

PARTE III CONCLUSION Y RECOMENDACION

CAPITULO I ONCLUSION

1 - 1 Area Indé Uno

En esta área se efectuaron 3 barrenos de la perforación. En consecuencia en el barreno MJMI-8 y -10 se obtuvieron los resultados siguientes.

La veta de brecha del mineral y la veta de plomo · zinc de una serie (total 5 vetas) las cuales se consideran de la veta Garabatos del barreno MJMI-8 se concentran en la sección profunda estrecha, también tienen la combinación del mineral similar y la ley.

La ley promedio de 1.2m del ancho de la veta que es el total de esto es Ag 40g/t, Zn 2.2 % y Pb 0.6%. Jamás se menciona que son los grupos de la ley alta, dependiendo de la veta se encuentra que tiene Ag 281g/t, Zn 12.8% y Pb 3.6%.

Por lo tanto la veta de zinc de la ley alta la cual se consideró que es la veta Garabatos en el barreno MJMI-3 del año pasado fue Zn 22.5% con un ancho de la veta de 0.5m.

En consecuencia esta veta principalmente contiene zinc y se considera que se acompañan con plata y plomo, se espera la continuidad de la veta y el estado de la mineralización en el intervalo a 500m aproximadamente entre el barreno MJMI-3 y MJMI-8.

La veta de plata la cual se descubrió nuevamente en el barreno MJMI-10 fue de Ag 550g/t en el intervalo de 2.1m entre 2.9m del ancho de la veta. Esta veta tiene la duda de esta continuidad debido a que no se conoce en la parte de la superficie aun tiene el ancho de la veta grande, también tiene la posibilidad alta de que sea la veta subteránea.

También, considerandose la dirección de la veta conocida alrededor se presume que es de la característica del EO, no es clara incluyendo la inclinación de la veta.

De todas maneras, dependiendo de esta continuidad que exista o no, tiene la posibilidad de que pueda evaluarse suficientemente la economía.

En la exploracion de la zona del skarn la cual fue el objetivo de la exploración inicial del barreno MJMI-10 no se obtuvieron los resultados teniendo la esperanza del yacimiento de oro y cobre del tipo de la temperatura alta. Por lo tanto la escala de la distribución de la zona del skarn, juntando el resultado del barreno MJMI-6 del año pasado, puede presumir que es respectivamente de más de 300m en la dirección del horizonte y el vertical. Por lo tanto acerca de que el centro de la mineralización exista o no es un tema de la exploración para el futuro.

1 - 2 Area Inmaculada

En esta área se efectuaron 2 barrenos de la exploración. De acuerdo a este

resultado, 2 barrenos también captaron la veta conocida y paralela del objeto la exploración, por lo tanto no se obtuvo el resultado más que el resultado de la mineralización de la parte de la superficie. Lo que es de la zona mineralizada es sumamente la zona alterada acompañada con 2 – 3 de la veta de cuarzo con un ancho de 2-3cm.

Estos consisten principalmente en la cloritización, aveces se acompañan con la silicificación y sericitización, por la mineralización únicamente tiene diminuta cantidad de pirita. En la ley no se detecta solamente el nivel del número de la zona anormal de la exploración geoquímica de la roca de la superficie (dinumita contidad de la anomalía de oro, plata y cobre).

La temperatura de la formación y la salinidad de la veta de cuarzo se encuentra que se cumple la condición de la formación de la veta mineralizada o no. De todas maneras, no tiene más remedio que considerarse que no tuvo totalmente el suministro suficiente de la solución de la mineralización.

CAPITULO II RECOMENDACION PARA EL FUTURO

2 - 1 Area Indé Uno

(1) Sobre la veta de zinc, plata y plomo del barreno MJMI-8 y la veta de zinc del barreno MJMI-3 del año pasado se espera la mineralización del intervalo a 500m en la parte media de ambos barrenos.

(2) Sobre la veta de plata de ley alta del barreno MJMI-10 se tiene la necesidad de confirmar esta dirección, inclinación y continuidad.

(3) Acerca de que el yacimiento del skarn de oro y cobre del tipo de la temperatura alta exista o no es un tema para el futuro. en el presente tiene la mineralización diminuta de estos, son la parte del afloramiento y el barreno MJMI-6 del año pasado.

Por consiguiente se espera el desarollo de la exploración continuada en estas partes.

2 - 2 Area Inmaculada

Por la central parte de esta área, se concluye que la actividad de la exploración para el futuro es negativa.

BIBLIOGRAFIA

- Consejo de recursos minerales (1993): Monografia geologica - minera del estado de durango.
- Consejo de recursos minerals (1992): Geological - mining monograph of the state of jalisco.
- Guillermo P.Salas. y Otros (1998): Geologia economica de mexico.
- Keneth F. Clark (1982): Cenozoic mineral deposit and subduction - related magmatic area in Mexico Geological Society of America Bulletin, v.93, p.533-544.
- Jenneth F Clark and Guillermo A. Salas P. (1998): A SPECIAL ISSUE DEVOTED TO THE GEOLOGY AND MINERAL DEPOSITS IN MEXICO, ECONOMIC GEOLOGY and the Bulletin of the Society of Economic Geologists.
- Takeda H. (1980): Review of the geology and mineralization in northern part of Sierra Madre Oriental, México (Part 1, geology). MINING GEOLOGY; 30(6), 363-371.
- Fundación de la unidad publica con personalidad juridica. Centro de ingenieria minera del japon para la cooperacion internacional (9 año de Heisei): Informe de la exploracion seleccionada del proyecto del estudio basico de la cooperacion del desarrollo de recursos del año 80 de Heisei en los estados unidos mexicanos.

APENDICE

MJMI-8-(1)

0m-100m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
		casing(BW)				
6.00						
9.00		Plagio porphyry Dyke	grey compact, weathered. plagioclase 1~5mm. mafic mineral common.			
10		F MEZCALERA	Turbidite, Ms>>Ss, alteration, irregular 1~5cm order, calcareous. Ss silty.			
15.50		Plagio porphyry				
16.30		F MEZCALERA	9.0m ditto.			
20						
26.20		Sandstone	S.s. grey, fine, massive.			
28.20		F MEZCALERA	9.0m ditto.			
30						
31.00		Plagio porphyry	6.0m ditto white~grey compact.	35.5 ~ 35.6	35.5 ~ 35.6	Py-diss argi. strong
36.00		F MEZCALERA				
40	***	Plagio porphyry				
39.40		F MEZCALERA				
46.35		Plagio porphyry		47.85 ~		
46.80		F MEZCALERA		48.15		
48.60		Plagio porphyry		Pt-lamina width: 1~2mm		
49.60		F MEZCALERA		51.0 ~ 51.2		
52.80		Sandstone		Pv-diss		
53.90				51.55 ~		
59.15		O-vein(6cm)	none mineral	51.62		Pv-diss strong
60						
70		F MEZCALERA	Turbidite, Ms>>Ss, laminated			
75						
80		Ms>>Ss	ditto. Alteration. general 1~3cm interval calcareous			
83.65		Plagio porphyry	grey fine massive partly Py-diss strong			
85.25						
86.65		O-vein(6cm)		Q-vein Py-diss(p)		
90		F MEZCALERA	Approx. 90m ~ relative normal sediment			
92.80		Ms>>Ss	calcareous.	Pv-diss in sandstone		
95.05		Plagio porphyry				
97.90		Sandstone	grey, fine, massive, partly laminated.			
100						

Fig. F II-1-8 FIGURA DE LA COLUMNA DE LA ESTRATIGRAFIA
DE LA PERFORACION DEL BARRENO MJMI-8

MJMI-8-(2)

100m-200m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	AUTR	REMARKS
103.66		F.MEZCALERA Ss>Ms	Normal sediment. Ms,Ss alternation. 3 ~ 30mm order interval thick Ss. max 35cm			
107.20		Ms>Ss	110.94 ~ 111.00 Pv lamina in Ss 111.25 ~ 111.32 Pv lamina in Ss			
110						
120						
121.00			121.00 ~ 128.00 Core losed and crushed			
128.00						
129.55						
130		Rhyolite or Dacite	grey fine compact. Associated with Plagioclase and mafic mineral a little.			
132.05		F.MEZCALERA				
136.25		Dacite	grey fine compact.			
137.50			139.5m ~ Normal sediments			
140		F.MEZCALERA	143.5 ~ 145.8m Pyrite+Sand layer common width 4 ~ 40mm			
148.50		Plagio porphyry Sandstone	dark grey fine massive			
150		Plagio porphyry	milky grey fine plagioclase 1 ~ 3mm party Pv diss (m ~ l)	Pv		
160		Ms>>Ss	alternation. Turbidite calcareous			
165.25						
165.50		Fault	partly brownish (weath ered)		argil	
170		Ms>>Ss				
173.70		60	Black part Ou-vein white part. Ms.			
173.82			173.82 ~ 173.93 Zn>Pb imp (p ~ m)			
175.62						
180		Ms/Ss	Calcareous			
187.80		①Ore breccia dyke	① ~ ④ Likely ore breccia vein	Pv>		
188.35		189.65 ~ 189.92②	contain angular Pv(max 2cm).Sphalerite (max 5cm).Ms(max 3cm).Ore part 20 ~ 30%	Gn>		
190		190.30 ~ 190.54③	⑤ Sphalerite+Pv+Galena vein (none Q)	Sph		
		190.72 ~ 190.94④	⑥ Qu vein.Sphalerite imp(p)			
		191.15 ~ 191.30⑤				
		191.64 ~ 191.75⑥				
199.55						
200		fault zone	Core crushed ~ powdered			

