## 2. Subjects and guiding principles for the future programme

Remarkable zinc mineralization has been revealed in the southwest of the drilled area and margins of this zone to the southwest and southeast are still open. The drilling grid should be extended to these directions to delineate the mineralized zone.

For the evaluation purpose of the mineralized zones detected in MJZK-1, 9 and 10, an interval of grid for drilling should be reduced over the area which covers these three holes.

No work has been conducted in Area B of geochemical anomalies. Yet, the above mentiond schemes over the Area A should be carried out before proceeding to the Area B.

Table 4-1 List of Polished Sections

Cov:covelline, Py:pyrite, Sp:sphalerite

No.	Hole	Depth	Main Constituents	Accessary	Notes
P1	MJZK-3,	17.70m	Sp(1~0.1mm)	Py	Sphalerite rarely includes pyrite specks.
P2	MJZK-3,	23. 75m	Sp(1~0.1mm)	Py(rare)	
P3	MJZK-3,	32.80m	Sp(1~0.1mm)	Py	Sphalerite specks along beddings.
P4	MJZK-3,	53.35m	Py(>1mm)		Idiomorphic pyrites along bedding planes.
P5	MJZK-5.	26.80m	Sp(>0.1mm)	Py	Idiomorphic pyrites in sphalerites.
P6	MJZK-6,	73.70m		Sp, Py, Cov	Idiomorphic covelline in sphalerite.
P7	MJZK-6.	98. 40m	Sp(>1mm)	Cov	Covelline replaces spalerite.
P8	MJZK-6,	190.20m	Py(>0.1mm)	Sp	Sphalerites with large dolomite crystals.
P9	MJZK-7,	67.10ш	Sp(>1mm)		
P10	MJZK-7,	82.00m	Sp(>0.1mm)	Py(rare)	Sphalerite veining.
P111		MJZK-7, 126.00m	Sp(pure, >0.1mm)	Py(rare)	Sphalerite veining.
P12		MJZK-7, 134.60m	Sp(>0.1mm)		
P13		MJZK-7, 169.60m	Py(>0.1mm)		Pyrites along bedding.
P14		MJZK-9, 144.85m	Sp(pure, variable)	Py(rare)	Sphalerite vein.

Table 4-1 List of Polished Sections(cont.)

No.	No. Hole	Depth	Main Constituents	Accessary	Notes
P15	MJZK-10, 53.35m	53.35m	Sp(pure, >0.1mm)		Sphalerites along beddings.
P16	MJZK-10, 54.45m	54. 45m	Sp(>0.1mm)	Cov(rare)	Sphalerites along beddings.
P17	MJZK-10, 83.30m	83.30m	Sp(>0.1mm)	Cov(rare)	
P18	MJZK-10, 165.60m	65.60ш	Sp(>0.1mm)	Py(rare)	
P19	MJZK-11, 168.30m	68. 30ш	Sp(<1mm)	Cov(rare)	
P20	MJZK-11, 177. 75m	77.75m	Py(1~0.1mm)		Pyrite impregnation.
P21	MJZK-11, 173.90m	73. 90ш	Sp(pure, >0.1mm)		Vein forming sphalerites.
P22	MJZK-11, 179. 70m	79.70m	Py(>0.1mm)		Pyrite impregnation.
P23	MJZK-11, 190.90m	90.90m		Py, Sp	
P24	MJZK-12, 151.00m	51.00ш	Sp(>0.1mm)	Py(rare)	Vein forming sphalerites.
P25	MJZK-12, 162. 70m	62.70m	Sp(1~0.1mm)	,!	

Table 4-2 List of Thin Sections

. *			(P1)	Number of corresponding polished section
No.	No. Hole	Depth	Маше	Notes
SS	MJZK-5	26.80m(P5)	Sphalerite in dolomite with quartz.	Sphalerite is associated with coarser dolomite crystals.
S6 S7	MJZK-6 MJZK-6	73.70m(P6) 98.40m(P7)	Hematite-melilite-quartz vein in dolomite Welilite with quartz	
S8	MJZK-6	190.20m(P8)	Sphalerite-bearing dolomite	Aggregates of dolomite, quartz, and sphalerite
				are associated with coarser dolomite crystals.
S		67.10m(P9)	Sphalerite-bearing dolomite	Sphalerite with coarse dolomite.
S10		82.00m(P10)	ditto	ditto
S11		126.00m(P11)	Sphalerite-bearing phlogopite dolomite	
S13		169.60m(P13)	Sphalerite-bearing dolomite	Quartz grains exist in coarser dolomite.
S16		54.45m(P16)	Phlogopite dolomite	Phlogopite along bedding of fine-graind matrix.
S24		151.00m(P24)	Sphalerite-bearing dolomite	Large crystals of dolomite.
S25	MJZK-25	162.70m(P25)	Sphalerite-bearing phlogopite dolomite	Sphalerite, phlogopite and dolomite in fine-
				grained matrix.
S31			Smithsonite-sphalerite in dolomite	Carbonate rims around sphalerite.
S32	MJZK-3	82.70m	Phlogopite dolomite	Few quartz.
S33			ditto	ditto. Banding due to grain sizes.
S34			Muscovite dolomite	With iron stains.
S41			Welilite dolomite	ditto.
S42			Muscovite dolomite	Banded.
S43	MJZK-4		Welilite dolomite	Medium-grained dolomite with iron stains.

Table 4-2 List of Thin Sections(cont.)

Fine-grained. Coarse-grained. Coarser facies penetrate finer facies.	Fine-grained.	Stained coarser facies. Fine-grained.	Stained coarser dolomite crystals.	Bedded.	With few quartz.	Daliueu.	Banded. With hematite	With iron bands.		With few muscovite and iron minerals. ditto. Mosaic texture.	Sphalerite is associated with coarser dolomite.
Muscovite dolomite Muscovite dolomite Phlomonite dolomite	Muscovite dolomite Quartz-bearing muscovite dolomite	Dolomite Dolomite	Muscovite dolomite	Muscovite dolomite Dolomite	Muscovite dolomite	Dolomite Sericite dolomite	Sericite dolomíte Sericite dolomíte	Sericite schist Hematite-bearing dolomite	Dolomite	Dolomite Dolomite	Sphalerite-bearing dolomite
86.10m 111.80m	125.00m 125.00m 138.15m	48.50m 73.00m	90.70m 107.20ш	131.25m 132.10m	139.00m	141.00m 29.65m	35.50m 37.20m	45.75m 46.75m	121.20m	143.00m 147.30m	153.85ш
S51 MJZK-5 S52 MJZK-5 S59 MJZK-5		S61 NJZK-6 S62 NJZK-6									

Table 5 Chemical Assays

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: .	Depth in m.	7.00- 18.0	3.80 - 2	4.80- 25.9	5.90- 26.1	6.10- 27.1	7.10- 28.1	8.10 - 29.1	9.10 - 30.1	0.10-31.1	1.10- 32.1	2.10 - 33.1	3.10 - 34.3	4.30 - 35.3	5.30- 36.3	6.30 - 37.4	8.40- 39.4	0.40- 41.4	1.40- 42.4	2.40- 43.4	3.40- 44.4	4.40- 45.4	5.40- 46.4	6.40- 47.4	7.40- 48.4	8.40- 49.4	9.40- 50.4	0.40 - 51.4	1.40- 52.4	2.40- 53.4	3.40- 54.4	4.40- 55.4	4. T	.*	
	Hole No.	MJZK-1 17	7	27	2,1	24	2.	28	2,	Ř ·	en .	ઌૼ	ന്	č	ξ'n.	ਲੌ	£	14	4	4	4	747	7	14	4	4,	4	2	ι·Λ	'n	īΫ́				

Chemical Assays(cont.) Table 5 Au (0.07) (0 MINEX 0.31.75 1.170 5.00-11.00 11.00-14.40 15.40-15.40 26.20-27.20 27.20-28.20 29.20-30.20 44.10-45.10 45.10-46.10 47.10-48.10 78.10-79.10 78.10-79.10 107.10-108.10 107.10-108.10 108.10-109.10 109.10-109.10 67.00-68.00 68.00-69.00 69.00-70.00 97.00-97.00 98.00-97.00 98.00-97.00 97.00-105.00 106.00-105.00 Depth in m. dole No. MJZK-2 MJZK-4 MJZK-6

Table 5 Chemical Assays(cont.)

Hole No.	Depth in m.	%Zn	Au	Ag 80	Cu	여	Zn	ပ္	>	u I
			00/t		<del>ૄ</del> ેશ	\$~ <b>2</b>	~	<b>5</b> ~2	<i>b</i> %	pom
1JZK-7	119.10-120.10		<0.07		0.01	<0.01	2.67	0.003	<0.01	<10
	120.10-121.10		<0.07		0.02	<0.01	13.80	0.003	<0.01	0: ×
	121.10-122.10		<0.07		0.01	<0.01	3.46	0.003	<0.01	< 10
	122.10-123.10		<0.0>		<0.01	<0.01	0.11	0.002	<0.01	<10
IJZK-8	93.10- 94.10		<0.07		<0.01	<0.01	0.44	0.002	<0.01	×10
	94.10- 95.10		<0.07		<0.01	<0.01	3.49	0.002	<0.01	<10
	96	_	<0.07		<0.01	<0.01	0.13	0.002	<0.01	<10
	143.00-144.00	1.69	<0.07		0.01	<0.01	1.48	0.003	<0.01	<10
	45.	_	<0.0>		0.01	<0.01	3.76	0.003	<0.01	<10
	10-146.	-	<0.07		0.01	<0.01	08.0	0.003	<0.01	<10
	50.	_	<0.03		0.01	<0.01	1.25	0.003	<0.01	<10
	00 - 151.		<0.07		0.01	<0.01	3.23	0.003	<0.01	<10
	151.00-152.00		<0.0>		0.01	<0.01	3.79	0.003	<0.03	< 10
	153.	_	<0.07		0.01	<0.01	3.70	0.003	<0.01	< 10
	153.00-154.00	_	<0.07	: :	0.01	<0.01	0.18	0.003	<0.01	< 10
	.00-181.	_	<0.07		<0.01	<0.01	0.44	0.002	<0.01	¢10
	181.00-182.00		<0.0>	: .	<0.01	<0.01	3.09	0.003	<0.01	<10
	182.00-183.00	:	<0.07	٠.	<0.01	<0.01	0.47	0.003	<0.01	<10
	189.00-190.00	_	<0.07		<0.01	<0.01	0.82	0.003	<0.01	<10
	190.00-191.00		<0.07		0.01	<0.01	3.71	0.003	<0.01	× 10
	191.00-192.00	_	<0.07		0.01	<0.01	2.35	0.003	<0.01	<10
	192.00-193.00	1.89	<0.07		<0.01	<0.01	1.80	0.003	<0.01	<10

Assayed for Au, Ag, Cu, Pb, Zn, Co, V, and In by Chemex Labs Ltd., Vancouver, CANADA

## Diagram:

## Geological Columns

## Legend for mineralization

Ру	41 × 14	pyrites
Zn		zinc minerals
I		sulphides
Ţ		decomposed or secondary

19 Line

Elevation: 1,170 m

:

Point .

475

Bearing

Depth :

201 m

Inclination: Vertical

Depth				Lithology	Zone	Mine zatio	rali- n		Assay I	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Surface soil							
5			-								
10		o i c			e r e d						
		20110			Weath						
15 - -				Clay beds. Sand beds.							 L
								18.00	18.84 19.69 20.53	0.84 0.85 0.84	0.5 0.4 0.7
- 				Light-gray, massive,					21.38 22.22 22.80 23.30	0.85 0.84 0.58 0.50	0.7 12.6 14.2 7.0
		٠		rich in voids,					23.80 24.80 25.90	0.50 1.00 1.10	6.0 5.8 12.8
-		0 a n			יט				26.10 27.10 28.10	0.20 1.00	12.4 4.2 0.6
<u>30</u> -		er R		Stained in reddish	idize				29.10 30.10 31.10 32.10	1.00 1.00 1.00	8.8 1.2 0.5 12.4
35		Upp		brown.	× 0				33.10 34.30 35.30	1.00 1.00 1.20	6.0 1.0 5.1
<del>-</del>									36.30 37.40 38.40	1,00 1.10 1.00	6.3 1.5 0.4
40		: .							39.40 40.40	1.00	4.8 1.2

Depth	- Constant	<del>an</del> cylotechic		Lithology		Mine zatio	rali- n		Assay I	Results	
		Hori- zon	Rock		Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
	ing	zon					<b> </b>		41.40	1.00	5.2
-									42,40	1.00	4.8
<b>-</b>							ī		43.40	1.00	0.6
-						ļ	.		44.40	1.00	8.4
-				Pinkish-gray, stained		T	Ţ	<u> </u>	45.40	1.00	7.8
45		`		with decomposed					46,40	1.00	11.8
-				pyrites.					47,40	1.00	13.8
-						1	1		48.40	1.00	15.6
-							1		49.40	1.00	4.0
-						]			50.40	1.00	5.4
50				·	}	}			51.40	1.00	2.1
-									52.40	1.00	1.0
-									53.40	1.00	7.6
<b>-</b>						T			54.40	1.00	7.8
-				r e	e d	į (			55.40	1.00	1.0
55		,		. •	22				56.40	1.00	1.8
					ਚ		Ì '	<b></b>	57.40	1.00	4.6
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-					0				58.40	1.00	1.3
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Depth	CONTRACTOR OF THE PARTY	esteroni solitari di Comi		Lithology	Zone	Mine zatio	rali- n	***************************************	Assay I	lesults	April 1990
	Logg- ing	Hori- 200	Rock	Remarks	2000	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Pyrite dissemination and stringers.		Ī	W. W. W.		-		nagy ign a a d and an Fr 3 de la
_ 95				Saccaroidal .			·				
-  -  -		1.		Disseminated pyrites. Sphalerite specks.	:		I				· .
 100 			:								
		÷		Pyrite stringers.							
105 											
_ _ 		,									
		u e	e	Pyrite impregnation.			i e	- 11			
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 		Uppe	Do		1 d	1					
<u>1</u> 20 _				Pyrite stringers.		T					17
				Specks of pyrites.			٠			-	
		:		Specks of pyrites.		l I					
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Depth			CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CONTRACTOR OF THE CO	Lithology	Zone	Mine zatio	rali- n		Assay	100	
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				Clayey veinlets at 5°.							100
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 -				Saccaroidal.							
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160				Sphalerite stringers.			x			24.	
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- 190				Sphalerite stringers.		7 <u>.</u> 3 a .1	Ι	<u> </u>			

Depth	S. KENES MORPEN	ATTACK HARRISTON	Lithology	Zone	Mine zatio	rali- n		Assay l		
(m)	Hori- zon	Rock	Remarks	2,0116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
	Upper Roan	Dolomite	Sphalerite stringers. White saccaroidal, Pyrite specks. Banded at 20°. Pyrite specks. Sphalerite stringers.	Primary	I	π				

Line 20

Elevation: 1,170 m

Point

475

Bearing

Depth :

201 m

Inclination : Vertical

Depth				Lithology	Zone	Mine zatio	rali- n	10000	Assay l	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	20116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Surface soil							
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-			•	Clay beds.			ŀ	11.00			
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<u> </u>				Sand beds.		\ \		100	14.40	3.40	5.0
15	· <u>····</u>				<u> </u>	<u> </u>		14.40	15.40	1.00	25.0
-				Banded, light-gray with	:			e i gire	16.40	1.00	3.0
H				reddish-brown staining.					17.20	0.80	2.9
<b>H</b>						i			18.20	1.00	3.3
20		:							19.20	1.00	2.0
-20									20.20	1.00	2.9
-									21,20	1.00	4.4 1.5
<b> </b>						:			22.20 23.20	1.00	1.8
									24.20	1.00	4.1
	弄	g				İ			25.20	1.00	3.9
		г 0	(B)	White, massive.					26.20	1.00	3.1
Γ		84	٠	· 	က မ			,	27.20	1.00	4.5
			- 12	Stained.	12 9		Ţ		28.20	1.00	4.3
		ı, o	0 1	Dumon	ק				29.20	1.00	3.0
30		e.	Д		X 1			, ×	30.20	1.00	1.5
		D D				.	<u> </u>		31.20	1.00	1.3
				a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de			* :		32.20	1.00	1.4
L									33.20	1.00	0.4
						,			34,20	1.00	0.4
35				White to pale-gray,					35.20	1.00	2.0
L				massive					36.20	1.00	4.2
-									37.20 38.20	1.00	4.4 0.5
-				. : <del>-</del>						1.00	0.3
-									39.20		
40			L		<u></u>				40.20	1.00	0.4

Depth				Lithology	Zone	Mine zatio	rali- n		Assay F		
		Hori- zon	Rock	Remarks	Lyone	Рy	Zn	from (m)	to (m)	run (m)	% Zn
<del> </del>		EOI1				·		40.20	41.20	1.00	1.8
<del> -</del>					1				42.20	1.00	3.7
<u> </u> -									43.20	1.00	1.8
<u> </u>			ļ ļ	Decomposed pyrites.		I	]		44.20	1.00	0.7
<u>-</u>										2,00	
45											* .
				White, saccaroidal							
<u> </u>									į		
<u> </u>											
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Ĺ		4.4 AF								,	
				Faintly banded at an	ಶ		İ				
<u>5</u> 5				angle of 10°.	e e						
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<u> </u>		0.	i t	Slightly banded.	<b>.</b>	١.			1		
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70				Banded at an angle of							
				10°.							
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Γ					מי		]				
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75				Pyrite impregnation.	·t	ΙI					
<del>                                     </del>				Banded at 10°.	۳. ت	Ì					11
<b>-</b>				Sphalerite veinlets.	×	Т	_ ;	76.20	77.20	1,00	0.4
<b> </b>				•	1		I		78.20	1.00	0.2
-				•	д 0				79.20	1.00	nil
-				• .	z	1			80.20	1.00	0.2
80						1					
<b> </b> -				Cavernous with a					81.20	1.00	2.6
-				banded structure.		ľ			82.20	1.00	0.4
<b> </b>			<b> </b>		3				83.20	1.00	0.3
<u>_</u>			.		6 72				84.20	1.00	0.3
<u>8</u> 5									85.20	1.00	2.3
<u>_</u>					i d				86.20	1.00	2.0
_					×	}	۱ ۱		87.20	1.00	0.4
L					0				88.20	1.00	1.0
L									89.20	1.00	2.5
90									90.20	1.00	1.7

Depth				Lithology	7	Mine zatio	rali- n	( Rayandrolleadic Th	Assay l	Results	
		Horí- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
					Oxi.			90.20	91.20	1.00	1.1
					ő				92.20	1.00	0.5
-					į	I	Ι		93.20	1.00	0.6
-			<b>i</b>	Pyrite and sphalerite		1 4	1		94.20	1.00	0.3
-				stringers.							0.3
95			·	•		ł	I	·	95.20	1.00	
_						T	T		96.20	1.00	1.5
L .									97.20	1.00	2.6
				Sphalerite veinlets with				<del>-</del>	98.20	1.00	0.7
Γ.				pyrite impregnation.			T		99.20	1.00	0.3
100			i	Pyrite-sphalerite dissemination.					100.20	1.00	0.7
<b></b> ``				aisseninauon.					101.20	1.00	0.9
<b>-</b>				·	!				102.20	1.00	1.0
-					ļ				103.20	1.00	0.1
<u> </u> -				: .							
-					1	Т	T		104.20	1.00	0.1
105			}	Sphalerite veinlets.	ĺ				105.20	1.00	1.1
				•		]	l		106.20	1.00	0.6
L											1
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Γ			]	Sphalerite veinlets.			Ţ			·	j
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<sup>1</sup> 10						I	Ŧ		·		
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L		Ro	i. t	Sphalerite veinlets.				· ·			
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-120				Faintly banded.		1					
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L				Light-gray, massive.	]						
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7.49				Massive.							
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Depth				Lithology	n	Mine zatio	erali- n		Assay	Results	
	Logg- ing	Hori- zon	Rock	Romarks	Zone	Py	Zn	from (m)	to (m)	run (m)	% Z
	1115	2011	<b> </b> -	Fine grained,		<u> </u>	<del> </del>				
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_				Faint banding at					1		1
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		1		Faint banding at 15°.							Ì
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				Light - gray, compact.			l		]		
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Depth		ChCg(xxx)##	Andrew Control of the Party	Lithology	- Zone	Mine zatio	rali-	SALES CHARLES TO SALES	Assay I		
(m)	Logg- ing	Hori- zon	Rock	Remarks	Lone	Py	Zn	from (m)	to (m)	run (m)	% Zn
195		Upper Roan	Dolomite	Light-gray, fine-grained.  Pyrite agregates.  Saccaroidal.  Banded at 15°.  White, banded.		r					

Line : 20 Elevation : 1,170 m

Point : 575 Bearing

Depth : 201 m Inclination : Vertical

Depth	<b></b>		<u> </u>	Lithology	Zone	Mine zatio	rali- n			Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	20116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
5		Cenozoic		Surface soil Sand beds	Weathered						
				Porous, banded with an angle of 10°. Sphalerite stringers. Penetrated by recrystallized dolomite veins.	Oxidized		I				
		per Roan	olomite	Sphalerite stringers.  Pyrite-sphalerite stringers.  Sphalerite stringers.	r y						
30		d D	Q	Banded at an angle of 20°.	Primar						
35 				Specks of pyrite. Recrystallized dolomite patches predominate.							

