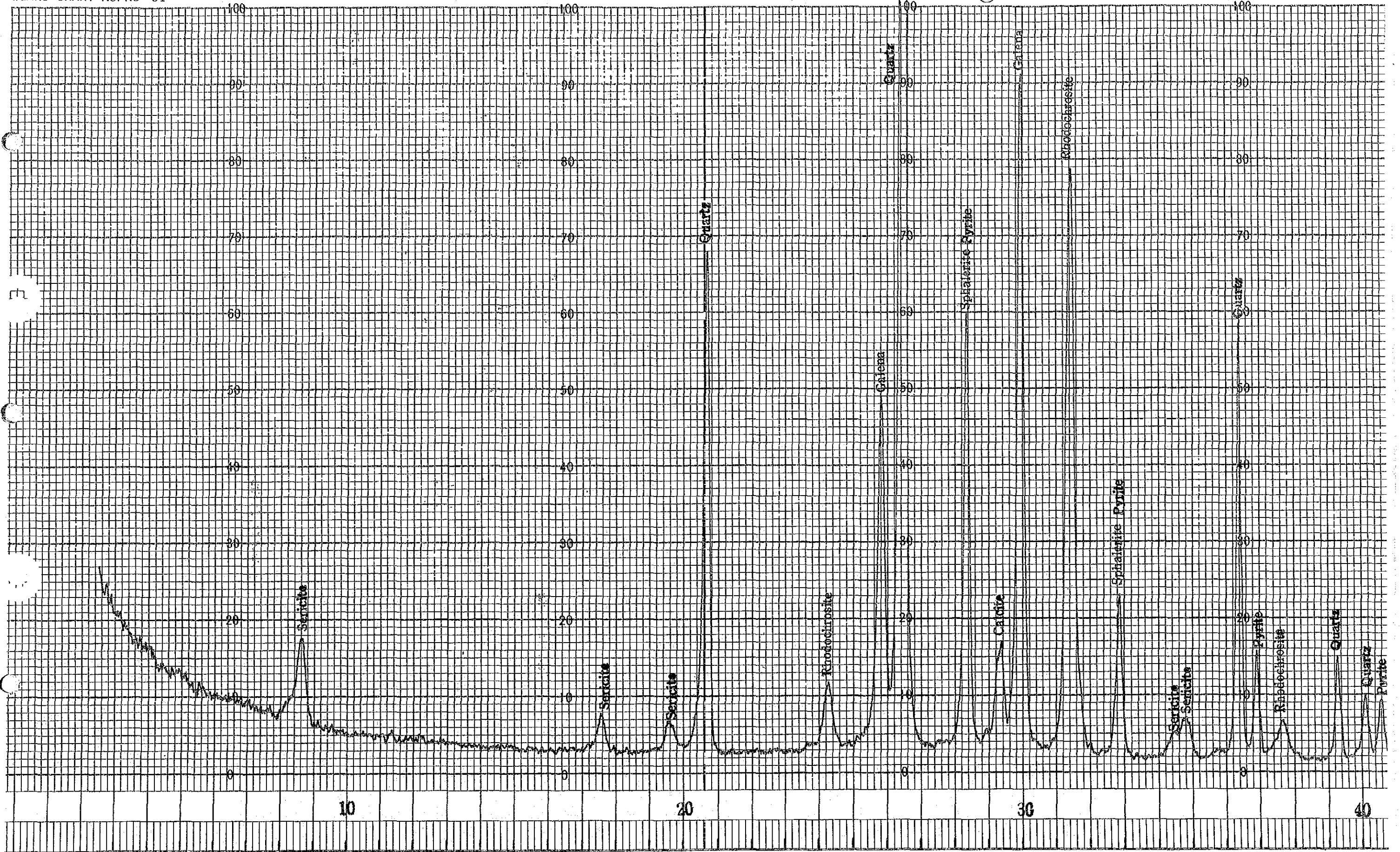
- Marine transportation
- Transportation by train
- Transportation by truck

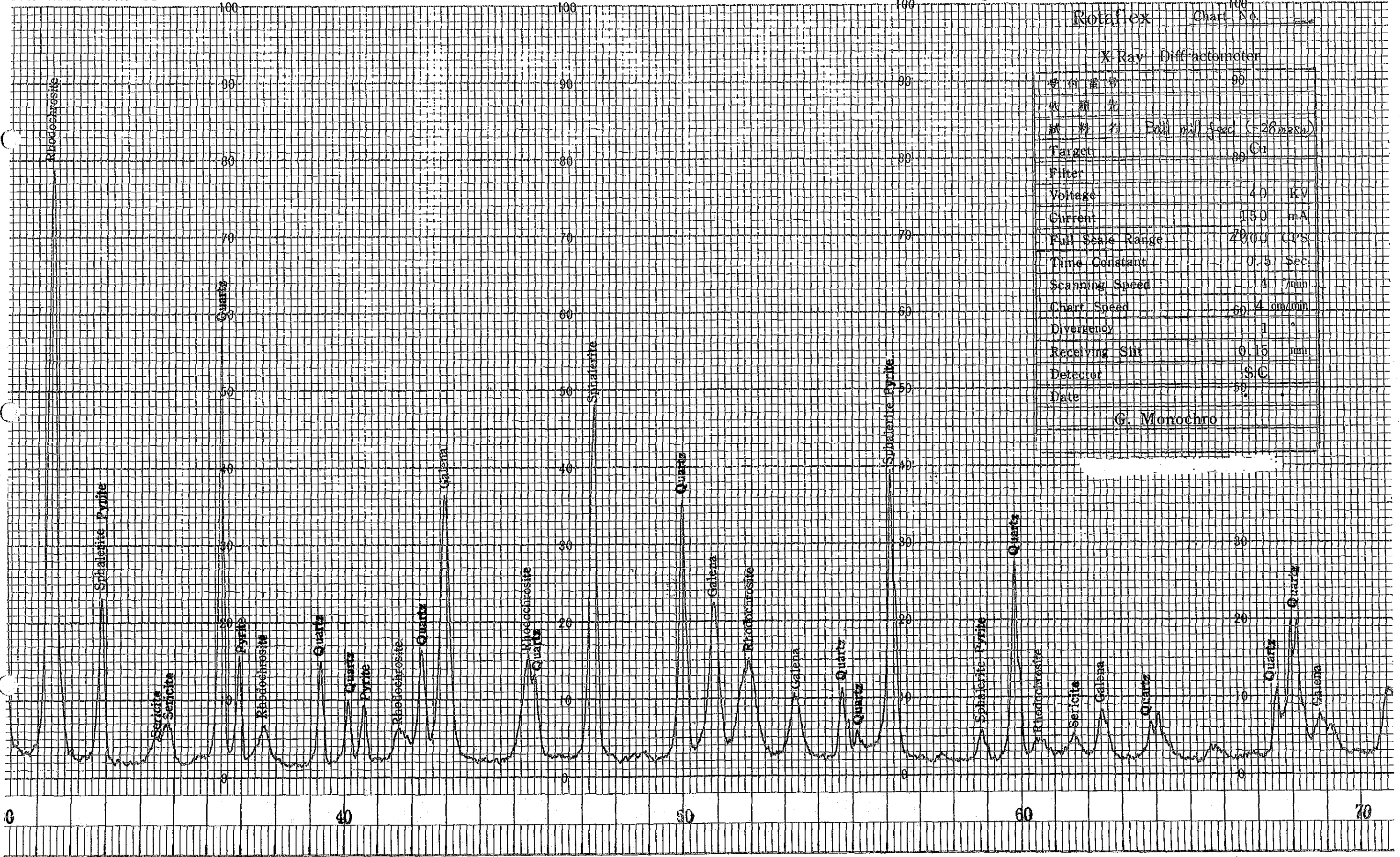


B - 2 Route for Transporting Equipment and Materials

X-ray Diffraction Charts

Sample: Ball mill feed (-28 mesh)





Rotaflex

Chart No.

X-Ray Diffractometer

電 源 電 圧	90
依 頼 先	
試 料 名	Ball mill feed (-20mesh)
Target	Cu
Filter	
Voltage	40 KV
Current	150 mA
Full Scale Range	7000 CPS
Time Constant	0.5 Sec
Scanning Speed	4 /min
Chart Speed	60.4 cm/min
Divergency	1°
Receiving Slit	0.15 mm
Detector	SiC
Date	
G. Monochro	

Microphotographs of Polished Sections

Samples : Crude ore

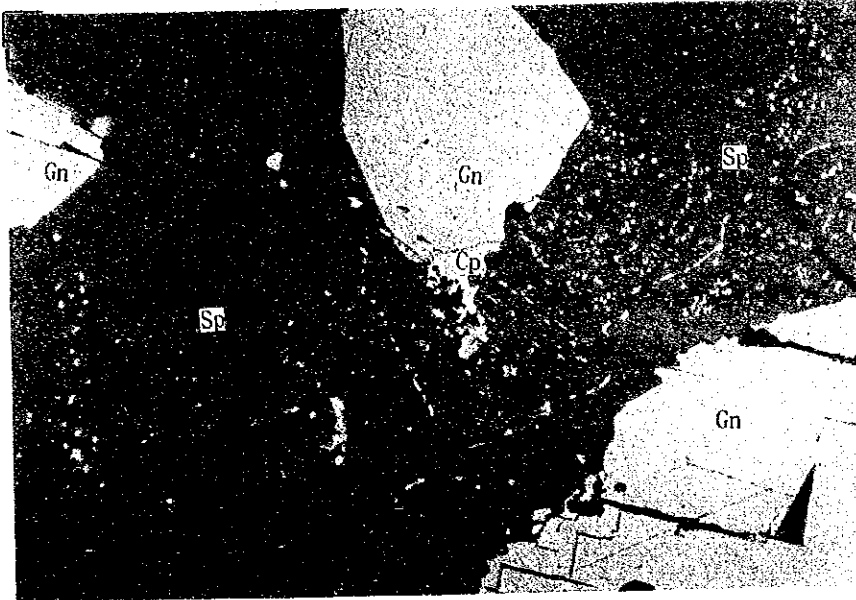
Pb Concentrate(No. 9)

Zn Concentrate(No. 9)

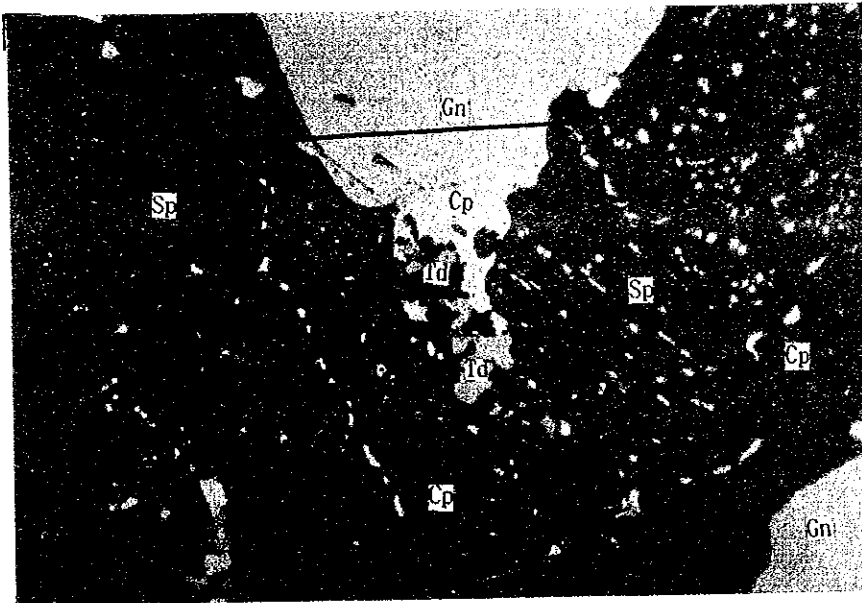
[Abbreviations]

Cp : Chalcopyrite
El : Electrum
G : Gangue minerals
Gn : Galena
Poly : Polybasite
Py : Pyrite
Qz : Quartz
Sp : Sphalerite
Td : Tetrahedrite