MJMI-8-(3)

200m-300m

MJMI-9-(1)

0m-100m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
1.00		Soil				
8.50		Sandstone	grey fine grain massive, calcareous			
12.20		Mudstone				
15.50		Sandstone	fine silty			
20	F MEZCALERA	Mudstone	normal sediments, calcareous partly Ss thin layer intercalated.			
21.50		Sandstone	grey fine massive, calcareous			
28.20		Ms>Ss	alternation 10~50cm order calcareous			
41.75		Mudstone	laminated, normal sediment.			
45.15	Dacite		grey fine massive aphanitic			
46.30						
50	F MEZCALERA	Ms>Ss	Alternation 0.5~10cm order normal sediment, partly turbidite calcareous.			
60.45		Dacite	grey fine plagioclase a little			
60.90						
70			68.60~68.65 Py+Calcite vein	Pv		
		Ms>Ss	72.25~Py+Cal vein width 0.2~1.5cm 73.60~73.85 Py spotted imp	Pv		
			75.15~78.85 Py imp(p) chloritization.	chl.		
78.05	(boundary sharp)		78.05~78.11 argillized(m~f)			
78.85			78.85~87.60 grey massive altered (blackish laminated Ms/Ss—altered →grey colored, massive) partly lamina remain = dark grey	arg.		
87.60						
100	99.60					

Fig.F II-1-9 FIGURA DE LA COLUMNA DE LA ESTRATIGRAFIA
DE LA PERFORACION DEL BARRENO MJMI-9

MJMI-9-(2)

100m-200m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
100			99.60~101.50 chloritization(p~m) partly argillized 101.50~102.60 grey & black color material mixed.		chl arg	
110		F.MEZCALERA				
117.84		Andesite	dark grey fin~med plagi, mafic phenocryst common.			
118.10		Ms>>Ss	alternation, normal sediment, calcareous 117.84~118.10 pale green~grey argillized & silicified strong 118.10~125.80 grey colored, altered		arg sil.	
125.80			125.80~133.20 grey dark grey ~ black mixed			
130						
133.20		Andesitic tuff ~ Tuff breccia	dark grey ~ black (matrix) breccia: andesitic ~ dacitic. Ms,Ss angular max 6cm			
140						
144.95						
148.08		Ms	black, rather massive			
150.75		-Fault zone	148.08~148.17			
151.03			148.35~148.45			
151.03			150.75~151.03			
154.53		F.MEZCALERA				
155.89						
156.60		Andesitic tuff	dark grey ~ black, fragment 0.5cm> massive. Breccia dyke?			
157.18						
158.00						
160		Dacite	grey, fin med massive. plagioc common = fin plagiop porphyry			
167.35		Ms>>Ss	alternation rather normal sediment			
170						
		Dacite	158 ~ ditto			
		Ss	dark grey fin massive, partly laminated Ms intercarated(174.0~174.9)			
		F.MEZCALERA				
180		Ms>>Ss	alternation normal sediment			
183.28		Ss				
184.95		Ms	black, upper & lower part normal sed. middle part turbidite			
190		Ss	dark grey med. Massive			
		Ms	normal sediment. lamina poor			
200		Ss				

MJMI-9-(3)

200m-300m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
		Ss	blackish fine massive			
210		Plagio porphyry	pale grey med. Plagioclase max 3mm			
220		Ms/Ss F.MEZCALERA plagio p → 20° Ss	alternation. normal sediment			
228.50		Plagio porphyry	grey fin masy. All part Pv imp(p~m)	Pv		
230		Ms	black rather massive 227.80 ~ 228.50 Pv diss spotted			
234.05		Plagio porphyry	grey fin masy.			
235.55		Ss				
238.90		Plagio porphyry Qu vein	grey fin masy. blkish med masy 238.90 ~ 239.30 Qu-vein network like Partly Zn,Cp spotted	Sph Cp		
240.47	L L	Dacite	grey very fin. phenocrst none			
243.95	L L	Ss				
248.20		Ms				
252.62		Ss	dark grey ~ black fin ~ med masy			
260		F.MEZCALERA Qu-vein	Qu-vein all most drusc. network like			
262.85		Ms>>Ss				
264.28		Ms				
264.75		Ms>>Ss				
266.10		Ss	grey med ~ crs masy. No grading			
267.35		Ms	blackish laminated partly fin Ss intercalated normal sediment			
268.18		Dacite	grey fin plagioclase & mafic M altered?	chl		
280		Ss				
281.60	L	Dacite	grey fin ~ med. flow band very clear			
282.50	L	Ss				
283.85	L	Dacite	Normal sediment dark grey fin ~ med masy.			
288.77	L L	Ms>>Ss	partly Ms interc.			
290		Qu-vein	292.85 ~ 292.45 } Qu-vein none ore mineral			
292.35		Ss	292.88 ~ 293.00 }			
295.20	L L	Dacite	dry fin masy.			
297.42	L	Se - Ms				
298.08	L L	Dacite	298.05 ~ 5cm Qu-vein none ore mineral			
299.00		Ss				
300.05						

MJMI-10-(1)

0m-100m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
10			Soil & Talus			
9.40						
10		F Gran tesoro (Andesitic tuff)	blackish fin-med masv. very hard lamina irregular schistosity?			
14.95						
17.10		Porphyrite	dark grey fine massive plagioclase a little			
20			9.40 ~ ditto			
21.60						
30		Plagio Porphyry or Monzonite	grey medium-coarse grain massive Plagioclase max. 5mm, Monzonite like			
34.50						
36.65		(Andesitic tuff)				
40						
41.40		F Gran tesoro (Pelitic semi schist)	blackish minorfolding, weak scistosity "suminagashi" structure.			
45.80		Dacite	grey-whitish(altered?) very hard fin plagioclase common			
50						
50		F Gran tesoro Ms >> Ss	36.65 ~ ditto			
60						
66.00		F Gran tesoro (Pelitic semi schist)				
67.20		Fault				
70						
70		Plagio porphyry ~ Monzonite				
74.15						
76.60		Dacitic Lithic Tuff ~Tuff breccia Ou-vein	74.15 ~ 76.60 dark grey fine massive. Sandstone like 79.57 ~ 79.62 Qu-vein glassy, non-metal dark grey med ~ crs tuff ~ tuff breccia pyroclastic flow. Flow unit 20 ~ 5cm grading weak upper part sandy.			
80						
90			Lithic Tuff breccia gravel subangular ~ subround like conglomerate			
100		Andesite	pale green fine massive (dyke)			

Fig.F II-1-10 FIGURA DE LA COLUMNA DE LA ESTRATIGRAFIA
DE LA PERFORACION DEL BARRENO MJMI-10
A P - 7

MJMI-10-(2)

100m-200m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
100.48	A A	Mud stone	Grey, weak lamina or relatively massive.			
103.60		Sandstone	Partly fine sandstone, lithic.			
105.48		Dacitic tuff (flow)	Dark grey fine relatively massive.			
108.75			dark grey fin ~ med, fin part sandy 106.5m ~ normal grading.			
110		Sandstone	grey fine tuffaceous, weak lamina			
		45~60°				
		Dacitic tuff ~tuff breccia	dark grey, grading weak 20~50cm order.			
		F Mezcalera	dacitic fragment max 3cm. Quartz fragment common. very hard			
		30°	115.6~reverse grading			
120		Sandstone				
127.15		45	grey fin ~ med. rather massive. tuffaceous.			
130						
133.30						
137.25		50	137.66 ~ 137.68(2cm)			
137.66			Pyrite vein concordant to lamina. dark grey fin sandstone weak lamina			
			partly tuff(5~15cm) intercalated			
140		Sandstone>>tuff	143.50~reverse grading.			
144.40		Tuff breccia Conglomerate	dark grey variable fragments subangular ~ subround. conglomeratic			
150			148.40~reverse grading.			
160		F Mezcalera				
168.30		40°				
170						
170.00		45°	Congo. \approx Tf brec. 20cm ~ 1m order. Sandstone. 10 ~ 30cm order			
		25°	grading: unclear			
177.50						
182.30		Tf brec \approx Congo	182.3 ~ 188.0 dark grey ~ altered (ser): pale gray colored			
183.10		Pv-Pb-Zn vein	182.3 ~ 183.10 oxidized cracked predominant.			
~183.35			183.10 ~ 183.35 Py > Pb > Zn network			
188.00			188.0 ~ 189.40 oxidized brown color			
189.40			188.3 ~ 188.45 core crushed strong			
190.37		20~30				
191.00			Fault?			
191.35		Qu-vein	190.37 ~ 191.00 Qu vein network			
194.06			partly Pb, Py imp strong			
			191.35 ~ 194.06 Qu vein network			
			many parts Py > Pb spotted or vein			
			partly Zn > Cp imp(p)			
			194.06 ~ 200.05 altered (ser) weak			
200						

MJMI-10-(3)

