

Progress Record of MJZK-3

Depth (m)	Log	Lithology	Drilling hr./m 10' 20'	Method	Progress																			
					January, 1990.																			
					20	21	22	23	24	25	26	27	28	29										
		Soil and sand beds		3" 87																			Drilled with tri-cone bits and NW casing pipes were set at 8.90 m.	
		Dolomite		NW CP																			Installation	Drilled with NQ-WL bits. NW casing pipes were lowered to 17.1 m and then 47.10 m after reaming.
				NQ																				
				BW CP																				BW casing pipes were inserted to 78.0 m.
100				BQ																				Drilled with BQ-WL bits.
200																								Dismantlement

Progress Record of MJZK-5

Depth (m)	Log	Lithology	Drilling hr./m 10' 20'	Method	Progress														
					December					January, 1990.									
					27	28	29	30	31	1	2	3	4	5	6	7	8	9	
		Soil and sand beds.		3" 7/8															
		Dolomite		NW CP															
				NQ	<p>Installation</p> <p>off</p> <p>Carriage</p> <p>Drilled with tri-cone bits to 10.5 m and cased with NW pipes.</p> <p>Reaming. NW casing pipes were lowered to 25.3 m and then to 31.6 m. Drilled with NQ-WL bits and BW casing pipes were set at 120.0 m.</p>														
100				BW CP															
				BQ	<p>Drilled with BQ-WL bits.</p>														
200																			
					Dismantlement														

Progress Record of MJZK-6

Depth (m)	Log	Lithology	Drilling hr./m 10' 20'		Method	Progress																		
						December, 1989.																		
						14	15	16	17	18	19	20	21	22	23	24	25	26						
		Soil and sand beds.			3" 7/8																			<p>Drilled with tri-cone bits to the depth of 33.4 m and NW casing pipes were inserted.</p>
		Dolomite			NW CP																			
					NQ																			
100					BW CP																			
200					BQ																			Dismantlement

Progress Record of MJZK-7

Depth (m)	Log	Lithology	Drilling hr./m 10' 20'	Method	Progress																	
					Jan.		December, 1989.															
					30	31	1	2	3	4	5	6	7	8								
		Surface soil		3" 7/8																		
				NW CP																		
		Dolomite																				
				NQ																		
100				BW CP																		
				BQ																		
200																						

Progress Record of MJZK-8

Depth (m)	Log	Lithology	Drilling hr/m 10' 20'	Method	Progress																
					February, 1990.																
					9	10	11	12	13	14	15	16	17								
	Surface soil			3" 7/8															<p>Drilled with tri-cone bits to 27.5 m and NW casing pipes were inserted.</p> <p>Drilled with NQ-WL bits.</p> <p>Hole is cased with BW casing pipes to the depth of 120 m.</p> <p>Drilled with BQ-WL bits.</p> <p style="text-align: right;">Dismantlement</p>		
	Phyllite			NW CP																	
	Alternation			NQ																	
100	Dolomite			BW CP																	
200				BQ																	

Progress Record of MJZK-9

Depth (m)	Log	Lithology	Drilling hr./m 10' 20'	Method	Progress															
					February, 1990.															
					18	19	20	21	22	23	24	25	26							
		Soil and sand beds		3" 7/8																
		Phyllite		NW CP																
		Dolomite		NQ																
					Installation Carriage															
					Drilled with tri-cone bits and NW casing pipes were inserted to 29.5 m.															
100				BW CP	Drilled with NQ-WL bits and BW casing pipes were fixed to the depth of 120.0 m.															
				BQ	Drilled with BQ-WL bits.															
200					Dismantlement															

Progress Record of MJZK-10

Depth (m)	Log	Lithology	Drilling hr./m 10' 20'	Method	Progress													
					March, 1990.													
					9	10	11	12	13	14	15	16	17	18				
		Soil		3" 7/8														
		Phyllite		NW CP														
		Dolomite		NQ														
					Installation Carriage													
100				BW CP														
				BQ														
200																		
																		Dismantlement

JICA

平成元年度資源開発協力基礎調査
地域開発計画調査ザンビア共和国
カブエウエスト地域中間報告
添付資料

地質柱状図

鉍化に関する凡例

Py 黄鉄鉍

Zn 亜鉛鉍物

I 硫化物

I 分解生成物または二次鉍物

Hole No. : MJZK-1
 Line : 19 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Mineralization		Assay Results				
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn	
5		Cenozoic		Surface soil	Weathered							
10												
15				Clay beds.								
				Sand beds.								
20									18.00	18.84	0.84	0.5
										19.69	0.85	0.4
										20.53	0.84	0.7
										21.38	0.85	0.7
										22.22	0.84	12.6
										22.80	0.58	14.2
25		Upper Roan		Light-gray, massive, rich in voids.	Oxidized							
										23.30	0.50	7.0
										23.80	0.50	6.0
										24.80	1.00	5.8
										25.90	1.10	12.8
										26.10	0.20	12.4
										27.10	1.00	4.2
										28.10	1.00	0.6
30										29.10	1.00	8.8
										30.10	1.00	1.2
										31.10	1.00	0.5
						Stained in reddish brown.				32.10	1.00	12.4
										33.10	1.00	6.0
										34.30	1.20	1.0
35										35.30	1.00	5.1
								36.30	1.00	6.3		
								37.40	1.10	1.5		
								38.40	1.00	0.4		
								39.40	1.00	4.8		
40								40.40	1.00	1.2		

Depth (m)	Lithology			Zone	Mineralization		Assay Results					
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn	
	[Brick pattern]	Upper Roan	Dolomite	Pinkish-gray, stained with decomposed pyrites.	Oxidized	T T T T T T T T T T		41.40	1.00	5.2		
								42.40	1.00	4.8		
								43.40	1.00	0.6		
								44.40	1.00	8.4		
45								45.40	1.00	7.8		
								46.40	1.00	11.8		
								47.40	1.00	13.8		
								48.40	1.00	15.6		
								49.40	1.00	4.0		
50								50.40	1.00	5.4		
					51.40	1.00	2.1					
					52.40	1.00	1.0					
					53.40	1.00	7.6					
					54.40	1.00	7.8					
55					55.40	1.00	1.0					
					56.40	1.00	1.8					
					57.40	1.00	4.6					
					58.40	1.00	1.3					
60						Argillaceous intercalation at an angle of 45°.	Primary	T T T T T T T T T T				
						ditto, at an angle of 15°.						
65												
70												
			Light-gray to white									
75			Bedding at an angle of 25°.									
80			Bedding at an angle of 10°.									
85			Bedding at an angle of 20°.									
90												

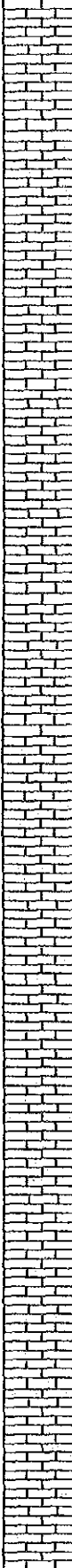
Depth (m)	Lithology			Zone	Minerali- zation		Assay Results					
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn	
95	[Brick pattern]	Upper Roan	Dolomite	Pyrite dissemination and stringers.	Primary	I						
100				Saccaroidal. Disseminated pyrites. Sphalerite specks.			I					
105				Pyrite stringers.								
110				Pyrite impregnation.								
115												
120				Pyrite stringers.								
125												
130				Specks of pyrites.								
135				Specks of pyrites.								
140				Banding at an angle of 10°.								

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results					
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn		
146	[Brick pattern]	Upper Roan	Dolomite	Sphalerite specks and stringers.	Primary	I	I						
150				Clayey veinlets at 5°.									
				Saccaroidal.									
155				Banded at an angle of 15°.									
160				Specks of pyrite. Sphalerite stringers.				I	I				
				Banded with an angle of 15°.									
165													
170													
175				Pyrite stringers.				I					
180													
185	Sphalerite stringers.			I									
	Pyrite stringers.			I									
190	Sphalerite stringers.			I									

Depth (m)	Lithology			Zone	Minerali- zation		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Sphalerite stringers. White saccaroidal.	Primary		I				
				Pyrite specks.		I	I				
				Banded at 20°. Pyrite specks.		I	I				
200				Sphalerite stringers.		I	I				

Hole No. : MJZK-2
 Line : 20 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results				
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn	
5		Cenozoic		Surface soil	Weathered							
10				Clay beds.				11.00				
15				Sand beds.				14.40	14.40	3.40	5.0	
20		Upper Roan	Dolomite	Banded, light-gray with reddish-brown staining.	Oxidized				16.40	1.00	3.0	
										17.20	0.80	2.9
										18.20	1.00	3.3
										19.20	1.00	2.0
										20.20	1.00	2.9
										21.20	1.00	4.4
										22.20	1.00	1.5
										23.20	1.00	1.8
										24.20	1.00	4.1
										25.20	1.00	3.9
									White, massive.	26.20	1.00	3.1
									Stained.	27.20	1.00	4.5
										28.20	1.00	4.3
										29.20	1.00	3.0
										30.20	1.00	1.5
										31.20	1.00	1.3
										32.20	1.00	1.4
				33.20	1.00	0.4						
				34.20	1.00	0.4						
35			White to pale-gray, massive	35.20	1.00	2.0						
				36.20	1.00	4.2						
				37.20	1.00	4.4						
				38.20	1.00	0.5						
				39.20	1.00	0.2						
40				40.20	1.00	0.4						

Depth (m)	Lithology			Zone	Mineralization		Assay Results						
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn		
		Upper Roan	Dolomite	Decomposed pyrites.	Oxidized	I	40.20	41.20	1.00	1.8			
								42.20	1.00	3.7			
								43.20	1.00	1.8			
								44.20	1.00	0.7			
45						White, saccaroidal							
						Faintly banded at an angle of 10°.							
50													
						Faintly banded at an angle of 10°.							
55													
						Slightly banded.							
60													
						Banded at an angle of 10°.							
65													
						Banded at an angle of 10°.							
70													
						Pyrite impregnation. Banded at 10°. Sphalerite veinlets.	Non-oxidized	I					
75										76.20	77.20	1.00	0.4
											78.20	1.00	0.2
											79.20	1.00	nil
											80.20	1.00	0.2
80			Cavernous with a banded structure.					81.20	1.00	2.6			
								82.20	1.00	0.4			
								83.20	1.00	0.3			
								84.20	1.00	0.3			
85				Oxidized				85.20	1.00	2.3			
								86.20	1.00	2.0			
								87.20	1.00	0.4			
								88.20	1.00	1.0			
								89.20	1.00	2.5			
90								90.20	1.00	1.7			

Depth (m)	Lithology			Remarks	Zone	Mineralization		Assay Results			
	Logg- ing	Hori- zon	Rock			Py	Zn	from (m)	to (m)	run (m)	% Zn
					Oxi.			90.20	91.20	1.00	1.1
						I	I		92.20	1.00	0.5
				Pyrite and sphalerite stringers.		I	I		93.20	1.00	0.6
									94.20	1.00	0.3
95							I		95.20	1.00	0.3
									96.20	1.00	1.5
				Sphalerite veinlets with pyrite impregnation. Pyrite-sphalerite dissemination.		I	I		97.20	1.00	2.6
									98.20	1.00	0.7
							I		99.20	1.00	0.3
100									100.20	1.00	0.7
									101.20	1.00	0.9
									102.20	1.00	1.0
									103.20	1.00	0.1
									104.20	1.00	0.1
				Sphalerite veinlets.		I	I		105.20	1.00	1.1
105									106.20	1.00	0.6
				Sphalerite veinlets.			I				
110						I	I				
				Sphalerite veinlets.			I				
115											
				Faintly banded.							
120											
				Light-gray, massive.							
125											
130											
				Massive.							
135											
				Faint banding.							
140											

Depth (m)	Lithology			Zone	Mineralization		Assay Results							
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn			
145	[Brick pattern]	Upper Roan	Dolomite	Fine-grained, saccaroidal.	Primary									
150														
155				Rich in voids.										
160				Pyrite specks.			I							
165														
170				Pyrite specks.			I							
175				Faint banding at an angle of 25°.										
180				Faint banding at 15°.										
185														
190				Light-gray, compact.										

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Light - gray, fine - grained.		I					
200				Pyrite aggregates. Saccaroidal. Banded at 15°. White, banded.							

Hole No. : MJZK-3
 Line : 20 Elevation : 1,170 m
 Point : 575 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
		Cenozoic		Surface soil	Weathered						
5				Sand beds							
10		Upper Roan Dolomite		Porous, banded with an angle of 10°. Sphalerite stringers.	Oxidized		I				
15				Penetrated by recrystallized dolomite veins.							
				Sphalerite stringers.	Primary		I				
20				Pyrite-sphalerite stringers.			I				
25				Sphalerite stringers.			I				
30				Banded at an angle of 20°.			I				
35				Specks of pyrite.			I				
40			Recrystallized dolomite patches predominate.		I						

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
45	[Brick pattern]	Upper Roan	Dolomite	Fine-grained, saccaroidal. Faintly banded with an angle of 15°.	Primary	I					
50				Pyrite impregnation.		I					
55				Micaceous - argillaceous banding at an angle of 10°.							
60				Pyrite specks and stringers associated with recrystallized dolomite patches.		I					
65											
70				Porous along recrystallized dolomite veinings.		I					
75				Specks of pyrite.		T I I I					
80				Decomposed pyrite specks and stringers.		T I I I					
85				Faint banding with an angle of 15°.							
90				Faint banding at an angle of 10°.		T I I I					

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
95	[Brick pattern]	Upper Roan	Dolomite	Porous along recrystallized dolomite patches and veins.	Primary						
100				Pyrite impregnation. Decomposed pyrite veinlets and impregnation.		I					
105				Stained along recrystallized dolomite veinlets.		I					
110				Argillaceous bandings at an angle of 10°.		I					
115				Decomposed pyrite impregnation.		I					
120				Pyrite impregnation and stringers.		I					
125				Argillaceous banding at an angle of 20°.		I					
130				Pyrite impregnation along recrystallized dolomite veining.		I					
135				Fine-grained, saccaroidal.		I					
140						I					

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
145	[Brick pattern]	Upper Roan	Dolomite	Stained along recrystallized dolomite patches and veinlets. Impregnated pyrites were decomposed.	Primary	I					
150				Pyrite impregnation and stringers.							
155				Argillaceous banding with an angle of 20°.							
160				Compact, saccharoidal.							
165				Pale-gray dolomite.							
170				Specks of pyrite. Pyrite impregnation along recrystallized dolomite patches.							
175											
180				Light-gray dolomite.							
185											
190											
188	[Triangle pattern]			Fault clay with dolomite fragments	Weathered						
189				Fault clay							

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Light-gray saccaroidal dolomite.	Primary						
200				Saccaroidal compact dolomite.							