Depth	1)): <u></u>		epp på like bell	Lithology	<i>a</i>	Mine zatio	rali- n		Assay l	Results	
		Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
45				Fine-grained, saccaroidal, Faintly banded with an angle of 15°. Pyrite impregnation.		I					
55				Micaccous - argillaceous banding at an angle of 10°.  Pyrite specks and stringers associated with recrystallized dolomite patches.	Å						
65 		Upper Roan	Dolomite	Porous along recrystallized dolomite veinings.	Primar	T					
				Specks of pyrite.  Decomposed pyrite specks and stringers.		F4					
				Faint banding with an angle of 15°.  Faint banding at an angle of 10°.		T - 1					

Depth				Lithology	Zone	Mine zatio	rali n	E ALL THURS IN COLUMN		Results	
'(m)		Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Porous along							
_				recrystallized dolomite							
_				patches and veins.		1					
						]					
95		,		. 4							
				Pyrite impregnation.		Ţ					ļ
-				Decomposed pyrite		1					
r				veinlets and							
100				impregnation.		1	ĺ				
100										-	
<b>-</b>			. 1						ŀ		10
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-					1	1					
<b>-</b>			[								
105				Stained along							
F				recrystallized dolomite		I					
<b> -</b>				veinlets.							
F										[	
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_110		,				T					
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L .	1-1-1-1	ಣ ೦	9	Argillaceous bandings	>>						
L		83	t.	at an angle of 10°.	1						
<b>L</b> .			ឮ		# E	1					
115		LI D	1 0								
L			Ω°	:	ָאַמַ .						
L		D D	"	Decomposed pyrite		7	ļ				
L				impregnation.		I					
L	-1-1-1	1	1		: .	_	İ				
120				Pyrite impregnation	4.					]	
		:		and stringers.	1:						
L						L		·			
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L		· ·		. *							
125						_		14.	<b>!</b> : .		
			-	Argillaceous banding	}						
				at an angle of 20°.	1				7	}	
		:							1		
				1		<u> </u>	ĺ			1	
				Pyrite impregnation	1	т					
		1		along recrystallized						1	
Γ		1		dolomite veining.							
			:			+   ±   I					·
	二二					I					
135			[			Ι					
1-100	异			771		-				.	
<u>.</u>				Fine-grained, saccaroidal.		T					
-				saccaroidal.		<u>+</u>			[		
-						Ţ					
<b>F</b>	异					_			1		
140		1	<u>L,</u>			L			<u> </u>		

Depth					Zone	Mine zatio	erali- m	e on amountain which was the		Results	
	Logg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
145				Stained along recrystallized dolomite patches and veinlets, Impregnated pyrites were decomposed,							
150   155				Pyrite impregnation and stringers.		+				· · ·	
				Argillaceous banding with an angle of 20°.		I			:	: '	
<u>1</u> 60 		ឧ		Compact, saccaroidal.		1			·	· · · · · · · · · · · · · · · · · · ·	
_ 		Upper Ro	Dolomite	Pale-gray dolomite.	Primary	Ī					
 - <u>1</u> 70		, L		Specks of pyrite. Pyrite impregnation along recrystallized dolomite patches.		I					
<u>1</u> 75						I					
 						<b>├</b>					
180  				Light-gray dolomite.							
<u>1</u> 85 				Fault clay with dolomite fragments	몆			· · · · i			
- - 190				Fault clay	Wea- thered						

Depth			<del></del>	Lithology	Zone	Mine zatio	rali- n		Assay l	Results	
(m)	Logg-	Hori- zon	Rock	Remarks	20116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
195		Upper Roan	Dolomite	Light-gray saccaroidal dolomite. Saccaroidal compact dolomite.	Primary						

Line :

19

Elevation: 1,169 m

Point

575

Bearing

Depth :

201 m

Inclination: Vertical

Depth				Lithology	Zone	Mine zatio	rali- n		Assay I	Results	
(m) Log	gg- Ho	ori- n	Rock	Remarks	DONE	Ру	Zn	from (m)	to (m)	run (m)	% Zn
		Cenozoic		Surface soil	Weathered						
15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Upper Roan	Dolomite	Cavity at 12.2 to 12.7 m.  Brick-brown staining.  Banding at an angle of 5°.  Decomposed pyrite specks.  Rich in voids.  Porous and cemented with brick-brown dull crusts.  Light-gray dolomite.  Decomposed pyrites.  Porous and cemented by recrystallized dolomite veins with brownish crusts.	Oxidized	F	├ ├	13.20	14.20 15.20 16.20 17.20 18.20 20.20 21.20 22.20 23.20 24.20 25.20 26.20 27.20 28.20 30.20 31.20 32.20 34.20 35.10 36.10 37.10 38.10 39.10	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0.6 4.2 0.3 1.3 0.3 0.9 1.4 0.8 0.8 1.0 0.6 0.8 3.0 3.7 13.7 12.1 3.0 1.0 0.5 1.3 1.5 2.6 3.0 0.2 0.2 0.6

Ing.   Iloration   Rock   Remarks   Py Za   Grow   Gay   G	Depth			ACCOUNT PARTY	Lithology	7	Mino	erali- on	Assay Results				
40.10 41.10 1.00 1. 42.10 1.00 3. 43.10 1.00 3. 44.10 1.00 3. 44.10 1.00 1. 45.10 1.00 3. 44.10 1.00 1. 45.10 1.00			Hori- zon	Rock	Remarks	Zoni		7	from (m)	to (m)	run (m)	%Zn	
42.10 1.00 3. 43.10 1.00 3. 44.10 1.00 1. 45.10 1.00 5. 45.10 1.00 5. 45.10 1.00 5. 45.10 1.00 1. 45.10 1.00 5. 45.10 1.00 1. 45.10 1.00 5. 45.10 1.00 1. 45.10 1.00 5. 45.10 1.00 1. 45.10 1. 45.10 1.00 1. 45.10 1.00 1. 45.10 1.00 1. 45.10 1.00 1. 45.10 1						T	1	1	1		4	1.4	
## A				ļ						42.10	1.00	3.5	
### Argillacous rapid banding between 52.5 and 70.5 m at an angle of 5 to 15°.  #### Decomposed pyrite stringers.  ###################################			.								1,00	3.5	
## 15	[				,					·	1,00	1.6	
Pructures, filled with boxworks and brick-brown crusts.    50	AK.						1	) .		<del></del>	<del> </del>	1.3	
50	30			<b>!</b>	P	1		1 7	<b></b>		<del> </del>	5.5	
50	-		' <u> </u>	[ i				111		·		9.5	
Decomposed pyrite stringers.  Argillaceous rapid banding between 52.5 and 70.5 m at an angle of 5 to 16°.  Decomposed pyrite stringers.  Decomposed pyrite stringers.  Light-gray, saccuroidal dolomite.  Vuggy bandings of recrystallized dolomite, stained with brick brown crusts.  Drusy and filled with brownish boxworks and crusts.  Pine-grained saccaroidal  Fine-grained saccaroidal  Argillaceous rapid banding 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	-	三十二		l				] i				0.9	
Decomposed pyrite   So.10   1.00	-		' <u></u>	ĺ	The Market			1	<del> </del>	<del></del>	<del></del>	2.1	
Decomposed pyrite	J- , ,		ļ		:	1	T				<del></del>	1.0	
### Stringers.  Argillaceous rapid banding between 52.5 and 70.6 in at an angle of 5 to 15°.  Decomposed pyrito stringers.  Be a composed pyrito stringers.  Alight-gray, saccaroidal dolomite.  Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  Fine-grained saccaroidal  Fine-grained saccaroidal  Fine-grained saccaroidal  Fine-grained saccaroidal  Fine-grained saccaroidal  Fine-grained saccaroidal	-50		ļ						<del> </del>			<del>                                     </del>	
Argillacocus rapid banding between 52.5 and 70.5 m at an angle of 5 to 15°.  Decomposed pyrite stringers.  Decomposed pyrite stringers.  Light-gray, saccaroidal dolomite.  Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts. Drusy and filled with brownish boxworks and crusts.  Pine-grained saccaroidal  Fine-grained saccaroidal	<b> </b>		.		stringers.					1		.	
Argillaceous rapid banding between 52.5 and 70.5 m at an angle of 5 to 15°.  Decomposed pyrite stringers.  Be out the stringers of the stringe	<b> </b>			İ		1	1 1		ļ				
and 70.5 m at an angle of 5 to 15°.  Decomposed pyrite stringers.  E	<b> </b>		ŀ		1	Ì		)	1	) 1		1	
Sto 16°.   Decomposed pyrite stringers.	t					1				} . }		}	
Decomposed pyrite	F- <sup>25</sup> ∤										:		
Decomposed pyrite stringers.  Decomposed pyrite stringers.  Light-gray, saccaroidal dolomite.  Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts. Drusy and filled with brownish boxworks and crusts.  Prine-grained saccaroidal  Pine-grained saccaroidal	-		]		οω το .				·				
Stringers.	-		Ì		Danner 1 1 1 1		1		}				
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To   To   To   To   To   To   To   To	<b> -</b>				Ser test British	1			\		1. 1		
To   To   To   To   To   To   To   To	60			<u> </u>				[				. 1	
To   To   To   To   To   To   To   To	-									( )		1	
To   To   To   To   To   To   To   To	-					•			1		1		
To   To   To   To   To   To   To   To	├ <sup>╏</sup>		ಹ	,		ŧ	}	{ }	<b>\</b>	{			
To   Column   Colum	<del> -</del>			, <u> </u>		N			1				
To   Co   Co   Co   Co   Co   Co   Co	L-65	<u> </u>	:	E	·	70	1		1				
To Light-gray, saccaroidal dolomite.  Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  Fine-grained saccaroidal	<b> </b> -			I		×	1.			)			
Company   Comp	<del> -</del>		Ωı				}	{ : }	}	ļ Ì	· 144	<b>\</b>	
Light-gray, saccaroidal dolomite.	<del> -  </del>	事				1	}		!			ļ	
Light-gray, saccaroidal dolomite.  Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  85  Fine-grained saccaroidal	<u> </u>	<del>-</del>		1.					!				
Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.			}	1		ſ				]	·	1	
Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.	<u> </u>	士士	}	. {		ŀ	1	"		} }			
Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.	<u> </u>			.		Ţ	1	1 1	'	\	100	\ <u>}</u>	
Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.	-			ł							' i [		
Vuggy bandings of recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  85  Fine-grained saccaroidal	_ [					•		1	' .	1.:			
80   recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  85   80.10   1.00   10.7   1.00   10.7   1.00	75			.	:	1		1			' i	ļ .	
80   recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  85   80.10   1.00   10.7   1.00   10.7   1.00	_		.	.		ļ				\ \ \	İ		
80   recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  85   80.10   1.00   10.7   1.00   10.7   1.00	_ [	丑	. [			! .	1	[ ·	۱.	۱ . ا			
80   recrystallized dolomite, stained with brick-brown crusts.  Drusy and filled with brownish boxworks and crusts.  85   80.10   1.00   10.7   1.00   10.7   1.00	_				gri	!	1	' _		<u> </u>			
Stained with brick-brown crusts.	_		Ì	1		١ ,			78.10	<del></del>		1.6	
Stained with brick-brown crusts.   Stained with brown crusts.   Stained with brown crusts.   Stained with brownish boxworks and crusts.   Stained with brownish boxworks and crusts.   Stained with brownish boxworks and crusts.   Stained with brownish boxworks and crusts.   Stained with brownish boxworks and crusts.   Stained with brownish boxworks and crusts.   Stained with brown crusts.	_80	丑		}		١						10.7	
Drusy and filled with brownish boxworks and crusts.    82.10   1.00   0.1	_ [	二二	{	. }		\	{ }	-	}	<del> </del>		2.0	
brownish boxworks and crusts.   T   83.10   1.00   1.5	_				ŀ	1 1		¹ <u>[</u>	]	<del></del>		0,1	
85.10 1.00 3.8  Fine-grained saccaroidal	[				brownish boxworks and	i I		۱. ۲. <u> </u>	]			1.5	
85 St.10 1.00 0.1  Fine-grained saccaroidal	_		)	. 1	1	<b>i</b>	<b>,</b> )	il	]			3.8	
Fine-grained saccaroidal	85					1	1	\		85.10	1.00	0.1	
	_ [			. [	Rine around accessed	! }	1	! [	7	1	7		
	_	耳目				¹ . i		•	.				
	_					· .		'	Ì	1			
	_			1		1 4		'	1	}	j	1	
90	90			}	·							\	

Depth	State	ale e e		Lithology	Zone	Mine zatio	rali- n	Assay Results				
		Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	% Zn	
95				Saccaroidal dolomite, with prevailing minute veins of recrystallized dolomite.								
				Stained with recrystallized dolomite patches and with brownish crusts.			÷4	97.10	98.10 99.10	1.00	1,1	
				Recrystallized dolomite veins, stained with	ized		-	104.10	105.10	1,00	0.2	
				brown crusts. Recrystallized dolomite veins, stained and filled with boxworks and	Oxid		F4		106.10 107.10 108.10 109.10	1.00 1.00 1.00 1.00	4.0 0.1 0.2 6.3	
<u>1</u> 10  		n 60	t e	crusts.  Decomposed pyrite impregnation.		***************************************			110.10 111.10 112.10 113.10	1.00 1.00 1.00 1.00	1.5 1.8 1.5 3.4	
<u>1</u> 15 		Upper R	Dolomi						114.10	1.00	1.1	
 		1		Light-gray,								
_ _ _ 125		÷		fine-grained saccaroidal dolomite.						:		
  				Decomposed pyrite	rimary	T			: 1			
- -				Decomposed pyrite impregnation and stringers.  Light-gray, saccaroidal dolomite.	<u>4</u>							
135    												

Depth				Lithology	Zone	Mine zatio	erali- n			Results	1
		Hori- zon	Rock	Remarks	Zone	Py		from (m)	to (m)	run (m)	%Zn
				Faint banding with an angle of 10°.							
_				·							
145				Fine-grained,							
<del>-</del>  -				saccaroidal dolomite.							÷
   <u>1</u> 50				Stained with recrystallized dolomite	1			·	.·	:	
_				veins and patches.							:
_			.	Pyrite specks, associated		Ī			! 		. [1]
<u>1</u> 55 				with recrystallized dolomite veins.		I					
- -				Argillaceous banding at							
 <u>1</u> 60			:	an angle of 15°.							
<del>-</del> <del>-</del>		a n	Ð	Decomposed pyrite stringers.		1			-		:
_ 		Ro	omit	sumgers.	mary						
		Upper	Do I	Speckled with recrystallized dolomite patches and veins.	Prin				:		
- <u>1</u> 70			,	Decomposed pyrite stringers.		F4					
				er Marie er er er er er							:
- <u>1</u> 75 -				Banding at an angle of 10°.							
- <b>-</b>								·		· 'i,	
180				Compact, saccaroidal.							
-				Banding at an angle of			la sag				
<u>1</u> 85				20°.					•		
- -				Prevailing veins of recrystallized dolomite.							
 190	异			:							

Depth		MARK THE MESO		Lithology	Zone	Minerali- zation			Assay I	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks		Ру	Zn	from (m)	to (m)	run (m)	% Zn
195		Пррег Roan	Dolomite	Specks of decomposed pyrite.  Fine-grained, saccaroidal dolomite.	Primary	۲- <u>- ا</u>					

Line 18

Elevation: 1,169 m

Point

575

. : Bearing

Depth

201 m

Inclination : Vertical

Depth		· · · · · · · ·		Lithology	Zone	Mine zatio	rali- n		Assay I	Results	
	Logg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Surface soil							
5		Cenozoic			Weathered			4.00	8.00	4.00	1.3
_ 10				Pebble-bearing clay					10.10	2.10	2.2
			<u> </u>	beds.					11.10	1,00	. 0.4
				Saccaroidal dolomite.			Ŧ		12.10	1.00	0.9
L				Stained in brown.	İ		<u> </u>		13.10	1.00	3.9
_ _15			!	Decomposed pyrites.	p e	I		;			
				Drusy white dolomite.	idiz				٠,		
20			}		×					e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	·.
								20.10	21.10	1.00	1.5
<u> </u>		д							22.10	1.00	0.1
_ _ 		Roa	mite		: 1.						
		. ri	1 0	Sphalerite patches and			T	25.10	26.10	1.00	0.6
_		d d	Do	stringers.					27.10	1.00	0.5
<b> </b> -	异	ь						:	28.10	1.00	0.8
					imary			:			
				Banded with an angle of 5°.	Pri					:	
35		, i		i							
										i,	
40	囍				1						

Dopth				Lithology	Zone	Mine zatio	erali m			Results	*****
(m)	Logg- ing	Hori- zon	Rock	Remarks	7.one	Py	Zn	from (m)	to (m)	run (m)	%Zn
				Pyrite specks.		I					
_		}	}	Banding with an angle				}			]
			]	of 10°.				Ì	·	}	}
					1		}				
45			( i	Pyrite specks and		( T	l	{		1	· ·
				stringers.				į i		ĺ	·
					ļ	1.1	<b>!</b> .				
		:	( )		-	11				}	
					1	11					
50				·	}		} !			· ·	
.34 ~					}	~	{				
					}	1					
				Finh and Fin	1	1					
				Light-gray, fine- grained, saccaroidal	1	}			i		
55				dolomite.	1	}		· ·	i		,
ប្តីប					}	ì	]	. 51 1			
					)	]					
			]		j	}			'		
					]	1					
<u></u> 0			1	Banding at an angle of	}		] ]		i	. :	
Įν	<u> </u>		. [	5°.	l	l	i i		·		
					(	l ·	[ [		İ		
		ផ្ទ	a			t		į			
1		Ro	+>		h N	[ .		·			
_			E		100		{ {	ļ			
35		5.a	0	•	Ë		1 [			i	
		о С	0		L .	\ T	[ ]				
		<u>p.</u>	Α	Minute specks of pyrite.	Ωı	1   1	} }	ł			
	1 7	Þ	ł		1	<b>]</b>	}	j			
		* 1	Í	Saccaroidal dolomite,	}	} }		)			
<u>(</u> 0			ļ	banded with an angle of	}	} } '	}	)		1 ,	
		}	1	<b>5°.</b>		] 1	}	1			
		. [	1		1		j				
		1	1		} .		}		ĺ		1 .
l		ļ	• [				Ì	}		·	
5			- (					-{			
		[	- {	ete û	{	1 1		Ì	į		
ł			- (				l	ļ			
			ļ	Banding at an angle of			ĺ	ļ	ļ		
	<u> </u>			10°.						1	
0			- }	Pyrite patches.		I		1	{	. [	
j		ſ	- {		}		}	Ş	{	· .	
1		}	1			_	1	}	Í	}	
}		}	1			Ι		}	ļ		
1	<u> </u>	}	1				1	ł	. }	: {	٠.
<u>}</u> 5		}	1	0 0			Í	}	}	· 1	
. 1		. }	1	Chlorite-sericite				1	}	- 1	
		}	j	veinlets at 86.0 to		T 1					٠.
	三三	}	. )	86.4 m.		1	j	j		. }	
ĺ		)	)	Argillaceous banding at		] ]	]	]	j	}	
90		)	]	an angle of 10°.		]	}	]	]	ì	

Depth		CATALOGICA		Lithology		Mine zatio	rali- n		Assay	Results	
(m)	Logg. ing	Hori- zon	Rock	Remarks	- Zone	Рy	Zn	from (m)	to (m)	run (m)	% Zn
				Argillaceous banding at an angle of 15°.		_					
 95				Specks of pyrite.							
- 30				Saccaroidal dolomite.							
_ 100				Faint banding with an angle of 10°.							
_		·						· .			
 105 				Compact, saccaroidal,							
 - - 110			-	Banding with an angle of 20°.							
	1114	Roan	mite	Cemented fault-breccia, at 111.3 to 111.9 m.	18 7 9				:		
 <u>1</u> 15 		Upper	D 0 1 0 1		Prim						
_  120 		. :		Chlorite bandings at 119.1 to 121.5 m. Pyrite specks and stringers.							
- -			: **								÷
<u>1</u> 25 		·		Argillaceous banding with an angle of 15°. Pyrite stringers.	:	Ι					
- 		. :.		Chlorite bandings at 131.6 to 133.0 m with an							
_ 135 				angle of 20°.  Pyrite specks and		T					
   140				stringers. Gray argillaceous banding at an angle of 20°.							