200m-300m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
210		Tuff breccia Conglomerate F Mezcalera	dark grey conglomeratic Tuff ~Tuff breccia / sandstone alteration 20~70cm order. grading unclear.			
215.30		Lithic tuff	dark grey fin~med very hard conglomerate 219.12 ~220.62 pale grey altered			
220			227.68~238.07 altered silicification(m~f) dark grey → grey colored.			
227.68						
230						
233.85		Sandstone	Pale grey fine massive silty silicified(f)			
238.07		Skarn zone	238.07~238.87 fine garnet, specularite,Py,Cp(only one part) 239.87~241.00(弱スカルン化) none mineral			
240			pale grey fine massive silicified(f) ver hard 243.67~246.92 pale brown Garnet skarn , partly Py imp (p) 246.92~ dark green and brownish. ①green part(70-80%) unknown mineral(chl?) cut garnet skarn (garnet→altered→green mineral) ②brown part(20-30%) garnet skarn ①-②mixed & Py imp(p) in both			
243.67						
250						
260						
270						
280	279.97 280.72	Mud stone Conglomerate	grey massive silicified strong. 280.07~280.38 Py-chl vein~spot gravel max 1.5cm subround.			
284.25 286.85		Sandstone	{ grey fine massive silicified strong. (285.95~286.85 garnet skarn) 285.33~285.53 Py·Chl veinlet			
290		Conglomerate ~ lithic tuff F Mezcalera	pale grey gravel means ±0.5cm max 2cm subangular none grading			
300						

300.40m End

MJMI-11-(1)

0m-100m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTTR	REMARKS
10		Andesitic Tuff breccia	dark ~ pale brownish, weathered contain various essential fragments max 3cm partly fractured			
20	21.80		21.80 ~ stable core, fresh dark blue compact			
30	32.15		32.15 ~ dark brown compact weathered, partly fractured			
40						
50						
51.9 ~ 52.9			51.9 ~ 52.9 dark green chloritization(m) partly Q-veinlets, mineral none			
60		Andesitic tuff ~ Tuff' breccia	dark brown weathered contain essentia fragments			
69.05 ~ 70.05	15~25		69.05 ~ 70.05 chl. Strong. Silieification weak			
71.16			71.60 ~ 71.75(20cm → 15cm)			
71.19		Q-vein	71.90 ~ 72.10(15cm → 8cm) mineral none			
74.20						
77.57		Q-vein	77.57 ~ 77.75(18cm → 5cm) ditto			
79.70						
80		Andesite	pale ~ dark brown, fin ~ med. compact plagioclase common 1 ~ 2m/m max 3m/m mafic mineral poor fracture poor			
90						
99.85			98.85 ~ 99.30 chl (m) Q-vein none			
100						

Fig.F II-2-5 FIGURA DE LA COLUMNA DE LA ESTRATIGRAFIA
DE LA PERFORACION DEL BARRENO MJMI-11

MJMI-11-(2)

100m-200m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
		Andesite	pale brown fin ~ med compact 77.57 ~ ditto fracture a little			
110						
120						
124.70			124.7 ~ 134.5 pale grey altered			
126.00			all most part Pv imp(p)			
127.20			126.0 ~ 127.2 G133 chl. weak			
130						
134.50						
137.35			137.35 ~ 150.2 pale grey altered in many parts. (20 ~ 50cm) Py imp(p)			
140						
145.20						
149.30			149.3 ~ 157.4 altered weak, (leaching)			
150.10		O-vein	150.12 ~ 150.15 (w 3cm)			
152.80			152.80 ~ 152.97 (w 2cm)			
153.50			153.51 ~ 153.58 (w 5cm)			
154.50		O-vein	154.54 ~ 154.55 (w 1cm)			
155.40			155.40 ~ 155.43 (w 3cm)			
157.40			all O-vein without opaque mineral another prats. many veinlets (<0.5cm)			
160						
170						
175.80		Andesite	pale brown ~ pale grey ~ green (leaching)			
180						
184.80		Andesite Tuff breccia O-vein	175.8 ~ 10cm fault breccia argillized 175.8 ~ 189.0 (Tf' breccia zone) chloritization strong partly Q-vein 1 ~ 5m/m			
190			dark green contain accidental fragments			
200			184.76 ~ 184.84 (W7cm) Q-veinlets chl. very strong Py imp (p)			

MJMI-11-(3)

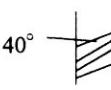
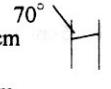
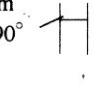
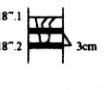
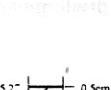
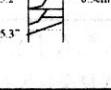
200m-300m

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
205.00			205.0~212.5 chl. weak~strong pale~dark green			
206.40		Q-vein	206.40~1cm 206.87~2cm } mineral none			
206.90						
210	209.50					
	212.50	Andestic Tuff breccia	206.87~209.45 chl. very strong argilized 212.5~dark brown~blue Py imp (p) accidental fragments.			
			dark brwnish~bluish			
220	223.35					
	223.50	Fault breccia	Argillized			
			223.5~228.0 dark green chloritization			
230	228.00					
	230.15					
	231.77					
	232.05	Fault breccia	230.15~234.10 dark green chl. argillized strong.			
	234.10					
240	239.95		239.95~244.65 dark green chl.			
	244.65					
250						
	250.00	Andestic Tuff breccia	dark brown~blue contain essential~accidental max 5cm fragments			
	261.80					
	263.70					
	264.40	Q-vein (about 2cm)	261.8~264.35 chloritization strong argilized strong core loosed and crushed			
	264.50		all Q-vein crused 1~5cm			
	267.40	Q-vein (2cm)	264.35~267.40 silicification>chl.(ser.) strong. Py imp(p) 267.40~270.45			
270	270.45		sil.ser. strong Py imp (p-m) 270.45~273.80 Fault zone?			
	273.80		core crushed very strong clay·sand·pebble like, argilized			
	277.20		273.8~277.2 dark green partly argilized (sil>chl) core fractured 1~5cm max10cm			
	280.30		Py imp (p) 277.2~280.3 chl>sil. strong Py imp (p) 283.1~292.1 dark green chl (m~5)			
	283.10		284.25~284.45 (w 12cm) Q-vein. mineral none			
	284.25	Q-vein				
290	292.10		292.1~296.8 dark green chl (t) argilized			
	296.80		296.8~300.68 dark grey argilized core loosed			
300						

300.88m End

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
		Soil and crushed zone				
8.00						
10						
20						
21.60		Andesite	dark grey~brown, fine compact homogeneous, phenocryst rare 8.0~21.6m core crushed 1~5cm			13.72 cementation 1st time 14.94 cementation 2nd time 16.46 cementation 3rd time
30						
34.90						
35.60						
38.00						
39.50		calcite, epidote veinlets	34.9~35.6m brownish cracks dominant 38.00~39.50m Epid>>cal. veinlet width 0.5~1.5cm			
40						
42.00			42.0~49.7m core crushed 1~5cm			
49.70						50.29 cementation 4th time
50						
56.00			56.0~58.5 core crushed 1~5cm			
58.50						
60						
62.95						60.35 cementation 5th time
63.70		Andesite	dark grey fine compact massive small plagioclase, mafic a little 62.95~63.70 chloritization strong and quartz veinlet 66.0~84.0 oxidized crack predominant			
66.00						
70						
80						
81.90						
82.50	xxxxxx		81.90~82.5 core crushed strong and argillized (chl) 84.0~90.0 fresh crack common.			
84.00						
90						
90.00						
95.00						
96.50	xxxxxx		95.0~98.0 oxidized crack predominant			
96.80						
98.00		Fault zone				
100.0						

Fig.F II-2-6 FIGURA DE LA COLUMNA DE LA ESTRATIGRAFIA DE LA PERFORACION DEL BARRENO MJMI-12

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
			98.0~106.9 dark grey fine compact all most none fracture			
106.90	xxxxxx	Andesite				
107.80	xxxxxx	Fault (10cm)	107.0~107.8 core crushed 107.8~119.5, 98.0~ditto			
110			very stable core			
119.50						
120						121.30 cementation 6th time
121.00	xxxxxx	Fault zone				
121.30	xxxxxx					
122.00			40° 			
130			Fault breccia < 1.0cm earthy, argillized strong, boundary sharp 121.3~122.0 core crushed 1-5cm 122.0~130.0 oxidized crack common and partly clay vein 0.3~0.5cm			
136.55		crushed zone \approx Fault				
139.60						
140			136.55~143.50 chloritization zone core crushed strong 0.5~3cm almost \pm 1cm			
141.00		70° 	140.7~1.5cm			
143.50		Q-vein 143.47~2cm 	Q-vein 90° 			
148.00			140.6~140.70 silicified none mineral dark green argillized strong, core loose. (139.6~141.0)			
150			none mineral 140.0~143.5 dark green core hard, fracture common 143.5~ pale brownish. core hard, fractured 2~5cm max10cm			
160						
164.12	xxxxxx	Andesite	148.0~164.12 dark brown~blue. fine compact hard stable core.			
164.17	Fault clay (5cm)		164.17 core crushed strong 0.5~3cm max5cm			
167.03		Fractured zone				
170			fracture common partly core crushed strong			
175.40			dark blue fine compact hard stable core			
180.00			partly crushed.			
182.90						
187.10	Q-vein 187.1  3cm		stable core crack almost none 187.1~202.5 chloritization weak with O-veinlets			
187.10	Q-vein 187.2  3cm		187.1~187.2 Q-vein with chl. cont.			
191.00			Pv & black mineral 187.43~2cm Q-vein cont Py			
193.00			189.98~2cm Q-vein mineral none			
194.00			193.98~194.0 crushed strong 194.65~194.75 Q-veinlets (0.3~0.5cm)			
198.00	Q-vein 195.2°  0.5cm Q-vein 195.3°  0.5cm		mineral none 195.27~195.37 Q-veinlets (0.3~0.7cm) Pb + Specularite			
200			199.5~202.5 party dark brown (fresh)			