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm

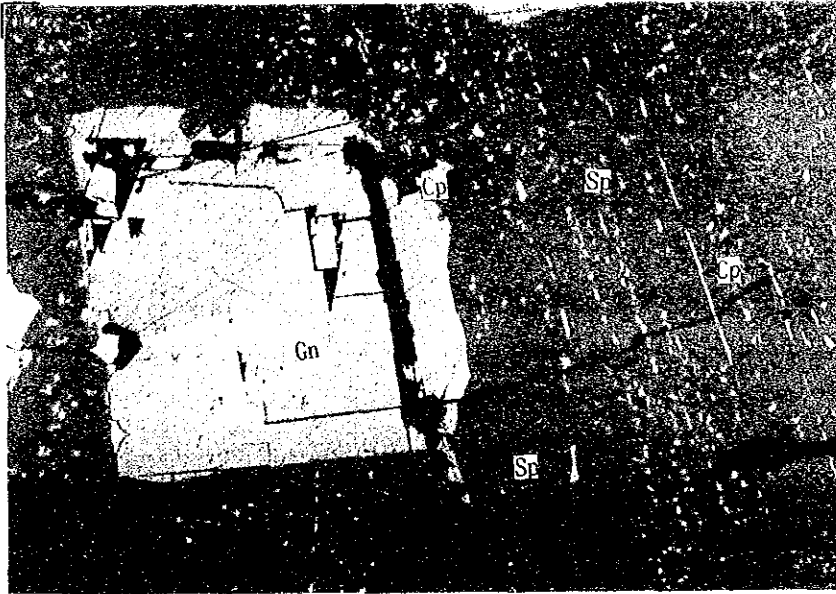


0 0.1mm

EPMA No. 1

Film No. 1736-00.0

Microphotographs of Polished Sections
(Reflected light)

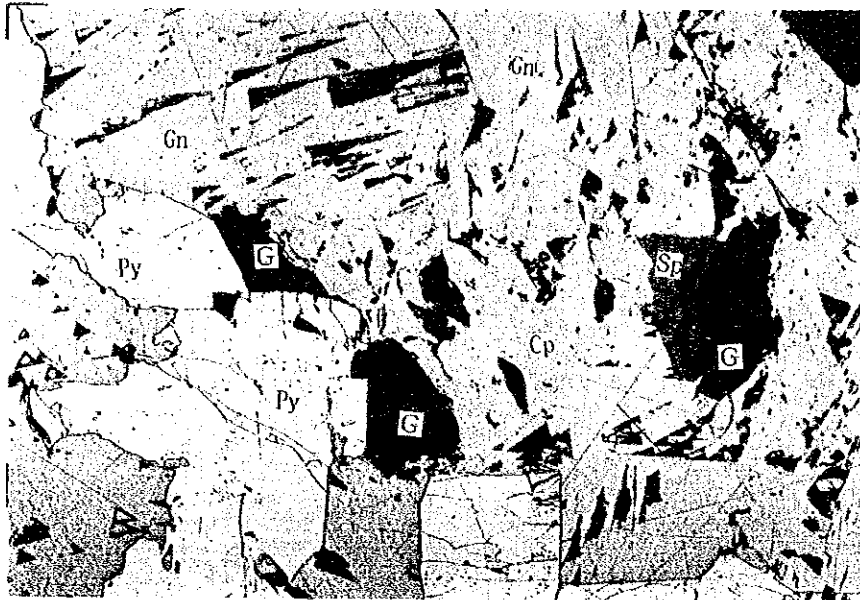


0 0.2mm

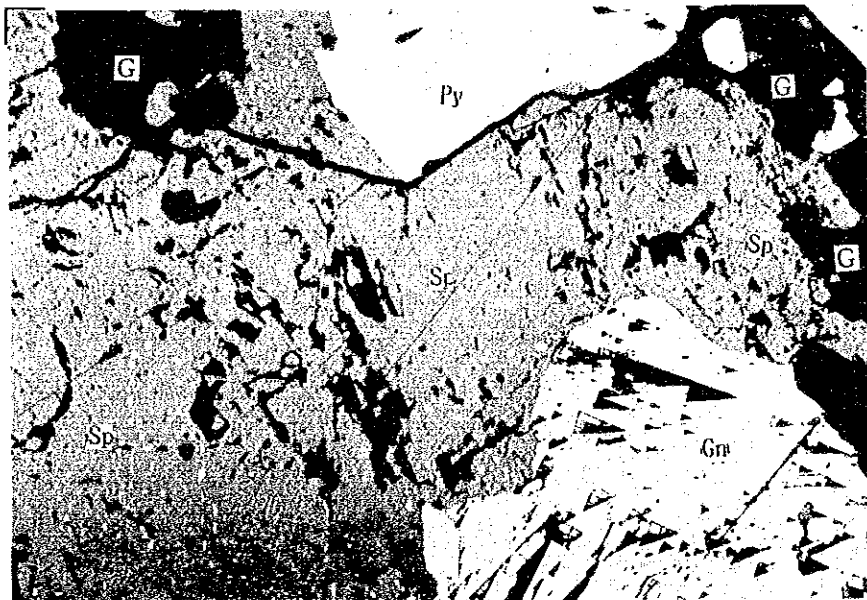


0 0.1mm

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm

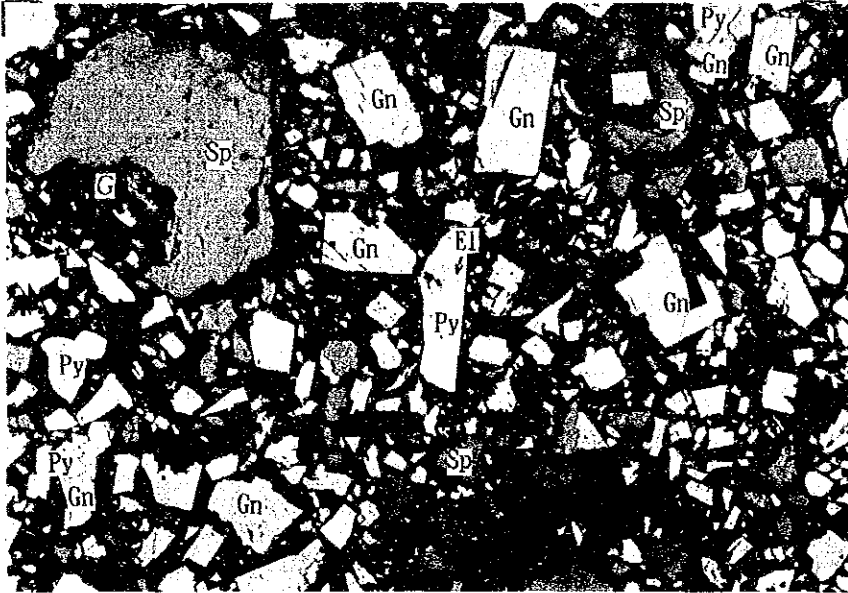


0 0.2mm

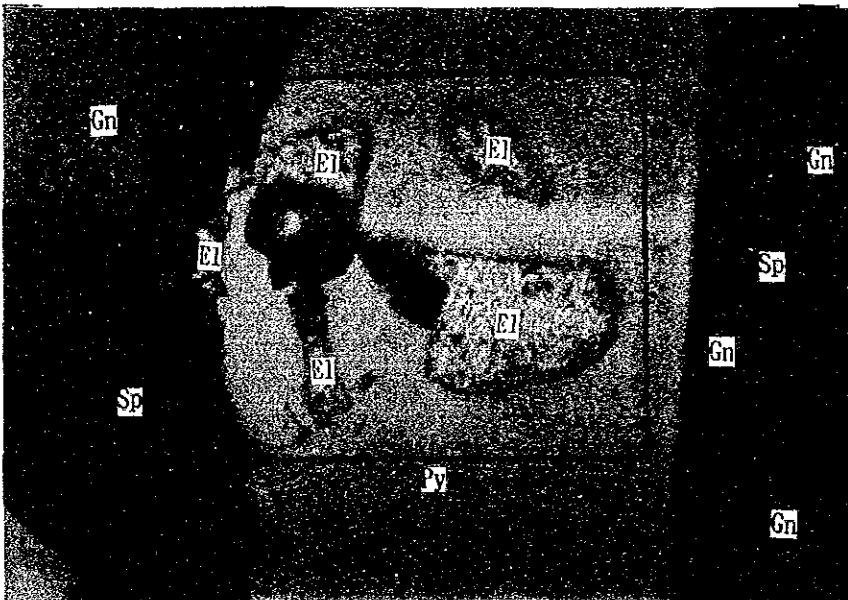
Pb Concentrate(No. 9)

PL-4

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm



0 0.02mm

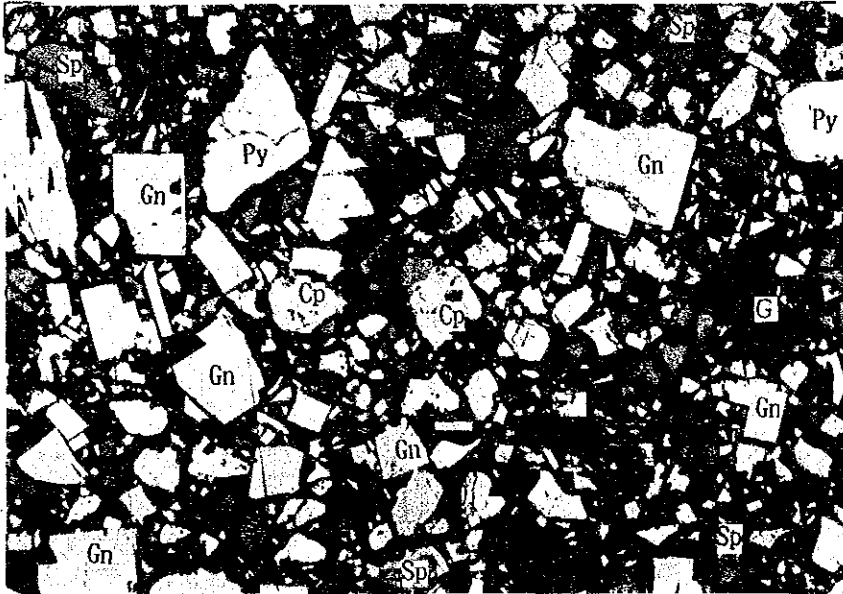
EPMA No. 2

Film No. 0464 2.0

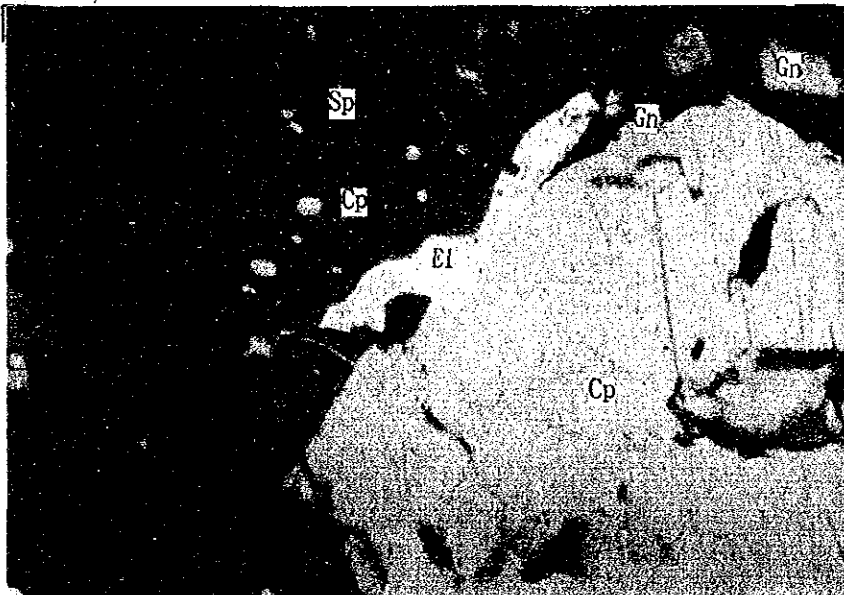
Pb Concentrate (No. 9)