Depth			telorena (K. 16-5)	Lithology		Mine zatio	rali-		Assay	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Fine-grained, saccaroidal dolomite.							:
145		·									
<del></del> .									-		
 150				Argillaceous banding with an angle of 20°.							
I				Argillaceous banding with an angle of 15°.				:			:
<u>1</u> 55 				Pyrite stringers.		I				)   	
- - 160				Specks of pyrite.				·			
- -		<b>ជ ខ ០</b>	9	Pyrite specks and stringers.	A	1					
		per R	olomit		Primar						
  170		T d D	Ω	Argillaceous banding with an angle of 15°.							
<u></u>				Faint banding with an angle of 20°.				11.	:		, . 
- 175				Pyrite stringers at 15°.	1.0	Ι					
·		·						,			
_ <u>1</u> 80				Porous recrystallized dolomite between 179.2 to 180.8 m. Decomposed pyrite		Ι			:		
-  185				specks. Banded with an angle of		* 					
- -				10°.							
 19 <u>0</u>				Pyrite stringers.		r					

Depth				Lithology	Zone	Mine zatio	rali- n		Assay I	?esults	
(m)	Logg.	Hori- zon	Rock	Remarks	20116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
		Upper Roan	Dolomite	Banded with an angle of 10°. Intra-formational folding at 195.8 to 196.9 m. Fine-grained, saccaroidal. Banding with an angle of 25°.	Primary						

Line : 18 Elevation : 1,170 m

Point : 475 Bearing

Depth: 201 m Inclination: Vertical

Depth	<u> </u>			Lithology	Zone	Mine zatio	rali- n			Results <sub>.</sub>	
(m)		Hori- zon	Rock	Remarks	20110	Ру	Zn	from (m)	to (m)	run (m)	% Zn
5				Surface soil							
				Clay beds.	, d.						
15 - - -		Cenozoic		Sand beds.	Weathere						
30											
35		L L	9	Light-gray dolomite, fine-grained, banded with an angle of 10°.	p e c			.:	1		
40		Upper Roan	Dolomi	With an angle of to	Oxidiz						

Depth				Lithology	Zone	Mine zatio	erali- n	***************************************	·	Results	(4,5)-500
(m)	Logg- ing	Hori- zon	Rock	Remarks	2,0116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
-				Grayey sericite- dolomite, banded with an angle of 30°.							
45 		. * .		Cavity at 45.1 to 45.7.							
<u></u>		. !		Brecciated and cemented at 47.6 to 48.9 and 49.4 to 50.2 m.			·   	50.00	51,00	1,00	0,1
<b>-</b>	IIIIII			Cavity at 51.1 to 53.0 m.				20.00	51.30	0.30	3.5
- 1				Assays are of brownish fallen sands.	1		į Į		53.00	1.70	3.6
	min			Cavity at 53.4 to 53.7 m.					54.00	1.00	0.4
<u>5</u> 5											
_ 60		:									
- -		ដ ស	9								
		80	-t+		ಶ			63.00	64.00	1.00	0.5
_65			E 0	Drusy, stained in	1 Z		Ŧ		65.00	1.00	3.2
-		9		reddish brown to	٦,				66.00 67.00	1.00	0.6
-		d	Ω	yellowish brown.	O X				68.00	1.00	1.0
-		Þ					1		69.00	1.00	6.8
<u>7</u> 0		· ]		Drusy, filled with box-					70.00	1.00	3.8
}			1	works and brick-brown			1		71.00	1.00	2.8
- [				staining.					72.00	1,00	2.2
- [				Sphalerite veinlet at					74.00	1.00	0.2
 75		:		73.7 m.			Œ		75.00	1.00	0.7
		ļ		Drusy with orange-			т		76.00	1.00	1.0
		ĺ		brown staining.			1		77.00	1.00	1.9
_ }			Ì				i		78.00	1.00	0.5
-   E						1.1	. [		79,00	1.00	0.9
_80		.		Contorted staining		17.	7		80.00	1.00	1.8
-		)		bands and veinlets in					81.00	1.00	0.9 1.4
- [	王耳	Ì	}	brown.			i		83.00	1.00	0.6
-	耳						ļ	<del></del>	84.00	1.00	0.9
	事	]	• ]						85.00	1.00	0.8
		1	- {				I		86.00	1.00	1.6
		·		Stained in orange to yellowish brown.			-		87.00	1.00	0.1
		]	]	Achomish promit.					88.00	1.00	8.0
<u> </u>		. [	- [				-		89.00	1.00	1.4
90	-17]			Drusy and stained.			Ţ		90.00	1.00	1.7

Depth		The street and	iniciae no I t	Lithology	Zone	Mine zatio	rali- n		Assay I	Results	
(m)	Logg- ing	Hori- zon	Rock	Romarks	ZONE	Рy	Zn	from (m)	to (m)	run (m)	% Zn
				Light-gray dolomite.				90.00	91.00	1.00	0.7
				Slightly stained.	eq		T I		92.00	1,00	1.0
<u> </u>					Oxidized	İ			93.00	1.00	0.4
<b> -</b> -					ő	[					
<u> </u>		1	<b>'</b>	Staining stringers.	'		J. – J.		94.00	1.00	1.0
95				. · ·			٦.		95.00	1.00	0.6
		·			~				96.00	1.00	1.0
				·	Non- oxidized				97.00	1.00	0.2
			<b>i</b>		28	I			98.00	1.00	5.5
				Specks of pyrite.		1	r		99.00	1.00	0.4
<b> </b>				Sphalerite veintlet at			-		00.00		· · · · · · · · · · · · · · · · · · ·
100		1		98.3 m.	]						
		1	}				}				
		·		Druse at 102,0 to	İ				·		
				17 ruse at 102.0 to		Ι					
<b>!</b>				102.5 Rt,	Ì	1					
<b>.</b>					1	ł		104.00	105.00	1.00	1.8
105				Stained with orange-		Ŧ	Ţ	104.00			
<b> </b>				brown rims, stringers	İ	-			106.00	1.00	8.6
L				and veinlets.		l			107.00	1.00	5.0
1									108.00	1.00	2.9
Γ					₩		ᆂ	:	109.00	1.00	2.4
110					(a)				110.00	1.00	2.9
110				Staining stringers.	18	T	I		111.00	1.00	0.8
-			}	Statung Stringers.	ייי		-		112.00	1.00	5.3
-		۲. تا		Secondary zinc veinlets.			т				
L	1 1	0	t e	Secondary Mile vennets.	×			<u></u>	113.00	1.00	2.4
Ŀ		ret L	٠,	Contorted staining	-		1		114.00	1.00	1.5
115	1 -		e e	bands.	}	] : }	i I	1	115.00	1.00	0.9
		بد ده	~						116.00	1.00	0.7
<b> </b>		Ωı	°						117.00	1.00	1.7
<b>-</b>		ā D	Ω	Gossanous fillings of	·				118.00	1.00	2,2
<b> </b> -		-	ł	yellowish brown to	1	ł	1				
· _				reddish brown.	1		1 ,3		119.00	1.00	1.1
120							_		120.00	1.00	0.3
				Light-gray, fine-		Ì		1.14			
<u> </u>				grained, saccaroidal.						·	
<b> </b>					'						
上		1.5									
<b> -</b>						[					
125	1 1			Banded with an angle of	. 1	1					
  -				5°.				·			
			,								
<u> </u>	19-1			•	>	-					
<b>_</b>					ม ส						
_130					E						
-					r i						
-					P	!					
_				Slightly stained in pale	ļ						
				orange-brown.							
135		•			'	Ι΄					[
<b></b> "				· ·			}				
<b>F</b>						_				٠.	
<b> -</b>						I					
<b>L</b>				:		l					
L					1	ł		,			}
140					l	L	l				

Depth		ny <del>filialia</del> n'i Serie any a	a negáfici incede legar	Lithology	Zone	Mine zatio	rali n			Results	:
	Logg- ing	Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
145				Pyrite stringers. ditto.		I					
150 				Banded with an angle of 10°.  Porous recrystallized dolomite vein at 157.2 to		Ι					
		Иррег Roan	Dolomite	158.2 m.  Light-gray, fine-grained, saccaroidal.  Light-gray, fine-grained, banded and saccaroidal.	Primary						
				Specks of pyrite.  Banded with an angle of 20°.  Decomposed pyrite patches and stringers.  Banded with an angle of 10°.  Pyrite specks and patches.		I					

Depth	erindan <del>un S</del> iebela			Lithology	Zone	Mine zatio	rali- n		Assay I	lesults	
(m)	Logg-	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
195		Пррег Воап	Dolomite	Pyrite-sphalerite veinlet of 1 cm wide at 190,1 m.  Pyrite-sphalerite veinlet of 0.3 cm wide at 194.0 m.  Pyrite stringers.  Chlorite phyllite at 200.3 to 200.5 m with an angle of 10°.	Primary	I	I	190.00	191.00	1.00	0.7

Line : 17 Elevation : 1,170 m

Point : 475 Bearing

Depth : 201 m Inclination : Vertical

Depth	Ī	-					Lithology	Zone	Mine zatio	rali- n		Assay l	Results	
		og ng	gg-		Hori- zon	Rock		voire	Ру	Zn	from (m)	to (m)	run (m)	%Zn
		18		A CONTRACTOR OF THE CONTRACTOR	zon		Surface soil				(III)		(11)	
					Cenozoic			Weathered						
35			With the second											
40	E	<u></u>	L	L			Light-gray dolomite					:		1.

Depth		<u> </u>		Lithology	Zone	Mine zatio	erali- n		Assay	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	2000	Py	Zn	from (m)	to (m)	run (m)	%Zn
				Argillaceous banding	†	1	1	\ <u>````</u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>	† <del></del>
<b>†</b>				with an angle of 15°.			1		Į.	1	{ '
-					1	].	:	]			
<b> -</b>						) :	}		•	}	}
<u> </u> -			. 1	Cavity at 43.5 to 44.1 m.	<b>.</b>	1				<b>,</b>	<u> </u>
45								f			ĺ
-				Rich in voids along			1	) 	] [		
_				recrystallized dolomite					\	ļ ·	} : .
L		į		patches.			(	·	[		[
_		j		Argillaceous banding with an angle of 10°.		1			ļ		
_50	三三	Ì		wish an angle of To .	ਾਰ	}		}	]		Ì .
_		İ			o o	}					
				Fine-grained, banded,	1.2	l			[ i		ł
				saccaroidal dolomite.	יט		}		[	<u> </u>	ļ ·
L	马马		]		× ×	1	<u> </u>	·			
55			ĺ	Speckled and rich in	0		<b> </b>	i		ļ	
				voids along recrystal-	1		[ i	l İ		1 .	· .
		1		lized dolomite patches	]	)					
-		- 1		and veins.	}	}					
<b> </b>		(			ļ			58,10	59.10	1.00	1.0
60						<b>1</b>	T		60.10	1.00	1.9
- Bu		· }	<u> </u>	Stained with brick-					61.10	1.00	1,4
<b>h</b>		{	İ	brown stringers.	1	}	_		62.10	1.00	0.6
- 1		_ ឌ (	o l	Stained with brick-	l		T		63.10	1.00	0.9
<b>-</b>		8	ر ب	brown stringers.	İ				64.10	1.00	1.3
<b>-</b>		~	ä i		1		1		65.10	1.00	0.3
_65		ا بر	1 0		<del> </del>				66.10	1.00	0.0
-		a	٥		1		T		67.10		1.7
-	三三	إيغا	Ω.	Sphalerite stringers.	ĺ					1.00	
- }		ם	ŀ	White dolomite.	1	} _			68.10	1.00	3.4
<u> </u>		-	·	Pyrite specks.			Ţļ		69.10	1.00	0.3
70		- 1				L			70.10	1.00	0.5
} }		1			İ		_		71.10	1.00	Nil
<b> </b>		}	- {	Sphalerite stringers.	1				72,10	1.00	0,2
┡	井	1	l		l		Ţ		73.10	1.00	0.6
L					יפי				Ì		
<u>7</u> 5		)			ο	) )	_	j	ĺ		
	井岩	. }	· .	Sphalerite specks.	j. 2		I	ſ		Ī	
L		[			بر ت			l	ļ		
<u> </u>	王		]	White, saccaroidal	×						
		1	j	dolomite.	0			1	}		
80		: (	Ì		д			}			
			- 1		o Z		_		ĺ	:	·
	丰丰	}	)	Sphalerite stringers and		]		81.10	82.10	1.00	1.6
		1	- }	veinlets.					83.10	1.00	2.1
	士号	İ	- [		[		, <b>*</b> }		84.10	1.00	Nil
_85		1	İ	Culta lavita mainlata			T	1	85.10	1.00	Nil
٠,			. }	Sphalerite veinlets.			1 }		86.10	1.00	4.4
-   <u>-</u>	五日	1		Argillaceous banding			1		87.10	1.00	Nil
- E		ł	- 1	with an angle of 5°.			. [			7.00	
<b>-</b> [		]	}	•				- I	ļ		
		\	}	Sphalerite veinlets.			T }	89.10	90.10	1.00	
90				opnaterite vermets.				05.10	9U.1U	1.00	0.4

Depth	0 <del>2-108-17-17-17-1</del>	• !		Lithology	7	Mine	rali- n		Assay l	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Sphalerite veinlets.	ъ		ĪŤ	90.10	91.10	1,00	3.2
				Spinitorito venticos.	2 6				92,10	1.00	1.9
-			. :	Speckled with recrystal-			T				
		,	,	lized dolomite patches.	1 75		ļ				
_				nzeu dolomite patenes.	0 X						
95		}			Z o		}				
				Argillaceous banding							
				with an angle of 20°.					,		
				with an angle of 20.							
		Ì		Speckled with recrystal-							
_				lized dolomite patches.							. 1
<u>1</u> 00				Tibod dolomico patenco.							
L		1			Ì	1		) )	'		
				Fine-grained, faintly							
_				banded dolomite.							
				banded dolomice.							
<u>ار</u>				Speckled with recrystal-		[	Ì				
105				lized dolomite patches.		[					
_		ł	İ		ۍ ت						
					9	ļ					
L					27	<u>†</u>					
					. i			<u></u>			
110				Stained in yellowish-				109.10	110.10	1.00	0.2
*°				brown along pores of	×		_		111.10	1.00	3.9
H				recrystallized dolomite			I		112.10	1.00	0.1
		и П		veins at 110.5 to							
<u> </u>		0	ø ·	110.7 m.						·	
_ :		ద	i. t		1.1						
<u>1</u> 15			អ	1.			ļ		1 1 1		:
		\$4	0				]			ļ	
		υ Ω	0	Speckled with recrystal-				4 - 4			
		Ω	Ω	lized porous dolomite						* *	
-		Þ		patches. Pores are				118.10	119.10	1.00	0.2
H				stained with brick-			-		120.10	1.00	4.6
<u>120</u>				brown crusts between	Į			ļ			16.4
L				119.3 and 122.0 m.					121.10	1.00	
L				1		1	1	ļ	122.10	1.00	5.3
L		}				<b>\</b>	_		123.10	1.00	0.1
Γ	1 1 1 1 1 1			Sphalerite stringers.	1				124.10	1.00	0.2
									125.10	1.00	0.2
<del>─</del> ″								<u> </u>	126.10	1.00	0.7
_				-	1	l			127.10	1.00	1.8
<u> </u>						1		<del> </del>	128.10	1.00	0.4
-				Faintly banded.							
<b>L</b>				Sphalerite veinlets.	>>		I	<b> </b>	129.10	1.00	0.6
<u>1</u> 30				5 to 1.4	<b>4</b>	<b>!</b>	1				
L				Argillaceous banding	ਕ 						
Γ		}		with an angle of 15°.	r i m			].			.
Γ					ρ <sub>i</sub>						
<b></b>							I				
F		:		:	-		_			,	
135				·					;		
<u>_</u>							l ·				
L											
-				Recrystallized dolomite	1	]	1	) i	!		
		:		veins predominate.	1			.			:
<u></u>				<b>F</b> - <b></b>	1						
140										L	

Depth	-	www.cococococ	<del>yelio Kacy a</del>	Lithology	Zone	Mine zatio	rali- n		Assay	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	~ Z0116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
										}	
_							]				
-				Argillaceous banding at				) : 		}	-
_			ļi	10°.	1		]	}		}	
145			]								
-			]			]_	Ì .			Ì	
- 1				Pyrite stringers.	1	I				1:	
					-:						
100				•							
_				Fine-grained, sacca- roidal.	]					] .	
_									:		
<u>1</u> 55					ĺ						
_,											
<u> </u>					1	]	İ				
										2,116	
-				Speckled with recrystal-							
<u>1</u> 60				lized dolomite patches.	}					 	
-			{		1 .			İ			
-		a n		Banded with an angle of 20°.	1				•		
		0	ده در		>			·			i .
 165		24	E i		3.	[					
_		, <b>j</b> e .	101	•	E E						•
		. o d	οQ		14						
		Чр	μ	Argillaceous banding	L.				İ		
-				with an angle of 15°.							
170			·	•	}						
-					( · :		. (	· .			
-				Pyrite specks.	1	T					
·		1.0		Speckled with recrystal-							
- 175		,		lized dolomite patches.		T			,		
ا`' شـــ				•	.						:
_ [											
_		. [	·	$\label{eq:controller} \mathcal{A} = \frac{1}{2} \left( \frac{1}{2} \right) \right) \right) \right)}{1} \right) \right)}{1} \right)} \right)} \right)} \right)} \right)} \right) \right)} \right)} \right) \right)}$				, j	* .		
_	井		' . <b>.</b>					.	· .		
_180	三三		<u> </u>	1.3							
-	基	. {	Ţ			-		İ			
-			ſ	Argillaceous banding with an angle of 20°.				.			•
-		ļ	ł	with an angle of 20.			}	ļ			
- ,,,,	士士	-	- {						er in	. '	
185							-	1	į		
- }			1		1						
-			İ								
_	二日			Speckled with recrystal-				.			
190				lized dolomite patches.	]						

Depth		and the state of		Lithology	Zone	Mine zatio	rali- n		Assay I	tesults:	.,
(m)	Logg- ing	Hori- zon	Rock	Remarks	20116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
		Upper Roan	Dolomite	Speckled with recrystal- lized dolomite patches.  Decomposed pyrite impregnation.  Recrystallized dolomite veins prevail.	Primary	7   1   1   1   1   1   1   1   1   1					

Line :

17

Elevation: 1,172 m

Point

375

Bearing

Depth :

201 m

Inclination : Vertical

Depth	THE ORIGINAL PROPERTY.			Lithology	Zone	Mine zatío	rali- n		Assay	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Zwiie	Ру	Zn	from (m)	to (m)	run (m)	% Zn
5				Surface soil							
		Cenozoic			Weathered						
							THE PARTY OF THE P				
30 - - - 35 -		Mwashia	Alt.	Pale greenish-gray talcose phyllite.  Dolomite/phyllite  Phyllitic with an angle of 55°.  Dolomite/phyllite  Pale greenish-gray.	Oxidized						

Depth	and the contract of the contra			Lithology	77	Mine zatio	rali- n		Assay	Results	
(m)	Logg- ing	Hori-	Rock	Remarks	Zone	Py	Zn	from (m)	to (m)	run (m)	% Zn
	******* ****** ******	Mwashia	Phyl- lite	Pale greenish-gray.						eren eren eren eren eren eren eren eren	
_		Mw	Alt.	Dolomite/phyllite					:		
		. ,	Dol.	Banded dolomite		}					
45			Alt.	Dolomite/phyllite				i .			
			Dol.	Dark-brown dolomite							
	*****		Phy.	Pale-gray phyllite							
			Dol.	Dark-brown dolomite	}	} '			!	:	
_50	\$\$\$ \$\$\$		Phy.	Pale-gray phyllite					1		:
55			Dolomite	Pinkish-brown dolomite with intercalations of phyllite at 51.7 to 52.1 and 54.7 to 55.2 m.			:				
<b>-</b> 			Alter- nation	Alternation of dolomite and phyllite with iron- bands.	dized					: '	#*
<u>6</u> 0 				Banded with an angle of 40°.	0 x i	;   					
_ 65		Roan	e	Phyllite intercalations at 60.2, 62.6 to 62.8 and 68.6 to 69.3 m.							
- i		ррег	lomit							i	
<u>7</u> 0		D	Do	Porous veinlets of recrystallized dolomite		i					
-				at 30°.			<b></b>	71.10	72.10	1.00	0.5
				Stained with brownish crusts.			1		73.10	1.00	1.7
L				or usus.					74.10	1.00	0.1
<u>7</u> 5 				Speckled with recrystal- lized dolomite patches.							
 			Clay	Brownish fault-clay between 77.5 and 80.3 m	Wea- thered				. :		
			e	Gray banded dolomite with an angle of 25°.	dizod	T -					
85			lomit	Decomposed pyrite specks.	0 × i						
   90		·	Dо	Rich in voids along recrystallized dolomite veinlets.	Non- oxidized						

Depth		#343647**********************************	2000 (TARE)	Lithology	Zone	Mine zatio	rali- n		Assay F		
(m)	Logg- ing	Hori- zon	Rock	Remarks	ZONE	Ру	Zn	from (m)	to (m)	run (m)	% Zn
-										ļ	ļ
<b>-</b>											
_		į						00.10	04.10	1.00	0.2
				Stained in brick-brown	יס	}		93.10	94.10	1.00	
95				to dark-brown along	9 2		4.		95.10	1.00	5.0 0.2
<u>-</u>		1		recrystallized dolomite veins.	***		Į	<del> </del>	96.10	1.00	0,2
				veins.	i.						
				n 11 21 11	×						
-				Banded with recrystal- lized dolomite veins at	l,	1		1		Ï	
<u>1</u> 00				an angle of 30°.	0						
-					Z						
						]	1				
<del></del> . ,									1		
_				Argillaceous banding				ļ ļ			
105				with an angle of 25°.	<b> </b>	1					
_											
<del>-</del>		1			1					. !	·
				i 							
					Į		l		:		
110											
_		1			9						
-		r.		Brecciated and	i 2	1	1	112.10	113.10	1,00	0.1
-		0	t e	cemented fault with an	יס 	İ	T		114.10	1.00	2.0
 115		rate l	m i	angle of 35°, stained in	×		i		115.10	1,00	1.9
113		<u>,</u>	0 1	brown to khaki at 113.3	0	1	•		116.10	1.00	0.2
_		9 2	0	to 114.3 m.							
		<u>a</u>		•			į				
		Þ	ŀ								
		1									
		1		Vuggy micro-banding of		1	\ ·	}			
		]		recrystallized dolomite							
		1		with an angle of 20°.	Non- oxidized						
		]	<u> </u>		Nox						
125		]	1							.*	-
		1		Stained in brick-brown,		1	-	125.00	126.00	1.00	0.5
L	臣	}		pale-brown to khaki					127.00	1.00	1.1
L_		1		along recrystallized dolomite patches and					128.00	1.00	0.2
_		1	1	veinlets.			}		129.00	1.00	0.8
<u>1</u> 30		1					T	ļ	130.00	1.00	0.1
_			Į		. <sup>1</sup> 3			<u> </u>	131.00	1.00	1.5
L		1			12		1	·	132.00	1.00	0.2
L		1			р 1		-		133.00	1.00	1.6
_		}		White saccaroidal	×	1		<u> </u>	134.00	1,00	0.2
135		1		dolomite.	0				135.00	1,00	0.8
_		]		. 1							
<u> </u>		1		Banded with an angle of							
<b> </b> _ :		1	·.	15°.				100.00	190.00	1.00	
<u> </u>		1		Stained along recrystal- lized dolomite patches.			1	138.00	139.00	1.00	0.2
140		1		nzed dominite patenes.				704	140.00	1.00	1.2