DEPTH (m)	COLUMN	GEOLOGY	DESCRIPTION	MINER	ALTR	REMARKS
202.50						
203.10	xxxxxx	203.5~203.6 Fault clay	Chloritization weak 200.18~2cm Q-vein with chl 200.56~4cm Q-vein network 203.1~204.3 chl.strong. Q-veinlets with specularite	} mineral none		206.96 cementation 11th time
204.30						
210			210.7 cementation 12th time. 80m longs			
220		Andesite	dark blue fine compact, hard. mafic mineral a little			
224.95			224.95~226.45 fractured 1~10cm means 2-5cm			
226.45			228.00			
228.00			228.0~231.3 fractured ditto			
230						
231.30						
240						
240.60						
241.93	xxxxxx	Q-vein	240.6~242.1 chl. strong. xxxxx 241.93~242.18. Q-vein mineral none			
242.10						
250		Andesite	Pale~dark brown fine compact			
260		O-vein	258.72~259.00 (28cm→20cm) Py imp (p) chl strong			
264.60	STOP		END			
270						
280						
290						
300						

Tab.F II-1-4 LISTA TOTAL DEL RESULTADO DEL ANALISIS DEL MINERAL
MJMI-8

No	FROM	TO	LONG	Width	Au	Ag	Cu	Pb	Zn	Fe	As	Sb	Hg
	m	m	m	m	g/t	g/t	%	%	%	%	ppm	ppm	ppb
DK-001	51.08	51.15	0.07	0.07	0.055	2.2	<0.01	<0.01	<0.01	16.45	74	19.5	190
DK-002	84.22	84.28	0.06	0.06	0.025	0.8	<0.01	<0.01	<0.01	13.20	116	12.0	310
DK-003	110.94	111.00	0.06	0.06	0.005	0.8	<0.01	<0.01	<0.01	6.61	91	10.0	10
DK-004	111.25	111.32	0.07	0.07	0.005	0.2	<0.01	<0.01	<0.01	3.77	32	4.8	10
DK-005	173.82	173.90	0.08	0.07	0.015	1.8	<0.01	0.06	0.05	1.64	73	5.0	130
DK-006	173.90	174.00	0.10	0.09	0.025	82.2	0.08	2.61	3.54	1.16	39	80.0	7620
DK-007	174.00	174.13	0.13	0.11	0.015	3.4	<0.01	0.19	0.26	2.69	110	17.5	330
DK-008	174.13	174.23	0.10	0.09	0.015	5.0	<0.01	0.08	0.13	3.97	156	42.0	240
DK-009	174.23	174.40	0.17	0.15	0.020	3.0	<0.01	0.07	0.09	5.48	138	12.0	150
DK-010	174.40	174.53	0.13	0.11	0.030	2.4	<0.01	0.04	0.08	4.48	155	29.0	120
DK-011	174.53	174.66	0.13	0.11	0.185	3.0	<0.01	0.08	0.12	3.13	188	60.0	640
DK-012	174.66	174.80	0.14	0.12	0.105	2.8	<0.01	0.09	0.10	2.15	120	43.0	390
DK-013	174.80	174.90	0.10	0.09	0.150	1.4	<0.01	0.09	0.11	2.37	141	54.0	390
DK-014	174.90	175.00	0.10	0.09	0.025	2.0	<0.01	0.06	0.09	3.28	142	41.0	1630
DK-015	175.00	175.13	0.13	0.11	0.120	4.0	<0.01	0.06	0.14	3.28	174	22.0	270
DK-016	175.13	175.26	0.13	0.11	4.590	5.8	<0.01	0.12	0.15	2.96	392	105.0	540
DK-017	175.26	175.38	0.12	0.10	0.055	2.4	<0.01	0.13	0.18	3.55	296	54.0	120
DK-018	175.38	175.62	0.24	0.21	0.250	1.6	<0.01	0.15	0.22	4.20	398	73.0	290
DK-019	187.80	187.90	0.10	0.09	0.145	34.8	<0.01	1.34	3.63	14.20	1140	540.0	2510
DK-020	187.90	188.00	0.10	0.09	0.410	41.2	0.06	0.92	12.75	12.40	6370	580.0	6440
DK-021	188.00	188.14	0.14	0.12	0.050	15.4	<0.01	0.46	2.75	8.16	456	280.0	2600
DK-022	188.14	188.23	0.09	0.08	0.095	17.4	<0.01	0.40	2.42	9.79	794	370.0	2370
DK-023	188.23	188.35	0.12	0.10	0.800	20.2	<0.01	0.47	2.84	11.15	756	270.0	2910
DK-024	189.65	189.73	0.08	0.07	0.060	32.4	0.01	0.63	2.87	10.45	660	140.0	2660
DK-025	189.73	189.81	0.08	0.07	0.070	41.8	0.01	0.71	3.57	13.55	911	240.0	3520
DK-026	189.81	189.92	0.11	0.10	0.045	26.2	<0.01	0.41	1.63	7.47	497	105.0	1080
DK-027	190.30	190.38	0.08	0.07	0.040	32.0	<0.01	0.51	2.21	6.16	387	115.0	1350
DK-028	190.38	190.54	0.16	0.14	0.025	33.6	<0.01	0.58	2.13	4.93	280	140.0	1400
DK-029	190.72	190.81	0.09	0.08	0.040	33.2	<0.01	0.59	1.40	7.85	462	120.0	690
DK-030	190.81	190.94	0.13	0.11	0.045	31.8	<0.01	0.50	1.59	10.10	611	150.0	740
DK-031	191.15	191.22	0.07	0.06	0.100	281.0	0.01	3.61	9.43	16.95	932	340.0	3860
DK-032	191.22	191.30	0.08	0.07	0.090	191.0	0.04	3.06	12.75	6.33	1290	210.0	8120
DK-033	191.64	191.75	0.11	0.10	0.065	4.4	<0.01	0.01	0.08	1.48	166	24.0	170

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No	FROM	TO	LONG	Width	Au	Ag	Cu	Pb	Zn	Fe	As	Sb	Hg
	m	m	m	m	g/t	g/t	%	%	%	%	ppm	ppm	ppb
DL-001	73.80	73.85	0.05	0.05	0.205	4.0	<0.01	0.01	0.01	14.10	2630	95.0	90
DL-002	289.90	239.00	0.10	0.09	0.035	8.8	0.20	<0.01	4.45	2.37	267	34.0	4510
DL-003	239.00	239.10	0.10	0.09	0.020	7.2	0.11	0.01	4.86	2.71	325	20.0	4940
DL-004	239.10	239.20	0.10	0.09	0.015	1.0	<0.01	<0.01	0.18	2.51	140	8.0	160
DL-005	239.20	239.30	0.10	0.09	0.010	1.4	<0.01	<0.01	0.09	2.22	91	8.0	90
DL-006	264.25	264.45	0.20	0.19	0.180	1.6	<0.01	<0.01	0.04	7.86	648	19.5	240
DL-007	264.45	264.60	0.15	0.14	0.065	1.0	<0.01	<0.01	<0.01	4.51	230	8.0	40
DL-008	264.60	264.75	0.15	0.14	0.070	0.8	<0.01	<0.01	0.01	4.28	257	7.2	40