PL - 5

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm



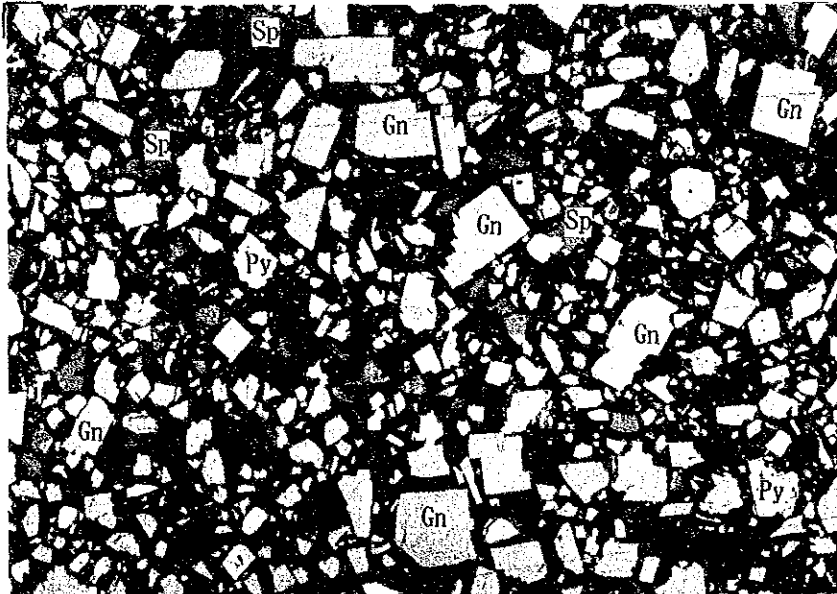
0 0.02mm

Film No 0764 5.3

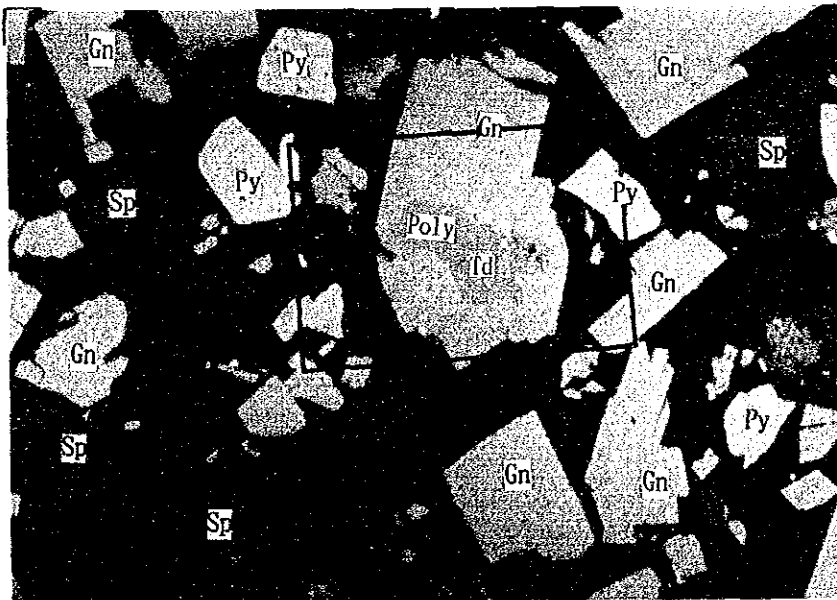
Pb Concentrate(No.9)

PL-6

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm



0 0.04mm

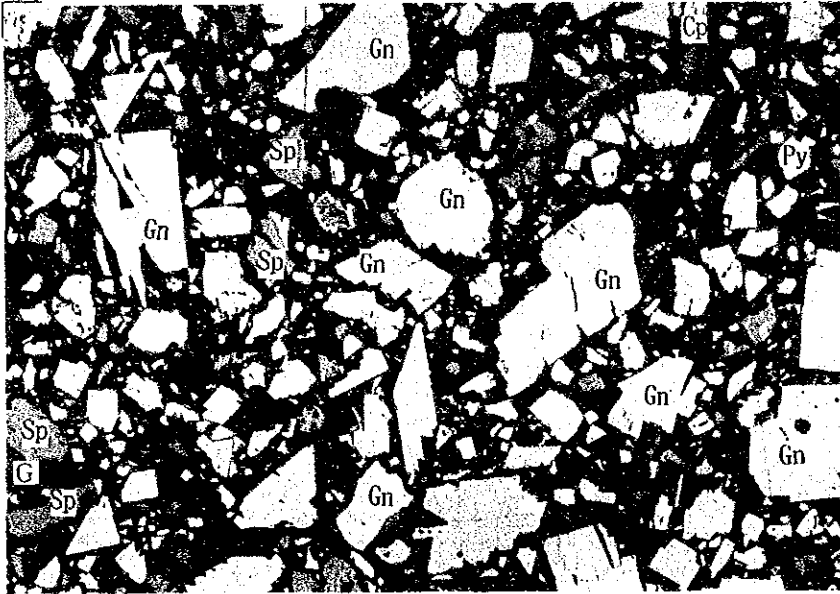
EPMA No. 3

Film No. 0464-14.15

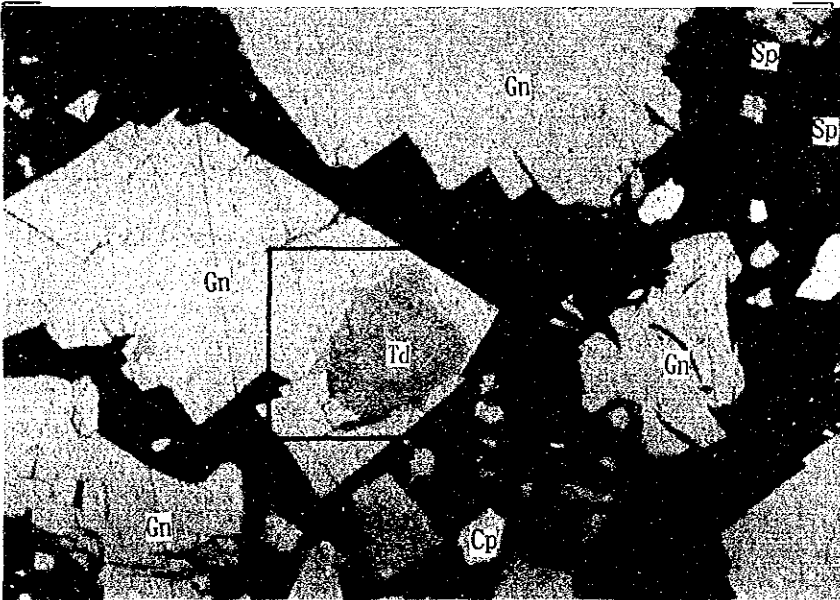
Pb Concentrate(No. 9)

PL-7

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm



0 0.04mm

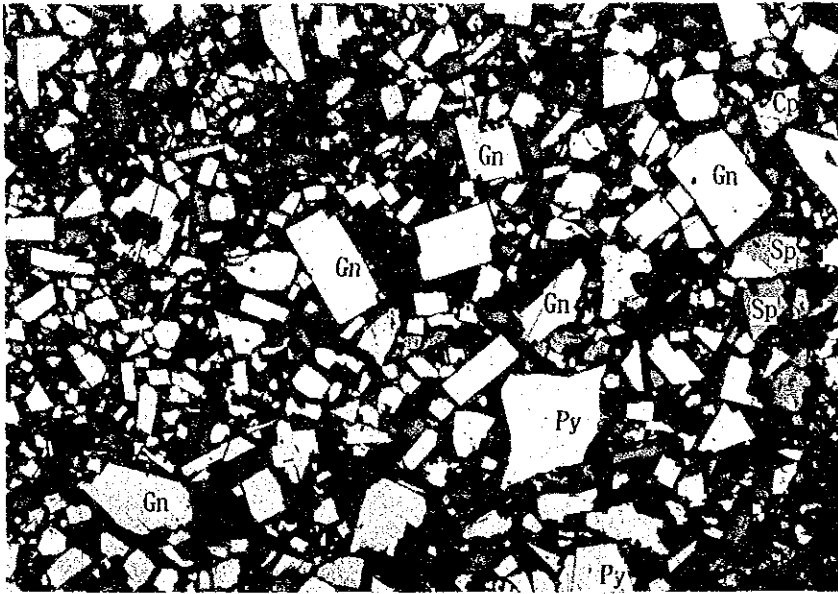
BPMA No. 4

Film No0464- 9. 8

Pb Concentrate(No. 9)

PL-8

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm



0 0.04mm

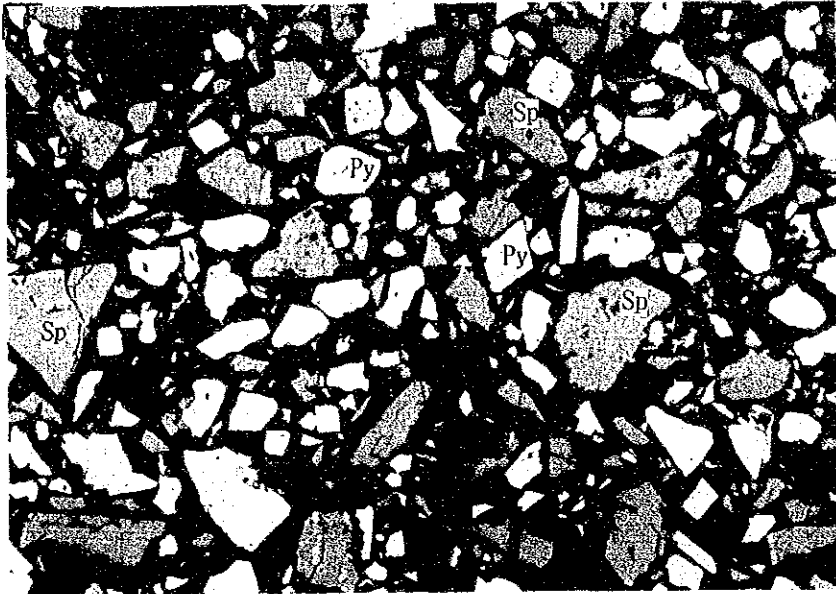
EPMA No. 5

Film No. 0964-19-18

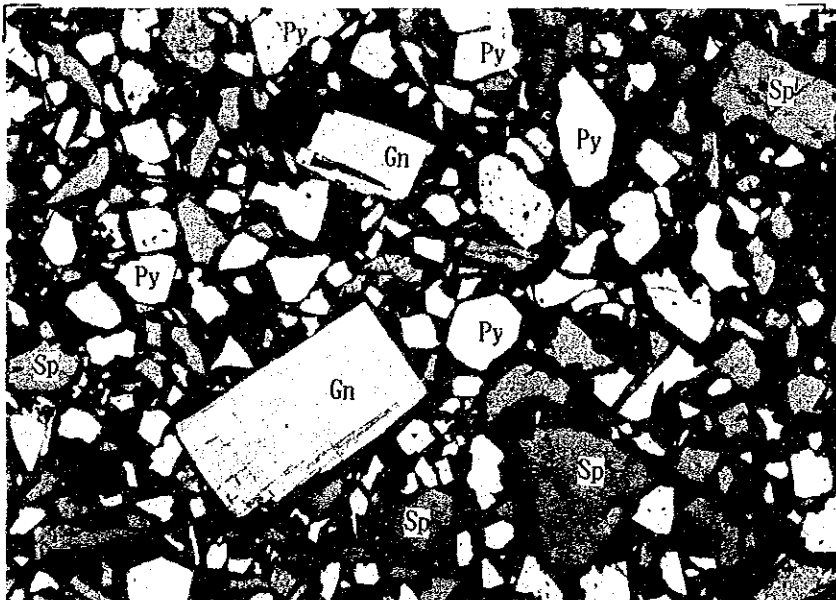
Zn Concentrate(No.9)