Depth	CHAPTOPHOPHALLA	***************************************		Lithology	Zone	Mine zatio	rali- n		Assay l		
(m)	Logg- ing	Hori- zon	Rock	Remarks	20110	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Porous with recrystal-	l		т	140.00	141.00	1.00	0.9
			İ	lized dolomite patches,			I		142.00	1.00	1.3
			•	stained in brick-brown					143.00	1.00	0.6
<b>i</b>				to dark-brown.				<u></u>	144.00	1.00	1.6
<u>-                                    </u>		ı				<b>!</b>			145.00	1.00	6.6
145			,			İ	١.		146.00	1.00	1.2
-									140.00	1.00	1.2
<b> -</b>								.*			
-					İ						
150				Porous with recrystal-	1	Ì	T '	149.00	150.00	1.00	0.2
				lized dolomite patches					151.00	1.00	6.6
				and veinlets, stained in	[ · .				152.00	1.00	5.8
-				dark-brown to brick-			]		153.00	1.00	6.2
-				brown or khaki.					154.00	1.00	0.2
H	1.7								155.00	1.00	1.8
155							_		156.00	1.00	1.1
-				Argillaceous banding		Ŧ					
L }				with an angle of 20°.		i			157.00	1.00	1.6
_				Decomposed pyrite	1	l i					
				stringers.							
160			: :	: .							
F				Speckled with recrystal-							
		r a	1	lized dolomite patches			\ \				
H. (		Ö.	t e	and veinlets, rich in	<b>ပု</b> ခ		ī				
-		pt		voids and stained with	м	1					
<u>1</u> 65			H o	dark-brown crusts.	, r		]				
L		ы Ф	<b></b>		٠,-		-		·		
L (		വ	οQ		×		i		·		
		D P									
				Saccaroidal dolomite,			1				,
170			;	speckled with recrystal-	ļ·						
			: i	lized patches and veins.							
-	-5										
-											
- •											
- 1		ĺ									
<u>175</u>				Banded with an angle of 20°.	<b>'</b>	ľ			- 1	i i i	
- 1			j	20.		· I					
						1					
			• ]	Decomposed specks of	) . ]	1		·			
				pyrite.		<u> </u>					
<u>1</u> 80		- (	[								
	<u> </u>	]		Stained along recrystal-				180.00	181.00	1.00	0.6
<u> </u>				lized dolomite patches					182.00	1.00	6.2
<del>-</del>			- 1	and veinlets with brick-			T		183.00	1.00	0.7
-				brown, to chocolate-			!		184.00	1.00	2.0
-   F	구무	·		brown dull crusts.			1	. :			
<u>1</u> 85		}	_ `	- / - <del></del>			, <u>i</u>		185.00	1.00	1.5
<u> </u>		ĺ				T	т		186.00	1,00	0.6
}		ļ		,		T			187.00	1.00	0.7
[	士马		}	Banded with an angle of	.		i		188.00	1.00	2.1
- [		ļ	ľ	30°.		1.0			189.00	1.00	0.6
			., ]		•				190.00	1.00	1.4

Depth	 		Lithology	Zone	Mine zatio	rali- n		Assay R		AND ASSESSMENT OF THE PARTY OF
(m)	Hori- zon	Rock	Remarks	20116	Ру	Zn	from (m)	to (m)	run (m)	% Zn
			Stained in brick-brown,				190.00	191.00	1.00	6.2
			~,		<u> </u>			192,00	1.00	5.6
	£1 63			İ			·	193.00	1.00	2.1
	0	(c)		r v				194.00	1.00	1.4
195	ద			22			·	195.00	1.00	0.2
_		u o	Argillaceous banding	43					•	
	o) H		with an angle of 20°.	, i						
	d d	Ω		0						
	 Þ				-					
200										

Line : 18

18 Elevation : 1,173 m

:

Point : 375 Bearing

Depth : 201 m Inclination : Vertical

Depth				Lithology	Zone	Mine zatio	rali- n	<del></del>	Assay R	esults	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
_				Surface soil					·		
<u>5</u>				Sand beds							·
				Clay beds						•	
10		:			* 1 -					· .	
				a a garata	red						
15 		0 z 0 u ə	· :		eathe						
-  -  -		D			M	1:-					
20											
25		÷			1:				:		
  -  -			٠						·		
30	~~~~			White to pale-gray,							
		a s h i a	Phyllite	foliated with an angle of 10° to 40°.	pez				-		
35 -		Μw	Alter- G nation P	Gray, banded. Dolomite/phyllite	xidiz						
40		Upper Roan	Dolo- Alt mite nat		<sup>x</sup> O						

Depth	***************************************	tokano towa		Lithology	Zone	Mine zatio	rali- n			Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Cone	Рy	Zn	from (m)	to (m)	run (m)	% Zn
				Cavity at 41.7 to 42.0 m.	dized						
45    50				Decomposed pyrite, Intercalation of phyllite at 47.2 to 47.6 m.	0 x i	I					
55				Banded with an angle of 30°.  Intercalations of thin phyllite between 51.6 and 55.0 m.							
60 		a n	9	Rapid banding of vuggy recrystallized veinlets of dolomite.							
65 65 		Upper Ro	Dolomit	Gray saccaroidal dolomite.	xidized						
				Argillaceous intercalation with an angle of 30°.  Porous veinlets of recrystallized dolomite.	Non-o						
75 - - 80				Sericite-chlorite veinlets at 74.2 to 74.7, 77.7 and 77.8 m. Iron staining.							
				Sericite-chlorite veinlets at 82.5 and 83.3 to 83.5 m.  Porous veinlets of recrystallized dolomite, clightly stained in brick.							
90				recrystamzed dolomite, slightly stained in brick- brown.							

Depth				Lithology	Zone	Mine zatio	rali- n	overence of the	Assay F	lesults	San and an and an and
(m)	Logg- ing	Hori- zon	Rock	Remarks	Lone	Py	Zn	from (m)	to (m)	run (m)	% Zn
	L	2011						(111)			<u> </u>
-					Non- oxi.						
					Z 6			92.10	93,10	1,00	0.6
				Stained with dull brick-		1	T	92.10			
	1.1.			brown crusts along					94.10	1.00	16.4
95				recrystallized dolomite					95,10	1.00	5.6
Ľ				veinlets.		T	-		96,10	1.00	0.6
		;							97.10	1,00	0.8
			i	Banded with an angle of		-	7		98.10	1.00	4.0
				20°.			۱ ۱ ۱		99,10	1.00	1.2
100					ľ		İ		100.10	1.00	1.1
100		·		Gr. 1. 1. 1.			<u> </u>		101.10	1.00	4.0
<b> </b>				Stained in pale-					102.10	1.00	1.2
				yellowish brown.	:				103.10	1.00	2,2
┡				Stained with brick-	1	1	+				
_				brown stringers.				: 	104.10	. 1.00	4.8
105				D1041130111190101			7		105.10	1.00	3.6
L				Stained veins of					106.10	1.00	8.0
				recrystallized dolomite,					107.10	1.00	8.6
Γ				with brick-brown crusts.					108.10	1.00	16.6
┌									109.10	1.00	16.2
110									110.10	1.00	4.2
<b> </b> 1*0		•		•			٠		111,10	1.00	0.8
-						Į.	1		112.10	1.00	1.7
<u> </u>	1 1			Brick-brown stringers.					113.10	1.00	2.2
L						İ			114.10	1.00	5.6
<u> </u>		р 2	:	Banded with an angle of							1.2
<u>1</u> 15		0.	ני	25°.	ಶ	İ	<u> </u>		115.10	1.00	
L		22	, <u></u>		2	İ	-		116.10	1.00	1.0
L.			E O	Dark-brown to brick-					117.10	1.00	2.1
Γ		, i	-	brown stringers.	. d				118.10	1.00	2.1
Γ	井	<u> </u>	ဂို	<b>21</b> 011501B01	×				119.10	1.00	2.6
120		a D		Rich in voids, filled with	°		<u>+</u>		120.00	1.00	1.6
120		1		dull brown crusts.					121.00	1.00	4.8
<b>-</b>		} '							122.00	1.00	2.8
H							7		123.00	1.00	6.8
-		1		Rich in voids, stained in				· · ·	124.00	1.00	14.0
F		1		yellowish to brick-					125.00	1.00	9.6
125		}		brown.	Ì					1.00	0.9
<u> </u>							Т		126.00		~
L		1		·			1		127.00	1.00	3.2
L		1		Brick-brown stringers.					128.00	1.00	2.8
		3			Ì	1	] ]		129.00	1.00	4.0
130		}							130.00	1.00	6.8
T**		1		Porous recrystallized					131.00	1.00	6.4
一		1		dolomite veins, filled					132.00	1.00	7.6
<b>F</b>		1		with dull brown crusts.					133.00	1.00	7.2
H		}							134.00	1.00	0.7
-		}					T		135.00	1.00	5.6
135		1	1	Rich in voids, stained					136.00	1.00	2.4
L		1	1	with brick-brown to pale				<u> </u>			10.0
L		1	1	brown crusts.	1			<b></b>	137.00	1.00	<b></b>
		1					<u>+</u>		138.00	1.00	1,2
		1		Argillaceous banding					139.00	1.00	4.4
140		1		with an angle of 20°.			Li		140.00	1.00	3.2

Depth		marya 1600 dada ka		Lithology		Mine	erali- in		Assay	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Zone	Py	Zn	from (m)	to (m)	run (m)	% Zn
				Chaire die huisk haaren		1	T	140,00	141.00	1.00	3.2
广				Stained in brick-brown.	ĺ				142.00	1.00	11.6
<u> </u>					}	]			143.00	1.00	18.0
<u> </u>				'	ļ	ĺ			144.00	1.00	18.0
J			ĺ	Chataga and Fam	Ì	•	†		145.00	1,00	7.2
145		•		Sphalerite patches.	1		1		146,00	1.00	0.5
<b>-</b>			· ·	Decomposed pyrite	}	T			147.00	1.00	1.2
}-				specks.		) . J.	1	<b></b>	148.00	1.00	0.6
-				Sphalerite patches.		I	æ		149.00	1,00	4.1
<b> </b> -					ĺ	T	}	<del></del>	150.00	1.00	1.3
150				Speckled with recrystal-			ļ	<b></b>	151.00	1.00	0.5
-				lized dolomite patches.					152.00	1.00	2.5
-				Decomposed pyrite					153.00	1.00	3.4
<u> </u> -			ľ	specks and stringers.		1	T.				
-				speaks and swingers.					154.00	1.00	12.4
<u>1</u> 55				,					155.00	1.00	10.8
_				Speckled with recrystal-		:			156.00	1.00	12.0
<u> </u>			¦	lized dolomite patches	ਚ				157.00	1.00	14.0
_				and veinlets, stained in	9				158.00	1.00	10.3
				brown to brick-brown,			} ;	ļ.——-	159.00	1.00	5.8
160			ļ		i d		<u>i</u>		160.00	1.00	5.1
_					x o		] _		161.00	1.00	2.6
		ន		Brick-brown crusts in			Ī		162.00	1.00	2.3
L		8	و د	pores.			1.		163.00	1.00	3.4
_		<b>124</b>	, l	Stained in brown to		.:	Ţ		164.00	1.00	5.8
165			a o	brick-brown.					165.00	1.00	11.8
<u></u>		14 00	74 0				1 1		166.00	1.00	4.1
			Ω.			1 1 1	Ī	·	167.00	1.00	2.1
_		d D		Veinlets and patches of			Ī		168.00	1.00	5.8
			, }	dull brown to brick-		1			169.00	1.00	13.2
170				brown crusts.					170.00	1.00	8.0
		!	Ì			i			171.00	1.00	0.8
				Stained with brick-	·				172.00	1.00	3.0
				brown crusts.					173.00	1.00	6.4
Γ		}		:		1			174.00	1.00	Nil
175				Argillaceous banding							
		· 1	1	with an angle of 15°.		Ι		·	ſ		
				i							
			)	Speckled with recrystal-		_					
-			ļ	lized dolomite patches.		Ι			[	ł	
		ĺ	ĺ	:			l			·	
		.	1		. 1	I		l	ļ		
-			ļ	Specks of pyrite.	r y	T				ì	
		}	1	White saccaroidal,	ಡ	T				: '	1
-	三三	Í	1	speckled with recrystal-	i. H	!			]	.:	. ]
 _185	렆	. }		lized dolomite patches.	L.				. ]		]
799				-				ļ	ł		l d
-						i					·
-		ļ							1		•
- [				White fire regime 1				1.			ı
- }		[	1	White, fine-grained saccaroidal dolomite					}	}	1
190				Saccardinal adiomine							

Depth	<del></del>	and the second	Lithology	Zone	Mine zatio	rali- n		Assay l	Results	
(m)	Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
195	Upper Roan	Dolomite	Faint banding with an angle of 25°. Compact, saccaroidal, faintly banded and speckled with recrystal- lized dolomite patches.	Primary						

Lìne

19

Elevation: 1,172 m

Point

375

Bearing

Depth

201 m

Inclination : Vertical

Depth		#4 <b>#1#</b>		Lithology	Zone	Mine zatio	rali- n		Assay F	?esults	
		Hori- zon	Rock	Remarks	Zone	Рy	Zn	from (m)	to (m)	run (m)	% Zn
5		enozoic		Surface soil							
- -	000	D		Gravel beds. Pale-brown, clayey.			,				 I
10					nered				÷		
_  _15  		fwashia	Phyllite	Brownish gray, mottled in white, yellow, gray, brown, etc.	Weath						
20		M					indigial desirates memory similar so which the mineral software in the software software software software so				
30		Upper Roan	Dolomite	Gray dolomite, intercalations of phyllite with an angle of 35°.  Banded with iron- staining.  Cavity between 35.1 and 35.5 m. Iron bands at 35.9 to 38.4 m.	Oxidized	F4 F-4 F4 F-4 F-4	Andread and the secon				

Depth	kining pagganilan dan pag	K <sub>ale</sub> zannya (amin	Lithology	Zone	Mine zatio	rali- n		Assay	Results	**************************************
(n1)	 Hori- zon	Rock	Remarks	Lone	Ру	Zn	from (m)	to (m)	run (m)	%Zn
45			Decomposed pyrite stringers and iron- bands. Porous with recrystallized dolomite veins.	Oxidized	T : - 1					
<u>5</u> 0			Light-gray, banded. Rapidly banded black		)		•	-[		
-			dolomite with strata- bound sphalerite			Ţ	52.10	53.10	1.00	3.5
_ _55	ļ		veinlets.				-	54.10 55.10	1.00	8.7 3.3
			Sphalerite stringers, associated with recrystallized dolomite veinlets.					00,10	1,00	0.0
	er Roan	olomite	Light-gray dolomite, banded with vuggy recrystallized dolomite veinlets.	-oxidized		F-1				
	Upp	Ω	Argillaceous banding with an angle of 25°.	Non						
			Banded with recrystallized dolomite stringers.							• .
_	·		Cavity at 77.2 to 77.3 m.							
80 			Brick-brown stains.  Brick-brown streaks.  Sphalerite and willemite.  Brick-brown stringers.  Cavity at 86.8 to 87.3 m.  Brick-brown stains.	Oxidized		T-1-1 T-1-1 T-1-1				

Depth	**************************************	·	Arrabir e name	Lithology	Zone	Mine zatio	rali- n		Assay F	lesults	A TOM PACE HOT THE
(m)	Logg- ing	Hori- zon	Rock	Remarks	Youe	Ру	Zn	from (m)	to (m)	run (m)	% Zn
	Ľ <sub>T</sub> L			Brick-brown to reddish-			Ţ				
				brown staining.	1			91.10	92.10	1,00	4.5
				;					93.10	1.00	6.7
							1 1 1		94.10	1.00	7.4
95				Reddish-brown stains.	1		4		95.10	1,00	4.7
							_		96.10	1.00	3.7
				Banded with an angle of			-		97.50	1.40	1,3
				15°.		į	-		98.50	1.00	3.6
				Brown streaks.					99.50	1.00	5.1
100							**		100.50	1.00	1,4
				Banded with vuggy			T .		101.50	1.00	2.0
				recrystallized dolomite		ľ			102.50	1.00	4.1
				veinlets.		ĺ			103.50	1.00	3.8
					1	ļ	+		104.50	1.00	7.7
105				Brick-brown stringers					105.00	0.50	15.0
				and patches.			1	<b></b>	106.00	1.00	2,4
			,				🕇				
				Light-gray, rapidly							
_		1		banded dolomite with	İ	ŀ					
<u>1</u> 10		1		yellow ochur stains.				:			
L					]		1 1			}	
L				Washed fractures at							
		a	t e	111.2 to 112.1 m.	ۍ ا						
<u> </u>		ığ.			- C	]	I.	].			
115		1	u o		 G		T			,	
L				White dolomite with	- I		<u>i</u>				
-		2	Ď	staining patches.	\ o	1	1 7			. '	
┡		ם ב		Porous and stained.			i				
F		1									
120		1	}		1			   			
-		1		Sphalerite patches,		1	H	121.00	122.00	1.00	4.8
F		1		surrounded with brick-		Ì	<u>1</u>	<del> </del>	123.00	1.00	1.6
-		1		brown crust rings.		1			124.00	1.00	5.0
H		1		Willemite patches,	1			<u> </u>	125.00	1.00	5.1
125		]	'	surrounded with brick- brown crust rings.			1		126.00	1.00	3.6
1		4	}	promiser agornigo.	1	1	T .	<b> </b>	<b> </b>		
<b> </b>	三三	1		Speckled and rich in			<b> </b> +		1	. 1	
<b>H</b>				viods along				-			
<b>+</b>		}	1	recrystallized dolomite	1				1		
_130		-		patches.			1	1			
r		1	1				1		] .		
<b> </b>		]	1				-		1	ļ	İ
<b> </b>		1									ĺ
		]					7				
100		1		Slightly stained in							
r		1		brown.							
<b>F</b>		‡	1				1	137.00	138.00	1.00	4.7
				Faintly banded with an angle of 15°.					[		[
140		1		angle of 19.				<u> </u>			

Depth					Zone	Mine zatio	rali- n		Assay l	Results	
		Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
_				Speckled and rich in voids with recrystallized dolomite patches.		T					
145						Ι					
- 1				D. Aliel bustom statistics		-	T .				
150 				Reddish brown staining.  Brick-brown stringers			T T	151.00	152.00	1.00	4.0
_		·		and patches. Sphalerite patches at 151.7 m. Brick-brown stains.	z e d		I I I I	101.00	153.00 154.00	1.00	5.0 4.2
 <u>1</u> 55				Brownish stains of	i d i	T	1		155.00 156.00	1.00	3.8 0.4
_				irregular stringers and veinlets.	ŏ	1	1		157.00 158.00	1.00	5.6 3.8
_ 				Brownish staining.		1	1 1		159.00	1.00	3.2
_		ឧរា					Ţ				, · · · .
  165		Ro	mite	Reddish-brown staining.		         	1	:	- ;		
- -		Upper	Dolo	Speckled and porous with recrystallized dolomite patches.	1						
<u>1</u> 70				Sphalerite-pyrite streak at 170.0 m with an angle of 20°.	, , , , , ,	I					
_ <u>1</u> 75 				Light-gray dolomite.	>·	<b>→</b>		. 19	- -		
 _  180				Pyrite impregnation.	Primary	<del></del>					
		'		Pyrite patches at 179.7, 181.9 and 182.2 m.					:		
 185		i		White, saccaroidal.  Pyrite patches.		T				·	
-				· ·		] ]   [		1 3			
 190				Pyrite patches and stringers.						المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة المراجعة ا	

Dopth			Lithology	Zone	Mine zatio	rali- n	Assay Results			
(m)	Hori- zon	Rock	Remarks	Voria	Ру	Zn	from (m)	to (m)	run (m)	% Zn
195	Upper Roan	Dolomite	Pyrite specks.  Fine-grained, saccaroidal, speckled with recrystallized dolomite veinlets.	Primary	I					

Minerali-zation Lithology Assay Results Depth Hori-zon (m) Logg-ing from (m) to (m) Rock Remarks Рy Zn % Zn Surface soil Cenozoic Soil beds 15 Weathered 20 Sand beds 25 30 Pale-brownish gray, deeply weathered, talcose in places. Phyllite Mwashi 35

Depth			Zone	Mine zatio	rali- n			Results			
(m)		Hori- 2011	Rock	Remarks	Lone	Py	Zn	from (m)	to (m)	run (m)	% Zn
	*****	Mwa.	Phy.		יט						
		zoic		Sand beds	here						:
45		Сепо	,		Weat						
  <u>5</u> 0				Gray dolomite, banded with vuggy veinlets of recrystal-lized dolomite at an angle of 70°.	xidized						
55 					Non-0						
60 60				Brick-brown dull crusts.  Porous, stained in brown to brick-brown.			*				
 65		ន ព		Argillaceous banding with an angle of 65°.			1				
		r Ros	omite	Stained with yellowish brown crusts.							
70 		Uppe	D 0 1	Brick-brown staining.	ized	ķ — — -	) h - 4				
-			.		਼ਜ਼ਤ •ਸ਼	: * *.	-	HO 00	74.00	1.00	2.8
				Brick-brown stringers.	×		1	73.30	74.30 75.30	1.00	5.6
				Gray, banded dolomite,	-				76.30	1.00	2.3
		·		speckled with recrystal- lized dolomite patches.			T .			4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -	
<u>8</u> 0 		i .		Porous and stained with			T		·		
_ 				brick-brown crusts,  Black manganese wad in	,		1				
_   _				voids at 86.3 and 88.3 m.		1					
90	量			Brick-brown stringers.	· · ·		Ţ			İ	