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No	FROM m	TO m	LONG m	Width m	Au g/t	Ag g/t	Cu %	Pb %	Zn %	Fe %	As ppm	Sb ppm	Hg ppb
DK-001	182.65	182.75	0.10	0.08	0.050	100.0	0.09	0.17	0.15	10.35	2660	150.0	2010
DK-002	183.10	183.35	0.25	0.25	0.015	42.2	0.06	0.52	6.23	3.97	95	61.0	6200
DK-003	184.80	184.87	0.07	0.05	0.010	19.8	0.03	0.14	1.92	1.77	175	30.0	1730
DK-004	186.40	186.50	0.10	0.08	0.010	6.8	<0.01	0.14	0.89	2.57	402	12.5	1590
DK-005	186.50	186.60	0.10	0.08	0.030	33.4	0.03	0.68	5.93	3.46	553	30.0	8660
DK-006	187.77	187.87	0.10	0.08	0.020	5.4	<0.01	0.08	0.21	2.87	352	7.6	290
DK-007	187.87	188.00	0.13	0.10	0.010	3.6	<0.01	0.10	0.12	1.66	514	11.5	310
DK-008	188.42	188.54	0.12	0.12	0.015	4.6	<0.01	0.12	0.17	9.12	1460	870.0	1270
DK-009	188.90	188.96	0.06	0.05	<0.005	1.4	<0.01	0.37	0.31	10.10	2570	>1000	60
DK-010	189.13	189.20	0.07	0.05	0.020	3.4	<0.01	0.36	0.34	16.80	3480	1000	240
DK-011	190.37	190.51	0.14	0.11	0.020	28.0	0.01	0.43	0.38	20.00	4200	>1000	500
DK-012	190.51	190.67	0.16	0.12	0.080	6.8	<0.01	0.07	0.05	2.23	617	300.0	830
DK-013	190.67	190.78	0.11	0.09	0.080	2.6	<0.01	0.02	0.02	0.70	159	94.0	420
DK-014	190.78	190.86	0.08	0.06	0.150	200.0	0.05	3.08	0.07	29.50	>10000	590.0	190
DK-015	190.86	191.00	0.14	0.11	0.055	206.0	0.09	10.00	0.08	20.80	8940	450.0	400
DK-016	191.35	191.47	0.12	0.09	0.095	963.0	0.65	1.80	0.37	5.74	374	>1000	1990
DK-017	191.47	191.60	0.13	0.10	0.150	1470.0	0.71	5.55	0.63	8.65	2610	>1000	2360
DK-018	191.60	191.75	0.15	0.12	0.280	1350.0	0.43	2.96	0.16	11.05	5710	>1000	1180
DK-019	191.75	191.87	0.12	0.09	0.450	14.0	<0.01	0.14	0.06	20.70	>10000	220.0	170
DK-020	191.87	191.95	0.08	0.06	0.640	13.6	<0.01	0.12	0.05	23.90	>10000	140.0	90
DK-021	191.95	192.06	0.11	0.09	0.545	15.8	<0.01	0.08	0.03	18.45	>10000	125.0	70
DK-022	192.06	192.26	0.20	0.16	0.285	146.0	0.05	0.18	0.07	20.50	>10000	370.0	60
DK-023	192.26	192.42	0.16	0.12	0.195	246.0	0.10	0.44	0.03	8.80	5750	420.0	80
DK-024	192.42	192.54	0.12	0.09	0.110	445.0	0.17	0.48	0.06	6.02	561	560.0	190
DK-025	192.54	192.66	0.12	0.09	0.255	252.0	0.12	0.98	0.08	12.25	>10000	410.0	230
DK-026	192.66	192.82	0.16	0.12	0.405	468.0	0.24	1.85	0.13	13.70	>10000	510.0	210
DK-027	192.82	193.16	0.23	0.18	0.210	1840.0	0.47	5.76	0.24	6.77	1780	>1000	420
DK-028	193.05	193.16	0.11	0.09	0.195	2220.0	0.65	2.24	0.18	4.30	562	>1000	670
DK-029	193.16	193.26	0.10	0.08	0.225	44.6	0.05	0.52	0.17	24.60	>10000	195.0	130
DK-030	193.26	193.43	0.17	0.13	0.225	16.8	<0.01	0.23	0.10	21.10	8710	90.0	270
DK-031	193.43	193.60	0.17	0.13	0.125	132.0	0.04	1.63	0.53	7.64	1220	135.0	590
DK-032	193.60	193.75	0.15	0.12	0.100	175.0	0.05	1.54	0.61	4.67	788	290.0	530
DK-033	193.75	193.90	0.15	0.12	0.055	68.0	0.04	1.31	0.17	4.85	1380	145.0	310
DK-034	193.90	194.06	0.16	0.12	0.030	5.0	<0.01	0.06	0.03	4.68	1585	42.0	80
DK-035	238.07	238.18	0.11	0.09	0.005	3.2	0.03	<0.01	<0.01	8.05	787	33.0	290
DK-036	238.18	232.28	0.10	0.08	0.025	0.8	<0.01	<0.01	<0.01	9.54	186	7.6	830
DK-037	238.28	238.38	0.10	0.08	0.010	1.2	0.12	<0.01	<0.01	2.85	27	16.0	60
DK-038	238.38	238.52	0.14	0.11	0.010	0.8	0.07	<0.01	<0.01	3.41	38	4.2	20
DK-039	238.52	238.60	0.08	0.06	0.025	0.8	0.01	<0.01	<0.01	11.15	27	1.6	10
DK-040	238.60	238.70	0.10	0.08	<0.005	0.2	0.01	<0.01	<0.01	14.90	17	1.2	<10
DK-041	238.70	238.78	0.08	0.06	<0.005	<0.2	<0.01	<0.01	<0.01	14.15	13	1.2	10
DK-042	238.78	238.88	0.10	0.08	<0.005	0.4	<0.01	<0.01	<0.01	13.75	7	1.0	10
DK-043	238.88	238.96	0.08	0.06	<0.005	0.2	<0.01	<0.01	<0.01	15.60	9	0.6	10
DK-044	238.96	239.08	0.12	0.10	<0.005	0.2	<0.01	<0.01	<0.01	13.35	5	0.8	20
DK-045	239.08	239.16	0.08	0.06	<0.005	0.2	<0.01	<0.01	<0.01	14.45	6	0.8	<10
DK-046	239.16	239.24	0.08	0.06	<0.005	0.2	<0.01	<0.01	<0.01	13.95	4	1.2	<10
DK-047	239.24	239.32	0.08	0.06	<0.005	<0.2	<0.01	<0.01	<0.01	13.90	<1	0.4	<10
DK-048	239.32	239.43	0.11	0.09	<0.005	0.2	0.01	<0.01	<0.01	15.80	7	0.2	<10
DK-049	239.43	239.53	0.10	0.08	0.030	1.2	0.07	<0.01	<0.01	16.55	45	3.6	30
DK-050	239.53	239.63	0.10	0.08	0.010	0.8	0.09	<0.01	<0.01	11.85	32	1.2	20
DK-051	239.63	239.73	0.10	0.08	0.015	1.8	0.04	<0.01	<0.01	9.61	1	27.0	30
DK-052	239.73	239.87	0.14	0.11	0.015	1.8	0.04	<0.01	<0.01	7.61	4	41.0	30
DK-053	250.49	250.58	0.09	0.05	0.015	1.0	0.09	<0.01	<0.01	14.95	61	3.2	10
DK-054	254.45	254.54	0.09	0.05	0.005	1.6	0.07	<0.01	<0.01	13.80	40	15.0	20
DK-055	254.54	254.63	0.09	0.05	0.130	1.2	0.01	<0.01	<0.01	14.10	42	12.0	30
DK-056	280.07	280.23	0.16	0.09	<0.005	1.4	0.05	<0.01	<0.01	8.86	16	7.2	10
DK-057	280.23	280.38	0.15	0.09	<0.005	1.6	0.03	<0.01	0.02	6.59	36	7.2	40
DK-058	285.33	285.53	0.20	0.12	0.010	5.0	0.10	0.01	0.01	18.35	8	16.0	40

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No	FROM m	TO m	LONG m	Width m	Au g/t	Ag g/t	Cu %	Pb %	Zn %	Fe %	As ppm	Sb ppm	Hg ppb
DN-001	71.60	71.75	0.15	0.13	0.010	1.4	0.06	<0.01	0.01	6.92	4	1.2	<10
DN-002	71.90	72.10	0.20	0.18	0.050	4.6	0.09	<0.01	0.01	8.33	13	1.6	<10
DN-003	77.57	77.75	0.18	0.16	<0.005	<0.2	<0.01	<0.01	<0.01	3.21	14	0.8	<10
DN-004	150.12	150.15	0.03	0.03	0.245	0.2	<0.01	<0.01	<0.01	1.47	27	1.0	<10
DN-005	153.51	153.58	0.07	0.06	0.045	0.6	<0.01	<0.01	<0.01	2.09	65	1.4	10
DN-006	184.76	184.84	0.08	0.07	0.055	3.8	0.43	<0.01	0.01	18.00	114	1.0	<10
DN-007	264.35	264.90	0.55	0.47	0.020	0.8	<0.01	<0.01	<0.01	3.26	14	1.0	10
DN-008	264.90	265.40	0.50	0.43	0.005	0.2	<0.01	<0.01	<0.01	2.63	16	0.8	<10
DN-009	265.40	265.90	0.50	0.43	0.010	0.8	0.02	<0.01	<0.01	2.87	17	0.8	<10
DN-010	265.90	266.40	0.50	0.43	0.005	0.6	<0.01	<0.01	<0.01	3.75	11	1.2	<10
DN-011	266.40	266.90	0.50	0.43	0.010	0.6	<0.01	<0.01	<0.01	2.90	16	0.6	10
DN-012	266.90	267.40	0.50	0.43	0.010	0.8	<0.01	<0.01	<0.01	2.72	4	0.6	<10
DN-013	267.40	267.90	0.50	0.43	0.015	0.8	<0.01	<0.01	<0.01	4.55	5	0.6	10
DN-014	267.90	268.40	0.50	0.43	0.005	0.4	<0.01	<0.01	<0.01	2.89	<1	0.4	<10
DN-015	268.40	268.90	0.50	0.43	0.015	1.4	<0.01	<0.01	<0.01	4.83	1	0.8	<10
DN-016	268.90	269.40	0.50	0.43	0.015	0.8	<0.01	<0.01	<0.01	3.16	2	0.2	<10
DN-017	269.40	269.90	0.50	0.43	0.005	0.6	<0.01	<0.01	<0.01	2.18	3	0.6	<10
DN-018	269.90	270.45	0.55	0.47	0.010	0.8	<0.01	<0.01	<0.01	1.77	<1	0.6	<10