PL-9

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm

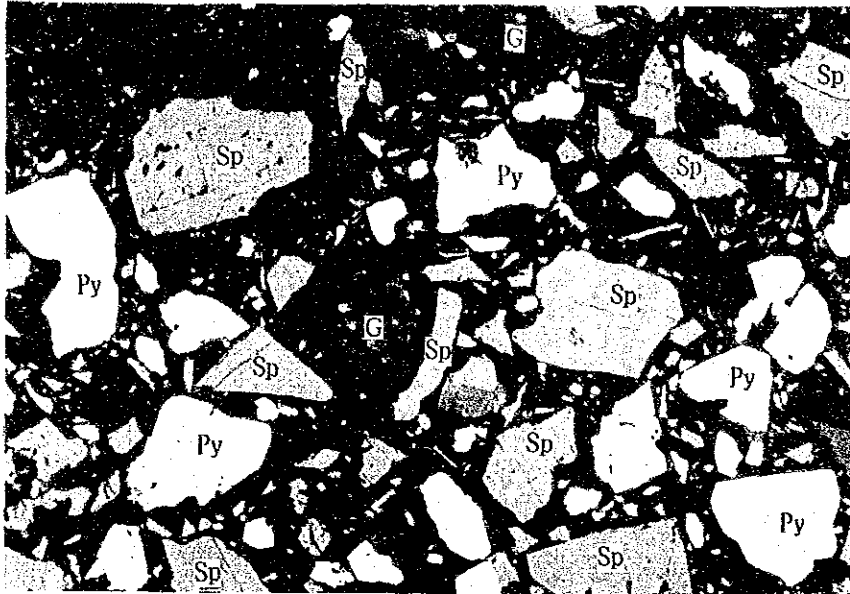


0 0.2mm

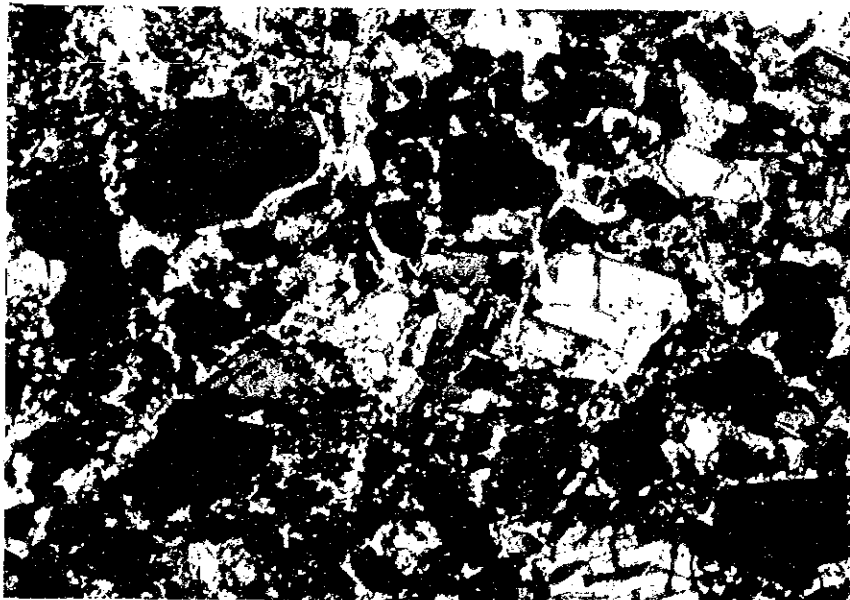
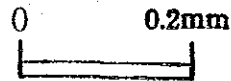
Film No. 0466-1-2

Zn Concentrate(No. 9)

PL-10



Reflected light
Plain polarized light



Transmitted light
Plain polarized light

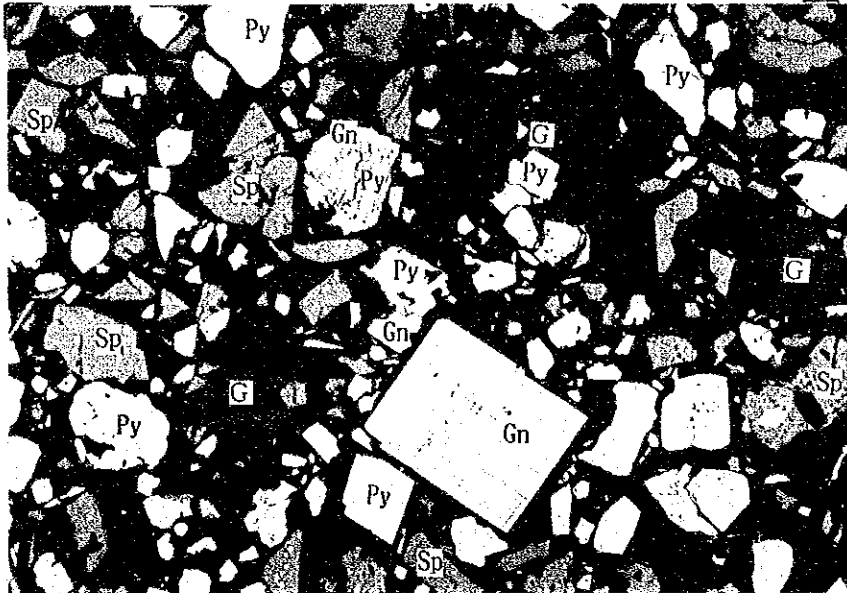


Film No. 0464-11-12

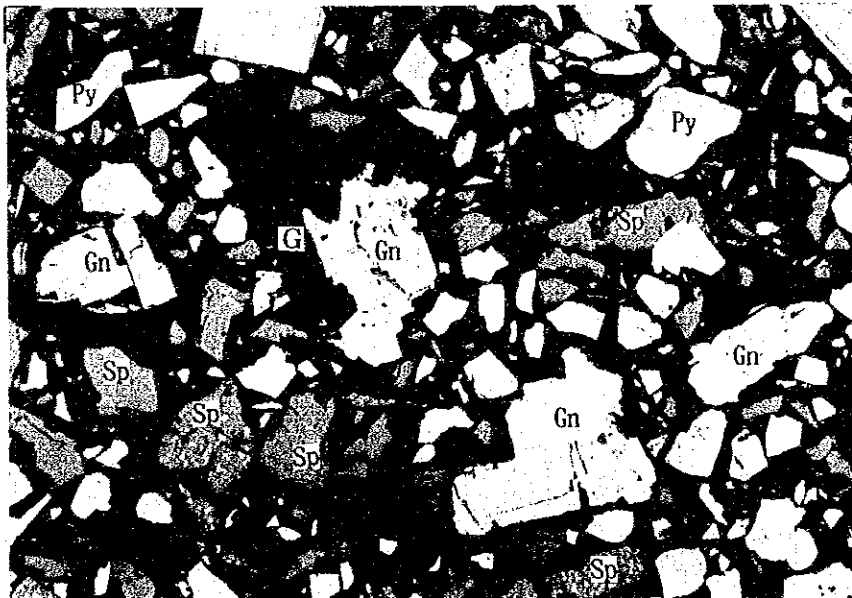
Zn Concentrate(No. 9)

PL-11

Microphotographs of Polished Sections
(Reflected light)



0 0.2mm



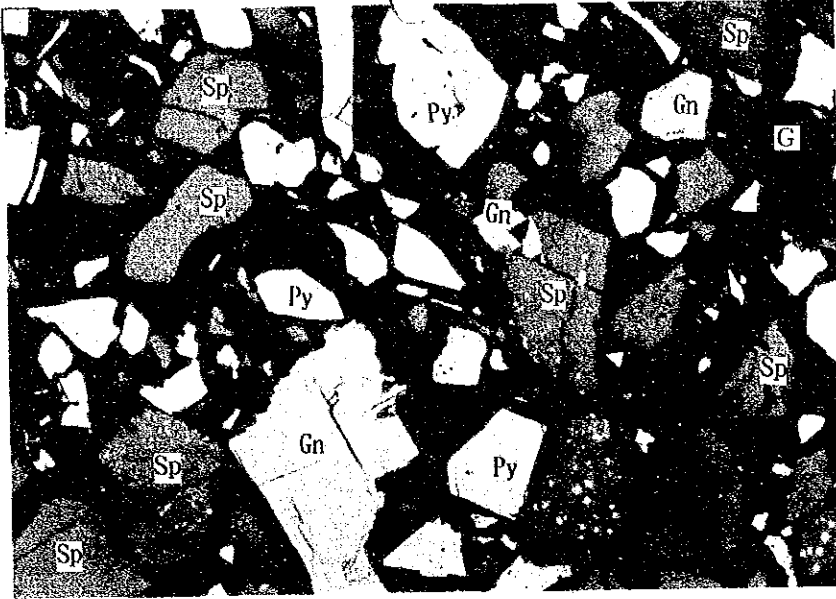
0 0.2mm

Film No 0461-6-7

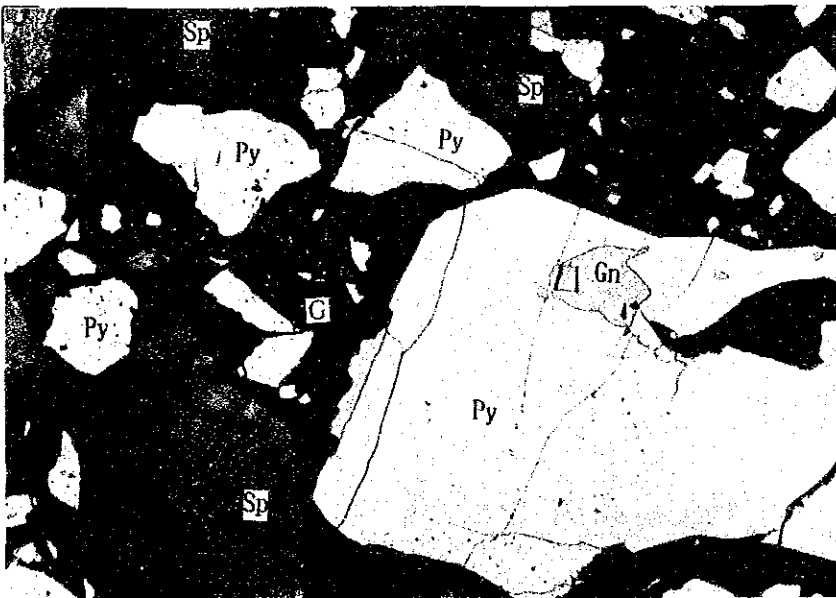
Zn Concentrate(No. 9)

PL-12

Microphotographs of Polished Sections
(Reflected light)