Hole No. : MJZK-4
 Line : 19 Elevation : 1,169 m
 Point : 575 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology			Zone	Minerali- zation		Assay Results					
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn	
5		Cenozoic		Surface soil	Weathered							
10												
15		Upper Roan Dolomite		Cavity at 12.2 to 12.7 m.	Oxidized			13.20	14.20	1.00	0.6	
				Brick-brown staining.						15.20	1.00	4.2
				Banding at an angle of 5°.						16.20	1.00	0.3
				Decomposed pyrite specks.						17.20	1.00	1.3
										18.20	1.00	0.3
										19.20	1.00	0.9
										20.20	1.00	1.4
										21.20	1.00	0.8
										22.20	1.00	0.8
						Rich in voids.				23.20	1.00	1.0
										24.20	1.00	0.6
						Porous and cemented with brick-brown dull crusts.				25.20	1.00	0.8
										26.20	1.00	3.0
										27.20	1.00	3.7
										28.20	1.00	13.7
										29.20	1.00	12.1
						Light-gray dolomite.				30.20	1.00	3.0
				Decomposed pyrites.				31.20	1.00	1.0		
								32.20	1.00	0.5		
								33.20	1.00	1.3		
				Porous and cemented by recrystallized dolomite veins with brownish crusts.				34.20	1.00	1.5		
								35.10	0.90	2.6		
								36.10	1.00	3.0		
								37.10	1.00	0.2		
								38.10	1.00	0.2		
								39.10	1.00	0.6		
40								40.10	1.00	0.9		

Depth (m)	Lithology				Zone	Mineralization		Assay Results									
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn						
45	[Brickwork pattern]	Upper Roan	Dolomite	<p>Fractures, filled with boxworks and brick-brown crusts.</p> <p>Decomposed pyrite stringers.</p> <p>Argillaceous rapid banding between 52.5 and 70.5 m at an angle of 5 to 15°.</p> <p>Decomposed pyrite stringers.</p> <p>Light-gray, saccaroidal dolomite.</p> <p>Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.</p> <p>Drusy and filled with brownish boxworks and crusts.</p> <p>Fine-grained saccaroidal dolomite.</p>	Oxidized			40.10	41.10	1.00	1.4						
															42.10	1.00	3.5
															43.10	1.00	3.5
															44.10	1.00	1.6
															45.10	1.00	1.3
															46.10	1.00	5.5
															47.10	1.00	9.5
															48.10	1.00	0.9
															49.10	1.00	2.1
50															50.10	1.00	1.0
55																	
60																	
65																	
70																	
75																	
80								78.10	79.10	1.00	1.6						
									80.10	1.00	10.7						
									81.10	1.00	2.0						
									82.10	1.00	0.1						
									83.10	1.00	1.5						
									84.10	1.00	3.8						
85									85.10	1.00	0.1						
90																	

Depth (m)	Lithology				Zone	Mineralization		Assay Results									
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn						
95	Upper Roan	Dolomite		Saccaroidal dolomite, with prevailing minute veins of recrystallized dolomite.	Oxidized												
									Stained with recrystallized dolomite patches and with brownish crusts.				97.10	98.10	1.00	1.1	
100														99.10	1.00	1.1	
105										Recrystallized dolomite veins, stained with brown crusts.				104.10	105.10	1.00	0.2
										Recrystallized dolomite veins, stained and filled with boxworks and crusts.					106.10	1.00	4.0
															107.10	1.00	0.1
															108.10	1.00	0.2
110															109.10	1.00	6.3
															110.10	1.00	1.5
															111.10	1.00	1.8
										Decomposed pyrite impregnation.					112.10	1.00	1.5
115															113.10	1.00	3.4
															114.10	1.00	1.1
															115.10	1.00	1.0
120					Primary												
				Light-gray, fine-grained saccaroidal dolomite.													
125																	
				Decomposed pyrite stringers.													
130				Decomposed pyrite impregnation and stringers.													
135				Light-gray, saccaroidal dolomite.													
140																	

Depth (m)	Lithology				Zone	Mineralization		Assay Results					
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn		
	Upper Roan	Dolomite		Faint banding with an angle of 10°.	Primary	T I I I							
145				Fine-grained, saccaroidal dolomite.									
150				Stained with recrystallized dolomite veins and patches.									
155				Pyrite specks, associated with recrystallized dolomite veins.									
160				Argillaceous banding at an angle of 15°.									
165				Decomposed pyrite stringers.									
170				Speckled with recrystallized dolomite patches and veins.									
175				Decomposed pyrite stringers.									
180				Banding at an angle of 10°.									
185				Compact, saccaroidal.									
190				Banding at an angle of 20°.									
				Prevailing veins of recrystallized dolomite.									

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Specks of decomposed pyrite.	Primary	-----					
200				Fine-grained, saccaroidal dolomite.							


Hole No. : MJZK-5
 Line : 18 Elevation : 1,169 m
 Point : 575 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results					
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn		
5		Cenozoic		Surface soil	Weathered								
									4.00				
										8.00	4.00	1.3	
10				Pebble-bearing clay beds.						10.10	2.10	2.2	
										11.10	1.00	0.4	
		Upper Roan Dolomite		Saccaroidal dolomite. Stained in brown.	Oxidized								
				Decomposed pyrites.									
				Drusy white dolomite.									
15													
20										20.10	21.10	1.00	1.5
											22.10	1.00	0.1
25				Sphalerite patches and stringers.	Primary								
									25.10	26.10	1.00	0.6	
										27.10	1.00	0.5	
										28.10	1.00	0.8	
30				Banded with an angle of 5°.									
35													
40													

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
45	[Brick pattern]	Upper Roan	Dolomite	Pyrite specks. Banding with an angle of 10°.	Primary	I					
50				Pyrite specks and stringers.		I					
55				Light-gray, fine- grained, saccaroidal dolomite.							
60				Banding at an angle of 5°.							
65				Minute specks of pyrite.		I					
70				Saccaroidal dolomite, banded with an angle of 5°.		I					
75											
80				Banding at an angle of 10°. Pyrite patches.		I					
85				Chlorite-sericite veinlets at 86.0 to 86.4 m.		I					
90				Argillaceous banding at an angle of 10°.		I					

Depth (m)	Lithology			Zone	Minerali- zation		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
95	[Brick pattern]	Upper Roan	Dolomite	Argillaceous banding at an angle of 15°.	Primary	I					
				Specks of pyrite.		I					
				Saccaroidal dolomite.		I					
100				Faint banding with an angle of 10°.		I					
105				Compact, saccaroidal.							
				Banding with an angle of 20°.							
110				Cemented fault-breccia, at 111.3 to 111.9 m.							
115											
120				Chlorite bandings at 119.1 to 121.5 m. Pyrite specks and stringers.		I					
125				Argillaceous banding with an angle of 15°. Pyrite stringers.		I					
130											
135	Chlorite bandings at 131.6 to 133.0 m with an angle of 20°.										
	Pyrite specks and stringers.	I									
140	Gray argillaceous banding at an angle of 20°.										

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
145	[Brick pattern]	Upper Roan	Dolomite	Fine-grained, saccaroidal dolomite.	Primary						
150				Argillaceous banding with an angle of 20°.							
155				Argillaceous banding with an angle of 15°.							
				Pyrite stringers.		I					
160				Specks of pyrite.		I					
165				Pyrite specks and stringers.		I					
170				Argillaceous banding with an angle of 15°.		I					
175				Faint banding with an angle of 20°.							
				Pyrite stringers at 15°.		I					
180				Porous recrystallized dolomite between 179.2 to 180.8 m. Decomposed pyrite specks.		I					
185				Banded with an angle of 10°.							
190				Pyrite stringers.		I					

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195 200		Upper Roan	Dolomite	<p>Banded with an angle of 10°.</p> <p>Intra-formational folding at 195.8 to 196.9 m.</p> <p>Fine-grained, saccaroidal.</p> <p>Banding with an angle of 25°.</p>	Primary						

Hole No. : MJZK-6
 Line : 18 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
5				Surface soil							
10				Clay beds.							
15				Sand beds.							
20											
25											
30											
35		Upper Roan	Dolomite	Light-gray dolomite, fine-grained, banded with an angle of 10°.	Oxidized						
40											

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
45											
50											
55											
60											
65											
70											
75											
80											
85											
90											

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
95	[Brick pattern]	Upper Roan	Dolomite	Light-gray dolomite. Slightly stained.	Oxidized	I	T	90.00	91.00	1.00	0.7
								92.00	1.00	1.0	
								93.00	1.00	0.4	
								94.00	1.00	1.0	
								95.00	1.00	0.6	
								96.00	1.00	1.0	
100	[Brick pattern]	Upper Roan	Dolomite	Staining stringers.	Non-oxidized	I	I				
				Specks of pyrite. Sphalerite veinlet at 98.3 m.							
				Druse at 102.0 to 102.5 m.							
105	[Brick pattern]	Upper Roan	Dolomite	Stained with orange- brown rims, stringers and veinlets.	Oxidized	I	T				
								104.00	105.00	1.00	1.8
								106.00	1.00	8.6	
								107.00	1.00	5.0	
								108.00	1.00	2.9	
								109.00	1.00	2.4	
110	[Brick pattern]	Upper Roan	Dolomite	Staining stringers.	Oxidized	I	T				
								110.00	1.00	2.9	
								111.00	1.00	0.8	
								112.00	1.00	5.3	
								113.00	1.00	2.4	
								114.00	1.00	1.5	
115	[Brick pattern]	Upper Roan	Dolomite	Contorted staining bands.	Oxidized	I	T				
								115.00	1.00	0.9	
								116.00	1.00	0.7	
								117.00	1.00	1.7	
								118.00	1.00	2.2	
								119.00	1.00	1.1	
120	[Brick pattern]	Upper Roan	Dolomite	Gossanous fillings of yellowish brown to reddish brown.	Oxidized	I	T				
								120.00	1.00	0.3	
125	[Brick pattern]	Upper Roan	Dolomite	Light-gray, fine- grained, saccaroidal.	Primary	I	I				
130	[Brick pattern]	Upper Roan	Dolomite	Banded with an angle of 5°.	Primary	I	I				
135	[Brick pattern]	Upper Roan	Dolomite	Slightly stained in pale orange-brown.	Primary	I	I				
140	[Brick pattern]	Upper Roan	Dolomite		Primary	I	I				

Depth (m)	Lithology			Zone	Mineralization		Assay Results						
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn		
145	[Brick pattern]	Upper Roan	Dolomite	Pyrite stringers. ditto.	Primary	I							
150													
155				Banded with an angle of 10°.		I							
160				Porous recrystallized dolomite vein at 157.2 to 158.2 m.									
165				Light-gray, fine- grained, saccaroidal.									
170				Light-gray, fine- grained, banded and saccaroidal.									
175				Specks of pyrite.		I							
180				Banded with an angle of 20°.									
185				Decomposed pyrite patches and stringers.		I							
190				Banded with an angle of 10°. Pyrite specks and patches.		I							

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Pyrite-sphalerite veinlet of 1 cm wide at 190.1 m.	Primary	I	I	190.00	191.00	1.00	0.7
				Pyrite-sphalerite veinlet of 0.3 cm wide at 194.0 m.							
				Pyrite stringers.							
200	[Brick pattern]			Chlorite phyllite at 200.3 to 200.5 m with an angle of 10°.							

Hole No. : MJZK-7
 Line : 17 Elevation : 1,170 m
 Point : 475 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
5				Surface soil							
10											
15											
20		Cenozoic			Weathered						
25											
30											
35											
40				Light-gray dolomite							






Depth (m)	Lithology			Zone	Mineralization		Assny Results				
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
45					Oxidized						
50											
55											
60											
65											
70											
75											
80											
85											
90											

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
95	[Brick pattern]	Upper	Dolomite	Sphalerite veinlets.	Non-oxidized		I	90.10	91.10	1.00	3.2
				Speckled with recrystallized dolomite patches.					92.10	1.00	1.9
100	[Brick pattern]	Upper	Dolomite	Argillaceous banding with an angle of 20°.	Oxidized		I				
				Speckled with recrystallized dolomite patches.							
105	[Brick pattern]	Upper	Dolomite	Fine-grained, faintly banded dolomite.	Oxidized		I				
				Speckled with recrystallized dolomite patches.							
110	[Brick pattern]	Upper	Dolomite	Stained in yellowish-brown along pores of recrystallized dolomite veins at 110.5 to 110.7 m.	Oxidized		I	109.10	110.10	1.00	0.2
115	[Brick pattern]	Upper	Dolomite	Speckled with recrystallized porous dolomite patches. Pores are stained with brick-brown crusts between 119.3 and 122.0 m.	Oxidized		I				
120	[Brick pattern]	Upper	Dolomite	Sphalerite stringers.	Oxidized		I	118.10	119.10	1.00	0.2
125	[Brick pattern]	Upper	Dolomite	Faintly banded. Sphalerite veinlets.	Oxidized		I				
130	[Brick pattern]	Upper	Dolomite	Argillaceous banding with an angle of 15°.	Primary		I				
135	[Brick pattern]	Upper	Dolomite	Recrystallized dolomite veins predominate.	Primary		I				
140	[Brick pattern]	Upper	Dolomite		Primary		I				

Depth (m)	Lithology			Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)
145	[Brick pattern]	Upper Roan	Dolomite	Argillaceous banding at 10°.	Primary	I				
150				Pyrite stringers.						
155				Fine-grained, sacca-roidal.						
160				Speckled with recrystal-lized dolomite patches.						
165				Banded with an angle of 20°.						
170				Argillaceous banding with an angle of 15°.						
175				Pyrite specks.			I			
180				Speckled with recrystal-lized dolomite patches.						
185				Argillaceous banding with an angle of 20°.						
190								Speckled with recrystal-lized dolomite patches.		