Depth			**************************************	Lithology	Zone	Mine zatio	rali- n	Assay Results			
(m)	Logg- ing	Hori- zon	Rock	Remarks	COHE	Рy	Zn	from (m)	to (m)	run (m)	% Zn
				Light-gray, fino-grained dolomite, saccaroidal.	n – i d i z e d						
 95 				Brick-brown stringers at an angle of 40°.	N o		F4				
_  100 				Speckled and rich in voids with recrystallized dolomite patches and veinlets.		1	# 4 F 1				
_ <u>1</u> 05  				Decomposed pyrite stringers and patches. Banded with an angle of		F4646					
110 		и		<b>55°</b> .		I					
_ 115		r Roa	lomite	Argillaceous banding with an angle of 25°.	idized						
  120		Uppe	Оо	Light-gray dolomite.	0 x		1				
				Porous and stained in brick-brown.			+ + + + + + + + + + + + + + + + +				
 <u>1</u> 25 		:1		Brick-brown stringers. White saccaroidal	:		T				
  130		: : :		dolomite.			I				
   135				Brick-brown to yellowish-brown veinlets.			T				
		. :		Decomposed pyrites and iron-staining.				137.80	138.60	0.80	2.5
  140				Fractures with brick- brown crusts.			I		139.60 140.60	1.00	2.5 6.7

Depth	- Court of the Cou			Lithology	Zone	Minoralization Assay Results			Results		
(m)		Hori- zon	Rock	Remarks	voue	Ру	Zn	from (m)	to (m)	run (m)	% Zn
-											
145											
_				Yellowish-brown		T 1	+-4				
150				patches,	. ਹ			. :			
·   				Yellowish-brown crusts.	x i d i z e		T				
155				White dolomite, speckled with recrystal-	ő	7					
				lized dolomite veinlets.		1 1		:			
		oan	<u>.</u>			-		·			
		r Ro	omite		:	tail.					
-:'::		Upper	D 9 1 9	Sphalerite stringers, with an angle of 40°.	Non- oxidized	I					
<u>1</u> 70				Brown to brick-brown	ъ Ф		T !				
				stringers.	xidiz		1				
				Sphalerite stringers.	0	T	I				
		d ,		Decomposed pyrite-	Non- oxidized	<u> </u>					
				recrystallized dolomite vein at 181.4 to 181.6 m. Banded with an angle of 40°.	p e	<b>±</b>	: 1				
<u>1</u> 85				~ ·	Oxidiz				:		
_ _ 190				Yellowish-brown crusts in fractures.			F4				

Depth	 	Lithology				Mine zatio	rali- n		Assay l	lesults	
(m)		Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
195		Upper Roan	Dolomite	Sphalerite patches and veinlets.  Pyrite specks and stringers.  White, fine-grained, saccaroidal dolomite, speckled and banded with recrystallized dolomite at an angle of 50°.	Non-oxidized						

Hole No. : MJZK-12

 Line
 :
 19
 Elevation
 : 1,172 m

 Point
 :
 375
 Bearing
 : N 40° E

 Depth
 :
 201 m
 Inclination
 : -45°

pth		Lithology			Minerali- zation		Assay Results			
Logg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
			Surface soil							
	Cenozoic			9 L						
			Soil beds	Weathe						
	Cen.		Weathered phyllite (?) Soil beds Weathered phyllite (?)		:		·			
	Ceno- zoic		Pebble - bearing soil beds.							,
	Upper Roan	Dolomit e	Banded with an angle of 60°.  Iron - stain banding.  Cavity between 33.5 and 34.7 m.  Cavity at 36.8 to 37.0 m.	Non-oxidized	F=4					
		Mwa.   Ceno   Seno   Ceno	Mwa. Phy.  Cen.  Solo 2 o 1 o	Horing Zon Rock Remarks  Surface soil  Soil beds  Mwa. Phy. Weathered phyllite (?)  Cen. Soil beds  Mwa. Phy. Weathered phyllite (?)  Pebble - bearing soil beds.  Banded with an angle of 60°.  Iron - stain banding.  Gavity between 33.5 and 34.7 m.  Cavity at 36.8 to	Logg- ling Rock Remarks  Surface soil  Soil beds  Mwa. Phy. Weathered phyllite (?)  Cen. Soil beds  Mwa. Phy. Weathered phyllite (?)  Pebble - bearing soil beds.  Banded with an angle of 60°.  Iron - stain banding.  Cavity between 33.5  and 34.7 m.  Cavity at 36.8 to  37.0 m.	Logg Hori- ling Nock Remarks  Surface soil  Soil beds  Mwa. Phy. Weathered phyllite (?)  Cen. Soil beds  Mwa. Phy. Weathered phyllite (?)  Pebble - bearing soil beds.  Banded with an angle of 60°.  Iron - stain banding.  Cavity at 36.8 to 37.0 m.	Logg   Hori- ling   Rock   Remarks   Remarks	Lorge Horizon Rock Remarks 2016 Py Zn from (m)  Surface soil  Soil beds  Soil beds  Mwa. Phy. Weathered phyllite (?)  Cen. Soil beds  Mwa. Phy. Weathered phyllite (?)  Pebble - bearing soil beds.  Banded with an angle of 60°.  Iron - stain banding.  Cavity between 33.5 and 34.7 m.  Cavity at 36.8 to 37.0 m.	Logg   Hori- ing   Nock   Remarks   Surface soil	Logg   Horis   Rock   Remarks   Py Zn   from to (m)   (m)   (m)

Depth	Lithology			Zone	Mine zatio	rali- N	Triuminist similar	Assay l	Results		
(m)		Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Gray banded, sericite dolomite,							
				Banding with vuggy veinlets of recrystallized dolomite.	idized		. '		·	- *    -  -	
				Banded with an angle	x o - u o N						
<u> </u>				of 60°. Brownish stains.			-	52.90	53.90	1.00	3.9
 55				rivet to 'aa			1		54.90	1.00	4.4
Ľ				Rich in voids and stained along			-		55.90	1.00	1.9
_				recrystallized					56.90 57.10	1.00	6.5 3.1
_ 60				dolomite veinlets, Yellowish-brown stringers.			)			-100	<u> </u>
<del>-</del> 		Roan	mite	Speckled with recrystallized dolomite							
65  _		Upper	D 0 1 0 1	patches and veins.  Phyllite -intercalations at 67.1 and 67.2 m.					-		
				White, banded dolomite rich in voids.	e d						
				Cavity at 73.8 to 74.0 m.	Oxidiz						
				Speckled and stained with brown to dark-							
80 		:		brown stringers.			*				
_ _ 85				Argillaceous banding with an angle of 45°.			т				
90			:	Speckled and stained in brown .			T - 4			:	

Depth	***************************************			Lithology	77	Mine zatio	rali- n	Assay Results			
	l.ogg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
	i i			White saccaroidal	<u> </u>		ĩ	89.90	90.90	1,00	5.2
				dolomite.			Ŀ	<del></del>	91.90	1,00	1,4
									92.90	1.00	3.5
-				Speckled and stained	ĺ						
95				in brown.			I				
				m brown.				94.90	95.90	1.00	4.6
_				Decomposed pyrite		T			96.90	1.00	4.1
_				impregnation.		i					
_						1					
100				-		1					
100											
-				Speckled and porous							
-				along recrystallized		†					İ
_				dolomite patches.		H					
-100						ı.					
105		1				T					
<b>-</b>				Decomposed pyrite			·				
-				specks.				·	] .		
<u> </u>	岸上	1									
<b>-</b>						Li					
110		}				_					
-			1			l i					
F		ជន	o o		P	1					
<u> </u>		R 0	4.3	Chocolate-brown	9 2	T					
-		] "	.i	gossany iron stains at 113.4 m.					:		
115		, L	1 0 1	Speckled and rich in	ص 						
<b>-</b>		9	0	voids.	×	<u>i</u>				1.	
-		ــ ا	ρ			Ţ					
L		Þ	İ					:,			
<u> </u>		]		Chlorite banding at	1					-	
<u>1</u> 20				119.0 m with an angle of		+					
L		1		35°.	' '						.*
L			]	Speckled with		1 T	1				
				recrystallized dolomite		Ţ					
L		1		patches.					İ		
125		}				т		: *	! .		
L		1	1	D			]				· ·
L				Decomposed pyrite crystals of 6 to 10 mm		I T					}
L		3	1	in diameter.		Ι Τ				·	
		1				Ţ			1		
_130		]									
L		1		Argillite-intercalations							
L		]		at 130.4 to 130.7 m with		Ţ	1	-			
L		1		an angle of 40°.		7					
L		1				1					
135		1				Ţ				}	
L		1									
L	二二			Speckled and porous		<u>T</u>					
				with recrystallized		L	1				
Ľ		1		dolomite veins.							
140		1				I					<u> </u>

Depth						Mine zatio	rali- n		Assay	Results	
(m)	Logg- ing	Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
				Speckled with recrystallized dolomite patches, rich in voids.  Banded with an angle	xidized	F					
_				of 45°.	ő	1. 1.					
<u></u>				Pyrite and sphalerite stringers.	Non. Oxi.	I	I				
150		·		Dolomite - sphalerite veins. Brecciated	ro .			149.80	150.80	1.00	6.2
_				dolomite filled with	xidizec		T		151.80	1.00	5.5
_  _155				sphalerite. Sphalerite patches and stringers.	Non-oxidized	Т					
				Banded with brownish	. 73			155.80	156.80	1.00	4.8
_				stringers at an angle of 35°.	Oxi- dized		1	100.00	20000		
160				#1		I			:	 ** .	
		o a m	: 8	Sphalerite patches and veinlets.		T	I				
_ 165		r R(	lomit	White compact, saccaroidal dolomíte.	:	<u> </u>	: -				
		Uppe	Оο	Sphalerite stringers.		I	Ι				
_ <u>1</u> 70 _				Iron-stain bands and decomposed pyrite stringers.	y	44					
_  175				outingers.	imar	4 <del>   </del>					
  		:		Banded with an angle	Ъг	<b></b>					
_ _ 		:		of 40°.	:	-					
_				White, saccaroidal sericite dolomite.		I					
_ 185 				Banded with an angle of 40°.							
_ _ 190											

Depth	***************		of the female street,	Lithology	Zone Minerali		rali- n	1000	Assay l	Results	
(m)		Hori- zon	Rock	Remarks	Zone	Ру	Zn	from (m)	to (m)	run (m)	% Zn
195		Upper Roan	Dolomite	Pyrite specks and stringers.  White compact, saccaroidal dolomite.  Sericite dolomite, banded with an angle of 60°.							

## References

- JICA & MMAJ(1989): Report on Mining Development Plan of the
  Kabwe Area, The Republic of Zambia. Japan
  International Cooperation Agency & Metal
  Mining Agency of Japan.
- SLIWA, A. & PODEMSKI, M. (1980): Kabwe West P.L.142, Final Report,
  Minex Dept., Zimco Ltd.
- WEIR,D.J. (1976): Kabwe West P.L.142, Quarterly Report No.2, Mindex Dept., Mindeco Ltd.

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PART II

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# I Summary of drilling operation

### 1. Introduction

An overall progress is shown in Table 1, and progress of drilling is listed in Table 2-1. Number of days required for drilling is shown in Table 2-2. Details of progress of each hole are given in Table 3.

Total consumption of commodity is listed in Table 4-1, and details of bits are shown in Table 4-2. Commodities consumed in each hole are listed in Table 4-3.

### 2. Common items

# 2.1 Crew

Engineer: UENO, Tadamasa ITODA,,Hidemitsu KOBAYASHI, Shouichi

A drilling team comprises one drilling engineer, one trainee and three helpers per shift. Drilling operation was conducted by 3 shifts a day of 8 hours each. Water was also transported by 3 shifts a day by drivers with or without helpers. Preparation of drill sites, moving, installation and dismantlement were principally on a basis of one shift a day. In addition to the above, one or two teams comprising three to members were engaged in road construction and its maintenance. Two boys were employed in the camp for cooking and washing.

### 2.2 Working hour

from 8 to 16 hours Morning shift from 16 to 24 hours Evening shift from 24 to 8 hours Night shift

Table 1.

		<u></u>		<b>,</b>		·				<del></del> -	<del>.</del>				:· ,					<del></del>					
	April										,										c	ì		at .	
	March						-	-											8	18	7	2 2			
	February				•	-										8	9 1 2	18 26	2.7						
Progress	January							:					6	1.0	20 29	3 0			*						
Table 1.	December									ß	9	1 4- 2 6	2.7					-							
	November	4			5 16	17 28	1 3 2 0			2 8															
	October	2 9		7 ह					-											+ (*)					
		1	Preparation	Formalities	Carring in	Supplies	Road	Accommodation	Drilling	MJZK- 2	ı.	9 1	ı I	7 1	ന <sub>.</sub> I	7	<b>∞</b> I	6 -	ī	0 9	7	carrying out	Demobilization		

Table 2.1 Summary of drilling progress

	Dril	Drilling		Shift	٠,	Man	Man power			o <b>∦</b>	Working Time			
Hole						,						Water		
	Bit size	Drilling	Core	Drilling	Total	Engineer	Helper	Drilling	Other	Total	Removing	transpor-	transpor- Road con-	G. Total
No		length	length						works			tation	struction	
		(m)	(m)	(shift)	(shift)	(man)	(man)	(F)	(h)	3	( <del>1</del> )	(F)	( <del>F</del> )	( <del>T</del> )
MJZK-1	37/s″T.B.,NQ.BQ	201.00	181.90	13.5	16.5	22.5	9.6	49.20	50.40	100.00	30,00	2.00	1	132.00
NJZK-2	ditto	201.00	185.60	14.0	25.0	57.0	228	56.40	55.20	112.00	80.00	8 00	16.00	216.00
MJZK-3	ditto	201.00	192.10	16.0	20.0	27.0	108	42.40	85.20	128.00	32.00	ı	-	160.00
MJZK-4	ditto	201.00	189.10	16.0	20.0	27.0	108	53.10	74.50	128.00	32.00	l	ı	160.00
MJZK-5	ditto	201.00	190.50	19.0	25.0	36.0	144	53.50	98.10	152.00	48.00	ı	ł	200.00
MJZK-6	ditto	201.00	164.80	14.5	18.5	28.5	114	95.10	60.50	116.00	32.00	I	ı	148.00
MJZK-7	ditto	201.00	167.50	10.0	18.0	27.0	108	35.10	44.50	80.00	48.00	ı	1	128.00
MJZK-8	ditto	201.00	173,50	10.0	15.0	24.0	96	37.30	42.30	80.00	40.00	I	ł	120.00
6-XZ(W	ditto	201:00	167.10	13.0	17.0	24.0	96	52.00	52.00	104:00	32.00	I	ı	136.00
NJZK-10	ditto	201.00	175.00	14.0	18.0	24.0	108	45,50	66.10	112.00	32.00	1	l	144.00
NJZK-11	ditto	201.00	154.60	10,0	16.0	27.0	108	37.50	42.10	80.00	48.00	1	!	128.00
MJZK-12	ditto	201.00	172.70	11.0	. 15.0	24.0	36	39.30	48.30	88.00	32.00	ı	ı	120.00
ပ	Grand Total	2,412.00 2,114.40	2,114.40	161.0	222.0	348.0	1,404	558.40	721.20	1,280.00	486.00	10.00	16.00	1.792.00

Table 2.2 Number of days required for drilling

		total		∞					
		days		2					
rks	Others			17/11/89					
t go		days		2					
Appurtenant works	Site	prepa.		19/11/89					
¥		days		7					
	Bringing	in & out		21/11/89					
ils	off	days	<b>,</b> -	0	-	<b>,</b>	2	3	
Details	working	days	5.7	<del></del>	6	6	12	9.5	δ
		daystotal	8.5	11	10	10	14	12.5	10
		days	1		1.5	1.5	1.5	5	1.5
	Dismantle-	ment	14/12/89	5/12/89	28/ 1/90 28/ 1/90	18/ 1/90	8/ 1/90	22/12/89 26/12/89	7/ 2/90
Duration	-	days	9	9	5.5	5.5	6.5	5.5	3.5
Dai	Drilling		7/12/89	29/11/89	23/ 1/90 28/ 1/90	13/ 1/90	2/ 1/90 8/ 1/90	16/12/89 21/12/89	4/ 2/90
		days	1.5	7	e	8	9	2	'n
	Prepa-	ration	6/12/89	25/11/89	20/ 1/90	10/ 1/90	27/12/89 1/ 1/90	14/12/89 16/12/89	30/ 1/90
	Hole	No	MJZK - 1	MJZK	MJZK - 3	MJZK - 4	MJZK - 5	MJZK - 6	MJZK - 7

days total days days in & out days prepa. days days total days days in & out days prepa. days days total days a la cout days prepa. days days total days are also days in & out days prepa. days days total days are also days in & out days prepa. days days total days are also days a	daystotal days days in & out days prepa. days days   0thers   0t	tledaystotal days days in & out days prepa. days  (90   1.5   9   8   1	Duration	Durati
1.5 9 8 1 1 2.5 10 9 1 1 2.8 3/90 5 1.2 109 14 9 2 2 2	1.5 9 8 1 1	1.5 9 8 1	Disman	)isman
0.5       9       8       1         1       10       9       1         2       9       8       1         2       9       8       1         4       9       28/3/90       5         6       1/4/90       5         1       1/4/90       5         1       1/4/90       5         1       1/4/90       5         1       1/4/90       5	2.5 10 9 1 2.5 10 9 1 2.5 10 9 1 2.8/3/90 5 3 123 109 14 9 2 2 1	2.5 10 9 1 2.5 10 9 1 2.5 123 109 14 9 2 2 1	3.5 16/ 2	13/ 2/90 16/ 2/90 16/ 2/90
1 10 9 1 2.5 10 9 1 2 9 8 1 2 9 8 1 2 9 8 1 1 4/90 5 20.5 123 109 14 9 2 2 1	2.5 10 9 1 2.5 10 9 1 2 9 8 1 20.5 123 109 14 9 2 2 1	2.5 10 9 1 2.5 10 9 1 2 9 8 1 2 8/3/90 5 20.5 123 109 14 9 2 2 1	4.5 26/ 2/	26/2/26/2/
2.5 10 9 1 2 9 8 1 2 28/3/90 5 20.5 123 109 14 9 2 2 1	2.5 10 9 1 2 9 8 1 20.5 123 109 14 9 2 2 1	2.5 10 9 1 2 9 8 1 2 8/3/90 5 20.5 123 109 14 9 2 2 1	5 18/3	18/3
2 9 8 1 20.5 123 109 14 9 2 2 1	2 9 8 1 28/3/90 5 5 123 109 14 9 2 2 1	2 9 8 1 28/3/90 5 5 123 109 14 9 2 2 1	3.5 6/3/8/3/	.5 6/3/
20.5 123 109 14 9 2 2 1	20.5 123 109 14 9 2 2 1	20.5 123 109 14 9 2 2 1	4 26/3	26/3
0.5 123 109 14 9 2 2 1	0.5 123 109 14 9 2 2 1	0.5 123 109 14 9 2 2 1		
			59.0	29.0

Table 3. Progress of Each Hole

		Total						132° 00′				-		216 00				-		160 00
	road,	etc.						-			*			16° 00′					i	
	water	supply						2° 00′						8 00	-					
g hours	mantling &	dismantling						30°00′						80 00	*					31 00
Workig	-qns	total				1 ·		100° 00′						112 00				··	ı	128 00
	othersrecovery			-					:											
	othersr					-		50° 40′						55 20						85 20
	drilling							49° 20′						26 40					:	42 40
OWer	help-	ers					-	06						228						108
Мап-ромег	engi-	neers			<del></del>			22.5						57				:		27
Shift	-	total				٠.		16.5		· .				25				: '		20
Sh	drilling	shift					-:	13.5						14	*1*	1				16
กลู	core	lengthlength		;	53.5	83.1	45.9	181.9		1	79.8	27.7	78.1	185.6			69.1	112.5	10.5	192.1
Drilling	drilled			18.5	53.5	83.1	45.9	201.0		15.4	95.2	27.7	78.1	201.0		8.9	69.1	112.5	10.5	201.0
	bit	size		3"8/7	NQ-WL	BQ-WL		Total		3"7/8	NQ-WL		BQ-WL	Total		3"7/8	NQ-WL	BQ-WL		Total
	Hole	No.	MJZK	<u></u>	-				MJZK	- 2	_	:			M 17K	ب ا				

		d,	-	·	<del></del>				160° 00′						200 00				····		148 00	
		J	suppry erc				·	<del>-</del> .				 	<u>-</u>	<del></del>			:	<u>.</u>	· · · ·			
· .	ig hours	mantling &	- 1					··· <u></u> -	32° 00′					_	48 00				-		32 00	
	Working		רטוקד			· · · · ·			128 00						152 00						116 00	
		othersrecovery							-				***									
		[				;			74° 50′						98 10			:			60 50	
	i i	drilling							53° 10′						53 50						55 10	
	-power	I 0	ers						108						144					:	114	
	Man-p	engi-	neers		: 1	:		- · ·	27						36						28.5	
	Shift	1	roral						20			 ·	٠.		25				· :	<u>.</u>	18.5	
	Sh	drilling	SHILL	,			. * * *		9						19	٠.			:		14.5	
	ng	core	renguarunguar			65.2	42.9	81.0	189.1			60.6	48.9	81.0	190.5		1	37.1	127.7		164.8	
•	Drilling	777	- 1		11.9		42.9	81.0	201.0		10.1		48.9	81.0	201.0			38.8	128.8	·	201.0	
		bit	2126		3"8/7	NQ-WL		BQ-WL	Total		3"7/8	NQ-WL	-	BQ-WL	Total		3"7/8	NQ-WL	BQ-WI		Total	
•		Hole	20.	MJZK	4 -					M 17 K	2 -					MJZK	9 -					

	Total		128° 00′		120 00		136 00
	road,						
	water						
ng hours	mantling & dismantling		48° 00′		40 00		32 00
Working	sub- total		80°00′		80 00		104 00
	ecovery			:	:		
	othersr		44° 50′		42.30		52 00
	drilling	:	35° 10′		37 30		52 00
wer	1p- s	:	108	.:	96		96
Man-power	engi- neers		27		24		24
£t	total		16	 	. 5		. 11
Shift	drilling shift		10		10		
80	core	81.5	162.5	92.5	173.5	43.2	167.1
Drilling	1	38.5 81.5	201.0	27.5 92.5 81.0	201.0	29.5 47.6 42.9 81.0	(N
	bit size	X 3"8/7 NQ-WI BQ-WI	Total	ZX 8 3"7/8 NQ-VL BQ-VL	Total	5X 9 3"7/8 NQ-WL BQ-WL	Total
	Hole No.	MJZK - 7		MJZK - 8		M32K - 9	