MJMI-12

No	FROM m	TO m	LONG m	Width m	Au g/t	Ag g/t	Cu %	Pb %	Zn %	Fe %	As ppm	Sb ppm	Hg ppb
DO-001	139.60	139.85	0.25	0.23	<0.005	<1	<0.01	<0.01	<0.01	4.99	<1	0.2	<10
DO-002	139.85	140.00	0.15	0.14	0.005	<1	<0.01	<0.01	<0.01	3.73	<1	<0.2	<10
DO-003	140.00	140.10	0.10	0.09	<0.005	<1	0.01	<0.01	<0.01	4.80	<1	<0.2	<10
DO-004	140.10	140.25	0.15	0.14	<0.005	<1	<0.01	<0.01	<0.01	2.77	<1	<0.2	<10
DO-005	140.25	140.45	0.20	0.18	0.215	2	0.08	<0.01	<0.01	3.49	2	<0.2	<10
DO-006	140.45	140.70	0.25	0.23	0.015	<1	0.15	<0.01	<0.01	4.58	<1	<0.2	<10
DO-007	140.70	140.715	0.015	0.015	0.055	<1	0.06	<0.01	<0.01	3.80	<1	<0.2	<10
DO-008	143.47	143.49	0.02	0.02	0.005	<1	<0.01	<0.01	<0.01	2.07	<1	<0.2	<10
DO-009	187.10	187.20	0.10	0.10	<0.005	<1	0.01	<0.01	<0.01	7.36	<1	<0.2	<10
DO-010	195.27	195.37	0.10	0.10	0.020	<1	0.37	<0.01	<0.01	5.12	<1	<0.2	<10
DO-011	241.93	242.07	0.14	0.13	<0.005	<1	<0.01	<0.01	<0.01	2.26	<1	0.2	<10
DO-012	242.07	242.18	0.11	0.10	<0.005	3	<0.01	<0.01	<0.01	3.79	3	<0.2	<10
DO-013	258.72	258.86	0.14	0.13	0.010	<1	0.39	<0.01	<0.01	7.36	<1	<0.2	<10
DO-014	258.86	259.00	0.14	0.13	0.635	<1	0.97	<0.01	<0.01	8.52	<1	<0.2	<10

Tab.F II-1-9 TABLA DE LOS RESULTADOS DE LA PERFORACION (MMJ-8)

CLASS	PERIODO DE TRABAJO	TOTAL DE DIAS		DIAS TRABAJADOS		DIAS NO TRABAJADOS		TOTAL MITAS	
		TOTAL DE DIAS	DIAS TRABAJADOS	DIAS TRABAJADOS	DIAS NO TRABAJADOS	TOTAL MITAS			
PREPARACION	2000. 1. 13 ~	2000. 1. 15	3	3	0	0	19		
PERFORACION	2000. 1. 16 ~	2000. 1. 21	6	6	0	0	52		
TRASLADO	2000. 1. 22 ~	2000. 1. 22	1	1	0	0	8		
TOTAL	2000. 1. 13 ~	2000. 1. 22	10	10	0	0	79		
PROFUNDIDAD DE PERFORACION									
PROFUNDIDAD PROYECTADA	250m	GRAVAS	1. 0m	PROFUNDIDAD(m)	RECUPERACION DEL INTERVALO	TOTAL			
LONGITUD PROLONGADA	0	LONG.DE TESTIGO	239. 78m	0. 0 ~102. 90	92. 3m	89%	89.	7%	
PROFUNDIDAD SUPERVISADA	250. 30m	RECOBRAR	95. 80%	102. 90 ~197. 50	94. 6m	100%	95.	0%	
TRABAJADAS	HORA	POR PERFORACION	POR TODOS	197. 50 ~250. 30	52. 8m	100%	95.	8%	
PERFORACION	53. 0h	74. 7%	55. 2%						
OTRO EXCEPTO PERFORACION	10. 0h	14. 1%	10. 4%	EFICIENCIA					
PARA ACCIDENTES	4. 0h	5. 6%	4. 2%	TTL AVANCE / TOTAL PERIOD		25. 03	mts/dia		
DEPENDIENTES	4. 0h	5. 6%	4. 2%	TTL AVANCE / DIAS TRABAJADOS		25. 03	mts/dia		
SUB-TOTAL	71. 0h	100%	74. 0%	TTL AVANCE / PERIOD PERFORADO		41. 71	mts/dia		
PREPARACION	22. 0h		22. 9%	TTL ADANCE / SOLO POR PERFORACION REAL		41. 71	mts/dia		
DESARME Y RETIRO	3. 0h		3. 1%	TTL ADANCE / TOTAL MITA		3. 16	mts/mita		
TOTAL	96. 0h		100%	MITAS TTL DE PERFORACION / TTL ADANCE		0. 2	mts/mts		
PROFUNDIDAD DE ADEME POR CADA DIAMETRO									
B/A ^x 100	A : LARGO PERFORADO (%)	RECUPERACION DE TUBOS		(REVESTIMIENTO (%)		ARTICULO			
DIAMETRO(mm)	P(m)	B : LARGO REVESTIDO (%)							
60. 3	10. 7	4. 3		100					

Tab.F II-1-10 TABLA DE LOS RESULTADOS DE LA PERFORACION (MIMI-9)

CLASS	PERIODO DE TRABAJO	TOTAL DE DIAS		DIAS TRABAJADOS	DIAS NO TRABAJADOS	TOTAL MITAS
		TOTAL DE DIAS	DIAS TRABAJADOS			
PREPARACION	2000. 1. 22 ~	2000. 1. 22	1	1	0	8
PERFORACION	2000. 1. 22 ~	2000. 1. 26	5	5	0	37
TRASLADO	2000. 1. 26 ~	2000. 1. 26	1	1	0	8
TOTAL	2000. 1. 22 ~	2000. 1. 26	7	7	0	53
PROFUNDIDAD DE PERFORACION						
PROFUNDIDAD PROYECTADA	300m	GRAVAS	1. 0m	PROFUNDIDAD(m)	RECUPERACION DEL INTERVALO	TOTAL
LONGITUD PROLONGADA	0	LONG DE TESTIGO	275. 53m	0. 0~102. 90	87. 3m	85. 0% 84. 8%
PROFUNDIDAD SUPERVISADA	300. 05m	RECOBRAR	92%	102. 90~209. 80	102. 70m	96. 0% 90. 6%
TRABAJADAS	HORA	POR PERFORACION	POR TODOS	209. 80~300. 05	88. 5m	94. 7% 92. 0%
PERFORACION	70. 0h	68. 0%	63. 1%			
OTRO EXCEPTO PERFORACION	20. 0h	19. 4%	18. 0%	EFICIENCIA		
PARA ACCIDENTES	6. 0h	5. 8%	5. 4%	TTL AVANCE / TOTAL PERIOD	42. 86	mts/dia
DEPENDIENTES	7. 0h	6. 8%	6. 3%	TTL AVANCE / DIAS TRABAJADOS	42. 86	mts/dia
SUB-TOTAL	103. 0h	100%	92. 8%	TTL AVANCE / PERIOD PERFORADO	60. 01	mts/dia
PREPARACION	5. 0h		4. 5%	TTL ADANCE / SOLO POR PERFORACION REAL	60. 01	mts/dia
DESARME Y RETIRO	3. 0h		2. 7%	TTL ADANCE / TOTAL MITA	5. 66	mts/mita
TOTAL	111. 0h		100%	MITAS TTL DE PERFORACION / TTL ADANCE	0. 12	mitas/mts
PROFUNDIDAD DE ADEME POR CADA DIAMETRO						
B/A*100	A : LARGO PERFORADO (%)	LARGO REVESTIDO (%)	RECUPERACION DE TUBOS (REVESTIMIENTO)			
DIAMETRO(mm)	P(m)					
60. 3	9. 75	3. 25	100			

Tab.F II-1-11 TABLA DE LOS RESULTADOS DE LA PERFORACION (MJMI-10)