Depth (m)	Lithology			Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)
195	[Brick pattern]	Upper Roan	Dolomite	Speckled with recrystallized dolomite patches.	Primary	Secondary				
200				Decomposed pyrite impregnation.						
				Recrystallized dolomite veins prevail.						

Hole No. : MJZK-8
 Line : 17 Elevation : 1,172 m
 Point : 375 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results					
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn		
5		Cenozoic		Surface soil	Weathered								
10													
15													
20													
25													
30			Mwashia			Pale greenish-gray talcose phyllite.	Oxidized						
						Dolomite/phyllite							
35						Phyllitic with an angle of 55°.							
				Alt.		Dolomite/phyllite							
40						Pale greenish-gray.							

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
45		Mwashia	Phyl- lite	Pale greenish-gray.	Oxidized						
			Alt.	Dolomite/phyllite							
		Upper Roan	Dol.	Banded dolomite							
			Alt.	Dolomite/phyllite							
			Dol.	Dark-brown dolomite							
			Phy.	Pale-gray phyllite							
			Dol.	Dark-brown dolomite							
			Phy.	Pale-gray phyllite							
			Dolomite	Pinkish-brown dolomite with intercalations of phyllite at 51.7 to 52.1 and 54.7 to 55.2 m.							
			Alter- nation	Alternation of dolomite and phyllite with iron-bands.							
		60	Dolomite	Banded with an angle of 40°.							
				Phyllite intercalations at 60.2, 62.6 to 62.8 and 68.6 to 69.3 m.							
Porous veinlets of recrystallized dolomite at 30°.											
Stained with brownish crusts.											
70	Dolomite	Speckled with recrystallized dolomite patches.									
80	Clay	Brownish fault-clay between 77.5 and 80.3 m	Wear- thured								
	Dolomite	Gray banded dolomite with an angle of 25°.	Oxidized								
Decomposed pyrite specks.											
85	Dolomite	Rich in voids along recrystallized dolomite veinlets.	Non-oxidized								
90											














Depth (m)	Lithology				Zone	Mineralization		Assay Results							
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn				
95	[Brick pattern]	Upper Roan	Dolomite	Stained in brick-brown to dark-brown along recrystallized dolomite veins.	Non-oxidized	I-I									
							93.10	94.10	1.00	0.2					
								95.10	1.00	5.0					
							96.10	1.00	0.2						
100							Banded with recrystallized dolomite veins at an angle of 30°.	Non-oxidized	I-I						
105							Argillaceous banding with an angle of 25°.			Oxidized					
110											Oxidized				
115							Brecciated and cemented fault with an angle of 35°, stained in brown to khaki at 113.3 to 114.3 m.	Oxidized		I-I	112.10	113.10	1.00	0.1	
													114.10	1.00	2.0
													115.10	1.00	1.9
												116.10	1.00	0.2	
120							Vuggy micro-banding of recrystallized dolomite with an angle of 20°.	Non-oxidized			I-I				
125			Stained in brick-brown, pale-brown to khaki along recrystallized dolomite patches and veinlets.	Non-oxidized											
130				Oxidized	I-I	125.00	126.00	1.00				0.5			
								127.00	1.00			1.1			
								128.00	1.00			0.2			
								129.00	1.00			0.8			
								130.00	1.00			0.1			
								131.00	1.00	1.5					
135			White saccaroidal dolomite.	Oxidized		I-I									
									132.00	1.00		0.2			
									133.00	1.00		1.6			
									134.00	1.00	0.2				
								135.00	1.00	0.8					
			Banded with an angle of 15°.	Oxidized			I-I	138.00	139.00	1.00	0.2				
			Stained along recrystallized dolomite patches.												
140									140.00	1.00	1.2				

Depth (m)	Lithology			Zone	Mineralization		Assay Results							
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn			
145	[Brick pattern]	Upper Roan	Dolomite	Porous with recrystal- lized dolomite patches, stained in brick-brown to dark-brown.	Oxidized	T I L	140.00	141.00	1.00	0.9				
							142.00	1.00	1.3					
							143.00	1.00	0.6					
							144.00	1.00	1.6					
							145.00	1.00	6.6					
							146.00	1.00	1.2					
150								Porous with recrystal- lized dolomite patches and veinlets, stained in dark-brown to brick- brown or khaki.		149.00	150.00	1.00	0.2	
										151.00	1.00	6.6		
										152.00	1.00	5.8		
										153.00	1.00	6.2		
										154.00	1.00	0.2		
155								Argillaceous banding with an angle of 20°. Decomposed pyrite stringers.		155.00	1.00	1.8		
										156.00	1.00	1.1		
										157.00	1.00	1.6		
160								Speckled with recrystal- lized dolomite patches and veinlets, rich in voids and stained with dark-brown crusts.						
165									Saccaroidal dolomite, speckled with recrystal- lized patches and veins.					
170								Banded with an angle of 20°.						
175									Decomposed specks of pyrite.					
180								Stained along recrystal- lized dolomite patches and veinlets with brick- brown, to chocolate- brown dull crusts.			180.00	181.00	1.00	0.6
										182.00	1.00	6.2		
				183.00	1.00	0.7								
				184.00	1.00	2.0								
				185.00	1.00	1.5								
				186.00	1.00	0.6								
185			Banded with an angle of 30°.		187.00	1.00	0.7							
					188.00	1.00	2.1							
					189.00	1.00	0.6							
190					190.00	1.00	1.4							

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Stained in brick-brown.	Oxidized	T	T	190.00	191.00	1.00	6.2
									192.00	1.00	5.6
									193.00	1.00	2.1
									194.00	1.00	1.4
									195.00	1.00	0.2
200	[Brick pattern]			Argillaceous banding with an angle of 20°.							

Hole No. : MJZK-9
 Line : 18 Elevation : 1,173 m
 Point : 375 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology			Zone	Mineralization		Assay Results						
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn		
0				Surface soil	Weathered								
5				Sand beds									
10				Clay beds									
15		Cenozoic			Weathered								
20													
25													
30			Mwashia	Phyllite		White to pale-gray, foliated with an angle of 10° to 40°.	Oxidized						
35				Dol.		Gray, banded.							
			Alter-nation	Dolomite/phyllite with iron bands.									
40		Upper Roan	Dolomite	Phyllite-intercalations in places.									

Depth (m)	Lithology				Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn	
				Cavity at 41.7 to 42.0 m.	Oxidized	H						
45				Decomposed pyrite.								
				Intercalation of phyllite at 47.2 to 47.6 m.								
50				Banded with an angle of 30°.	Non-oxidized	H						
55				Intercalations of thin phyllite between 51.6 and 55.0 m.								
60				Rapid banding of vuggy recrystallized veinlets of dolomite.								
65				Gray saccharoidal dolomite.								
70				Argillaceous intercalation with an angle of 30°.								
75				Porous veinlets of recrystallized dolomite.	H	H						
				Sericite-chlorite veinlets at 74.2 to 74.7, 77.7 and 77.8 m. Iron staining.								
80				Sericite-chlorite veinlets at 82.5 and 83.3 to 83.5 m.								
85				Porous veinlets of recrystallized dolomite, slightly stained in brick-brown.	H	H						
90												

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
95				Stained with dull brick-brown crusts along recrystallized dolomite veinlets.	Non-oxi.			92.10	93.10	1.00	0.6
									94.10	1.00	16.4
100				Banded with an angle of 20°.				95.10	1.00	5.6	
									96.10	1.00	0.6
105				Stained in pale-yellowish brown.				97.10	1.00	0.8	
									98.10	1.00	4.0
110				Stained with brick-brown stringers.				99.10	1.00	1.2	
									100.10	1.00	1.1
115				Stained veins of recrystallized dolomite, with brick-brown crusts.				101.10	1.00	4.0	
									102.10	1.00	1.2
120				Stained with brick-brown stringers.				103.10	1.00	2.2	
									104.10	1.00	4.8
125				Stained veins of recrystallized dolomite, with brick-brown crusts.				105.10	1.00	3.6	
									106.10	1.00	8.0
130				Brick-brown stringers.				107.10	1.00	8.6	
									108.10	1.00	16.6
135				Banded with an angle of 25°.				109.10	1.00	16.2	
									110.10	1.00	4.2
140				Dark-brown to brick-brown stringers.				111.10	1.00	0.8	
									112.10	1.00	1.7
				Rich in voids, filled with dull brown crusts.				113.10	1.00	2.2	
				Rich in voids, stained in yellowish to brick-brown.				114.10	1.00	5.6	
				Brick-brown stringers.				115.10	1.00	1.2	
				Porous recrystallized dolomite veins, filled with dull brown crusts.				116.10	1.00	1.0	
				Rich in voids, stained with brick-brown to pale brown crusts.				117.10	1.00	2.1	
				Argillaceous banding with an angle of 20°.				118.10	1.00	2.1	
								119.10	1.00	2.6	
								120.00	1.00	1.6	
								121.00	1.00	4.8	
								122.00	1.00	2.8	
								123.00	1.00	6.8	
								124.00	1.00	14.0	
								125.00	1.00	9.6	
								126.00	1.00	0.9	
								127.00	1.00	3.2	
								128.00	1.00	2.8	
								129.00	1.00	4.0	
								130.00	1.00	6.8	
								131.00	1.00	6.4	
								132.00	1.00	7.6	
								133.00	1.00	7.2	
								134.00	1.00	0.7	
								135.00	1.00	5.6	
								136.00	1.00	2.4	
								137.00	1.00	10.0	
								138.00	1.00	1.2	
								139.00	1.00	4.4	
								140.00	1.00	3.2	

Depth (m)	Lithology				Zone	Mineralization		Assay Results								
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn					
145	[Brick pattern]	Upper Roan	Dolomite	Stained in brick-brown.	Oxidized	T	T	140.00	141.00	1.00	3.2					
											142.00	1.00	11.6			
											143.00	1.00	18.0			
											144.00	1.00	18.0			
										Sphalerite patches.			145.00	1.00	7.2	
													146.00	1.00	0.5	
										Decomposed pyrite specks.			147.00	1.00	1.2	
										Sphalerite patches.			148.00	1.00	0.6	
													149.00	1.00	4.1	
										Speckled with recrystallized dolomite patches.			150.00	1.00	1.3	
150	[Brick pattern]	Upper Roan	Dolomite	Speckled with recrystallized dolomite patches.	Oxidized	T	T	151.00	1.00	0.5						
											152.00	1.00	2.5			
											153.00	1.00	3.4			
										Decomposed pyrite specks and stringers.			154.00	1.00	12.4	
													155.00	1.00	10.8	
													156.00	1.00	12.0	
										Speckled with recrystallized dolomite patches and veinlets, stained in brown to brick-brown.			157.00	1.00	14.0	
													158.00	1.00	10.3	
													159.00	1.00	5.8	
													160.00	1.00	5.1	
160	[Brick pattern]	Upper Roan	Dolomite	Brick-brown crusts in pores.	Oxidized	T	T	161.00	1.00	2.6						
											162.00	1.00	2.3			
											163.00	1.00	3.4			
											164.00	1.00	5.8			
										Stained in brown to brick-brown.			165.00	1.00	11.8	
													166.00	1.00	4.1	
													167.00	1.00	2.1	
													168.00	1.00	5.8	
										Veinlets and patches of dull brown to brick-brown crusts.			169.00	1.00	13.2	
													170.00	1.00	8.0	
170	[Brick pattern]	Upper Roan	Dolomite	Stained with brick-brown crusts.	Oxidized	T	T	171.00	1.00	0.8						
											172.00	1.00	3.0			
											173.00	1.00	6.4			
											174.00	1.00	Nil			
										Argillaceous banding with an angle of 15°.						
										Speckled with recrystallized dolomite patches.						
										Specks of pyrite.						
175	[Brick pattern]	Upper Roan	Dolomite	White saccharoidal, speckled with recrystallized dolomite patches.	Primary	T	T									
180	[Brick pattern]	Upper Roan	Dolomite	White, fine-grained saccharoidal dolomite	Primary	T	T									
185	[Brick pattern]	Upper Roan	Dolomite		Primary	T	T									
190	[Brick pattern]	Upper Roan	Dolomite		Primary	T	T									

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Faint banding with an angle of 25°.	Primary						
200				Compact, saccaroidal, faintly banded and speckled with recrystallized dolomite patches.							

Hole No. : MJZK-10
 Line : 19 Elevation : 1,172 m
 Point : 375 Bearing :
 Depth : 201 m Inclination : Vertical

Depth (m)	Lithology				Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn	
0		Cenozoic		Surface soil	Weathered							
5				Gravel beds.								
10		Mwashia	Phyllite	Pale-brown, clayey.	Weathered							
15				Brownish gray, mottled in white, yellow, gray, brown, etc.								
20												
25		Upper Roan	Dolomite	Gray dolomite, intercalations of phyllite with an angle of 35°.	Oxidized							
30				Banded with iron- staining.								
35				Cavity between 35.1 and 35.5 m. Iron bands at 35.9 to 38.4 m.								
40												

Depth (m)	Lithology				Zone	Mineralization		Assay Results							
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn				
45	[Brick pattern]	Upper Roan	Dolomite	Decomposed pyrite stringers and iron-bands.	Oxidized	I	I								
				Porous with recrystallized dolomite veins.											
50				Light-gray, banded.											
				Rapidly banded black dolomite with strata-bound sphalerite veinlets.					52.10	53.10	1.00	3.5			
55										54.10	1.00	8.7			
										55.10	1.00	3.3			
60								Sphalerite stringers, associated with recrystallized dolomite veinlets.	Non-oxidized	I	I				
								Light-gray dolomite, banded with vuggy recrystallized dolomite veinlets.							
65								Argillaceous banding with an angle of 25°.							
								Banded with recrystallized dolomite stringers.							
70				Oxidized	I	I									
			Cavity at 77.2 to 77.3 m.												
75			Brick-brown stains.												
			Brick-brown streaks. Sphalerite and willemite.												
80			Brick-brown stringers.												
85															
			Cavity at 86.8 to 87.3 m.												
90			Brick-brown stains.												