0 0.1mm



0 0.1mm

Results of EPMA analysis

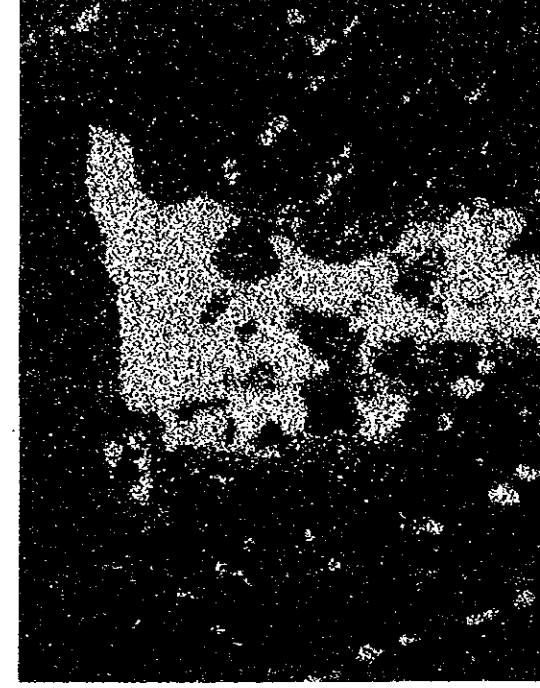
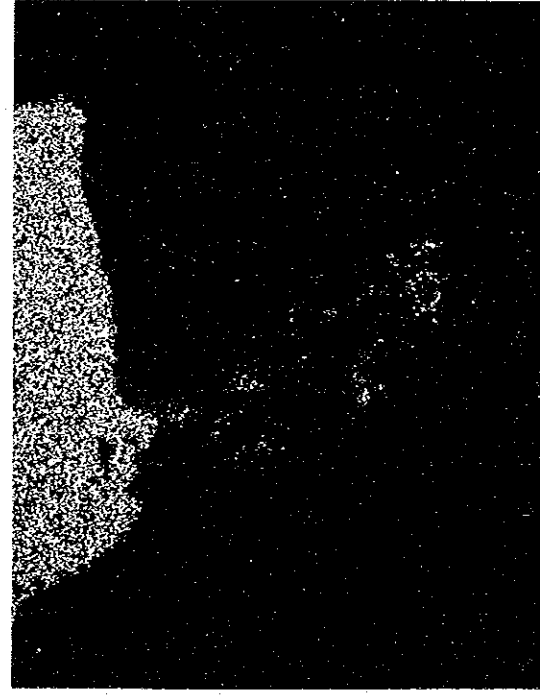
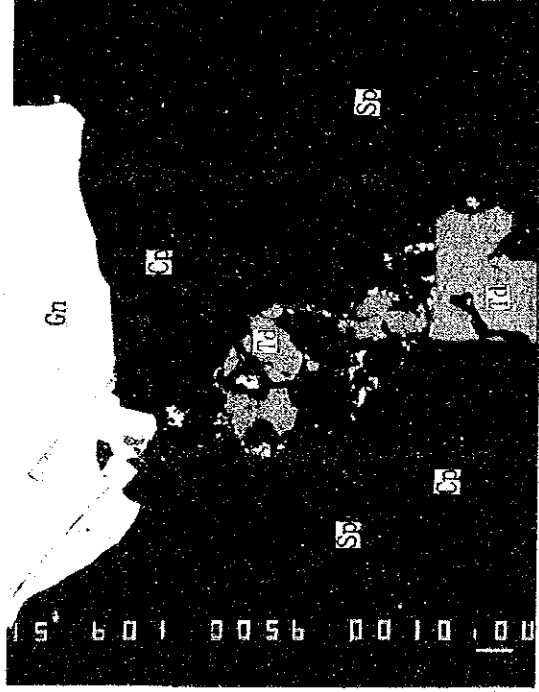
[Abbreviations]

Cp : Chalcopyrite
El : Electrum
Gn : Galena
Poly : Polybasite
Py : Pyrite
Qz : Quartz
Sp : Sphalerite
Td : Tetrahedrite

EPMA Test Findings

No. 1 - 1

Name of Specimen	Crude Ore #4 Vein
Acceleration Voltage	15 kV
Current of Electron-beam	0.05 μ A
Magnification	\times 600

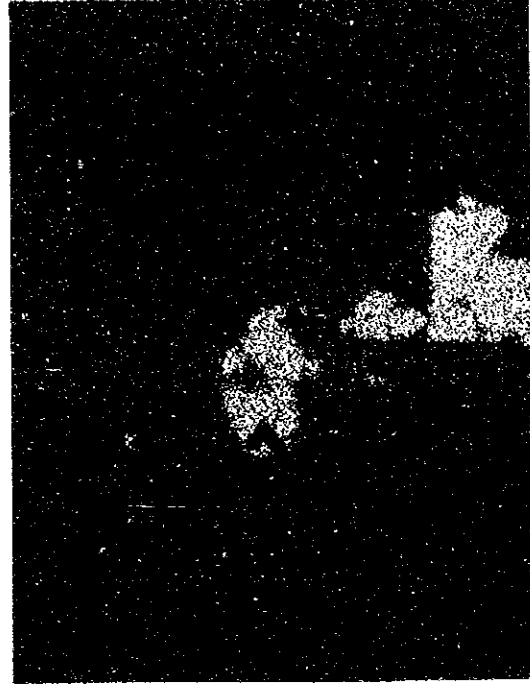
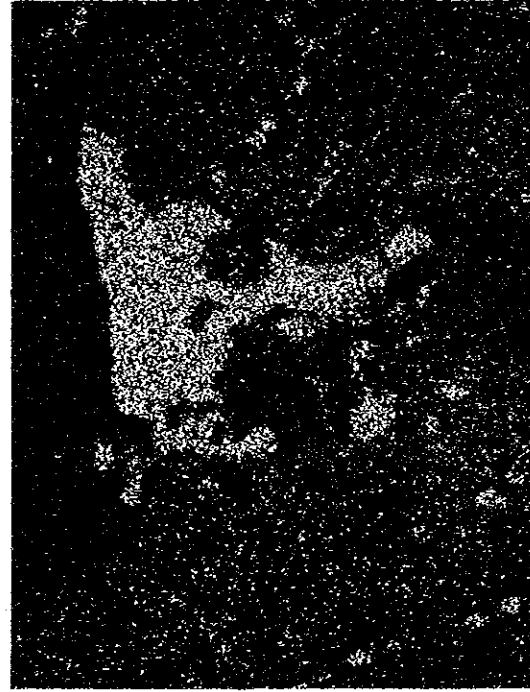


Explanation of Photograph

Composition Image	Zn
	Cu
	Pb



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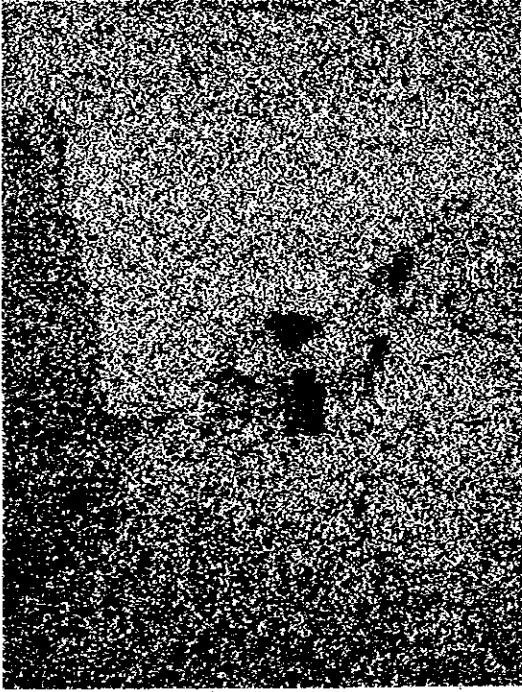
Explanation of Photograph

	Fe
	Sb
	As
	Ag

EPMA Test Findings

№ 1-2

Name of Specimen	Crude Ore #4 Vein
Acceleration Voltage	15 kV
Current of Electron-beam	0.05 μ A
Magnification	\times 600



Explanation of Photograph

S

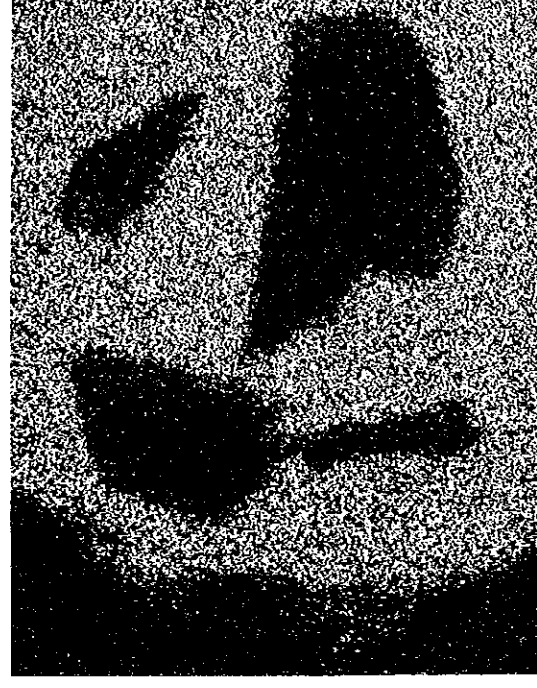
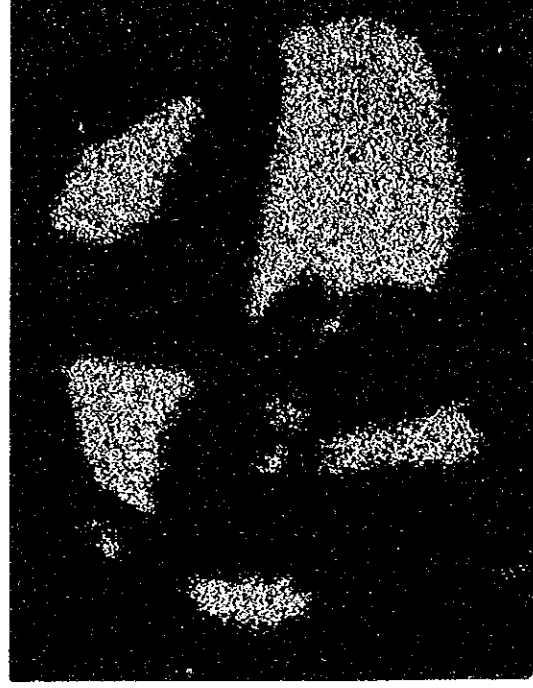
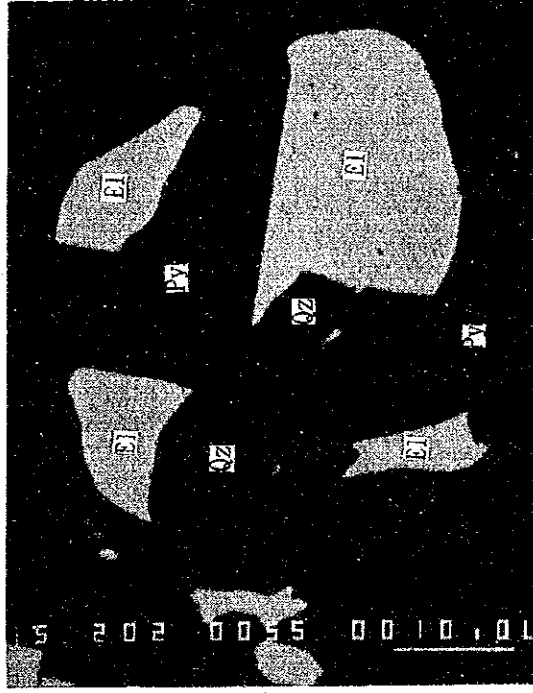


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EPMA Test Findings

№ 2

Name of Specimen	Pb-C No8
Acceleration Voltage	15 kV
Current of Electron-beam	0.05 μ A
Magnification	\times 2000