CLASS	PERIODO DE TRABAJO	TOTAL DE DIAS		DIAS TRABAJADOS		DIAS NO TRABAJADOS		TOTAL MITAS	
PREPARACION	2000. 1. 27 ~	2000. 1. 27		1	1	0	0	8	
PERFORACION	2000. 1. 28 ~	2000. 2. 14		19	19	0	0	131	
TRASLADO	2000. 2. 15 ~	2000. 2. 15		1	1	0	0	8	
TOTAL	2000. 1. 27 ~	2000. 2. 15		21	21	0	0	147	
PROFUNDIDAD DE PERFORACION									
PROFUNDIDAD PROYECTADA	300m	GRAVAS	1. 0m	PROFUNDIDAD(m)	RECUPERACION DEL INTERVALO	TOTAL			
LONGITUD PROLONGADA	0	LONG.DE TESTIGO	286. 15m	0. 0 ~ 100. 11	87. 50m	87. 40%			
PROFUNDIDAD SUPERVISADA	300. 40m	RECOBRAR	95. 26%	100. 11 ~ 200. 52	99. 45m	99. 04%			
TRABAJADAS	HORA	POR PERFORACION	POR TODOS	200. 52 ~ 300. 40	99. 20m	99. 32%			
PERFORACION	213h	52. 0%	48. 7%			95. 26%			
OTRO EXCEPTO PERFORACION	26h	6. 3%	5. 9%	EFICIENCIA					
PARA ACCIDENTES	89h	21. 7%	20. 4%	TTL AVANCE / TOTAL PERIOD		14. 30 mts/dia			
DEPENDIENTES	82h	20. 0%	18. 8%	TTL AVANCE / DIAS TRABAJADOS		14. 30 mts/dia			
SUB-TOTAL	410h	100%	93. 8%	TTL AVANCE / PERIOD PERFORADO		15. 81 mts/dia			
PREPARACION	7h		1. 6%	TTL ADANCE / SOLO POR PERFORACION REAL		15. 81 mts/dia			
DESARME Y RETIRO	20h		4. 6%	TTL ADANCE / TOTAL MITA		2. 0 mts/mita			
TOTAL	437h		100%	MITAS TTL DE PERFORACION / TTL ADANCE		0. 44 mitas/mts			
PROFUNDIDAD DE ADEME POR CADA DIAMETRO									
B/A x 100	A : LARGO PERFORADO (%)	RECUPERACION DE TUBOS		(REVESTIMIENTO)		ARTICULO			
DIAMETRO(mm)	P(m)	B : LARGO REVESTIDO (%)							
60. 3	9. 14	3. 04		100					

Tab.F II-2-1 TABLA DE LOS RESULTADOS DE LA PERFORACION (MJMI-11)

CLASS	PERIODO DE TRABAJO	TOTAL DE DIAS		DIAS TRABAJADOS	DIAS NO TRABAJADOS	TOTAL MITAS
		TOTAL	DIAS			
PREPARACION	2000. 2. 27 ~	2000. 2. 28	2	2	0	8
PERFORACION	2000. 2. 29 ~	2000. 3. 15	16	16	0	90
TRASLADO	2000. 3. 16 ~	2000. 3. 16	1	1	0	8
TOTAL	2000. 2. 27 ~	2000	19	19	0	106
PROFUNDIDAD DE PERFORACION						
PROFUNDIDAD PROYECTADA	300m	GRAVAS	3. 0m	PROFUNDIDAD(m)	RECUPERACION DEL INTERVALO	TOTAL
LONGITUD PROLONGADA	0	LONG DE TESTIGO	291. 0m	0. 0~101. 6	98. 5m	96. 9%
PROFUNDIDAD SUPERVISADA	300. 84m	RECOBRAR	96. 70%	101. 6~201. 5	99. 5m	99. 6%
TRABAJADAS	HORA	POR PERFORACION	POR TODOS	201. 5~300. 84	93. 0m	93. 6%
PERFORACION	132h	63. 8%	52. 0%			96. 7%
OTRO EXCEPTO PERFORACION	28h	13. 5%	11. 0%			
PARA ACCIDENTES	41h	19. 8%	16. 1%	TTL AVANCE//TOTAL PERIOD		15. 83 mts/dia
DEPENDIENTES	6h	2. 9%	2. 4%	TTL AVANCE//DIAS TRABAJADOS		15. 83 mts/dia
SUB-TOTAL	207h	100%	81. 5%	TTL AVANCE//PERIOD PERFORADO		18. 80 mts/dia
PREPARACION	30h		11. 6%	TTL ADANCE//SOLO POR PERFORACION REAL		18. 80 mts/dia
DESARME Y RETIRO	17h		6. 7%	TTL ADANCE//TOTAL MITA		2. 8 mts/mita
TOTAL	254h			MITAS TTL DE PERFORACION//TTL ADANCE		0. 30 mitas/mts
PROFUNDIDAD DE ADEME POR CADA DIAMETRO						
DIAMETRO	B/A: 100 (%)	A : LARGO PERFORADO (%)	B : LARGO REVESTIDO (%)	RECUPERACION DE TUBOS	ARTICULO	
DIAMETRO(mm)	P(m)	(REVESTIMIENTO (%)	(%)			
76. 2	9. 0			100%		
60. 3	78. 0			100%		

Tab.F II-2-2 TABLA DE LOS RESULTADOS DE LA PERFORACION (MIMI-12)

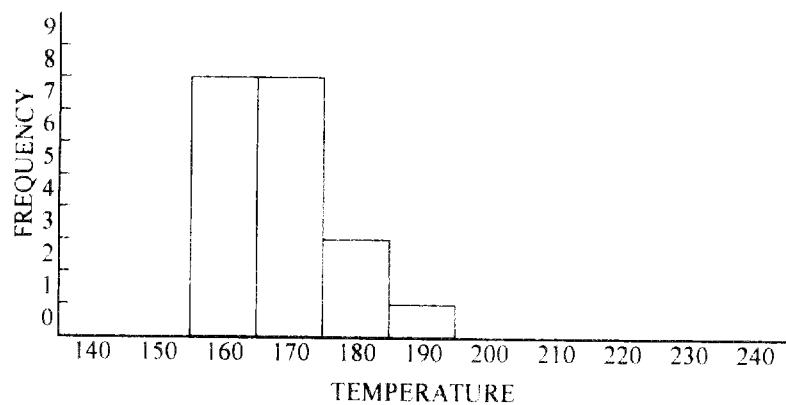
CLASS	PERIODO DE TRABAJO	TOTAL DE DIAS	DIAS TRABAJADOS	DIAS NO TRABAJADOS		TOTAL MITAS
				PREPARACION	PERFORACION	
PREPARACION	2000. 2. 16 ~	2000. 2. 18	3	3	0	24
PERFORACION	2000. 2. 19 ~	2000. 3. 10	20	20	0	152
TRASLADO	2000. 3. 10 ~	2000. 3. 10	1	1	0	7
TOTAL	2000. 2. 16 ~	2000. 3. 10	24	24	0	183
PROFUNDIDAD DE PERFORACION						
PROFUNDIDAD PROYECTADA	300m	GRAVAS	m	PROFUNDIDAD(m)	RECUPERACION DEL INTERVALO	TOTAL
LONGITUD PROLONGADA	0	LONG DE TESTIGO	251. 04m	0. 0 ~102. 40	92. 92m	90. 7%
PROFUNDIDAD SUPERVISADA	264. 60m	RECOBRAR	94. 9%	102. 40 ~203. 30	96. 82m	96. 0%
TRABAJADAS	HORA	POR PERFORACION	POR TODOS	203. 30 ~264. 60	61. 30m	100%
PERFORACION	119. 0h	25. 9%	23. 6%			94. 9%
OTRO EXCEPTO PERFORACION	48. 0h	10. 5%	9. 5%	EFICIENCIA		
PARA ACCIDENTES	287. 0h	62. 5%	57. 0%	TTL AVANCE / TOTAL PERIOD	11. 03	mts/dia
DEPENDIENTES	5. 0h	1. 1%	1. 0%	TTL AVANCE / DIAS TRABAJADOS	11. 03	mts/dia
SUB-TOTAL	459. 0h	100%	91. 1%	TTL AVANCE / PERIOD PERFORADO	13. 23	mts/dia
PREPARACION	420. 0h		8. 3%	TTL ADANCE / SOLO POR PERFORACION REAL	13. 23	mts/dia
DESARME Y RETIRO	3. 0h		0. 6%	TTL ADANCE / TOTAL MITA	1. 45	mts/mita
TOTAL	504. 0h		100%	MITAS TTL DE PERFORACION / TTL ADANCE	0. 6	mitas/mits
PROFUNDIDAD DE ADEME POR CADA DIAMETRO						
B/A \times 100	Δ : LARGO PERFORADO (%)	A : LARGO REVESTIMENTO (%)	ARTICULO			
DIAMETRO(mm)	P(m)					
60. 3	12. 8	4. 8				100

Tab.F II-2-3 ······ TABLA DE LA MEDICION DE LA TEMPERATURA HOMOGENEA
Y LA DISTRIBUCION DE LA FRECUENCIA

Sample No.: F-1 (MJMI-8 175.13 ~ 175.26m)