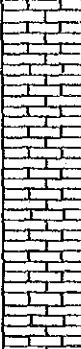
Depth (m)	Lithology			Zone	Mineralization		Assay Results			
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)
95	[Brick pattern]	Upper Roan	Dolomite	Brick-brown to reddish-brown staining.	Oxidized	T T T T T T T T T T T T				
							91.10	92.10	1.00	4.5
								93.10	1.00	6.7
								94.10	1.00	7.4
								95.10	1.00	4.7
								96.10	1.00	3.7
								97.50	1.40	1.3
								98.50	1.00	3.6
								99.50	1.00	5.1
								100.50	1.00	1.4
								101.50	1.00	2.0
							100	[Brick pattern]	Upper Roan	Dolomite
	102.50	1.00	4.1							
	103.50	1.00	3.8							
	104.50	1.00	7.7							
105	[Brick pattern]	Upper Roan	Dolomite	Banded with vuggy recrystallized dolomite veinlets.	Oxidized	T T				
								105.00	0.50	15.0
110	[Brick pattern]	Upper Roan	Dolomite	Brick-brown stringers and patches.	Oxidized	T T				
								106.00	1.00	2.4
115	[Brick pattern]	Upper Roan	Dolomite	Light-gray, rapidly banded dolomite with yellow ochre stains.	Oxidized	T T				
120	[Brick pattern]	Upper Roan	Dolomite	Washed fractures at 111.2 to 112.1 m.	Oxidized	T T				
125	[Brick pattern]	Upper Roan	Dolomite	White dolomite with staining patches.	Oxidized	T T				
130	[Brick pattern]	Upper Roan	Dolomite	Porous and stained.	Oxidized	T T				
135	[Brick pattern]	Upper Roan	Dolomite	Sphalerite patches, surrounded with brick-brown crust rings.	Oxidized	T T				
								121.00	122.00	1.00
140	[Brick pattern]	Upper Roan	Dolomite	Willemite patches, surrounded with brick-brown crust rings.	Oxidized	T T				
								123.00	1.00	1.6
140	[Brick pattern]	Upper Roan	Dolomite	Speckled and rich in voids along recrystallized dolomite patches.	Oxidized	T T				
								124.00	1.00	5.0
140	[Brick pattern]	Upper Roan	Dolomite	Slightly stained in brown.	Oxidized	T T				
								125.00	1.00	5.1
140	[Brick pattern]	Upper Roan	Dolomite	Faintly banded with an angle of 15°.	Oxidized	T T				
								126.00	1.00	3.6
140	[Brick pattern]	Upper Roan	Dolomite		Oxidized	T T				
								137.00	138.00	1.00

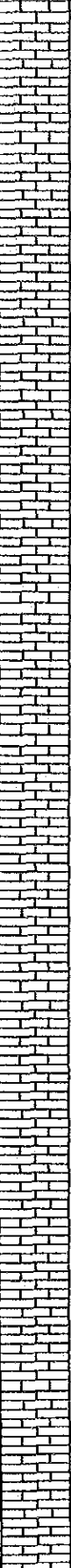
Depth (m)	Lithology			Zone	Mineralization		Assay Results												
	Logging	Horizon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn								
145		Upper Roan	Dolomite	Speckled and rich in voids with recrystallized dolomite patches.	Oxidized	T T T T T T T T T T T T T T T T	T T T T T T T T T T T T T T T T												
150				Reddish brown staining. Brick-brown stringers and patches. Sphalerite patches at 151.7 m. Brick-brown stains.											151.00	152.00	1.00	4.0	
155				Brownish stains of irregular stringers and veinlets.												153.00	1.00	5.0	
160				Brownish staining.												154.00	1.00	4.2	
165				Reddish-brown staining.												155.00	1.00	3.8	
170				Speckled and porous with recrystallized dolomite patches.												156.00	1.00	0.4	
175				Sphalerite-pyrite streak at 170.0 m with an angle of 20°. Light-gray dolomite.												157.00	1.00	5.6	
180				Pyrite impregnation.												158.00	1.00	3.8	
185				Pyrite patches at 179.7, 181.9 and 182.2 m. White, saccaroidal.												159.00	1.00	3.2	
190				Pyrite patches and stringers.															
														Primary					

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Pyrite specks.	Primary	I					
200				Fine-grained, saccaroidal, speckled with recrystallized dolomite veinlets.		I					

Hole No. : MJZK-11
 Line : 18 Elevation : 1,173 m
 Point : 375 Bearing : N 40° E
 Depth : 201 m Inclination : -45°

Depth (m)	Lithology				Zone	Minerali- zation		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
0				Surface soil							
5											
10											
15		Ceno- zoic		Soil beds	Weath- ered						
20											
25				Sand beds							
30		Mwasha	Phyllite	Pale-brownish gray, deeply weathered, talcose in places.							
35											
40											

Depth (m)	Lithology			Zone	Mineralization		Assay Results							
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn			
		Mwa.	Phy.		Weathered									
45		Cenozoic		Sand beds										
50		Upper Roan	Dolomite	Gray dolomite, banded with vuggy veinlets of recrystal-lized dolomite at an angle of 70°.	Non-oxidized									
55														
60						Brick-brown dull crusts.								
						Porous, stained in brown to brick-brown.								
65						Argillaceous banding with an angle of 65°.								
						Stained with yellowish brown crusts.								
70						Brick-brown staining.								
75						Brick-brown stringers.	Oxidized			73.30	74.30	1.00	2.8	
						Gray, banded dolomite, speckled with recrystal-lized dolomite patches.						75.30	1.00	5.6
												76.30	1.00	2.3
80			Porous and stained with brick-brown crusts.											
85			Black manganese wad in voids at 86.3 and 88.3 m.											
90			Brick-brown stringers.											

Depth (m)	Lithology			Zone	Mineralization		Assay Results						
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn		
95		Upper Roan	Dolomite	Light-gray, fine-grained dolomite, saccaroidal.	Non-oxidized								
				Brick-brown stringers at an angle of 40°.									
100				Speckled and rich in voids with recrystallized dolomite patches and veinlets.									
105						Decomposed pyrite stringers and patches.	Oxidized						
110						Banded with an angle of 55°.							
115						Argillaceous banding with an angle of 25°.							
120						Light-gray dolomite.							
						Porous and stained in brick-brown.							
125						Brick-brown stringers.							
						White saccaroidal dolomite.							
130						Brick-brown to yellowish-brown veinlets.							
135						Decomposed pyrites and iron-staining.							
						Fractures with brick-brown crusts.				137.80	138.60	0.80	2.5
								139.60	1.00	2.5			
140								140.60	1.00	6.7			

Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
145	[Brickwork pattern]	Upper Roan	Dolomite	Yellowish-brown patches.	Oxidized	I	I				
150				Yellowish-brown crusts.		I	I				
155				White dolomite, speckled with recrystallized dolomite veinlets.		I	I				
160						I	I				
165				Sphalerite stringers, with an angle of 40°.		Non-oxidized	I	I			
170				Brown to brick-brown stringers.	Oxidized	I	I				
175				Sphalerite stringers.	Non-oxidized	I	I				
180				Decomposed pyrite-recrystallized dolomite vein at 181.4 to 181.6 m. Banded with an angle of 40°.	Oxidized	I	I				
185											
190				Yellowish-brown crusts in fractures.							

Depth (m)	Lithology			Zone	Minerali- zation		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
195	[Brick pattern]	Upper Roan	Dolomite	Sphalerite patches and veinlets.	Oxi.						
200				Pyrite specks and stringers.	Non-oxidized						
				White, fine-grained, saccaroidal dolomite, speckled and banded with recrystallized dolomite at an angle of 50°.							

Hole No. : MJZK-12

Line : 19 Elevation : 1,172 m

Point : 375 Bearing : N 40° E

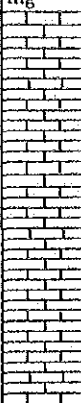
Depth : 201 m Inclination : -45°

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logg- ing	Hori- zon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
0				Surface soil	Weathered						
5		Ceno- zoic									
10											
15				Soil beds							
20					Non-oxidized						
		Mwa.	Phy.	Weathered phyllite (?)							
		Cen.		Soil beds							
		Mwa.	Phy.	Weathered phyllite (?)							
25		Ceno- zoic		Pebble-bearing soil beds.							
30		Upper Roan	Dolomite	Banded with an angle of 60°.							
					Iron-stain banding.						
					Cavity between 33.5 and 34.7 m.						
35					Cavity at 36.8 to 37.0 m.						
40				Cavity at 39.9 to 40.4							

Depth (m)	Lithology			Zone	Mineralization		Assay Results			
	Logging	Flori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)
45	Upper Roan	Dolomite	Dolomite	Gray banded, sericite dolomite.	Non-oxidized	T I L				
				Banding with vuggy veinlets of recrystallized dolomite.						
50				Banded with an angle of 60°.						
				Brownish stains.						
55				Rich in voids and stained along recrystallized dolomite veinlets.						
60				Yellowish-brown stringers.						
65				Speckled with recrystallized dolomite patches and veins.						
				Phyllite-intercalations at 67.1 and 67.2 m.						
70				White, banded dolomite rich in voids.						
75				Cavity at 73.8 to 74.0 m.						
80	Speckled and stained with brown to dark- brown stringers.	Oxidized								
85	Argillaceous banding with an angle of 45°.									
90										

Depth (m)	Lithology			Zone	Mineralization		Assay Results							
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn			
	[Brick pattern]	Upper Roan	Dolomite	White saccharoidal dolomite.	Oxidized		T I I	89.90	90.90	1.00	5.2			
												91.90	1.00	1.4
												92.90	1.00	3.5
95										I				
								Speckled and stained in brown.						
								Decomposed pyrite impregnation.		T				
										I	94.90	95.90	1.00	4.6
												96.90	1.00	4.1
100										T				
				Speckled and porous along recrystallized dolomite patches.		T								
105						T								
				Decomposed pyrite specks.		T								
110						T								
				Chocolate-brown gossany iron stains at 113.4 m.		T								
115				Speckled and rich in voids.		T								
						T								
120				Chlorite banding at 119.0 m with an angle of 35°.		T								
				Speckled with recrystallized dolomite patches.		T								
125						T								
				Decomposed pyrite crystals of 6 to 10 mm in diameter.		T								
130						T								
				Argillite-intercalations at 130.4 to 130.7 m with an angle of 40°.		T								
135						T								
				Speckled and porous with recrystallized dolomite veins.		T								
140						T								

Depth (m)	Lithology				Zone	Mineralization		Assay Results			
	Logging	Horizon	Rock	Remarks		Py	Zn	from (m)	to (m)	run (m)	% Zn
145	Upper Roan	Dolomite	Speckled with recrystallized dolomite patches, rich in voids.	Oxidized	I						
			Banded with an angle of 45°.								
			Pyrite and sphalerite stringers.	Non.	I	I					
				Oxi.							
150			Dolomite - sphalerite veins. Brecciated dolomite filled with sphalerite.	Non-oxidized	I	149.80	150.80	1.00	6.2		
			Sphalerite patches and stringers.				151.80	1.00	5.5		
155			Banded with brownish stringers at an angle of 35°.	Oxidized	I	I	155.80	156.80	1.00	4.8	
160			Sphalerite patches and veinlets.	I	I						
165			White compact, saccaroidal dolomite.	I	I						
			Sphalerite stringers.	I	I						
170	Iron-stain bands and decomposed pyrite stringers.	Primary	I								
175											
	Banded with an angle of 40°.										
180	White, saccaroidal sericite dolomite.	I	I								
185											
190	Banded with an angle of 40°.	I	I								