Explanation of Photograph

Composition Image	Ag
	Au
	Fe



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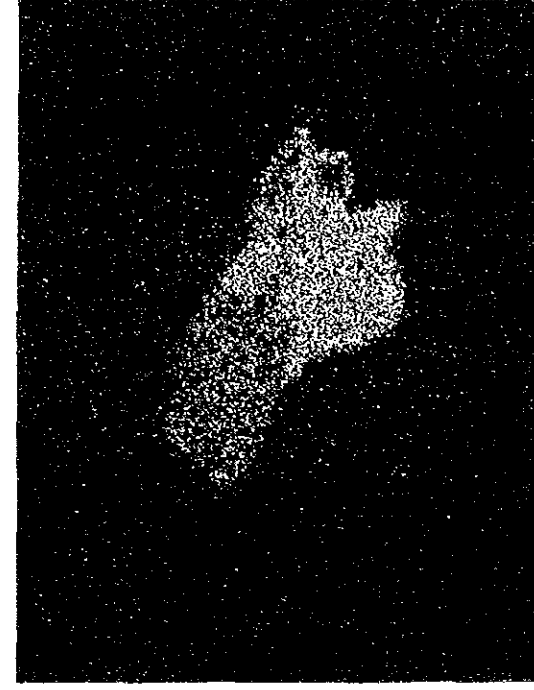
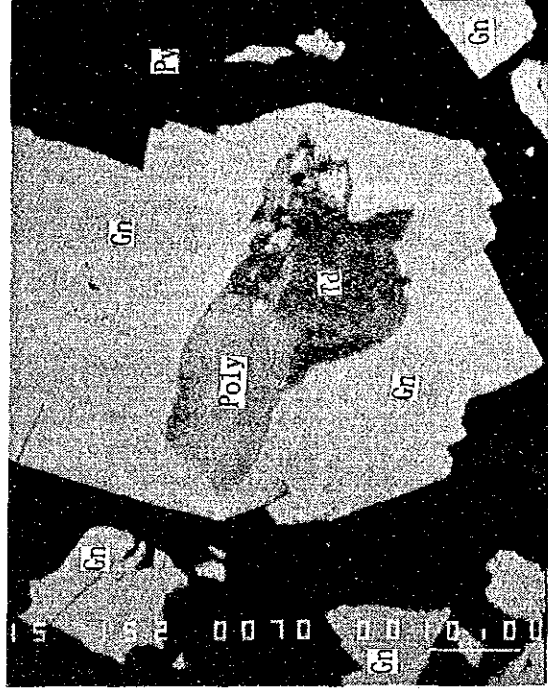
Explanation of Photograph

S	Si
---	----

EPMA Test Findings

NO 3

Name of Specimen	Pb-C No9
Acceleration Voltage	15 KV
Current of Electron-beam	0.05 μ A
Magnification	x 1500

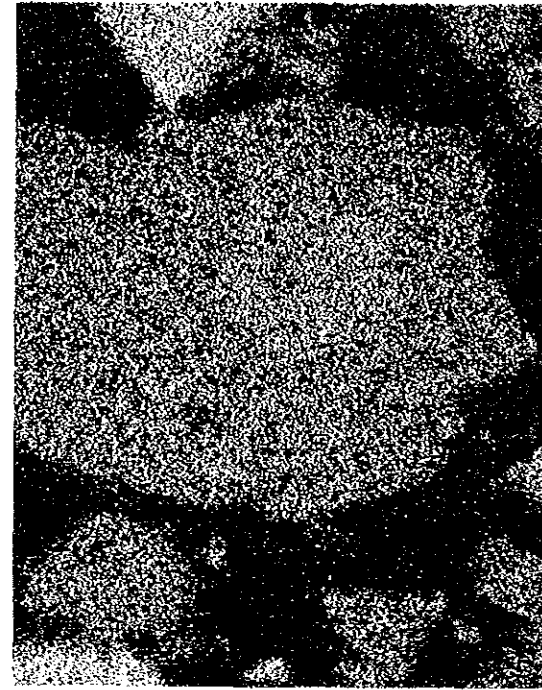
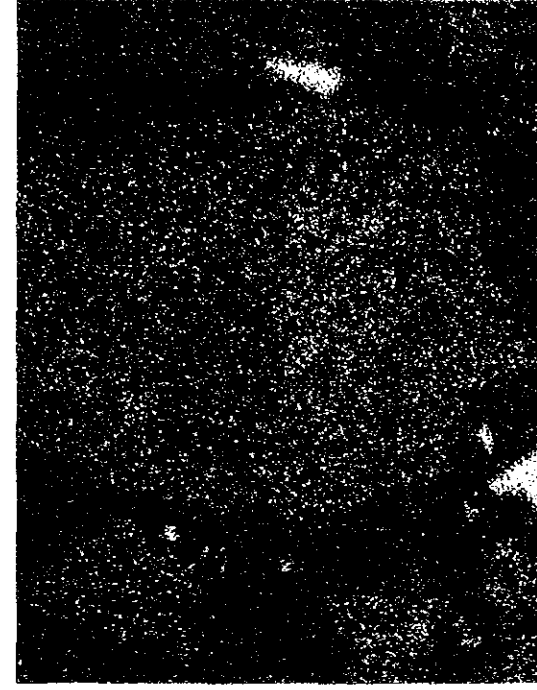


Explanation of Photograph

Composition Image	Cu	Sb
	Ag	



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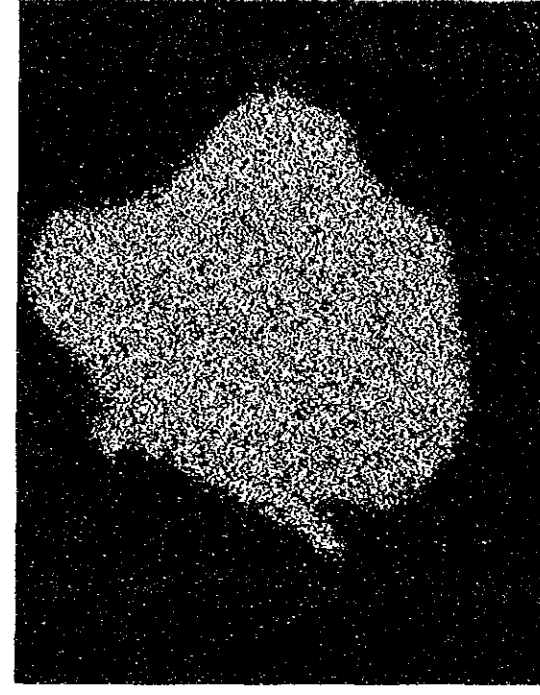
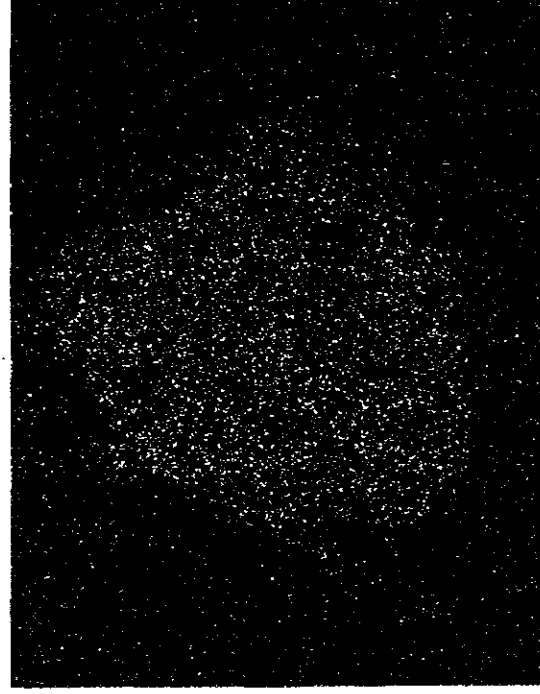
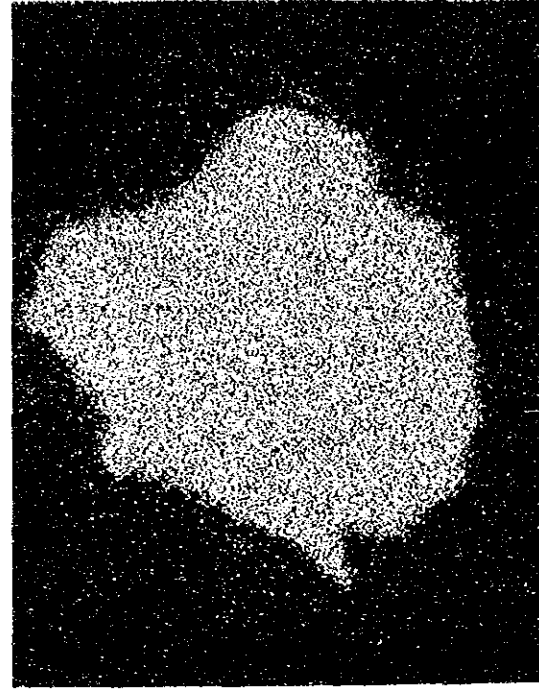
Explanation of Photograph

Pb	Zn
Fe	S

EPMA Test Findings

NO 4

Name of Specimen	Pb-C No.9
Acceleration Voltage	15 kV
Current of Electron-beam	0.05 μ A
Magnification	\times 2000

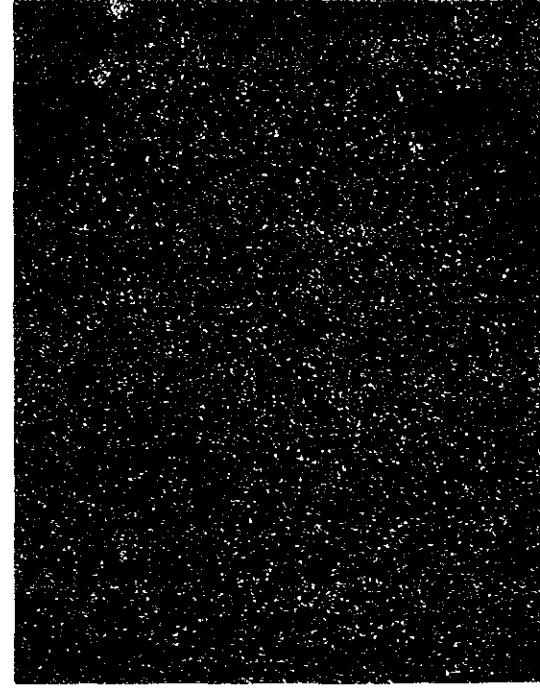
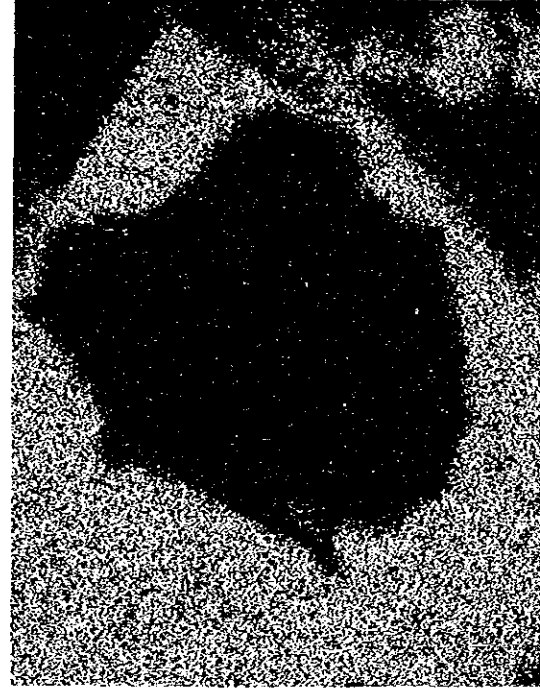


Explanation of Photograph

Composition Image	Cu
	Ag
	Sb

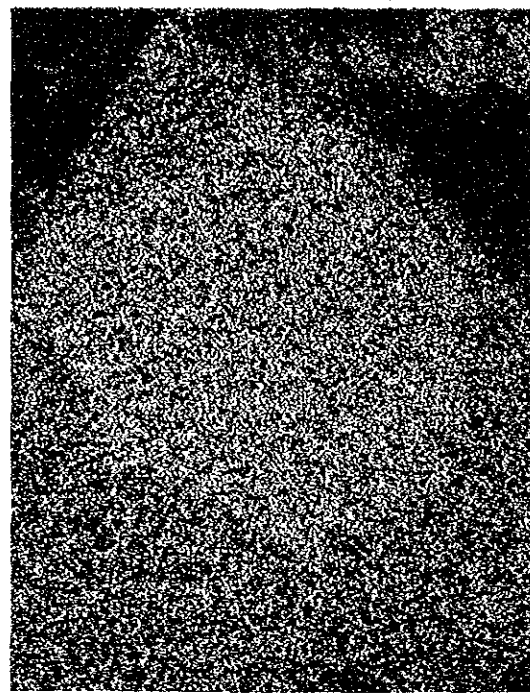
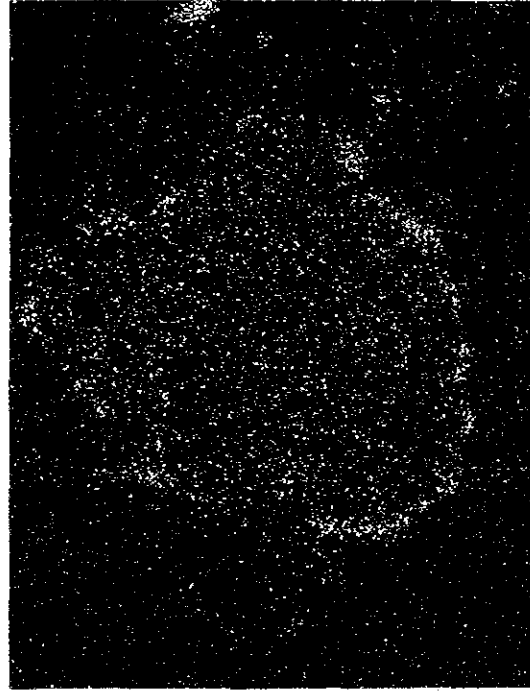