		<u></u>		00		00		00
		Total		144° 00′		128		120
		road, etc.					·.	
•		water supply				-		·
	g hours	mantling & dismantling	V - 1	32°00′		48 00		32 00 =
-	Working	sub- total d		112°00′		80 00		88 00
		othersrecovery						
		others		66° 10′		42 10		48 30
		drilling		45° 50′		37 50		39 30
	n-power	help- cers	:	108		108		96
	Man-p	eng1- neers		24		27		24
	Shift	total		18		16		15
	Sh	drilling shift		14		10		
	į	core di length	79.0	175.0	73.7	154.6	84.5	172.7
	Drilling	drilled core lengthlength	26.0 79.0 47.0 49.0	201.0	24.0 96.1 80.9	201.0	27.1 85.7 88.2	201.0
		bit d size	3"8/7 NQ-WL BQ-WL	Total	3"7/8 NQ-WL BQ-WL	Total	3"7/8 NQ-WL BQ-WL	Total
		Hole No.	MJZK -10		HJZK -11		MJZK -12	

Table 4-1 Total consumption

Description	Specifications	Unit	Quantity	Description	Specifications	Unit	Quantity
Diesel fuel		Q	7.380	Petrol	, , , , , , , , , , , , , , , , , , ,	Q	3,575
Hydraulic oil		Q	120	Engine oil		Q	784
Gear oil		Q	70	Crease		kg	31
Bentonite	***************************************	kg	12,825	СКС		kg	158
Tet-stop	}	kg	150	Hud oil		Q	1,290
Mud seal	· i	kg	150	Seaclay		kg	125
Cement		kg	920	Tricone bit	3°/e″3MII	- pe	12
Diamond bit	NQ-WL	рc	16	Diamond bit	,RØ-RF	рc	15
Diamond reamer	NQ-WL	рс	12	Diamond reamer	BQ-WL	ре	12
Casing diamond shoe	NW-NU	рc	9	Casing metal shoe	NW-NU	pc	5
Casing metal shoe	BW-NU	рс	12	Core barrel Ass y	NQ-WL x3.0m	set	3
Core barrel Ass'y	BQ-WL x3.0m	set	3	Inner tube	NQ WL x3.0m	рe	6
Inner tube	BQ-WL x3.0m	рc	8	Core lifter case	NQ-WL	pe	36
Core lifter case	BQ-WL	pc	38	Core lifter	NO-KT	pe	45
Core lifter	BQ-YIL	pe	48	Thrust ball bearing	NQ-WL	ре	24
Thrust ball bearing	BQ-WL	pc	36	Stop ring	NQ-WL	рс	7
Stop ring	BQ-WL	рс	12	Shut off valve	NQ-VL	pe	48
Shut off valve	BQ-WL	pc	48	Ratch	NQ-WL	pc	2
Ratch	BQ-WL	рc	2	Landing ring	NQ-WL	рс	6
Landing ring	BQ-WL	pc	5	Lifting dock	KQ-WL	рс	2
Lifting dock	BQ-YL	рc	2	Lifting dock spring	NQ-WL	pc	12
Lifting dock spring	BQ-WL	P¢	10	Pipot pin	NQ-VL	pe	3
Pipot pin	BQ-WI,	рc	3	Chuck piece	NQ-WL	set	6
Chuck piece	BQ-WL	set	6	Oil pressure hose		рс	3
Crutch boad		рe	1	Y-belt	C-61 x 4	pe	16
Cylinder liner		рç	4	Piston rod		pc	6
Piston rubber		pc	50	Ball valve		рс	40
Valve seat		pc	40	Delivery bose	1″ × 15a	pc	3
Sucsion hose	3″ x 5m	рc	4	Pressure gage	100mm×100kg/cm <sup>2</sup>	рс	5
V-belt	B-81X4, B-80X4	рс	24	Counter crutch boad		pc	1
Ball bearing		PC	6	Thrust ball bearing		pe	6
Inner pipe		pc	8	Oil seal		PC	3
Gasket		РC	3	Sheet		рс	8
V-gasket	MG-15h	рc	122	Vire	φ10 X 50kg	kg	250
Vire	φ16 x 20kg	kg	80	Vire rope	16mm X 35m	PC	4
Vire rope	45mm X 250m	pc	5	Manila rope	16mm × 50m	pc	2
Manila rope	10am × 50m	рc	3	Pipe wrench	1,200mm	Pc	3
Core box	NQ-WL	pc	157	Pipe wrench	900mm	ρc	7
Core box	BO-MT	pe	113	Pipe wrench	600an	pe	. 12
				1 vbn arottop	04 aren	150	
Pipe wrench	450mm	PC	15	<u></u>		لبسيا	

Table 4-2 List of used bits

Item	Size	Bit No.	Matrix	Diamond(kt/Bit)	Meterage by Bit	Attrition Ra	te
Tri-cone	37/8"			3 pieces	270. 80		
,		191649	E-35	30kt	155. 40տ	30	 1%
		191647	E-35	30	94. 90	30	1
	) 	191656	E-35	30	14. 60	30	1
		191653	E-35	30	157. 00	30	1
	NQ-WL	191648	E-35	30	177. 90	30	1
:		191655	E-35	30	94. 50	30	
Diamond		191650	E-35	30	153. 20	30	!
bit		191652	E-35	30	164. 70	30	1
		Total			1, 012. 20		
		191661	E-35	22	162. 00	30	
		191659	€-35	22	255. 20	30	ı 
1::		191657	E-35	22	129. 00	30	. · !
and the second	BQ-WL	191666	E-35	22	269. 80	30	ļ.,.
÷ ,		191665	E-35	22	128. 80	30	· .
		191662	E-35	22	184. 20	30	ļ 
		Total			1, 129. 00		5. ·
<del></del>		NNTR-25	E-35	8	568. 40	30	ļ 
:	NQ-WL	NNTR-29	E-35	8	443. 80	30	ļ 
Reamer		Total			1, 012. 20		
		39637	E-35	6	335. 90	30	ļ <i></i>
	BQ-WL	39636	E-35	6	793. 10	30	ļ 
		Total			1, 129. 00	·	

	Total	7, 380	3, 575	784	120	70	31	1.290	12,825	158	150	150	125	920
	<u> </u>									~~				
MJZK	-12	440	255	92	50	10	<i>co</i>	100	1,300	ह्य	15	15	10	200
M3ZK	-11	270	100	40	1	1	2	08	1,000	15	* p	1		200
MJZK	-10	850	350	75	30	10	က	120	1,125	10	12	10	10	200
MJZK	б -	420	160	0.2	10	10	2	180	1,000	15	15	10	15	1
MJZK	- 8	300	120	09	ı	1	2	120	750	10	1	1	1	l
MJZK	- 7	250	180	30	10	ιΩ	63	100	750	10	15	15	10	1
MJZK	9 -	700	485	282	15	ıc	2	150	1,250	10	15	02	10	120
MJZK	- 5	850	909	75	1	1	က	140	2, 325	30	25	25	52	1
ЖУЗК	- 4	420	230	30	15	10	က	100	1,125	13	25	25	52	120
ХZГК	- 3	470	215	40	1	1	7	120	1,125	10	15	20	0,7	1
MJZK	- 2	1,050	630	100	20	20	ın	35	200	10	1	1	. [	40
ЖZСW	<del></del> -(	1,060	650	130	1	1	. 67	45	575	10	10	10	10	40
	Unit	93	8	<b>Q</b>	9	Ø	kg	01	, K.	kg	kg	ķ	kg	kg 8
Hole No.	Item	Diesel fuel	Petrol	Engine oil	Hydraulic oil	Gear oil	Greas	Mud oil	Bentonite	CNC	Tel-stop	Mud seal	Seaclay	Cement

## II Record of operation

### 1. MJZK-1

 $0 \sim 18.5 \text{ m}$ 

Tri-cone bits of 3"7/8 were used with bentonite mud-fluid. Two bits were used alernatively to penetrate sticky clay beds between 14 and 16 m where each bit required removing of clay several times. The hole reached to sand beds and NW casing pipes were inserted.

# 18.5 ~72.0 m

Drilled using NQ-WL diamond bits with mudfluid and mud-oil. The hole entered into dolomite at a depth of 22.2m. Due to loss of all circulation fluid at 34.1 m in depth, NW casing pipes were inserted to the depth of 34.3 m after reaming. Leakage continued and BW casing pipes were set to the depth of 72.0 m.

## 72.0 ~201.0 m

Drilled with BQ-WL diamond bits using mudoil fluid. All circulation fluid was lost
at 72.5 m. Bentonite and filler were
added to prevent circulation loss. A bit
was exchanged at 155.1 m.

## 2. MJZK-2

# 0 ~ 15.4 m

Overburden was drilled by tri-cone bits with bentonite-fluid. For sticky clay beds, two bits were used alternatively. Casing pipes of NW size were set to the depth of 15.4 m.

# 15.4 ~ 122.9 m

Dolomite was drilled by NQ-WL bits with bentonite-fluid and mud-oil. Due to loss of circulation at 68.2 m, drilling fluid was feeded continuously. A bit was exchanged at 95.2 m and BW casing pipes were inserted to the depth of 122.9 m.

### 122.9 ~ 201.0 m

Drilled by BQ-WL with mud-oil fluid.

After casing, the hole proceeded smoothly and ended at 201.0m.

# 3. MJZK-3

. .

0 ~8.9 m

Overburden was drilled with a tri-cone bit using bentonite-fluid. Casing pipes of NW size were set at 8.9 m.

## 8.9 ~78.0 m

Dolomite was drilled by NQ-WL diamond bits with bentonite- and mud-oil fluids.

Loss of circulation at 16.4 m could not be stopped with additives and NW casing pipes were lowered by reaming to the depth of 17.1 m and then to the depth of 47.1 m because of circulation loss at 46.4 m. Leakage continued and BW casing pipes were inserted to the depth of 78.0 m.

# 78.0 ~201.0 m

Drilled by BQ-WL diamond bits with mud-oil fluid. Leakage of circulation occurred at 187.0 m and drilling fluid was feeded continously. The bit was exchanged at 190.5 m, and the hole completed at 201.0 m.

## 4. MJZK-4

0 ~11.9 m

Soil was drilled by a tri-cone bit with bentonite-fluid. NW casing pipes were inserted to dolomite at the depth of 11.9 m.

### 11.9 ~ 120.0 m

Drilled by NQ-WL diamond bits with bentonite- and mud-oil fluids. All circulation was lost at 20.2 and also 34.0 m and all efforts with additives were failed to prevent loss. The casing pipes were lowered by reaming with a diamond shoe bit to the depth of 35 m. A bit was exchanged at 77.1 m and BW casing pipes were inserted to the depth of 120.0 m.

# 120.0 ~ 201.0 m

Dolomite was drilled by a BQ-WL diamond bit using mud-oil fluid. Some loss of circulation was covered with supply of new drilling fluid.

### 5 MJZK-5

 $(0.41)^{-1}$   $(0.41)^{-1}$   $(0.41)^{-1}$   $(0.41)^{-1}$   $(0.41)^{-1}$   $(0.41)^{-1}$   $(0.41)^{-1}$ 

Soil was drilled with a tri-cone bit and circulation was lost at 10.1 m. NW casing pipes were tentatively set to a depth of 10.5 m.

# 10.5 ~ 120.0 m

The hole entered into dolomite at 10.8 m.

Loss of circulation continued and casing pipes were lowered after reaming with a diamond shoe bit to 25.3 and further to the depth of 31.6 m. A NQ-WL bit was exchanged at 71.1 m and BW casing pipes

were inserted to the depth of 120 m.

120 ~ 201.0 m

With supply of mud-oil drilling fluid, the hole was drilled with a BO-WL diamond bit and completed at 201.0 m in depth.

### 6. MJZK-6

0 ~33.4 m

Unconsolidated sediments were drilled by a tri-cone bit using bentonite-fluid. casing pipes were inserted to 33.4 m in depth.

# 33.4 ~72.2 m

Dolomite was drilled with a NQ-WL diamond bit using bentonite- and mud-oil fluids. Cavities were encountered at 45.1 and 51.2 m. BW casing pipes were set at a depth of 72.2 m.

# 72.2 ~ 201.0 m

Drilled by a BQ-WL diamond bit with mud-oil and bentonite-fluid. All circulation was lost at a cavity of 102.0 m in depth and filtrate loss reduction additives were introduced. The hole completed at 201.0 m with replenishment of drilling fluid.

## 7. MJZK-7

 $0 \sim 38.5 \text{ m}$ 

Surface soil was drilled with a tri-cone bit using bentonite-fluid. NW casing pipes were set at the top of basement rocks of 38.5 m in depth:

# 38.5 ~120.0 m

Dolomite was drilled with a NQ-WL diamond bit using bentonite- and mud-oil fluids.

All circulation was lost in a cavity at 43.5 m and additives could not stop loss. The casing pipes were lowered by reaming with a diamond shoe bit to a depth of 45.0 m. BW casing pipes were inserted at a depth of 120.0 m.

120.0 ~ 201.0 m

The hole completed at a depth of 201.0 m with a BO-WL bit using mud-oil fluid.

#### 8. MJZK-8

 $0 \sim 27.5 \text{ m}$ 

Surface soil was drilled by a tri-cone bit with bentonite-fluid. Casing pipes of NW size were fixed at a depth of 27.5 m.

27.5 ~ 120.0 m

A NQ-WL bit was used with bentonite- and mud-oil fluids. Difficulties were experienced with blocking caused by wedge-shaped cores of phyllite to a depth of 59.0 m. The hole entered into dolomite and a fault was encountered at 77.5 m which created loss of circulation. Drilling fluid was replenished until casing pipes of BW size were inserted at a depth of 120.0 m.

120.0 ~ 201.0 m

Dolomite was drilled by a BQ-WL diamond bit using mud-oil fluid. Loss of water was replenished with additional fluid and the hole completed at 201.0 m in depth.

### 9. MJZK-9

0 ~29.5 m

Soil and clay beds were drilled with a tricone bit using bentonite fluid to a depth of 29.5 m and casing pipes of NW size were set.

### 29.5 ~ 120.0 m

Drilled with a NQ-WL bit using bentonite and mud-oil fluid. The consistency of bentonite-fluid was kept thick within phyllite to a depth of 37.4 m. The hole entered to dolomite and all circulation was lost at 97.5 m. Additives were introduced and with replenishment of fluid, the hole proceeded to a depth of 120.0 m where casing pipes of BW size were set.

## 120.0 ~ 201.0 m

Drilled by a BQ-WL bit using mud-oil fluid to the depth of 201.0 m.

### 10. MJZK-10

 $0 \sim 26.0 \text{ m}$ 

Surface soil and weathered phyllites were penetrated by a tri-cone bit using bentonite-fluid. Reaching to dolomite at 26.0 m, casing pipes of NW size were set.

# 26.0 ~ 105.0 m

Drilled by a NQ-WL bit with bentonite fluid. Loss of all circulation occurred at 85.5 m and 92.5 m. Additives were introduced and fluid was replenished until casing pipes of NW-size were inserted at a depth of 105.0 m.

### 105.0 ~201.0 m

Dolomite was drilled with BQ-WL bits using mud-oil fluid. The bit and core tube were exchanged at 152.0 m in depth and the hole was completed at 201.0 m.

### 11. MJZK-11

0 ~ 24.0 m

After insertion of a drive pipe of 1.5 m, the mouth was cemented. A tri-cone bit and bentnite-fluid were used to a depth of 24.0 m, where casing pipes of NW size were inserted.

### 24.0 ~ 120.1 m

Drilled by a NQ-WL bit with mud-oil fluid. The hole penetrated weatherd phyllite between 29.4 and 40.9 m and reached to dolomite at a depth of 46.4 m. The casing pipes of NW size were extended and fixed to this depth. Bentonite-fluid was used to a depth of 60 m, but due to an outbreak of mud sheath, fluid was replaced by mud-oil fluid. Casing pipes of BW size were inserted at a depth of 120.1 m.

## 120.1 ~ 201.0 m

Drilled by a BQ-WL diamond bit with mud-oil fluid until the hole was completed at 201.0 m in depth.

## 12. MJZK-12

 $0 \sim 27.1 \text{ m}$ 

After cementing of a drive pipe of 1.5 m, soil and weathered phyllites were penetrated by a tri-cone bit using bentonite-fluid, and casing pipes of NW size were inserted to a depth of 27.1 m.

# 27.1 ~112.8 m

Dolomite was drilled with a NQ-WL diamond bit. All circulation was lost at a depth of 78.5 m and additives were introduced. Replenishment with drilling fluid was

maintained until casing pipes of BW size were inserted at a depth of 112.8 m.

# 112.8 ~201.0 m

Drilled to the depth of 201.0 m by a diamond bit of BQ size using mud-oil fluid.

Table 5-1-1 Progress Report of Drilling MJZK-1

	Drilling length per shift		Total length		Number of shift		Man-shift		
Date	lst	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Dec.	m :	m	m	Œ	п	-			
6	lnstal-								
	lation								:
7	ditto &				i				
	16. 4			16. 4					
8	–								
9	9. 5	8. 4	Reaming	17. 9	15. 2				
						3.5	5. 0	9. 0	36
10	6. 2	16. 5	12.5	35. 2	35. 2				
11	3. 4	28. 2	24. 0	55. 6	55. 6				
	4		e di un entre	, i.		- I			
12	30.0	21. 0	24. 9	75. 9	75. 9	·			
				1.				·	
13	Measure-	Dis-							
	ment	mantling						٧.	
14	Dis-	-	i				_		
	mantling	· · · · · · · · · · · · · · · · · · ·				10.,0	11.5	13. 5	54
4.2				-	-		·		
ja *									
			:						
,	еп п	71 1	61 4	901.0	101 0	19 K	16. 5	22. 5	99
Total	65. 5	74.1	61. 4	201. 0	181.9	13. 5	10. 9	66.0	ขอ

Table 5-1-2 Summary of Drilling MJZK-1

			Su	rvey F	eriod				h	lan-si	nift
		Per	i od	Days	Working Da	ıys	Off-d	ays	Engir	neer	Helper
Prepa	ration	6 ~ 7, D	ec., 1989	1. 5	1	. 5				4.5	18
		7 ~13, D	ec.	6. 0	Drilling:5	i. 0		1	] 1	5. 0	60
Drill	ing										
					Recovery:				:		
Remov	al	14, Dec.	· 	1.0	1	. 0				3.0	12
Total		6 ~14, D	ec., 1989	8. 5	7	. 5		1	2	2.5	90
Depth	, etc.					c	ore Re	cove	ry per	Eve	y 100m
Plann	ed .	200. Om	Soil,	etc.	18.6m	D	epth	Sec	tion	Cum	ılative
Revis	ed	: m	Core Le	ngth	181.9m		0~100	8	1.4%		
Measu	red	201.0m	Core Rec	overy	90. 5%	10	0~200m	10	0.0%		90.5%
Worki	ng Hours	49°20′							ĺ		
Drill	ing	49°20′		46%	37%				.1		
Other	s	58°40′		54	44			Dril	ling s	peed	
Recov	ering	: . :		1		Ru	n/dril	ling	days		
Sub-t	otal	108°00′		100	81		20	1.0	÷ 5 =	40. 20	)m/day
Prepa	ration	10°00′			8	Run/drilling shifts			. :		
Disma	ntling	12°00′	e de la composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della comp		9		20	1. 0÷	13. 5=1	4.89	/shift
Water	Supply	2°00′			2		Ru	n fo	r each	size	)
Acces	s, etc.				i	Bi	t Size		3' 8/7	NQ	BQ
						Rui	n	(n)	18. 6	53. 5	129. 0
Total		132°00′			100	Со	re Len	gth	<u> </u>	52. 9	129. 0
Casin	g					No	tes:				
Size	Depth	Ratio aga	inst tota	l dept	h Recovery						1
НХ	m				% %						. •
N₩	34. 3			17. 1	100						
B₩	72. 0			35. 8	100						·

Table 5-2-1 Progress Report of Drilling MJZK-2

	Drilling	length p	er shift	Total	length	Number of	shift	Nan-s	hift
Date	1st	2nd	3rd	run	core	Drilling	Total	Engineer	llelper
Nov.	m	m	m	m	m				
17	Supply-	ļ				į			
	purchase								
18	ditto						2	6	24
19	Site-								I
	prepara.								!
20	ditto	!	·						
21	Carriage				İ	:			! :
22	ditto				·	:			
23	ditto		·	-					!
24	ditto								
25	Mast-	·			. ;		,		
	assembl.						7	21	84
26	Instal-								
	lation	:							1 1
27	ditto								. : .
28	Wiring					:			
29	13. 4		:					: "	
30	3.8	9.0	15.0	27.8	25. 8				
Dec.		i	·     .					-  -	
- 1	9. 0	21.0	24. 0	54. 0	54.0				
2	17. 0	10.7	11. 2	38. 9	38. 9	10	13	21	84
3	22. 0	24. 0	20. 9	66. 9	66. 9				
. 4	Measure.	Dismant.			:				
5	Dismant.								
			:			4	6	9	36
Total	65. 2	64. 7	71. 1	201. 0	185. 6	14	28	57	228