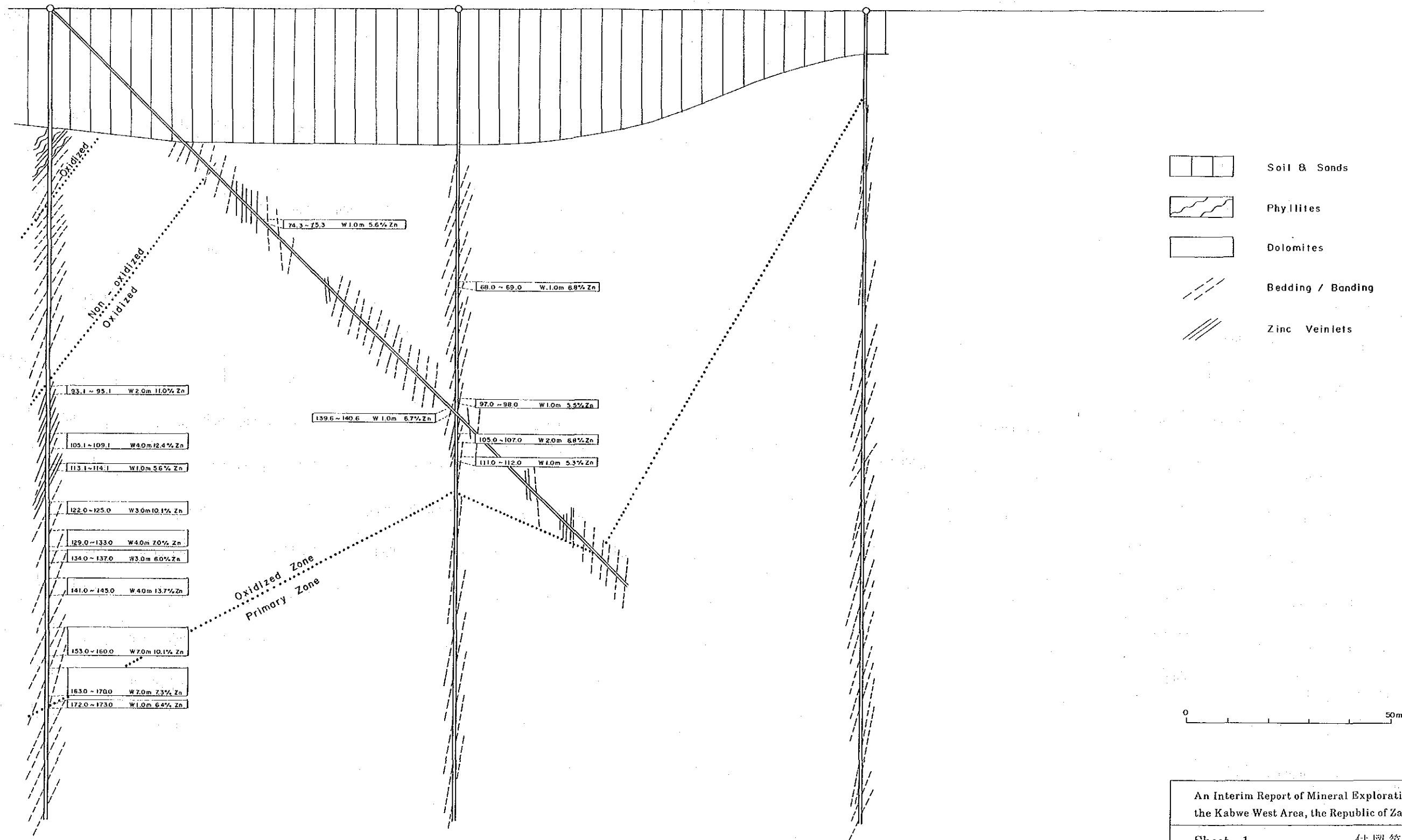
Depth (m)	Lithology			Zone	Mineralization		Assay Results				
	Logg- ing	Hori- zon	Rock		Remarks	Py	Zn	from (m)	to (m)	run (m)	% Zn
195		Upper Roan	Dolomite	Pyrite specks and stringers.		I					
				White compact, saccaroidal dolomite.							
200				Sericite dolomite, banded with an angle of 60°.							


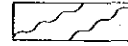
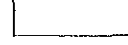
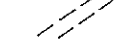
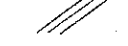


MJZK-9 (90°, 201m)
MJZK-11 (-45°, 201m)

MJZK-6 (90°, 201m)

MJZK-5 (90°, 201m)



-  Soil & Sands
-  Phyllites
-  Dolomites
-  Bedding / Banding
-  Zinc Veinlets



An Interim Report of Mineral Exploration in
the Kabwe West Area, the Republic of Zambia

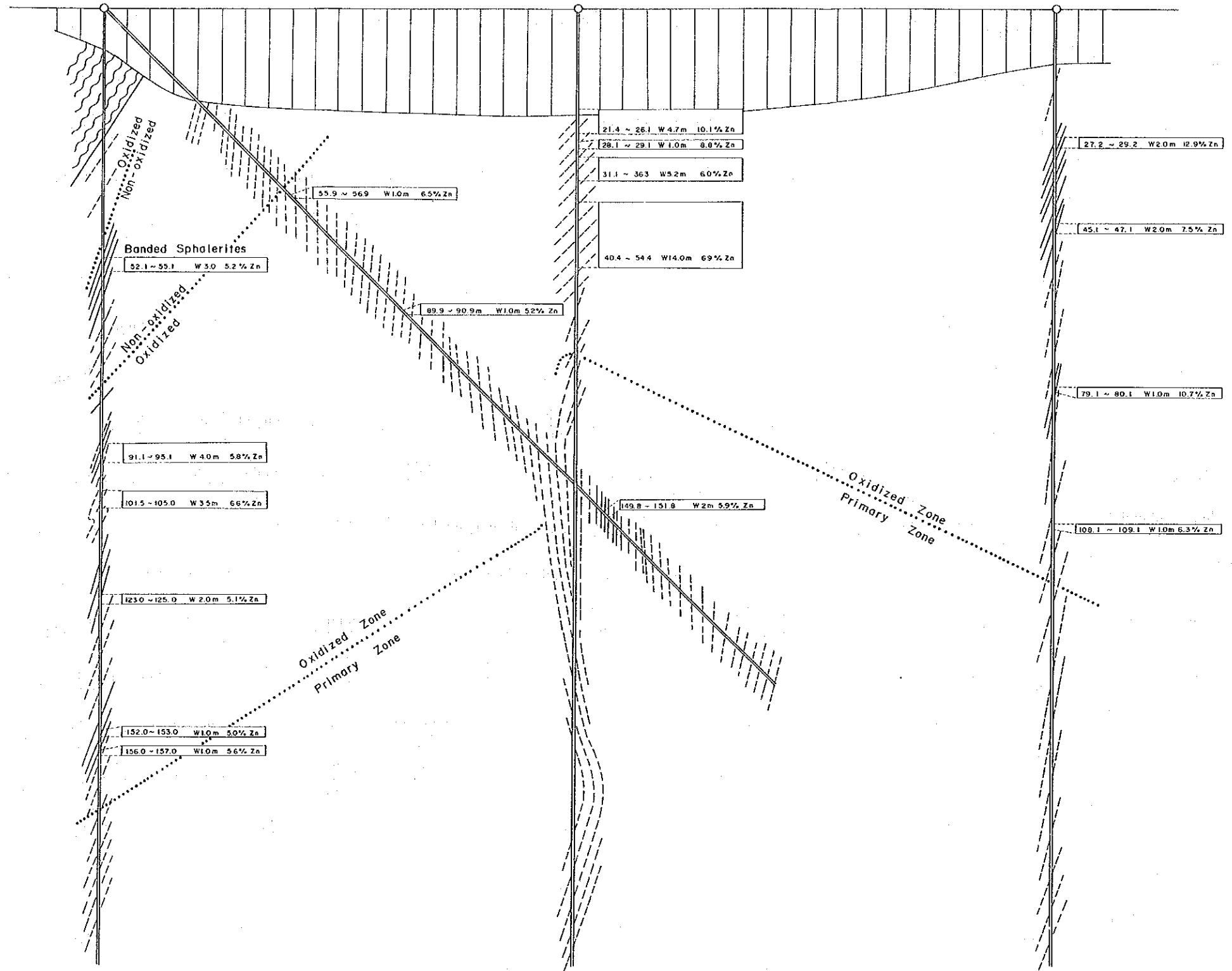
Sheet 1 付図第1図
カブエウエスト地質断面図
Geological Section in Kabwe West
- Line 18 -

Japan International Cooperation Agency
& Metal Mining Agency of Japan (1990)

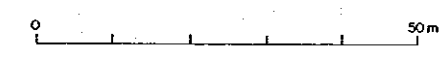
MJZK - 10 (90°, 201 m)
 MJZK - 12 (-45°, 201 m)

MJZK - 1 (90°, 201 m)

MJZK - 4 (90°, 201 m)



- Soil & Sands
- Phyllites
- Dolomites
- Bedding / Banding
- Zinc Veinlets



An Interim Report of Mineral Exploration in the Kabwe West Area, the Republic of Zambia

Sheet 2 付図第2図
 カブエウエスト地質断面図
 Geological Section in Kabwe West
 - Line 19 -

Japan International Cooperation Agency
 & Metal Mining Agency of Japan (1990)

LINE - 17

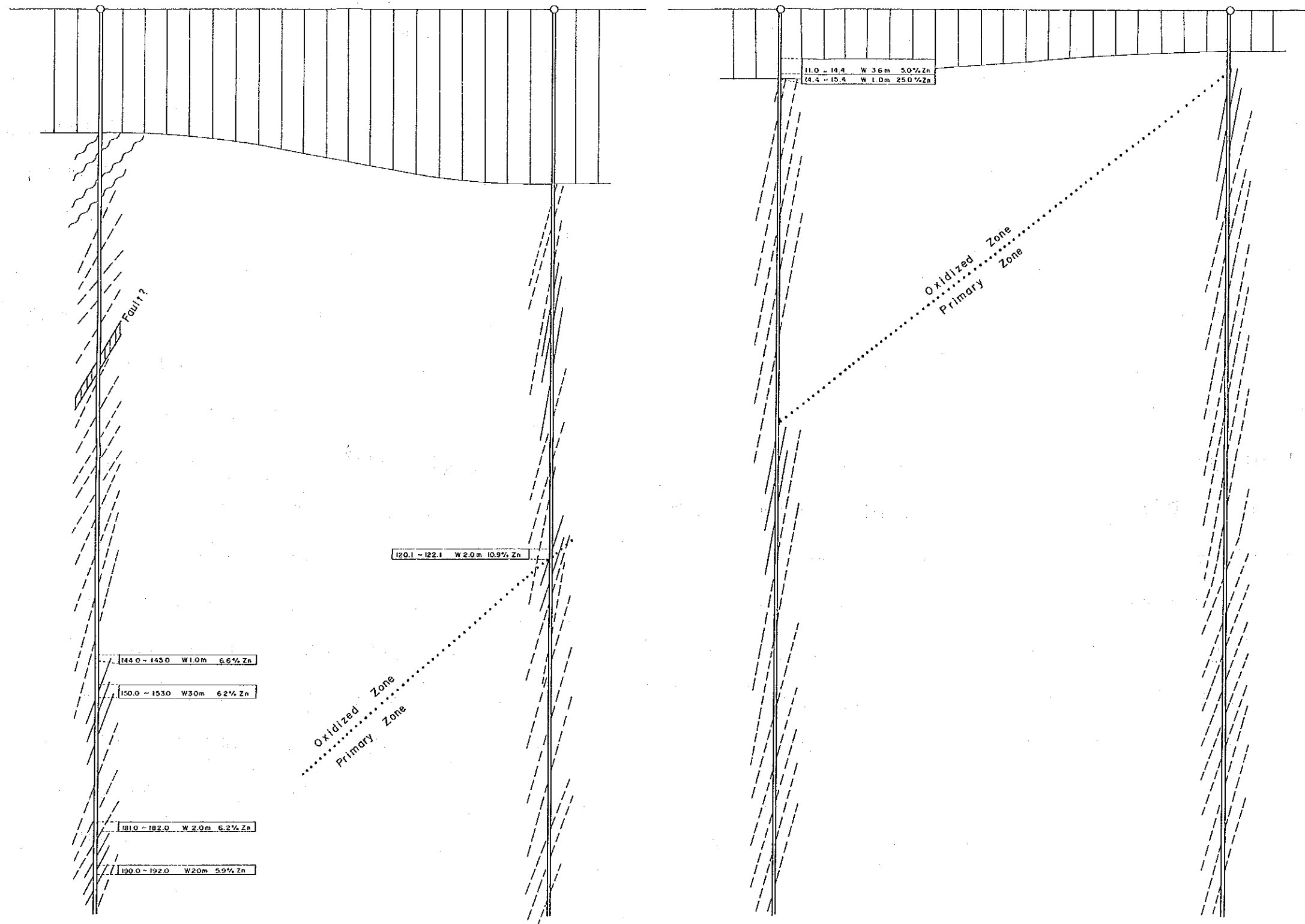
LINE - 20


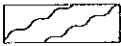

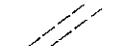
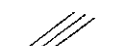
MJ 2K-8 (90°, 201m)

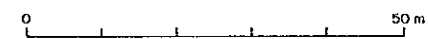
MJ 2K-7 (90°, 201m)

MJ 2K-2 (90°, 201m)

MJ 2K-3 (90°, 201m)



-  Soil & Sands
-  Phylites
-  Dolomites
-  Bedding / Banding
-  Zinc Veinters



An Interim Report of Mineral Exploration in
the Kabwe West Area, the Republic of Zambia