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Explanation of Photograph

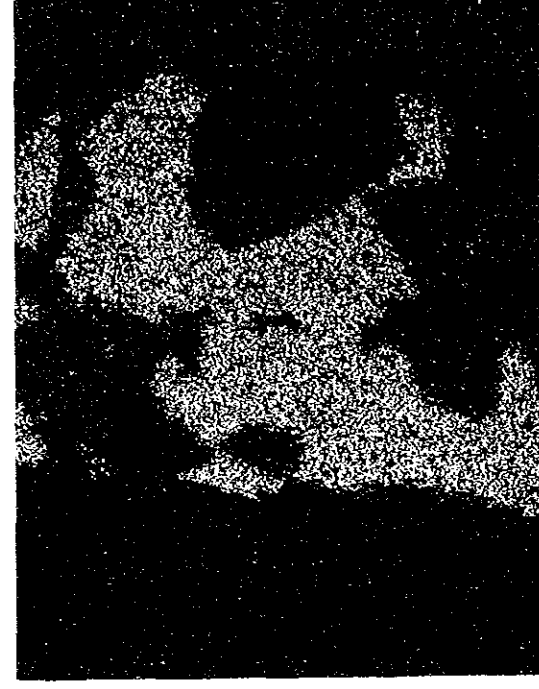
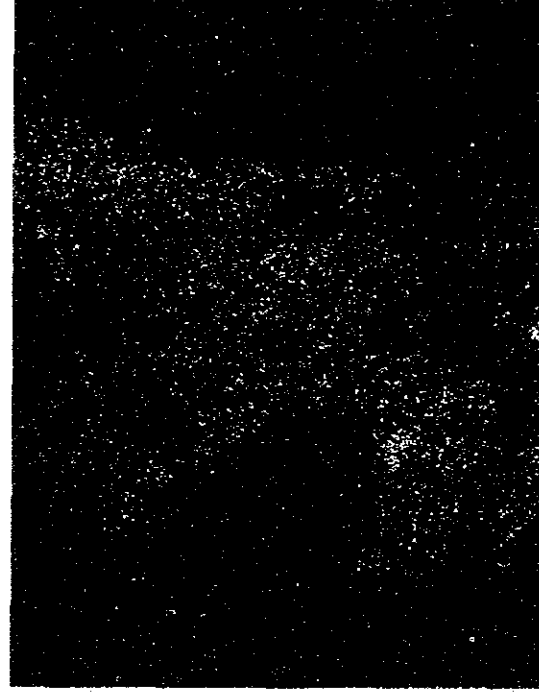
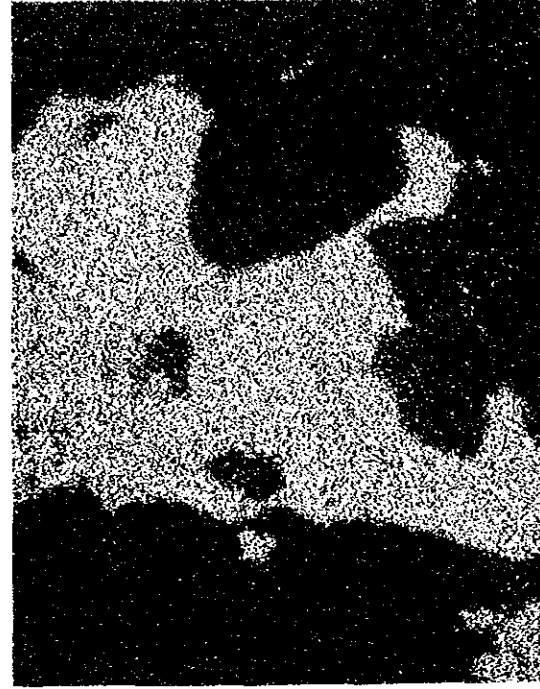
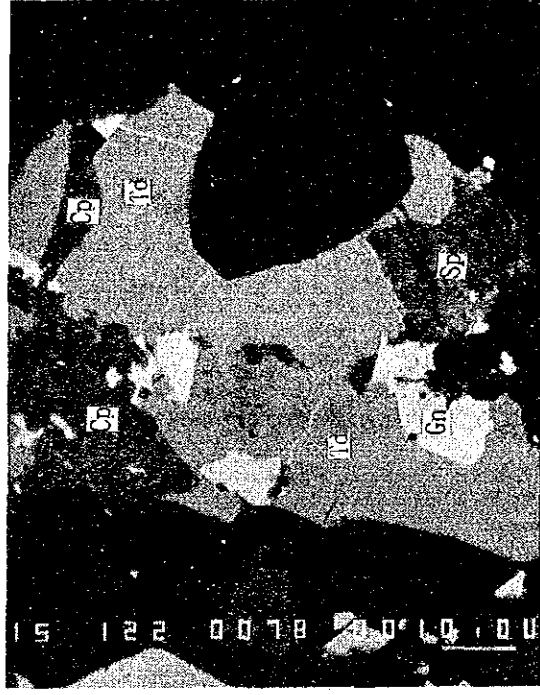
Pb	Zn
Fe	S



EPMA Test Findings

№ 5-1

Name of Specimen	Pb-C No9
Acceleration Voltage	15 kV
Current of Electron-beam	0.05 μ A
Magnification	\times 1200

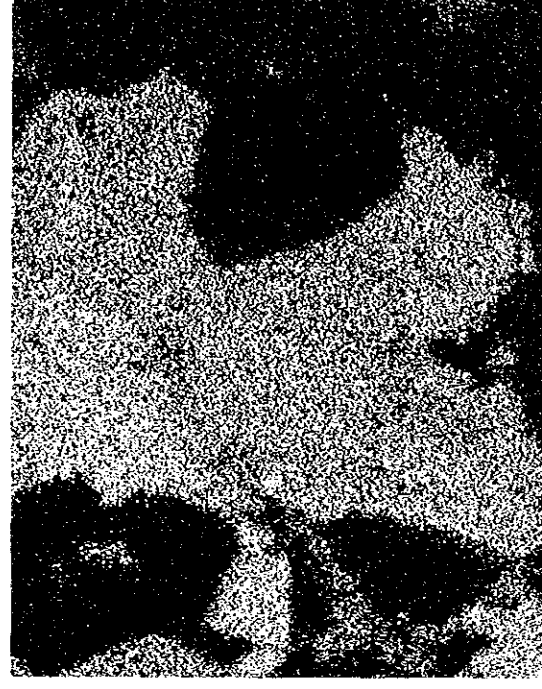
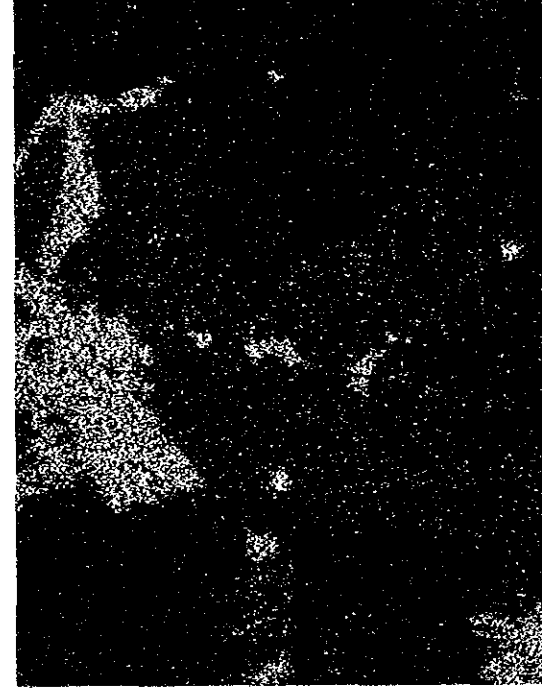
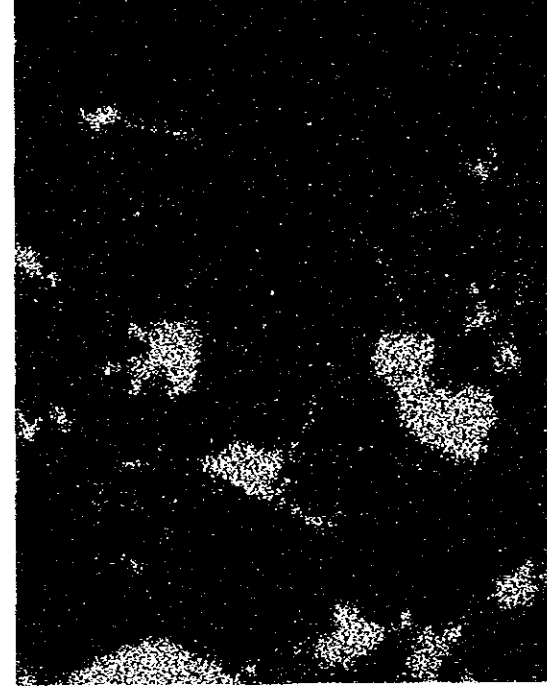


Explanation of Photograph

Composition Image	Cu
	Sb



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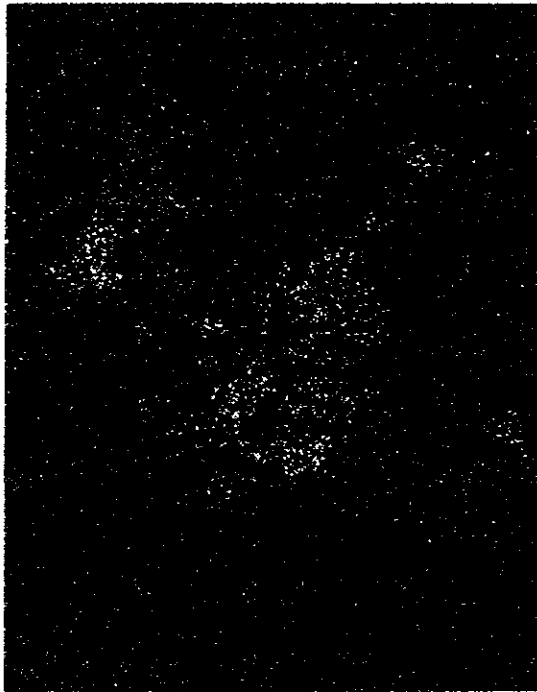
Explanation of Photograph

Pb	Zn
Fe	S

EPMA Test Findings

№ 5-2

Name of Specimen	Pb-C No9
Acceleration Voltage	15 kV
Current of Electron-beam	0.05 μ A
Magnification	\times 1200



Explanation of Photograph

AS



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C-4 Table of Results of Mineral Examination

1 Emission Spectro-analysis

Table 1 Results of Emission Spectro-analysis of Tsav Ore

Element	As	B	Mn	Pb	Mg	Si	Bi	Fe	Al	Mo	Sn	V	Cu	Ag	Zn	Ti	Ca	Cr
	.	.	⊙	⊙	⊙	⊙	△	⊙	△	□	□	□	△	△	⊙	△	△	*