Table 5-2-2 Summary of Drilling MJZK-2

			Su	irvoy l	Period	<del></del>		1	lan-s	hi	ft
		Per	iod	Days	Working Da	ıys	Off-days	Engi	100r	Н	olper
Prepa	ration	17 ~ 28, N	ov., 1989	12		12			36		144
		29, Nov. ~	4, Dec.	6	Drilling:	6			18		72
Drill	ing	-						٠.			
					Recovery:			:			
Remov	al		5, Dec.	1		1			3		12
Total		17, Nov. ~	5, Dec.	19		19			57		228
Depth	, etc.		<u> </u>	- <del>-</del>		Co	re Recov	ery pe	r Eve	ry	100m
Plann	ed	200. Om	Soil,	etc.	15. 4m	D	epth S	ection	Cu	nú.	lative
Revis	ed	m	Core Le	ength	185. 6	0	)~100m	84. 6%			
Measu	red	201. Om	Core Rec	covery	92. 3%	100	)~200m 1	00.0		ę	92. 3%
Worki	ng Hours								4		
Drill	ing	56°40	′	51%	26%					-	
Other	s	55°20	•	49	26		Dri	llings	speed		
Recov	ering					Run	/drillin	g days			
Sub-t	otal	112°00	۲.	100	52		201	. 0÷6 =3	33. 50	m/c	lay
Prepa	ration	72°00	,		33	Run	/drillin	g shif	ts		
Disma	ntling	8°00		:	4		201	. 0÷14=	14. 36	m/s	shift
₩ater	Supply	8°00	<i>,</i> [		4 .		Run f	or eacl	ısiz	e	
Acces	s, etc.	16°00			7	Bit	Size	3, 8/,	NQ		BQ
	÷					Run	ı (m)	15. 4	107	. 5	78. 1
Total		216°00	,		100	Cor	e Length	-	107	. 5	78. 1
Casin	g		:			Not	es:				
Size	Depth	Ratio aga	inst tota	ıl dept	h Recovery						
HX	10				% %				•		.*
N₩	15. 4		•	7. 7	100				•	٠	
BW	122. 9			61. 1	100						

Table 5-3-1 Progress Report of Drilling MJZK-3

	r			,					
	Drilling	length p	er shift	Total	length	Number of	shift	Man-s	hift
Date	İst	2nd	3rd	run -	core	Drilling	Total	Engineer	Helper
Jan,	m	п	w	n.	m				
20	Instal-						•		
	lation					3	1	3	12
21	ditto			17-7					
22	_						-		
:				•					
23	17. 1	12. 0	3. 0	32. 1	23. 2				
			z.	ir.		**			
. 24	12. 0	3. 0	Reaming	15. 0	15. 0				
	÷ .				1	est et			
25	6. 0	9. 0	15. 9	30. 9	30. 9			: .	: .
				1			1		
26	11. 0	21. 0	30. 0	62.0	62. 0				
	,*		i.		:				
-27	30. 0	20. 5	10. 5	61.0	61.0				
1 1 4						- 15	16	18	72
28	Measure-	Dis-						·	
	ment	mantling							
. 29	Dis-		, 11					e se	
	mantling		. :			1	3	6	24
		į						: .	
			:	·				·	
			· •.	·					
Total	76. 1	65. 5	59. 4	201. 0	192. 1	16	20	27	108

Table 5-3-2 Summary of Drilling MJZK-3

			Sı	rvey F	or	iod				1	lan-sh	ift
. :		Per	iod	Days	₩	orking Da	ys	Off-d	ays	Engir	ieer	Helper
Prepa	ration	20 ~ 22, J	an., 1990	3. 0		2	. 0	1	. 0		6.0	24
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		23 ~ 28, J	an.	5. 5	D	rilling:5	. 5			]	6. 5	66
Drill	ing											
				<u> </u> 	R	ecovery:				İ		
Remov	al	28 ~ 29, J	an.	1.5		1	. 5				4. 5	. 18
Total	:	20 ~ 29, J	an., 1990	10.0		9	. 0	1	. 0	2	27. 0	108
Depth	, etc.						C	ore Re	cove	ry per	Ever	y 100m
Plann	ed	200. Om	Soil,	etc.		8. 9m	Do	epth	Sec	tion	Cumu	lative
Revis	ed	m	Core Le	ength		192. 1m	. (	0~100m	9	1.1%		
Measu	red	201. Om	Core Rec	overy		95. 6%	10	0~200¤	10	0.0		95.6%
Worki	ng Hours	İ										
Drill	ing	42°40	′	33%		27%						
Other	s	85°20	,	67		53			Dril	lings	speed	
Recov	ering					4 Ja	Rui	n/dril	ling	days		
Sub-t	otal	128°00	,	100		80		2	01. 0	÷5. 5=3	36. 54 <u>m</u>	/day
Prepa	ration	16°00	,	ĺ		10	Rui	n/dril	ling	shift	s	
Disma	ntling	16°00	<b>,</b>			10		2	01.0	÷16=12	2.56m/	shift
Water	Supply			·				Ru	n fo	r eacl	size	
Acces	s, etc.			1			Bi	t Size		3'.8/7	NQ	BQ
		1		ļ			Rui	<b>1</b>	(a)	8. 9	69. 1	123.
Total		160°00	<b>,</b>			100	Co	re Len	gth	_	69. 1	123.
Casin	g		<u></u>				No	tes:				
Size	Depth	Ratio aga	inst tota	1 dept	h	Recovery						
нх	na				%	%						
NW	47. 1	* * .		23. 4		100		:				
BW	78. 1			38. 8	,	100						

Table 5-4-1 Progress Report of Drilling MJZK-4

Drilling	length p	er shift	Total	length	Number of	shift	Man-s	hift
lst	2nd	3rd	run	core	Drilling	Total	Engineer	llelper
n	m	m .	m	m				
Instal-								
lation	ļ	•						· ]
ditto								
13. 2	7. 9	9. 0	30. 1	18. 2	·			·
	·				3	5	9	36
5. 0	6. 0	21. 0	32. 0	32. 0				
·			. 1		turi i			
15. 0	18. 0	9. 0	42. 0	42.0	: ,			:
	. ]		.*					
15. 7	5. 2	21.0	41.9	41.9				٠. :
18. 0	18. 0	19.0	55.0	55.0			٠.	
							Hijts of a	
	ļ						: .	
i	manting							
							:-	
			. :		3	15	18	72
cc o	gs 1	70.0	201 0	190 1	16	2n	97	108
	Ist  Installation ditto  13. 2  5. 0  15. 7  18. 0  Measurement Dis-	1st         2nd           m         m           Instal- lation ditto         7.9           5.0         6.0           15.7         5.2           18.0         18.0           Measure ment mantling         mantling           Dis- mantling         mantling	Instal-lation ditto  13.2 7.9 9.0  5.0 6.0 21.0  15.7 5.2 21.0  18.0 18.0 19.0  Measure Disment mantling Dismantling	1st         2nd         3rd         run           m         m         m         m           Instal-lation ditto         30.1         30.1           5.0         6.0         21.0         32.0           15.0         18.0         9.0         42.0           15.7         5.2         21.0         41.9           18.0         19.0         55.0           Measure pant mantling pis-mantling         mantling	1st         2nd         3rd         run         core           m         m         m         m         m           Installation         ditto         30.1         18.2           5.0         6.0         21.0         32.0         32.0           15.0         18.0         9.0         42.0         42.0           15.7         5.2         21.0         41.9         41.9           18.0         19.0         55.0         55.0           Measure ment mantling         mantling         mantling	1st         2nd         3rd         run         core         Drilling           m	1st         2nd         3rd         run         core         Drilling         Total           Installation ditto         30.1         18.2         30.1         18.2         30.1         30.1         18.2         30.1	1st         2nd         3rd         run         core         Drilling         Total         Engineer           Installation ditto         m

Table 5-4-2 Summary of Drilling MJZK-4

		· · · · · · · · · · · · · · · · · · ·	Su	rvey l	Per.	ìod					Nan-s	hift
		Peri		Days	_	orking Da	ys	Off-d	ays	Engi		Helper
Prepa	ration	10 ~ 12, Ja		3.0	-		. 0	· · · · · · · · · · · · · · · · · · ·	1		6.0	24
		13 ~ 18, Ja		5. 5	Di	rilling:5	. 5				16. 5	66
Drill	ing:								İ			:
					Re	ecovery:		•	.		) (	
Remov	al	18 ~ 19, Ja	ın.	1.5		1	. 5				4.5	18
Total		10 ~ 19, Ja	ın., 1990	10. 0		9	. 0		1		27. 0	108
Depth	, etc.						Ca	ore Re	cove	ry pe	r Eve	ry 100m
Plann	ed	200. 0m	Soil,	etc.		11.9m	De	epth	Sec	tion	Cum	ulative
Revis	ed	m	Core Le	ngth		189. 1m	(	)~100m	8	8. 1%	•	
Measu	red	201. Om	Core Rec	overy	L	94. 1%	100	0~200≖	10	0.,0		94.1%
Worki	ng Hours			·								
Drill	ing	53°10′		42%		33%						· ·
Other	s	74°50′		58		47			Dril	ling	speed	· ·
Recov	ering ==						Rur	n/dril	ling	days		
Sub-t	otal	128°00′		100		80				÷5. 5=		n/day
Prepa	ration	16°00′				10	Rur	n/dril.	ling	shif	ts	
Disma	ntling	16°00′				10		20	01.0	÷16=1	2. 56m	/shift
Water	Supply								n fo	r eac	<b></b>	<del>- 1 </del>
Acces	s, etc.						Bi t	Size		3′ 8/	<del> </del>	
							Rur		(m)	11.9	108.	+
Total		160°00′	<u> </u>	]		100		re Len	gth	-	108.	81.0
Casin				: .	, 1		Not	es:				ļ
Size	Depth	Ratio agai	nst tota	l dept		Recovery						
НХ	. e.e. v			107	%	% 100		a.				1
NW	35. 0			17. 4	- 1	100					-	
BW	120.0		<del></del>	59. 7		100						

Table 5-5-1 Progress Report of Drilling MJZK-5

ĺ		Drilling	length p	or shift	Total	length	Number of	shift	Man-s	hift
ĺ	Date	lst	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
	Dec.	m	n	m	щ	· m	i			
	27	Carriage								
	28	Instal-		١.				i		
		lation						<b>\</b>		
	29	Mast-	3					i		
		assembl.								
	30	Wiring						 		
ļ								4	12	48
	31	<u> -</u> 1.		-						-
	Jan.	·								
	1			.						
	2	12.0	5. 1	9. 0	26. 1	15. 6				
ļ	3	Reaming	Reaming	Casing			 	1		
	4	5. 5	0. 5	18. 0	1	24. 0				
	5	21. 0	12.0	21.0	ļ	54. 0				
	6	7. 3	10. 6	21.0	38. 9	38. 9				
							15	15	15	- 60
}	7	24.0	24. 0	10.0	58. 0	58.0	:			·
	. 8	Measure-		. '		 	ļ ļ			
- {		ment	mantling	·			<u> </u>			
	9	Dis-		·	٠				·	
		mantling								
	, 						4	6	9	36
ĺ		'		i			]			
	_	A 0 0	<b>50.0</b>	70.0	001.0	100.5	10	25	36	14
ļ	Total	69. 8	52. 2	79. 0	201.0	190. 5	19			

Table 5-5-2 Summary of Drilling MJZK-5

	<del></del>		Su	rvey F	eriod		**************************************		ŀ	lan-s	hift	
		Per	iod	Days	Working Da	ıys	Of f-d	ays	Engir	eer	Help	er:
Prepar	ration	27, Dec. ~1,	Jan. , ' 90	6. 0		l. 0		2. 0	1	2. 0		42
		2 ~ 8,	Jan.	6. 5	Drilling:	3. 5			- 1	9. 5		78
Drilli	ing								:			
	:	·			Recovery:							
Remova	al	8 ~ 9,	Jan.	1.5	1	1.5				4. 5		18
Total		27, Dec. ~9,	Jan. , ' 90	14.0	12	2. 0		2. 0	3	36. 0	1	44
Depth,	etc.					С	ore Re	cove	ry per	Eve	ry 10	10m
Planno	ed	200. Om	Soil,	etc.	10.5m	D	epth	Sec	tion	Cum	ulati	ve
Revise	эd	m	Core Le	ngth	190. 5դ		0~100m	8	9. 5%			
Neasur	ed	201.0m	Core Rec	overy	94.8%	10	0~200=	10	0.0		94.	8%
Workin	ng Hours											
Drilli	ing	53°50′		35%	27%							
Others	8	98°10′		65	49		]	Dril	ling s	peed		
Recove	ering					Ru	n/dril	ling	days			
Sub-to	otal	152°00′	·	100	76		20	01. 0	-6. 5=3	0. 92	m/day	,
Prepar	ation	32°00′			16	Ru	n/dril	ling	shift	s		
Dismar	ntling	16°00′			8		26	01. 0	-19=10	). 58m	/shif	t
Water	Supply						Rui	n fo	r each	siz	e	
Access	s, etc.		; ·			Bi	t Size		3'8/7	NQ	B	Q
						Ru	n i	(m)	10.5	109	. 5 81	. 0
Total		200°00′	·		100	Со	re Leng	gth	-	109	. 5 81	. 0
Casing			12			No	tes:					
Size	Depth	Ratio aga	inst tota	l dept	h Recovery							
нх	n			<del></del>	% %							•
NW	31. 6	· ·		15. 7	100						:	
BW	120.0			59. 7	100							
<del></del>							· · · · · · · ·	1.				

Table 5-6-1 Progress Report of Drilling MJZK-6

	Drilling	length p	er shift	Total	length	Number of	shift	Nan-s	hift
Date	lst	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Dec.	m	m	to	ŧī	m.				
. 14	Instal-								
•	lation								
15	ditto								
									,
16	ditto &								
	16. 4			16.4	-				-
					-	0.5	2. 5	7. 5	30
17	12. 0	13.0	11.8	36.8	18. 1				A g
18	13.0	8. 0	8. 7	29. 7	28.6				
19	15. 0	18. 0	13. 5	46. 5	46. 5				
20	15. 0	12. 5	22. 1	49.6	49, 6		:		
21	22.0	Neasure-		22. 0	22.0				
		ment		*. **	:	i in in in in in in in in in in in in in		Term in a	
22	Dis-								
	mantling	. '						÷	
23	<del>-</del> -		-	**		* 1	1. 441	Đ.	
						14. 0	15. 0	18.0	72
24	-								
		4E							
25						. :			
						İ			
26	Dis-				. •	1			
	mantling							0.0	10
	. 17					_	1.0	3.0	12
					3010	4 4 7	10 5	00 5	111
Total	93. 4	51. 5	56. 1	201.0	164. 8	14.5	18. 5	28. 5	114

Table 5-6-2 Summary of Drilling MJZK-6

			Su	rvey	Per	iod				N	lan-sl	nift
		Per	iod	Days	W	orking Da	ys	Off-d	ays	Engir	eer	Helper
Prepa	ration	14 ~ 16, D	ec., 1989	2. 0		2	. 0				6.0	24
		16 ~ 21, D	ec.	5. 5	D	rilling:5	. 5			1	6. 5	66
Drill	ing	1										
					R	ecovery:					. :	· · · · · · · · · · · · · · · · · · ·
Remov	al	22 ~ 26, D	ec.	5. 0		2	. 0	3	. 0		6.0	24
Total		14 ~ 26, D	ec., 1989	12. 5		9	. 5	3	. 0	2	28. 5	114
Depth	, etc.						C	ore Re	cove	ry per	Eve	у 100m
Plann	ed	200. Om	Soil.	etc.		33. 4m	D	epth	Sec	tion	Cum	ılative
Revis	ed	m	Core Le	ngth		164.8m		0~100m	6	3. 8%		
Neasu	red	201. Om	Core Rec	overy		82. 5%	10	0~200m	10	0.0	•	82.0%
Worki	ng Hours										:	
Drill	ing	55°10′		48%		37%						- 1
Other	s	60°50′		52		41			Dril	ling s	peed	· · · · · · · · · · · · · · · · · · ·
Recov	ering				: 		Ru	n/dril	ling	days		
Sub-t	otal	116°00′		100		78		2	01. 0	÷5. 5=3	6. 54	day
Prepa	ration	16°00′				11	Ru	n/dril	ling	shift	s	
Disma	ntling	16°00′				11	:	2	01. 0	÷14. 5=	13. 86	Sm/shift
Water	Supply							Ru	n fo	r each	size	) <u>.</u>
Acces	s, etc.						Bi	t Size	_	3'8/7	NQ	BQ
							Ru	n .	(m)	33. 4	38. 8	3 128.8
Total		148° 00′				100	Co	re Len	gth	-	36. (	128.8
Casin	g						No	tes:				
Size	Depth	Ratio aga	inst tota	l dep	th	Recovery						
нх	n				%	Ж				• •		
N₩	33.4			16.	6	100						
B₩	72. 2			35.	9	100						

Table 5-7-1 Progress Report of Drilling MJZK-7

	Drilling	length p	er shift	Total	length	Number of	shift	Man-s	hift
Date	lst.	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Jan,	m	· m	m	m	m				
30	Carriage					5.			
							i	į	
31	Instal-								
	lation		H:			·			
Feb.					i				
1	Mast-	i							
	assembl.								
2	Sheeting		ı						
			'					-	
3	· _					·			
		F		:					·
				<del></del>			4	12	48
4	15. 0	23. 5	6.5	45. 5	6.5				
_	_								
5	17. 1	24. 0	33. 9	75. 0	75. 0				
6	8. 0	39. 0	34. 0	81.0	81. 0				
п		<b>.</b>		•					•
. 7	Measure-	Dis-							
8	ment	mantling							
0	Dis-								
	mantling					10	12	15	60
Total	40. 1	86. 5	74. 4	201.0	162. 0	10	16	27	108

Table 5-7-2 Summary of Drilling MJZK-7

;		Su	rvey P	eriod				N	an-si	nift
	2. Perio	bc	Days	Working	Day	s Off-d	ays	Engin	eer	Helper
Preparation	30, Jan. ~3, I	Feb.,'90	5. 0		4.	0 1	. 0	1	2. 0	48
	4 ~ 7,1	Feb.	3. 5	Drillin	g:3.	5		1	0.5	42
Drilling					:					
				Recover	у:					
Removal	7 ~ 8,1	řeb.	1.5		1.	5		· · · · · · · · · · · · · · · · · · ·	4. 5	18
Total	30, Jan. ~8, I	Feb., 90	10.0		9.	0 1	. 0	2	7.0	108
Depth, etc.						Core Re	cove	ry per	Ever	y 100m
Planned	200. Om	Soil,	etc.	38.	5m	Depth	Sec	tion	Cum	ulative
Revised	m	Core Le	ngth	162.	5m	0~100m	6	1.5%	* * .	
Measured	201.0m	Core Rec	overy	80.8	8%	100~200m	100	0.0		80.8%
Working Hours				:		:				• !
Drilling	35°10′		44%	2'	7%			<u> </u>		
Others .	44°50′		56	3!	5		Dril	ling s	peed	<u> </u>
Recovering	. *			:		Run/dril	ling	days	1	
Sub-total	80°00′		100	62	2	2	01.0	÷3, 5=5	7. 42	ı/day
Preparation	32°00′			25	5	Run/dril	ling	shift	s	5) 
Dismantling	16°00′			13	3	2	01.0	÷10≈20	. 10m/	shift
Water Supply			.			Ru	n for	r each	size	<del>,</del>
Access, etc.						Bit Size		3',8/7	NQ	BQ
						Run	(a)	38.5	81.5	81.0
Total	128°00′			100	0	Core Len	gth		81.5	5 81.0
Casing		<u> </u>				Notes:			÷	
Size Depth	Ratio agair	ist tota	l dept	h Recov	ery			:		
HX m			9	*	%			• • •	÷	
NW 45.0	÷		22, 3	100	0					
BW 120.0			59. 7	100	0				112	

Table 5-8-1 Progress Report of Drilling MJZK-8

	Drilling	length p	er shift	Total	length	Number of	shift	Nan-s	hift
Date	1st	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Feb.	Ш	m	m	10.	. т				
9	Instal-								i
	lation							·	
10	ditto								
İ								. •	
		:		! 			2	6	24
11	Wiring								
			''	<u>'</u>					
12						٠.		ļ	
				į		:			
13	27.0	8. 1	17. 2	52. 3	24. 8		• '		
		14 T + 1					-		
14	30.8	30.0	6.9	67.7	67.7				
15	26.0	36.0	19. 0	81.0	81.0			:	
			į				-1		
16	Neasure-	Dis-						# 1	
	ment	mantling							
17	Dis-	İ	•						٠.
	mantling		: · · · · i			10	19	18	72
	<u> </u>					10	13	10	12
			·	,					
			l.		. :	111			,
							:		
٠.									
Total	83.8	74.1	43. 1	201.0	173.5	10	15	24	96
iotal	03.0	14. 1	40. (	201.0	1.3.0	L		<u> </u>	

Table 5-8-2 Summary of Drilling MJZK-8

		Su	rvey	Perio	od				N	an-s	hift
	Per	iod	Days	Wor	king Da	ys	Off-d	ays	Engin	eer	Helper
Preparation	9 ~ 12, Fe	b., 1990	4.0		3	. 0	1.	. 0		9, 0	36
	13 ~ 16, Fe	ob.	3. 5	Dri	illing:3	. 5			1	0.5	42
Drilling			[ ]								٠
				Rec	covery:		r		·		
Removal	16 ~ 17, Fe	eb.	1.5		1	. 5				4.5	18
Total	9 ~ 17, Fe	эb. , 1990	9. 0		8	. 0	1.	. 0	2	4. 0	.96
Depth, etc.						C	ore Re	cove	ry per	Eve	ry 100m
Planned	200. Om	Soil,	etc.		27.5m	D	epth	Sec	tion	Cum	ulative
Revised	m	Core Le	ngth		173.5m		0~100m	7	2. 5%		
Measured	201.0m	Core Rec	overy		86. 3%	10	0~200m	10	0.0		86. 3%
Working Hours	i						:		:		
Drilling	37° 30′		47%		31%						
Others	42°30′		53		35		3	Dril	ling s	peed	
Recovering						Ru	n/dril	ling	days		
Sub-total	80°00′		100		66		2	01. 0	÷3. 5=5	7. 42	n/day
Preparation	24°00′				20	Rui	n/dril	ling	shift	s	1
Dismantling	16° 00′				14		2	01. 0	÷10=20	. 10m	/shift
Water Supply		,					Ru	n fo	r each	siz	e
Access, etc.			1			Bi	t Size		3, 8/4	NQ	BQ
			i			Rui	n	(m)	27. 5	92.	5 81.0
Total	120°00′				100	Co	re Len	gth	_	92.	5 81.0
Casing						No	tes:				
Size Depth	Ratio agai	nst tota	l dept	th R	Recovery						
нх				%	%	٠	٠			•	
NW 27.5			13. 7	7	100						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
BW 120.0			59. 7	7	100			-			:

Table 5-9-1 Progress Report of Drilling MJZK-9

	Drilling	length p	er shift	Total	length	Number of	shift	Man-s	hift
Date	1st	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Feb.	m	M	119	m	m				
18	Carriage								
19	Mast-								
	assembl.								
20	Wiring								
;21	-								
22	28. 4	9. 7	17. 0	55. 1	21. 2				
23	10.0	12. 0	8. 0	30.0	30. 0				
24	14.0	12.0	8.9	34. 9	34. 9				
						9	12	18	72
25	• 14.0	39. 0	28. 0	81.0	81.0	••		•	
26	Measure-	Dist-						l	
·	ment	mantling							
				·.		4	5	6	. 24
				·				**	4
		- 1							
					. :		es de 19		
	·		·						
·									
						:-	,		
			: 						
				1 · · · · · · · · · · · · · · · · · · ·				·	
			ļ		1 1,3			·	
	00.4	70.5	C1 C	: 001_0	107 1	. 19	17	24	96
Total	66. 4	72. 7	61. 9	201.0	167. 1	13	17	24	ขบ

Table 5-9-2 Summary of Drilling NJZK-9

<u></u>			Su	rvey I	eriod	***	· · director ace			1	lan-s	hift	
		Per	iod	Days	Worki	ng Da	ys 0	)ff-d	ays	Engir	neer	llelı	per
Prepa	ration	18 ~ 21, F	ob., 1990	4. 0		3.	. 0		1.0		9. 0		3Ġ
		22 ~ 26, F	eb,	4. 5	Drilli	ing:4.	. 5			: - }	3. 5		54
Drill	ing	!			Recove	ery:		÷					
Remov	al	26, F	eb.	0. 5		0.	. 5	-			1.5		6
Total		18 ~ 26, F	eb., 1990	9.0		8.	. 0		1.0		24. 0		96
Depth	, etc.						Cor	e Re	cove	ry pei	Eve	ry 1(	)Om
Plann	ed	200. Om	Soil,	etc.	- 29	9. 5m	Dep	oth	Sec	tion	Cum	ulati	ive
Revis	ed	m I	Core Le	ngth	16	7. 1m	0~1	00m 70.5%					
Neasu	red	201. Om	Core Rec	overy	83	3.1%	100~	0~200m 100.0% 83				83.	. 1%
Worki	ng Hours	:	: +										
Drill	ing	52°00	′	50%		38%		<u>.</u>					
Other	s	52°00	·	50		38			Dril	ling s	speed		
Recov	ering						Run/	dril	ling	days			
Sub-t	otal	104°00	·	100		76		2	01.0	÷4. 5=4	14. 66	m/day	<b>y</b>
Prepa	ration	24°00			:	18	Run/	'dril	ling	shift	2.5		
Disma	ntling	8° <u>.</u> 00				6		2	01. 0	÷13=15	. 46m	/shi	ft
Water	Supply				•			Ru	n fo	r eacl	siz	e	
Acces	s, etc.			-	* * .		Bit	Size		3' 8/7	NQ		BQ
				į			Run	·	(m)	29. 5	90.	5 81	1.0
Total	:-	136°00	<i>r</i>		<u>_</u>	100	Core	Len	gth	_	86.	1 81	1.0
Casin	g		***				Note	es:					
Size	Depth	Ratio aga	inst tota	l dept	th Reco	overy							-
IIX	m				%	%							
N₩	29. 5			14. 7	7   1	100							
B₩	120.0			59.7	7	100							

Table 5-10-1 Progress Report of Drilling NJZK-10

	Drilling	length p	er shift	Total	length	Number of	chift	Man s	hift
Date	lst	2nd	3rd	run	core	Drilling	r	Engineer	r
Mar.	ın ın	m	m	m	m m	DIALING	10101	LIIG I WOO!	
9	Carriage		14						. (1)
10	Nast-			1					
	assembl.		ļ						
}						]	2	6	24
11	Mainte-								
	nance			Į.					
12									
13	29. 1	32. 3	30. 7	92. 1	66. 1			٠.	• •
14	12. 9	22. 6	24.4	59. 9	59. 9				
15	Bit-			:		* .	;		
	change	6.8	12.0	18.8	18.8				
16	12.0	11.2	7.0	30. 2	30. 2				
17	Messure-	Dis-							
	ment	casing	<u></u>		·	14	15	15	72
18	Dis-	ļ							
	mantling			:	. :		. 1	3	12
		,					+ ‡	e se taga e tilot	
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.					i. Ii.	. :			
N - 4 - 1	E 1 A	70.0	74.1	901 0	175 0	14	18	24	108
Total	54.0	72. 9	74. 1	201.0	175.0	14	10	24	100

Table 5-10-2 Summary of Drilling MJZK-10

		Su	irvey l	Per i	od				N	lan-sh	ift
	Per	iod	Days	Wo	rking Da	ys	Of f-d	ays	Engin	eer	lelper
Preparation	9 ~ 12, M	ar., 1990	4			3	<del></del> -	1		9	36
	13 ~ 17, M	ar.	5	Dr	illing:	5	-		:	15	60
Drilling				Re	covery:		:				
Removal	18, M	ar.	1			1				3	12
Total	9 ~ 18, M	ar., 1990	10			9		1		27	108
Depth, etc.				-1		Co	ore Re	cove	ry per	Ever	/ 100m
Planned	200. Om	Soil,	etc.		26. 0m	De	epth .	Sec	tion	Cumu	lative
Revised	m	Core Le	ngth		175. Om	0-	100n	7	4.0%		
Measured	201. Om	Core Rec	overy		87. 1%	100	)~200m	10	0.0		87.0%
Working Hours	· .										
Drilling	45°50	,	41%		32%				}.		
Others	66°10	,	59		46		:	Dril	ling s	peed	
Recovering						Rur	n/dril	ling	days	7.1	
Sub-total	112°00	,	100	٠	78		2	01.0	÷5 = 4	0. 20m	day
Preparation	24°00	,	[	P 2-1	17	Rur	ı/dri1	ling	shift	s	
Dismantling	8°00	,			5		2	01. 0	÷14=14	. 35m/s	shift
Water Supply					• 1		Ru	n fo	r each	size	
Access, etc.						Bit	Size	. :	3'.8/7	NQ	BQ
						Rur	)	(m)	26. 0	79. 0	96. 0
lotal	144°00	<b>.</b> .			100	Cor	e Len	gth		79. 0	96. 0
Casing			14:			Not	es:				
Size Depth	Ratio aga	inst tota	.1 dept	th	Recovery						
IX m	·			%	%				*		1
vw 26.0			12. 9	9	100						
BW 105.0			52. 2	2	100						

Table 5-11-1 Progress Report of Drilling MJZK-11

	Drilling	length p	er shift	Total	length	Number of	shift	Man-s	hift
Date	lst	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Feb.	m	m	ın	m	m	-			
27	Mast-								
	assembl.			•					
28	ditto	·							
Mar.									
1	Scaf-					:			
	folding								
-2		. :							
3	24. 0	22. 6	15. 0	61.6	15. 2				
						3	6	12	48
4	30. 3	15. 6	12. 3	58. 5	58. 5			·	
5	15. 7	40. 0	25. 2	80. 9	80.9				·
6	Mesure-							€ <sup>k</sup> .	
	ment		:-	·					·
7.	Dis-	Dis-							:
	mantling	casing		1					
8	ditto							+ <u>:</u>	
						7	10	15	60
								٠.	
		-							
		·			:	. !		•	
	: .		*** [		·				
		:							
						: **		es afte	
	-	:							
Total	70.0	78. 5	52. 5	201.0	154.6	10	16	27	108

Table-5-11-2 Summary of Drilling MJZK-11

			Su	rvey Po	eriod		1.5	<u> </u>	lan-sh	ift
		Per	iod	Days	Working Da	ys Off-	days	Engin	icer []	lelper
Prepai	ation	27, Feb. ~2	, Mar., '90	4.0	3	. 0	1.0		9. 0	36
		3 ~ 6	, Mar.	3. 5	Drilling:3	. 5		1	0. 5	42
Drilli	ing							:		
					Recovery:					
Remova	ıl	6 ~ 8	, Mar.	2. 5	2	. 5	• • • • • • • • • • • • • • • • • • • •		7. 5	3(
Total	· · · · · · · · · · · · · · · · · · ·	27, Feb. ~8	Mar., 90	10.0		. 0	1.0	<u> </u>	7. 0	108
Depth,	otc.					Core R	ecove	ery per	Ever	y 100
Planne	ed."	200. Om	Soil,	etc.	46. 4m	Depth	Sec	tion	Cumu	lative
Revise	ed	m	Core Le	ngth	154.6m	0~100		3. 6%		
Measur	ed	201. Om	Core Rec	overy	76. 9%	100~200	m 10	0.0		76. 99
Workin	ng Hours	. ·	· · · · · · · · · · · · · · · · · · ·		1 1					
Drilli	ng	37°50		47%	29%		<u></u>			
Others		42°10	<b>'</b> ]	53	33			ling s	peed	
Recove			1.		-	Run/dri				
Sub-to		80°00	1	100	62			÷3. 5=5		/day
[	ation	24°00	İ		19	Run/dri				,
Dismar		24°00			19		<u> </u>	)÷10=20	<del></del>	shiit
	Supply		-	: 4	Ì	Bit Siz	·····	r each	·	BQ
Access	s, etc.	·			·			3' 8/7	NQ 96. 1	80. 9
Total		128°00	,	·	100	Run Core Le	(m)	<u> </u>	73.7	80. 9
Casing	· · · · · · · · · · · · · · · · · · ·	120 00	<u> </u>	<u>l</u>	100	Notes:		l' <u>-</u>	10.1	1 00. 0
Size	Depth	Ratio aga	inst tota	l denth	Recovery	NO COS.				
HX	1.5m	naoro aga		0.8%						:
NW	46. 4			23. 1	100			-		
BW	120. 1			59. 7	100					
Ļ <u>.</u>		<u> </u>	1.5						:	

Table 5-12-1 Progress Report of Drilling MJZK-12

	Drilling	length p	er shift	Total	length	Number of	shift	Nan-s	hift
Date	lst	2nd	3rd	run	core	Drilling	Total	Engineer	Helper
Mar.	m	m	m	m	n				
19	Nast-								
	assembl.						:		
20	Scaf-								
	folding					-			
21									
22	22. 2	4. 9	19.8	46. 9	18.6		-		
23	30.0	27. 0	8.9	65. 9	65. 9				
24	27. 0	30. 0	24. 0	81.0	81.0				
						9	11	15	60
25	7. 2	Dis-		7. 2	7. 2				
		casing							
26	Dis-						*.		
	mantling						.* *		÷
27	Dis-	·	·						
	mantling		. :						
						2	4	9	36
			:		•				
			*.						
									٠.
			+:						
	·	.		*					
					*.	•	:		
70	00.1	01.0	<b>c</b> o 7	001.0	170 7	44	1.5	0.4	96
Total	86. 4	61.9	52. 7	201.0	172.7	11	15	24	30

Table 5-12-2 Summary of Drilling MJZK-12

			Su	rvey Pe	riod				M	an-sh	ift
		Per	iod	Days	Working Da	ıys	Off-d	ays;	Engin	eer .	llelper
Prepa	ration	19 ~ 21, M	Ar., 1990	3		2		1	-	6	24
		22 ~ 25, M	ar.	4	Drilling:	4			i	12	48
Drill	ing				Recovery:						
Remov	al .	26 ~ 27, M	ar,	2		2				6	24
Total		19 ~ 27, N	ar.,1990	9		. 8		1		24	96
Depth	, etc.			<u> </u>		С	ore Re	cove	ry per	Ever	y 100m
Plann	ed	200. Om	Soil,	etc.	27.1m	Đ	epth	Sec	tion	Cumu	lative
Revis	ed	n	Core Le	ngth	172. 7m		0~100m	7	2. 9%		
Measu	red	201. Om	Core Rec	overy	85. 9%	10	0~200m	10	0. 0		85. 9%
Worki	ng Hours	Michael	·						*., "		
Drill	ing	39° 30	,	45%	33%						
Other	<b>S</b>	48° 30	·	55	41			Dril	ling s	peed	
Recov	ering					Ru	n/dril	ling	days		
Sub-t	otal	88°00	,	100	74		2	01. 0	÷4=50.	25m/da	a y
Prepa	ration	16°00	<i>,</i>		13	Ru	n/dril	ling	shift	S	
Disma	ntling	16°00	<b>,</b>		1,3		. 2	01. 0	÷11=18	. 27m/s	shift
Water	Supply				•		Ru	n fo	r each	size	
Acces	s, etc.				e e e e e e e e e e e e e e e e e e e	Bi	t Size		3' 8/7	NQ	BQ
						Ru	n	(m)	27. 1	85. 7	88. 2
Total		120°00			100	Со	re Len	gth	_	84.5	88. 2
Casin	g					No	tes:				
Size	Depth	Ratio aga	inst tota	l depth	Recovery						
HX	1.5m			0.8	* %		: .				:
N₩	27. 1	·		13. 5							
B₩	112. 8			56. 1	100						

Table 6. Summary of Drilling Operation

	De	pth		Core			Si	ze			<u>ala, an an</u> adronium in mai Cristal de la compansion de l
				Reco	very	NQ	)-WL	BQ	-WL	Spe	ed
	Planned	Measured	Length	Om	100m					m per	n per
				~* *	~	run	core	run	core	drilling	drilling
Hole No.	(m)	(n)	(m)	100m	200m	(m)	(m)	(m)	(m)	day	shift
MJZK- 1	200. 0	201. 0	181. 9	81.4%	100.0%	53. 5	52. 9	129. 0	129. 0	40. 20	14. 89
					(90. 5)						
MJZK- 2	200. 0	201.0	185. 6	84. 6	100. 0	107.5	107. 5	78. 1	78. 1	33. 50	14. 36
	,				(92. 5)						
MJZK- 3	200. 0	201. 0	192. 1	91.1	100.0	69. 1	69. 1	123. 0	123. 0	36. 54	12. 56
					(95. 6)						
MJZK- 4	200.0	201.0	189. 1	88. 1	100.0	108. 1	108. 1	81.0	81.0	36. 54	12. 56
		.;		. 1	(94. 1)			., 14			
MJZK- 5	200.0	201. 0	190. 5	89. 5	100. 0	109. 5	109. 5	81.0	81.0	30. 92	10. 58
		. 6 *	11		(94.8)						
MJZK- 6	200. 0	201.0	164.8	63.8	100. 0	38. 8	36. 0	128.8	128. 8	36. 54	13.86
	ļ				(82. 0)						"
NJZK-7	200. 0	201. 0	162. 5	61.5	100.0	81.5	81.5	81.0	81.0	57. 42	20. 10
:					(80. 8)						
MJZK- 8	200. 0	201. 0	173. 5	72. 5	100. 0	92. 5	92. 5	81.0	81. 0	57. 42	20. 10
		11	1.		(86. 3)				: .		
NJZK- 9	200. 0	201. 0	167. 1	70. 5	100.0	90. 5	86. 1	81.0	81.0	44. 66	15. 46
·		·			(83. 1)		-		·		
MJZK-10	200. 0	201. 0	175. 0	74.0	100. 0	79. 0	79. 0	96. 0	96. 0	40. 20	14. 35
			ļ		(87. 0)						į
MJZK-11	200. 0	201. 0	154.6	53. 6	100. 0	96. 1	73. 7	80. 9	80. 9	57. 42	20. 10
			is a large		(76, 8)						
MJZK-12	200. 0	201. 0	172. 7	72. 9	100.0	85. 7	84. 5	88. 2	88. 2	50. 25	18. 27
					(85. 9)				į		

( ) : Cumulative Recovery

## Diagram:

Progress Records

of Each Hole

en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la companya de la companya de la companya de la companya de la companya de la companya de la co

Progress Record of MJZK-1

Depth			Drilli	กฮ					Progres	9				***************************************								
(m)	Log	Lithology					hrJm						Method				December,					
(11.1)			10′	20/			0 11 12 13 14	7	<del></del>	т-												
				-L	ļ.,,	*****	<u> </u>	0 9 1	0 1 1 1 1 2 1 3 1 4 1				lL.	لسلما								
	<b>!</b>	Soil and sand				3" 7/8	1 N		Drilled with tri	cone l	oits to	18.5	m.									
ļ		beds			li i		\															
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						NITTE	1 1 1	<u> </u>														
	<del>┠┈╏╸╏╺╏</del>		.			NW CP		\	4.4													
		Dolomite			li i	O.F		1	NW Casing Pip	es wer	e ins	erted	to 18	.5 m								
上							Instal-	\	and lowered to					1								
1					- <u>-</u>	NQ	lation	)					-									
H						NQ		1														
1							Ì	1														
<u></u>								1	Drilled with NG	-WL	oits.											
1				'				. 1														
					;				Cased with BW	pipes	to the	e dep	th of									
Γ						7117			72.0 m.			•										
				1.		BW CP			(-		٠.											
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Progress Record of MJZK-2

Depth			Drilling	<u>, , , , , , , , , , , , , , , , , , , </u>				Progr	ess	<del>Único de Principal de la contractica</del>		
.(m)	Log	Lithology	hr./m	N	lethod		Nov	ember	-	Dece	nher	
.(m)	2.06	2	10' 20'			<del>}</del>			1 2 3	4 5	Т	
<b></b>	l					111- 20	21 ~ 24	201~ 20				ــــــــــــــــــــــــــــــــــــــ
				1	3″ 7/8				Drill	ed with tri	cono.	
		Soil and sand		1					$\prod$	Cased wi	th	
_				1	CL NM				1\	NW pipe		
		beds			CP				1 \	15.4 m.	5 55	
					:	}			1 \	10.4 111.		. !
_		Dolomite			NQ				_			- 1
		201011110						Instal-	· - 1		:	
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						i	Carriage		1			
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l					BW CP					1		1
					CP						4	
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1						Drilled W	ith NQ-WI	Dits.			- 12	
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						Jased Wil	th BW pipe	s to 122.9	m.			
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						Drilled w	ith BQ-WL	. hite				
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Progress Record of MJZK-3

Depth		THE PARTY OF THE PROPERTY OF THE PARTY OF TH	Drilling		Progress				
(m)	Log	Lithology	hr/m	3 20 20 1					
			10′ 20′	·	20 21 22 23 24 25 26 27 28 29				
		Soil and sand beds Dolomite		3″ 8/7	Drilled with tri-cone bits and NW casing pipes were set at 8.90 m.				
1				NW CP	Installation Drilled with NQ-WL bits. NW				
				ру	casing pipes were lowered to 17.1 m and then 47.10 m after reaming.				
				EP BW	BW casing pipes were inserted to 78.0 m.				
100				BQ	Drilled with BQ-WL bits.				
-		egi							
200					Dismantlement				

Progress Record of MJZK-4

Depth		**************************************	Drilling		Progress
(m)	Log	Lithology	hr/m	Method	January, 1990.
\``` <i>`</i>			10′ 20′		10 11 12 13 14 15 16 17 18 19
		o-in		3" 7/8	Drilled with tri-cone bits and NW
		Soil			casing pipes were inserted to 11.9 m.
<b>-</b>					
		Dolomite			:
				NW	
<u> </u>				CP	
					Instal- lation Drilled with NQ-WL bits and
L					lation Drilled with NQ-WL bits and NWCP were lowered to 31.5 m after
		The second second		NQ	reaming.
<b>i</b> .		•		Ne	
					The second of th
<u> </u>					
<b> -</b>					
-					
				;	
_					
				BW	
100		and a second second		CP	BW casing pipes were
			i .		inserted to the depth of
					120.0 m.
		14.1			
<b>!</b>					
-			<u> </u>		
				BQ	Drilled with BQ-WL bits.
-			]		The second of th
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200		-			
				•	Dismantlement
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Progress Record of MJZK-5

	1	AND DESCRIPTION OF THE PERSON	-		
Depth			Drilling		Progress
(m)	Log	Lithology	hr./m	Method	December January, 1990.
1			10' 20'		27 28 29 30 31 1 2 3 4 5 6 7 8 9
	<del>                                     </del>	P4 14		<del></del>	And the second s
i		Soil and sand		3" 7/8	
į ;	$\{\ \}\ \}\ \}$	beds.		li i	Drilled with tri-cone bits
	┠┻┸╼┟╼				
i .		Dolomite		! !	to 10.5 m and cased with
<u> </u>		201011110		NW	off \ NW pipes.
			} '	CP	Installation
<b>l</b> .					Installation /
<u></u>		•	<b>i</b> i		\
				<del>-</del>	Carriage
1					
<b>H</b>	<del></del>				\
1				NQ	D NVV
1					Reaming. NW
<u> </u>					casing pipes were
[				l II	lowered to 25.3 m
					1
Γ					and then to 31.6 m.
i					Drilled with NQ-
<u> </u>					1
1					WL bits and BW
					casing pipes were
<b> -</b>			}	BW	<u> </u>
					set at 120.0 m.
			1	CP	
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1				ВQ	
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		:			Drilled with BQ-WL bits.
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