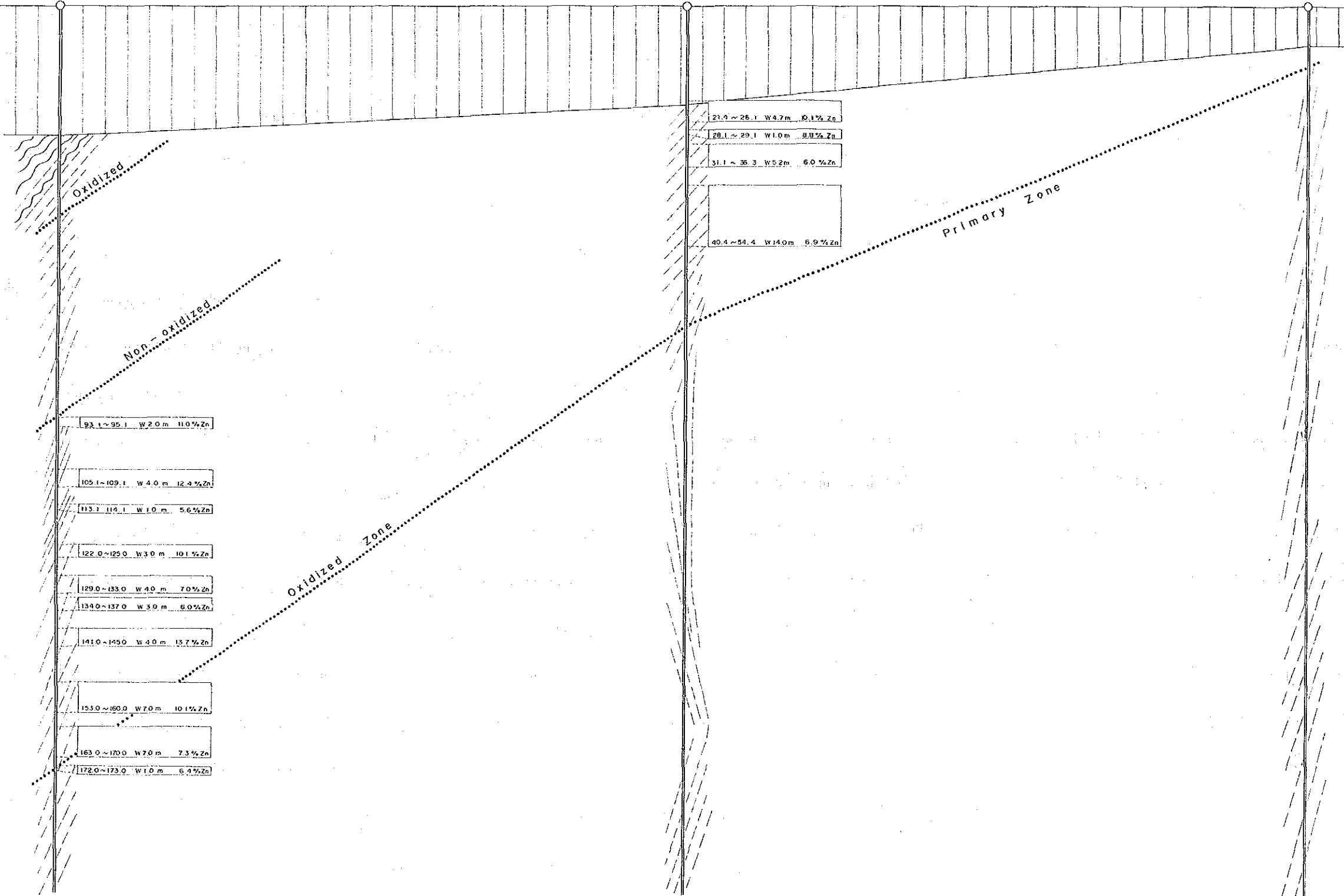
Sheet 3 付図第3図
カブエウエスト地質断面図
Geological Section in Kabwe West
- Lines 17 & 20 -

Japan International Cooperation Agency
& Metal Mining Agency of Japan (1990)

MJZK - 9 (90°, 201m)

MJZK - 1 (90°, 201m)

MJZK - 3 (90°, 201m)



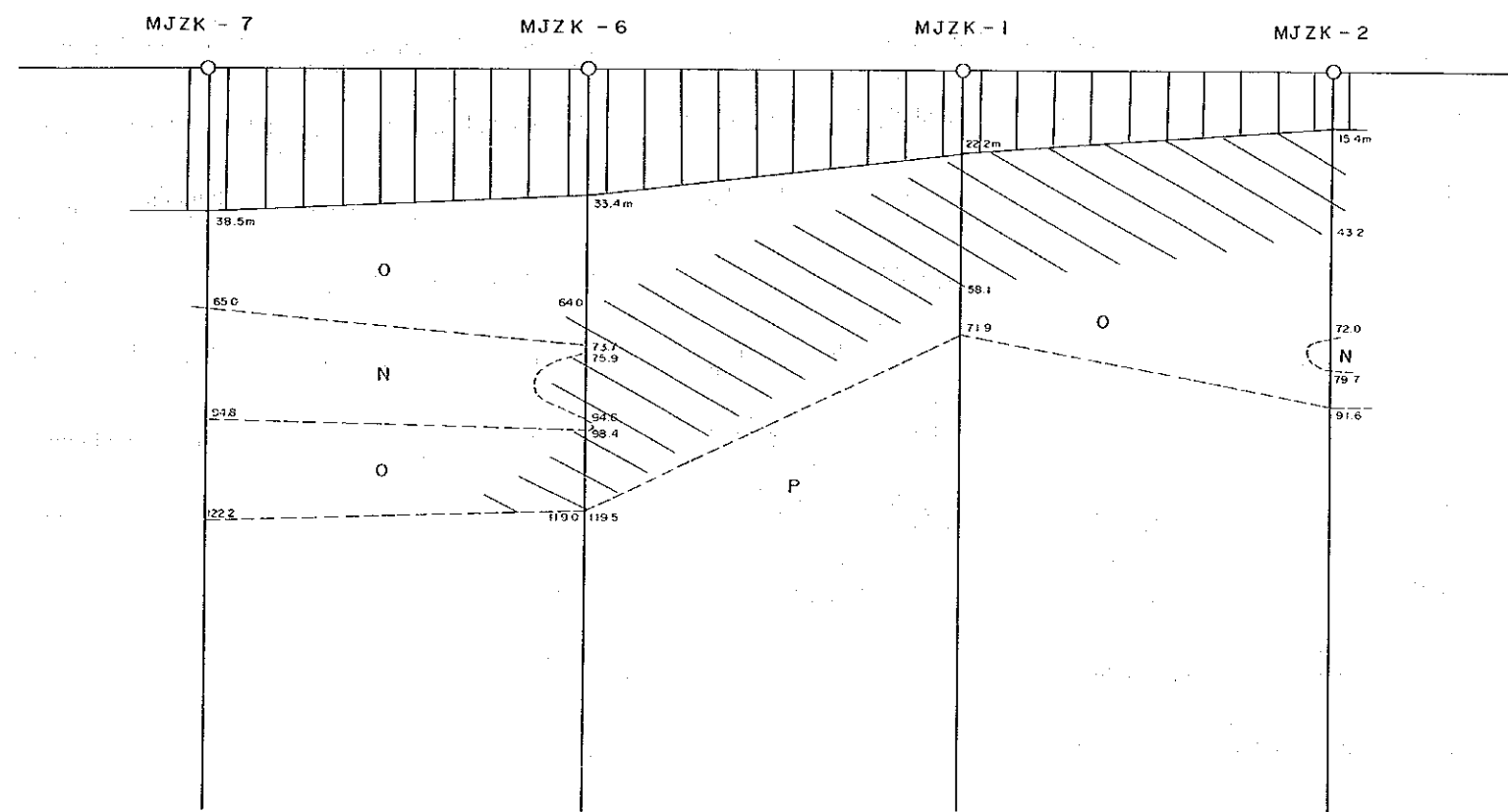
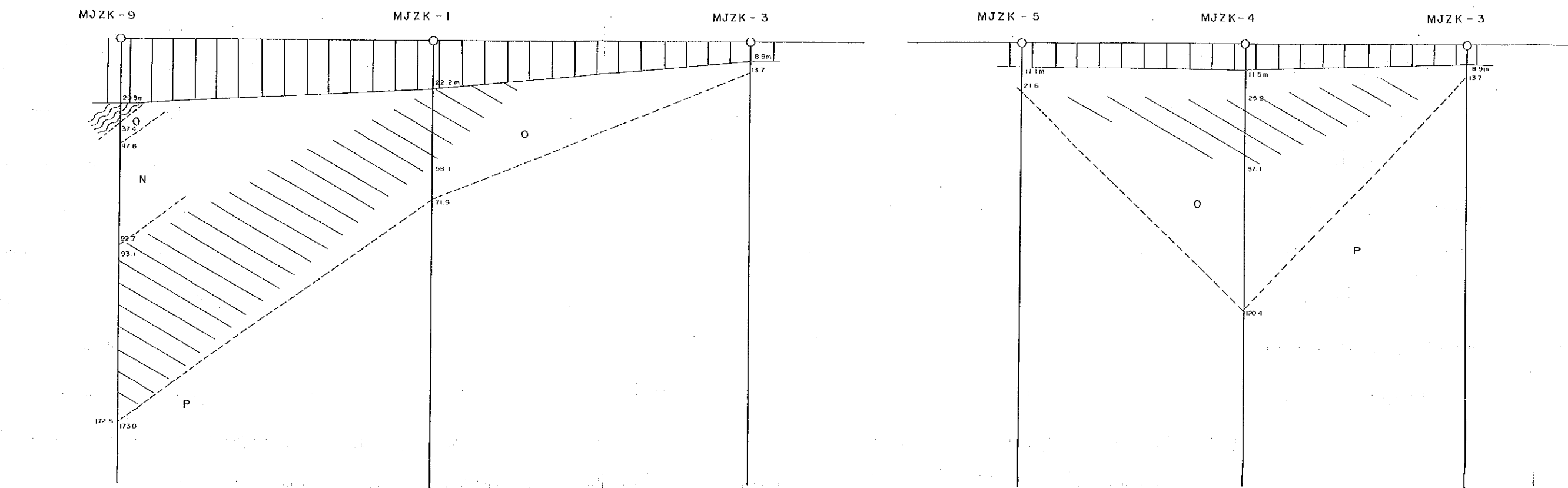
- Soil & Sands
- Phyllites
- Dolomites
- Bedding / Banding
- Zinc Veinlets

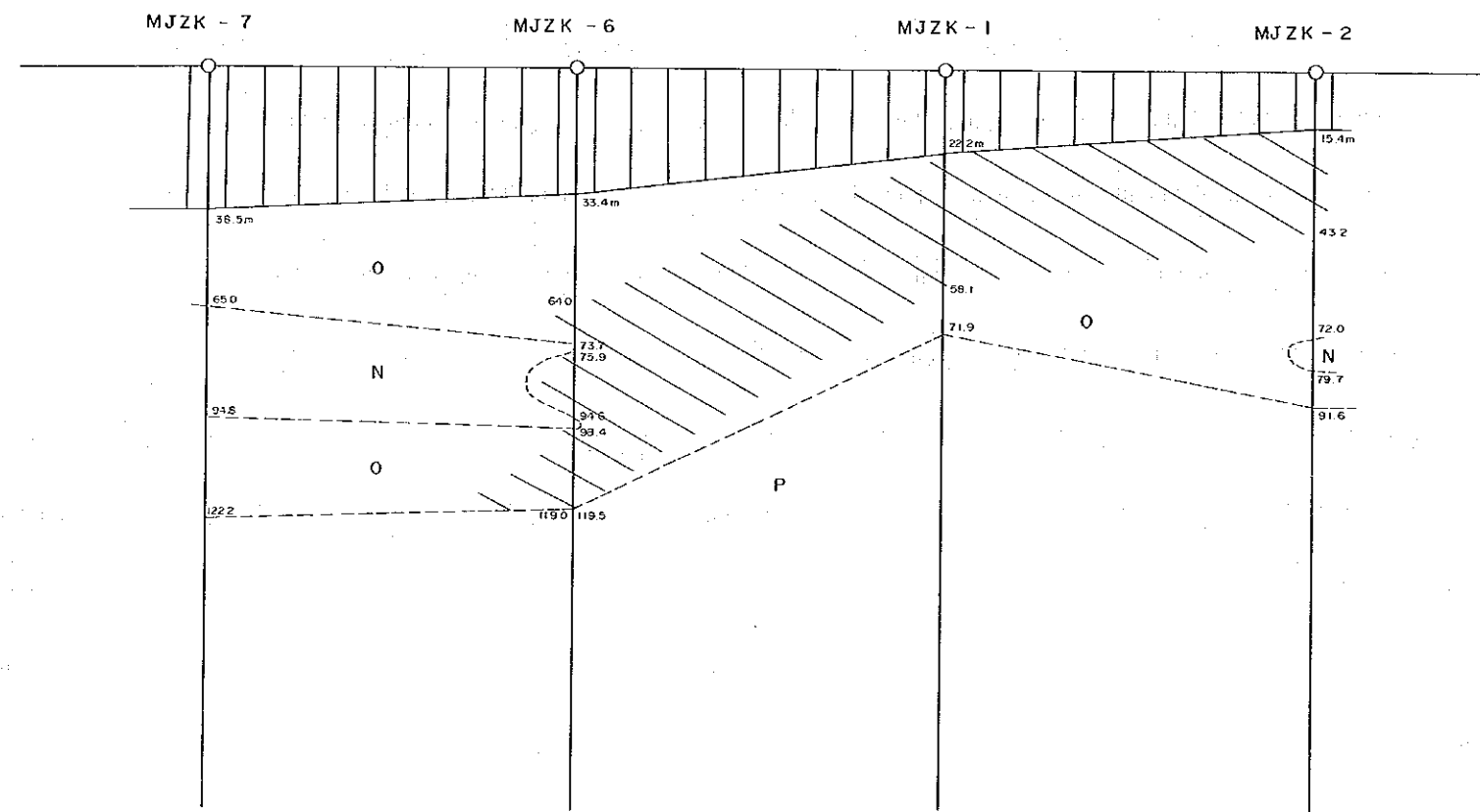
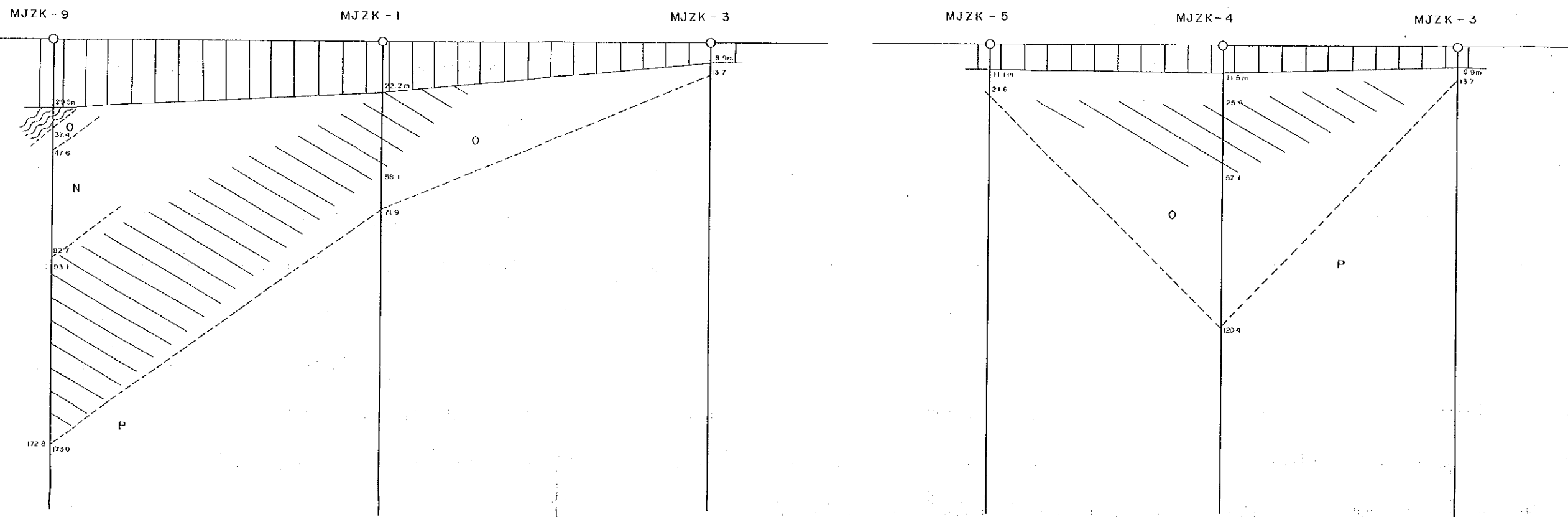