* ⊙;Abundant
 △;Little
 .;Rare
 □;Extremely rare

2 Chemical Analysis

Table 2 Results of Analysis of Tsav Ore

Element	G R A D E										
	Au	Ag	Cu	Fe	Pb	Zn	Cd	Mn	As	Bi	Cr
	g/t	g/t	%	%	%	%	%	%	%	%	%
	1.8	556.3	0.16	7.95	9.01	5.67	0.56	5.40	0.05	0.11	<0.01
Element	B	V	Mo	Sn	S	SiO2	Al2O3	CaO	MgO	TiO2	
	%	%	%	%	%	%	%	%	%	%	
	<0.01	<0.01	<0.01	<0.01	9.51	41.20	5.54	0.84	0.50	0.17	

3 Microscopic Observation of Polishing Section

Table 3 Results of Microscopic Observation of Tsav Ore

	Qz	Cal	Rh	Ser	Gn	Sp	Cp	Py
Feed	⊙	△	○	△	⊙	○	.	△*

[Abbreviations]

Qz:Quartz, Cal:Calcite, Rh:Rhodochrosite, Ser:Sericite
 Gn:Galena, Sp:Sphalerite, Cp:Chalcopyrite, Py:Pyrite

*: ⊙;Abundant
 ○;Common
 △;Little
 .;Rare

8 Flotation Characteristic Test

Table 9 Results of Preliminary Flotation Test of Tsav Ore

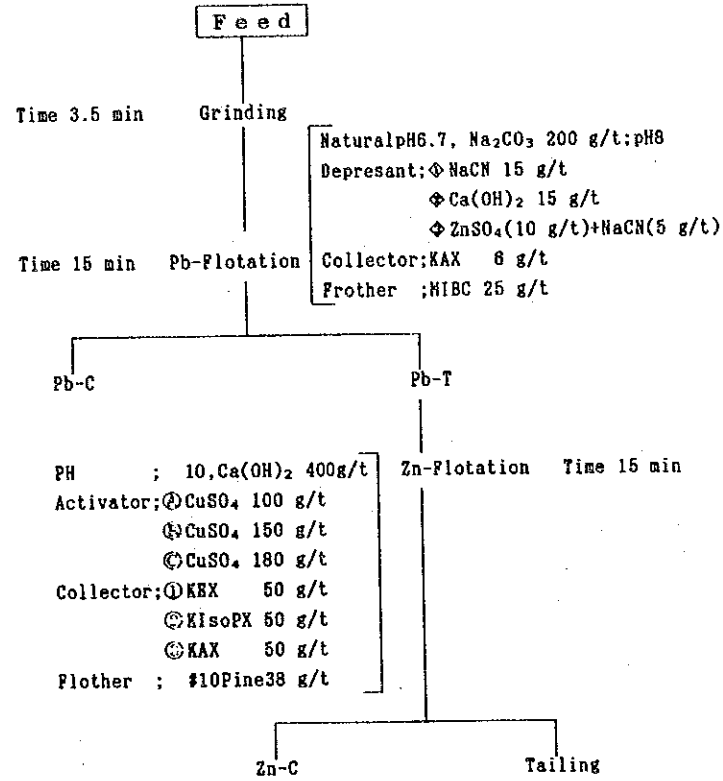


Fig. 1 Flowsheet of Preliminary Flotation Test of Tsav Ore

Table 8 Experimental Design Table

NO	A	B	C
1	NaCN 15g/t	KEX 50g/t	CuSO ₄ 100g/t
2	NaCN 15g/t	KIPX 50g/t	CuSO ₄ 150g/t
3	NaCN 15g/t	KAX 50g/t	CuSO ₄ 180g/t
4	Ca(OH) ₂ 15g/t	KEX 50g/t	CuSO ₄ 150g/t
5	Ca(OH) ₂ 15g/t	KIPX 50g/t	CuSO ₄ 180g/t
6	Ca(OH) ₂ 15g/t	KAX 50g/t	CuSO ₄ 100g/t
7	ZnSO ₄ (10g/t)+NaCN(5g/t)	KEX 50g/t	CuSO ₄ 180g/t
8	ZnSO ₄ (10g/t)+NaCN(5g/t)	KIPX 50g/t	CuSO ₄ 100g/t
9	ZnSO ₄ (10g/t)+NaCN(5g/t)	KAX 50g/t	CuSO ₄ 150g/t

Sample No Name	Weight [g]	Weight [%]	Grade [%]							Recovery [%]						
			Cu	Pb	Zn	Fe	Au *	Ag *	S	Cu	Pb	Zn	Fe	Au	Ag	S
Feed	499.39	100.00	0.18	8.79	5.11	10.85	2.4	600	9.47	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NO.1Pb-C	82.7	16.56	0.59	47.00	12.79	4.93	9.0	3206	18.51	55.5	88.6	41.5	7.5	62.5	88.4	32.4
(NO.1Pb-T)	416.69	83.44	0.09	1.21	3.59	12.03	1.1	83	7.68	44.5	11.4	58.5	92.5	37.5	11.6	67.6
NO.1Zn-C	51.46	10.30	0.62	7.36	27.70	14.14	1.6	510	24.94	36.2	8.6	55.8	13.4	6.9	8.8	27.1
NO.1T	365.23	73.14	0.02	0.34	0.19	11.73	1.0	23	5.25	8.3	2.8	2.7	79.1	30.6	2.8	40.5
Feed	500.12	100.00	0.16	8.79	4.46	10.21	2.7	591	9.40	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NO.2Pb-C	75.98	15.19	0.54	53.53	9.84	4.72	14.2	3503	18.86	50.8	92.5	33.6	7.0	79.4	90.0	30.5
(NO.2Pb-T)	424.14	84.81	0.09	0.78	3.49	11.19	0.7	70	7.71	49.2	7.5	66.4	93.0	20.6	10.0	69.5
NO.2Zn-C	75.45	15.09	0.48	2.64	18.95	19.84	1.4	291	31.41	44.9	4.5	64.1	29.3	7.8	7.4	50.4
NO.2T	348.69	69.72	0.01	0.38	0.15	9.32	0.5	22	2.58	4.3	3.0	2.3	63.7	12.8	2.6	19.1
Feed	496.85	100.00	0.18	8.33	5.02	10.12	2.5	594	9.32	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NO.3Pb-C	71.56	14.40	0.55	48.85	7.12	4.59	14.8	3524	18.79	44.9	84.5	20.4	6.5	85.4	85.4	29.0
(NO.3Pb-T)	425.29	85.60	0.11	1.52	4.67	11.06	0.4	101	7.73	55.1	15.5	79.6	93.5	14.6	14.6	71.0
NO.3Zn-C	77.32	15.56	0.49	6.49	24.97	16.21	1.0	445	29.68	43.2	12.1	77.4	24.9	6.2	11.7	49.6
NO.3T	347.97	70.04	0.03	0.41	0.16	9.91	0.3	25	2.85	11.9	3.4	2.2	68.6	8.4	2.9	21.4
Feed	499.11	100.00	0.17	8.29	5.30	9.68	2.1	536	9.24	100.0	100.0	100.0	99.9	100.0	100.0	100.0
NO.4Pb-C	75.81	15.19	0.56	44.60	10.14	9.72	11.4	2569	22.83	51.2	81.7	29.1	15.2	82.1	72.7	37.6
(NO.4Pb-T)	423.3	84.81	0.10	1.79	4.43	9.67	0.5	172	6.80	48.8	18.3	70.9	84.7	17.9	27.3	62.4
NO.4Zn-C	69.27	13.88	0.48	8.46	25.83	12.16	1.7	521	28.38	40.2	14.2	67.7	17.4	11.2	13.5	42.6
NO.4T	354.03	70.93	0.02	0.48	0.24	9.18	0.2	104	2.58	8.6	4.1	3.2	67.3	6.7	13.8	19.8
Feed	500.89	100.00	0.18	8.57	4.85	9.22	3.5	590	9.30	100.0	100.0	100.0	100.1	100.0	100.0	100.0
NO.5Pb-C	92.29	18.43	0.51	39.28	8.15	8.86	16.9	2760	23.35	53.5	84.4	31.0	17.8	90.0	86.2	46.3
(NO.5Pb-T)	408.6	81.57	0.10	1.64	4.11	9.30	0.4	100	6.13	46.5	15.6	69.0	82.3	10.0	13.8	53.7
NO.5Zn-C	65.09	12.99	0.47	8.32	24.83	14.32	1.1	510	27.09	34.8	12.6	66.5	20.2	4.1	11.2	37.8
NO.5T	343.51	68.58	0.03	0.37	0.18	8.35	0.3	22	2.16	11.7	3.0	2.5	62.1	5.9	2.6	15.9
Feed	502.21	100.00	0.16	8.63	5.12	9.48	3.1	585	9.24	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NO.6Pb-C	79.71	15.87	0.51	42.98	7.68	11.09	17.4	3057	23.31	50.3	79.0	23.8	18.6	88.7	82.9	40.0
(NO.6Pb-T)	422.5	84.13	0.09	2.15	4.64	9.18	0.4	119	6.58	49.7	21.0	76.2	81.4	11.3	17.1	60.0
NO.6Zn-C	77.09	15.35	0.43	10.15	24.65	15.58	1.4	572	27.65	41.1	18.1	73.9	25.2	6.9	15.0	46.0
NO.6T	345.41	68.78	0.02	0.36	0.17	7.75	0.2	18	1.88	8.6	2.9	2.3	56.2	4.4	2.1	14.0
Feed	499.92	100.00	0.16	7.32	4.20	7.99	2.5	560	9.34	100.0	100.0	100.0	100.1	100.0	100.0	100.0
NO.7Pb-C	89.67	17.94	0.54	38.48	8.59	4.88	11.7	2866	20.07	59.8	94.3	36.7	11.0	83.4	91.9	38.5
(NO.7Pb-T)	410.25	82.06	0.08	0.51	3.24	8.66	0.5	56	7.00	40.2	5.7	63.3	89.1	16.6	8.1	61.5
NO.7Zn-C	50.73	10.15	0.50	1.49	24.69	16.27	1.3	223	31.07	31.3	2.1	59.7	20.7	5.2	4.0	33.8
NO.7T	359.52	71.92	0.02	0.37	0.21	7.59	0.4	32	3.60	8.9	3.6	3.6	68.4	11.4	4.1	27.7
Feed	502.46	100.00	0.15	8.35	5.35	9.72	3.0	587	9.30	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NO.8Pb-C	69.59	13.85	0.57	50.58	10.43	5.26	18.6	3546	19.37	52.6	83.9	27.0	7.5	87.3	83.7	28.9
(NO.8Pb-T)	432.87	86.15	0.08	1.56	4.54	10.43	0.4	111	7.68	47.4	16.1	73.0	92.5	12.7	16.3	71.1
NO.8Zn-C	78.39	15.60	0.41	7.11	24.24	17.87	1.5	518	30.65	42.7	13.3	70.6	28.7	7.9	13.8	51.4
NO.8T	354.48	70.55	0.01	0.33	0.18	8.79	0.2	21	2.60	4.7	2.8	2.4	63.8	4.8	2.5	19.7
Feed	499.93	100.00	0.16	9.17	5.25	9.47	3.3	606	9.44	100.0	100.0	100.0	99.9	100.0	100.0	100.0
NO.9Pb-C	76.95	15.39	0.54	55.88	10.77	5.78	18.8	3588	19.78	52.3	93.8	31.6	9.3	88.3	91.2	32.3
(NO.9Pb-T)	422.98	84.61	0.09	0.67	4.25	10.14	0.5	63	7.56	47.7	6.2	68.4	90.6	11.7	8.8	67.7
NO.9Zn-C	64.13	12.83	0.48	2.08	26.95	13.02	1.3	276	31.44	38.7	2.9	65.8	17.6	5.1	5.8	42.7
NO.9T	358.85	71.78	0.02	0.42	0.19	9.63	0.3	25	3.29	9.0	3.3	2.6	73.0	6.6	3.0	25.0

*; g/t

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