An Interim Report of Mineral Exploration in the Kabwe West Area, the Republic of Zambia

Sheet 4 付図第4図
 カブエウエスト地質断面図
 Geological Section in Kabwe West
 West - East Lines

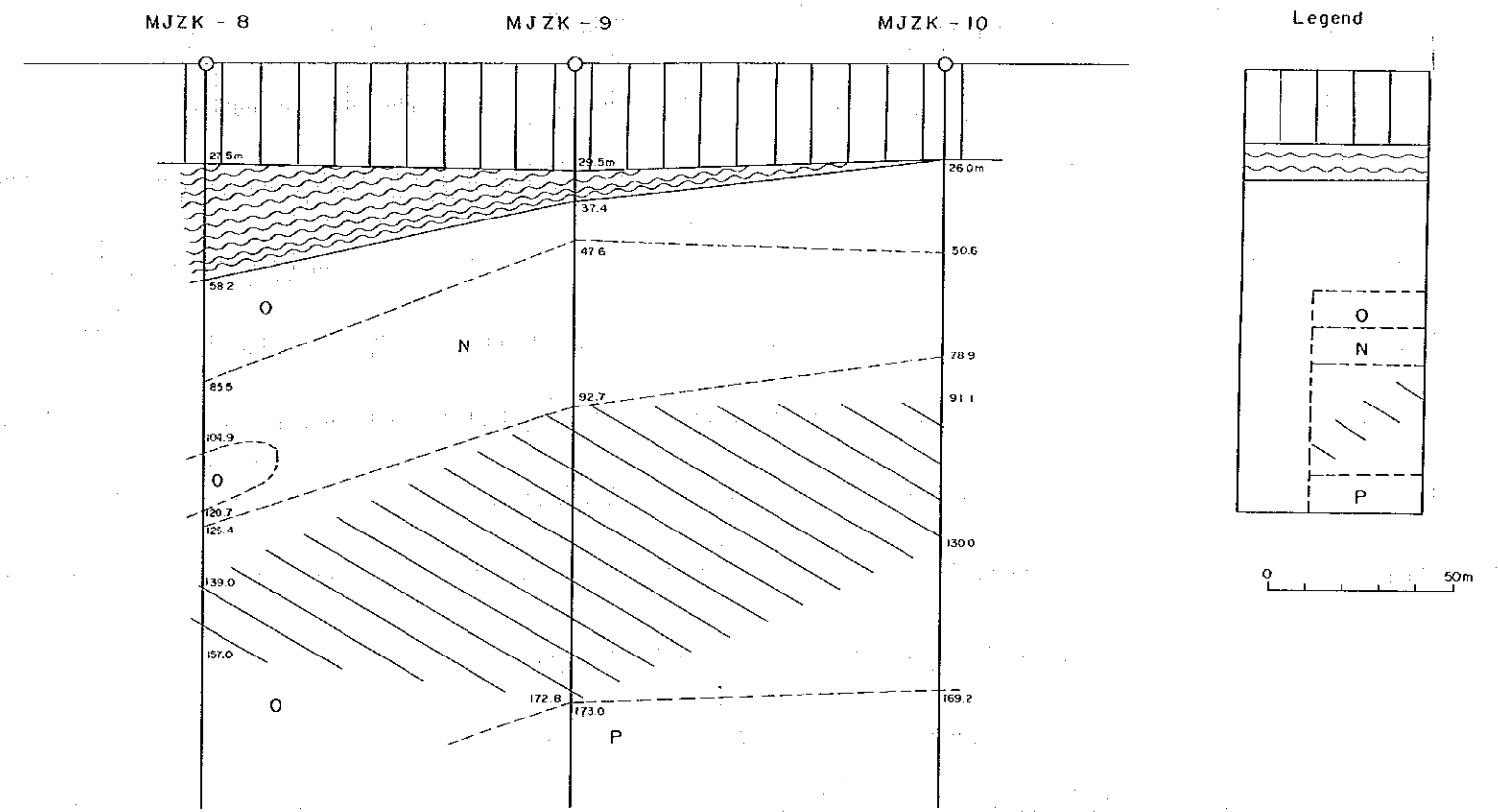
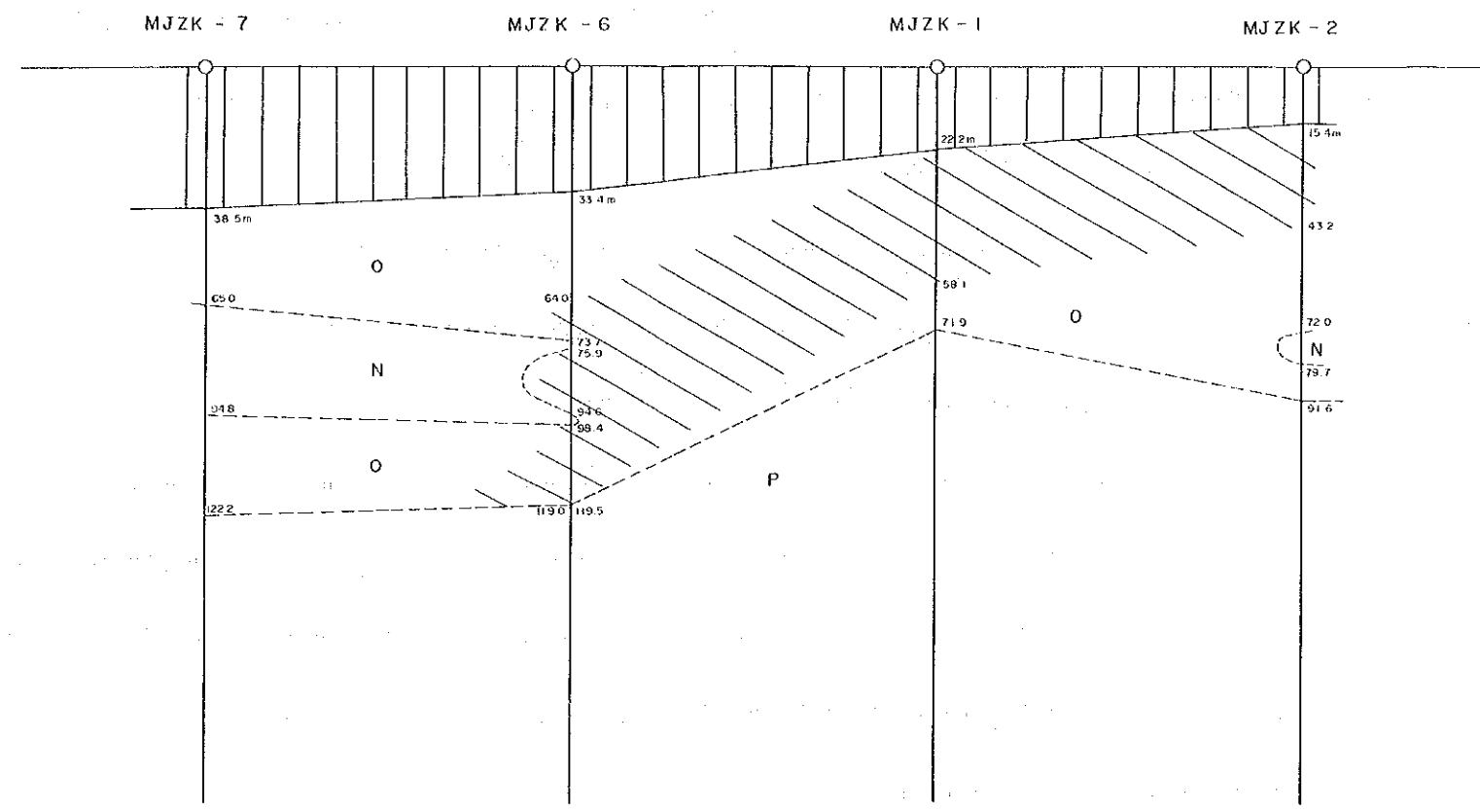
Japan International Cooperation Agency
 & Metal Mining Agency of Japan (1990)

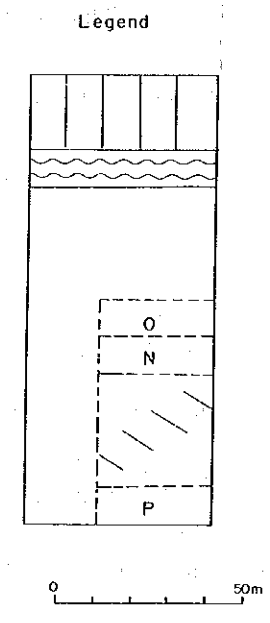
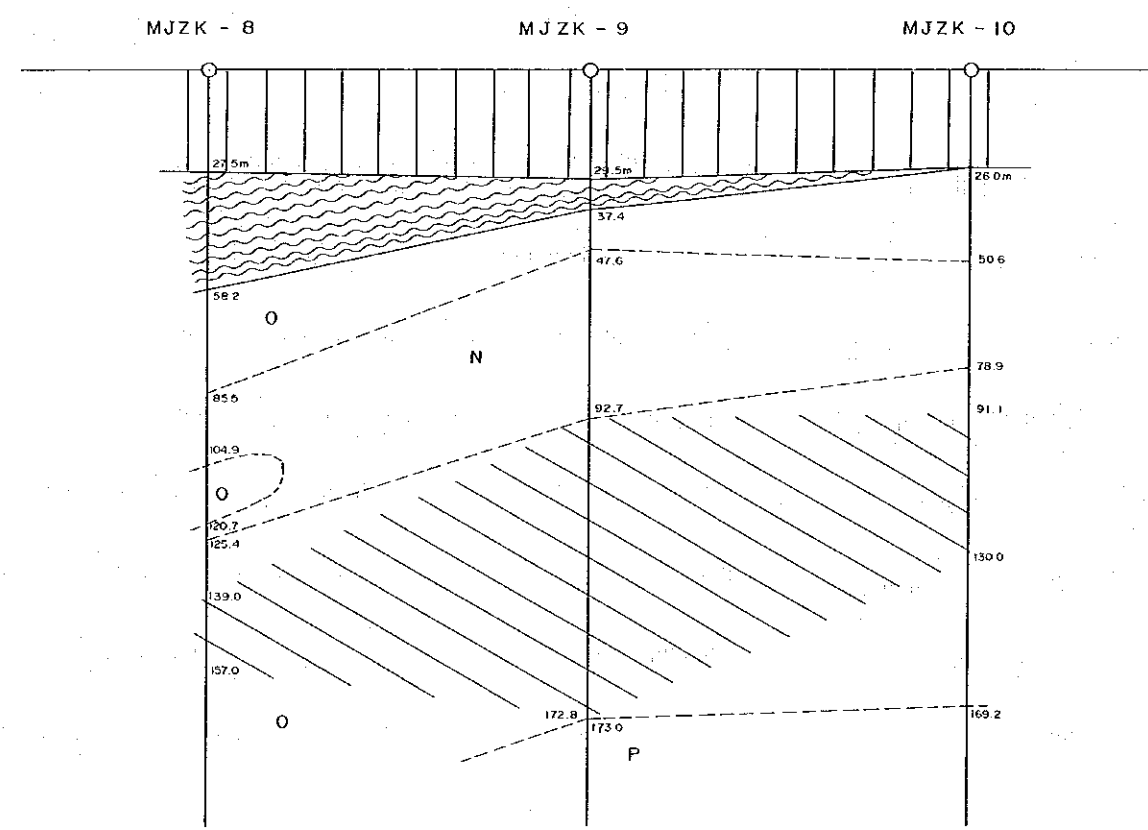
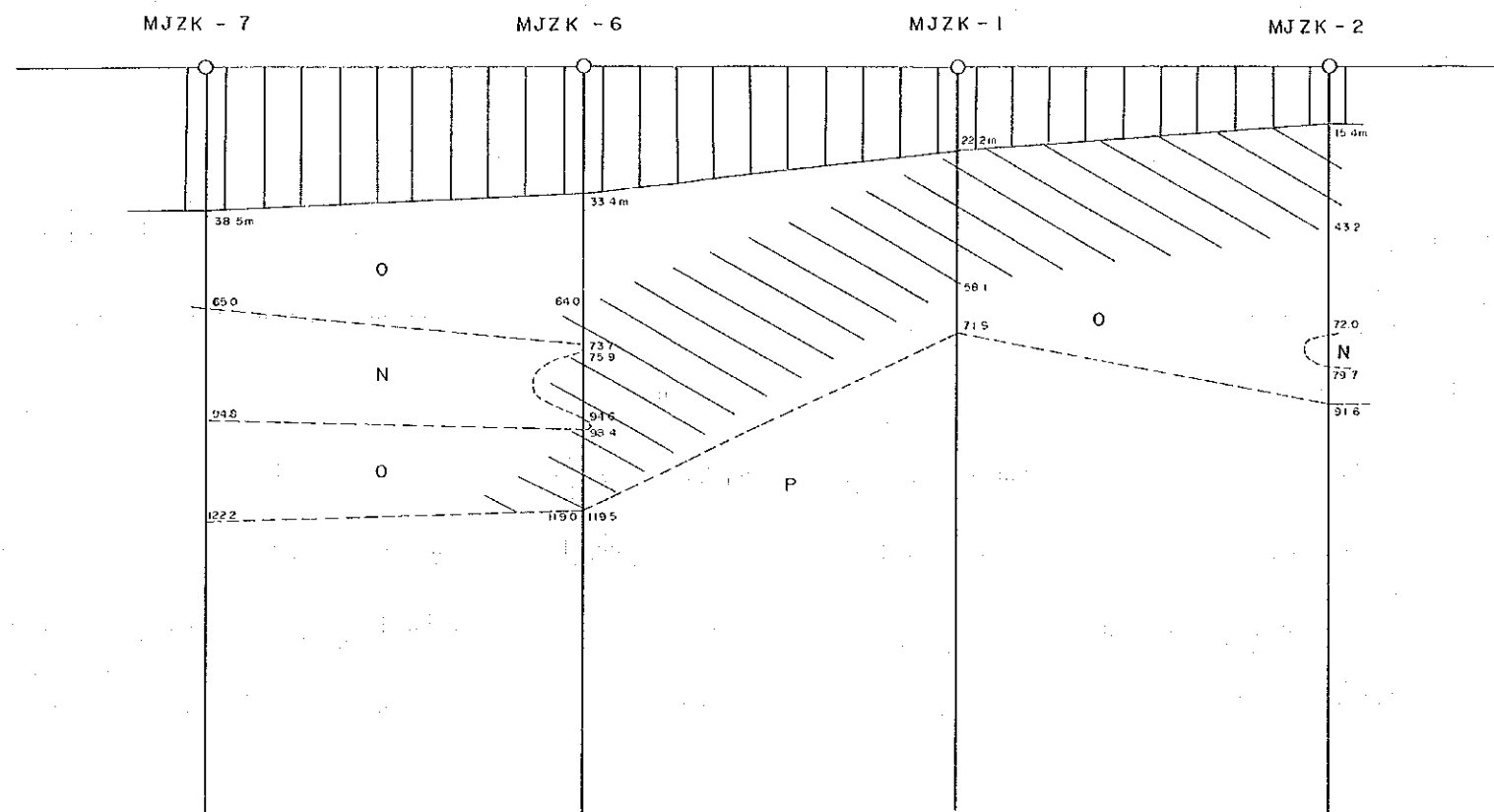




凡例

風化帶 Weathered Zone





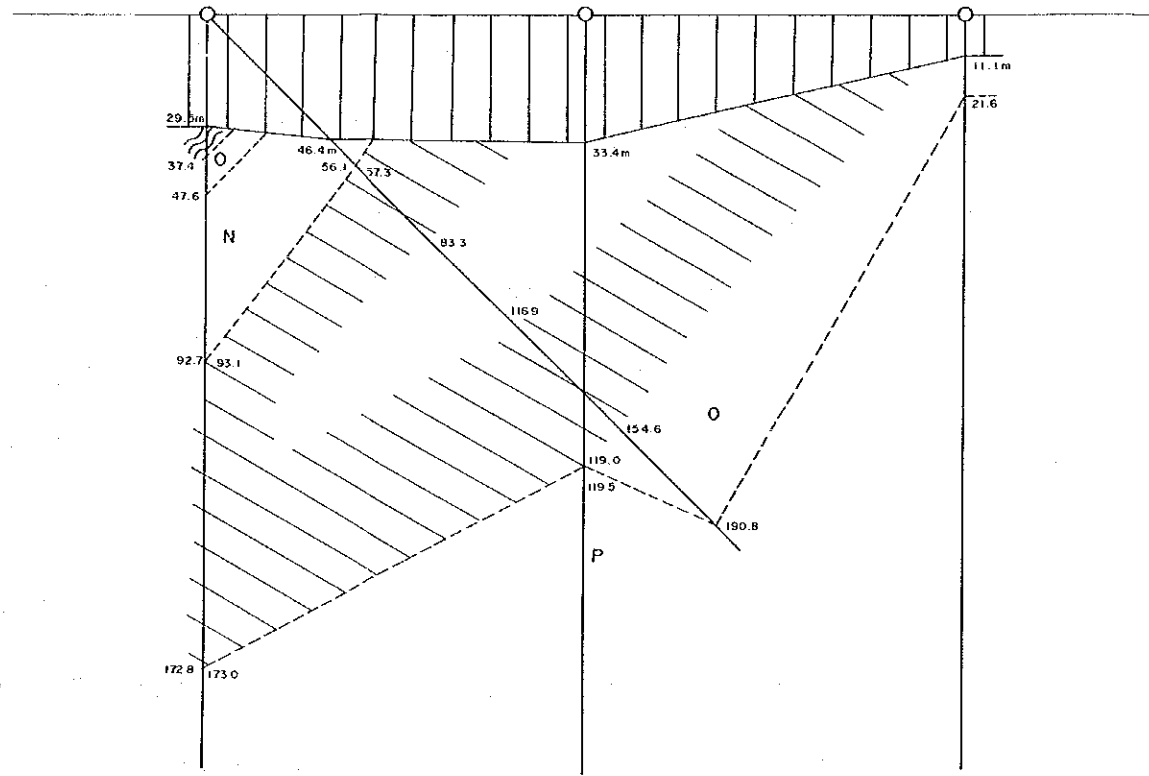
- 凡 例
- 風化帯 Weathered Zone
 - 千枚岩類 Phyllites
 - ドロマイト Dolomites
 - 酸化帯 Oxidized
 - 非酸化帯 Non-oxidized
 - 鉱化帯 Mineralized
(Approx. > 1% Zn)
 - 初生帯 Primary

An Interim Report of Mineral Exploration in the Kabwe West Area, the Republic of Zambia

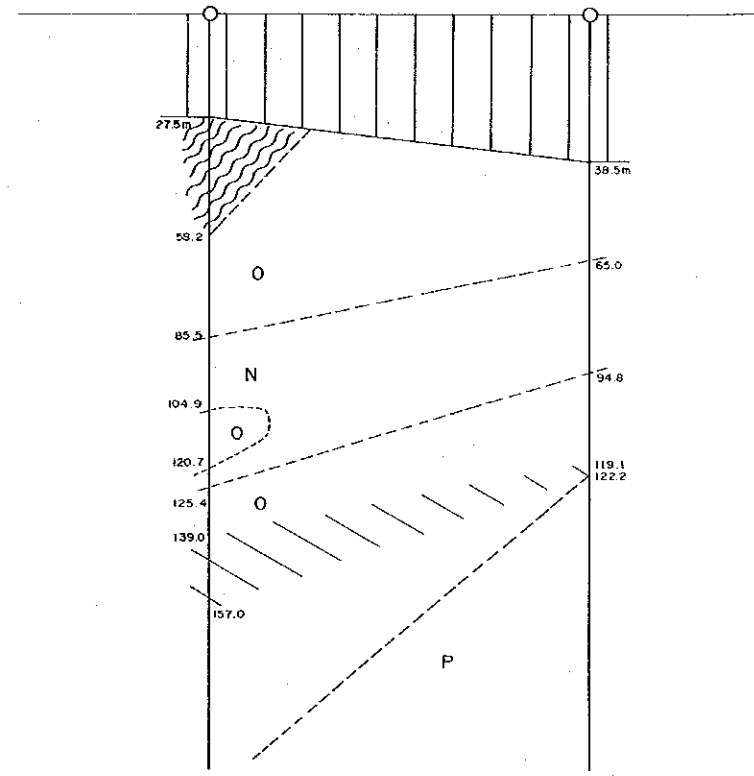
Sheet 5 付図第5図
カブエウエスト模式断面図
Schematic Sections in Kabwe West
(A)

Japan International Cooperation Agency & Metal Mining Agency of Japan (1990)

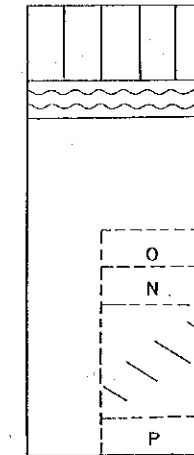
MJZK - 9
MJZK - 11 (-45°)



MJZK - 8 MJZK - 7



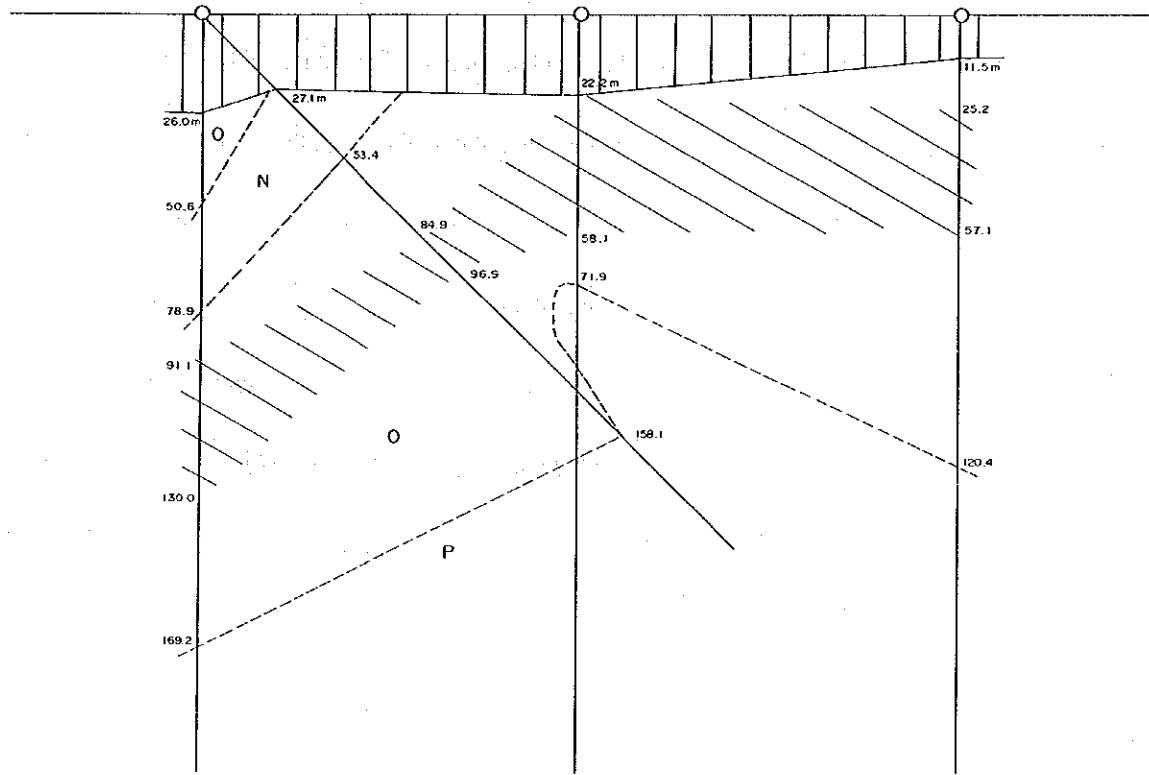
Legend



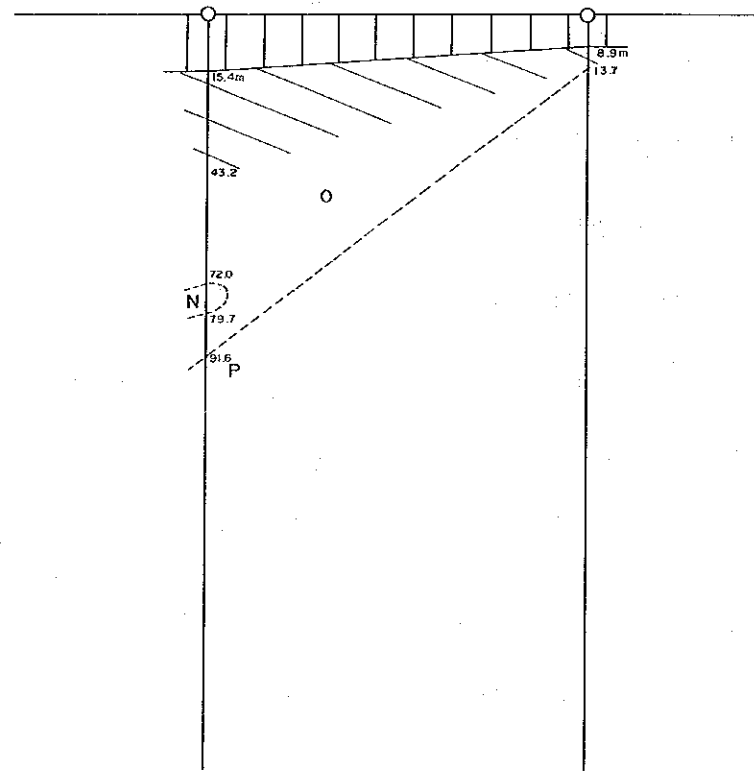
凡 例

風化帯 Weathered Zone
 千枚岩類 Phyllites
 ドロマイト Dolomites
 酸化帯 Oxidized
 非酸化帯 Non-oxidized
 鉱化帯 Mineralized
 (Approx. > 1% Zn)
 初生帯 Primary

MJZK - 10
MJZK - 12 (-45°)



MJZK - 2 MJZK - 3



0 50m

An Interim Report of Mineral Exploration in
the Kabwe West Area, the Republic of Zambia

Sheet 6 付図第6図

カブエウエスト模式断面図

Schematic Sections in Kabwe West

(B)

Japan International Cooperation Agency
& Metal Mining Agency of Japan (1990)