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	25.0	12	po	161	-0.1	0.18
2	Quartz	12.5	10	po	168	0.0	0.00
3	Quartz	27.5	12	po	173	-0.1	0.18
4	Quartz	25.0	13	irr	179	-0.1	0.18
5	Quartz	12.5	10	po	162	-0.2	0.35
6	Quartz	15.0	13	po	191	-0.1	0.18
7	Quartz	22.5	12	irr	170	0.0	0.00
8	Quartz	10.0	12	po	173	0.0	0.00
9	Quartz	5.0	10	po	164	-	-
10	Quartz	5.0	12	po	172	-	-
11	Quartz	5.0	10	po	168	-	-
12	Quartz	32.5	13	irr	182	-0.1	0.18
13	Quartz	22.5	12	irr	171	-0.1	0.18
14	Quartz	10.0	10	po	166	0.0	0.00
15	Quartz	5.0	10	po	165	-	-
16	Quartz	12.5	12	irr	172	-0.1	0.18
17	Quartz	17.5	12	po	177	-0.1	0.18
18	Quartz	30.0	15	irr	188	-0.2	0.35
19	Quartz	22.5	13	irr	182	0.0	0.00
20	Quartz	10.0	12	po	169	-	-

eg: egg irr: irregular po: polymorph sq: square tr:triangle wg: wedge



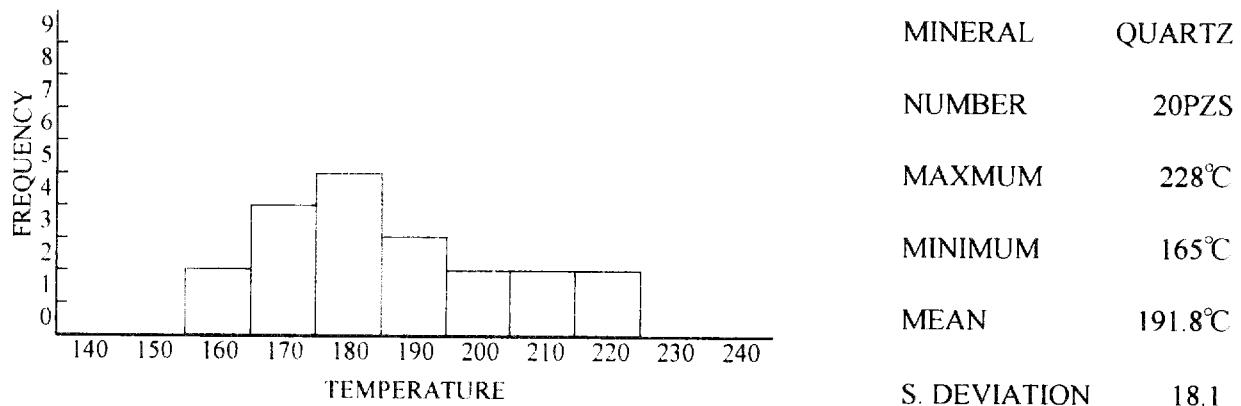
MINERAL	QUARTZ
NUMBER	20PZS
MAXIMUM	191°C
MINIMUM	161°C
MEAN	172.7°C
S. DEVIATION	8.1

FigIII-2-3 TABLA DE LA MEDICION DE LA TEMPERATURA HOMOGENEA
Y LA DISTRIBUCION DE LA FRECUENCIA

Sample No.: F-2 (MJMI-9 239.20~239.30m)

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	30.0	10	po	165	-0.1	0.18
2	Quartz	55.0	17	irr	189	-0.1	0.18
3	Quartz	22.5	12	po	172	0.0	0.00
4	Quartz	25.0	12	po	187	-0.1	0.18
5	Quartz	22.5	12	po	169	-0.1	0.18
6	Quartz	15.0	13	po	174	-0.1	0.18
7	Quartz	35.0	15	irr	218	-0.1	0.18
8	Quartz	22.5	13	po	192	-0.1	0.18
9	Quartz	7.5	12	po	205	-	-
10	Quartz	12.5	12	po	222	0.0	0.00
11	Quartz	20.0	15	irr	199	-0.1	0.18
12	Quartz	15.0	13	po	185	-0.1	0.18
13	Quartz	7.5	12	po	228	-	-
14	Quartz	17.5	15	irr	212	-0.1	0.18
15	Quartz	10.0	13	po	207	0.0	0.00
16	Quartz	5.0	12	po	188	-	-
17	Quartz	35.0	13	irr	192	-0.1	0.18
18	Quartz	12.5	12	po	175	-0.1	0.18
19	Quartz	7.5	12	po	172	-	-
20	Quartz	12.5	12	po	184	-0.1	0.18

eg: egg irr: irregular po: polymorph sq: square tr:triangle wg: wedge

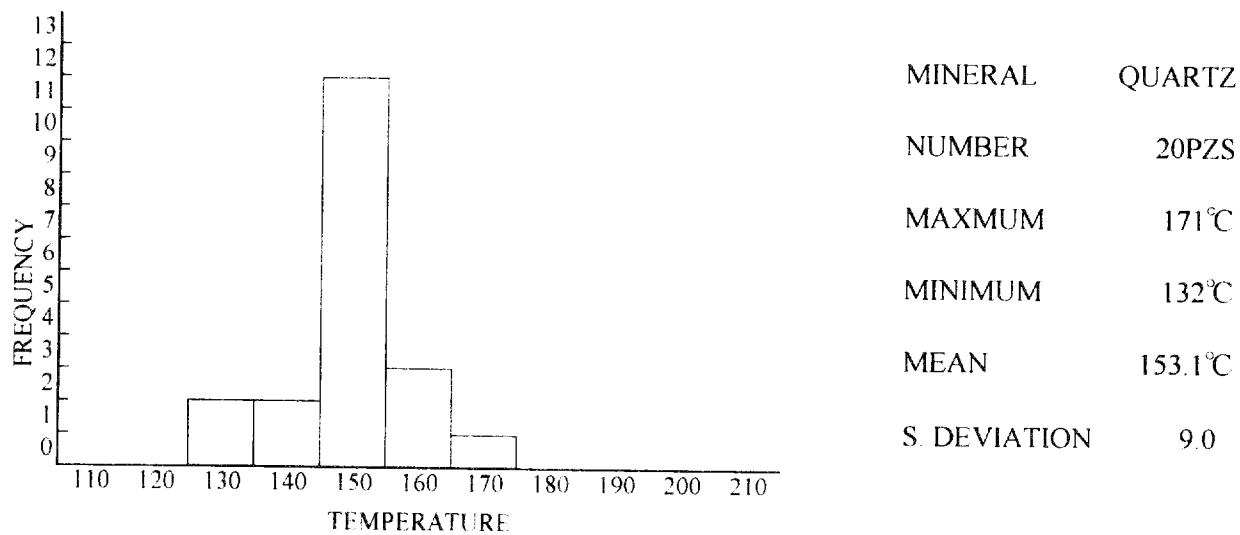


FigFII-2-3 TABLA DE LA MEDICION DE LA TEMPERATURA HOMOGENEA
Y LA DISTRIBUCION DE LA FRECUENCIA

Sample No.: F-3 (MJMI-10 190.67~190.70m)

No.	Mineral	Size ($m\mu$)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	62.5	12	po	155	-0.1	0.18
2	Quartz	10.0	10	sq	132	0.0	0.00
3	Quartz	15.0	12	po	154	0.0	0.00
4	Quartz	7.5	10	po	141	-0.1	0.18
5	Quartz	5.0	10	po	137	-	-
6	Quartz	42.5	12	irr	156	-0.1	0.18
7	Quartz	30.0	12	po	154	0.0	0.00
8	Quartz	12.5	12	po	155	0.0	0.00
9	Quartz	7.5	10	po	155	0.0	0.00
10	Quartz	5.0	13	sq	164	-	-
11	Quartz	5.0	12	po	151	-	-
12	Quartz	22.5	13	irr	171	0.0	0.00
13	Quartz	20.0	12	po	155	-0.1	0.18
14	Quartz	20.0	12	po	156	0.0	0.00
15	Quartz	32.5	12	irr	153	-0.1	0.18
16	Quartz	17.5	12	po	159	-0.1	0.18
17	Quartz	10.0	13	po	161	0.0	0.00
18	Quartz	7.5	12	sq	160	-	-
19	Quartz	12.5	10	po	141	0.0	0.00
20	Quartz	10.0	12	po	151	0.0	0.00

eg: egg irr: irregular po: polymorph sq: square tr:triangle wg: wedge

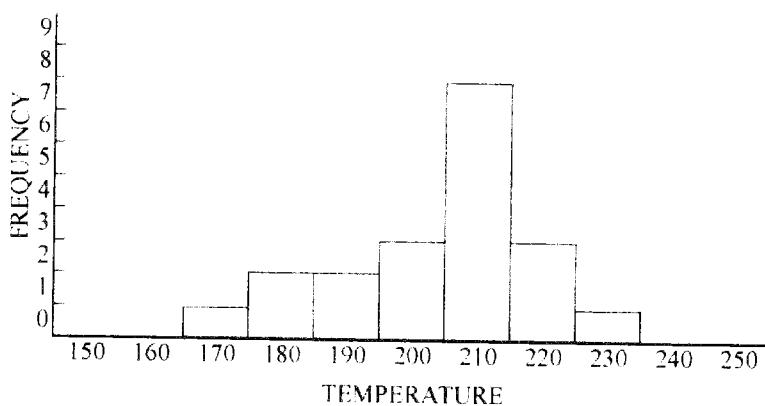


FigII-2-3 TABLA DE LA MEDICION DE LA TEMPERATURA HOMOGENEA
Y LA DISTRIBUCION DE LA FRECUENCIA

Sample No.: F-4 (MJMI-11 77.57 ~ 77.59m)

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	22.5	12	po	217	-3.2	5.26
2	Quartz	17.5	10	tu	219	-3.6	5.86
3	Quartz	7.5	12	po	225	-	-
4	Quartz	10.0	12	po	215	-3.9	6.30
5	Quartz	17.5	10	po	192	-3.9	6.30
6	Quartz	25.0	12	po	231	-0.6	1.05
7	Quartz	10.0	10	tr	211	-3.0	4.96
8	Quartz	5.0	10	tr	205	-	-
9	Quartz	15.0	13	po	217	-3.7	6.01
10	Quartz	10.0	12	po	215	-3.2	5.26
11	Quartz	37.5	13	tu	221	-3.1	5.11
12	Quartz	20.0	12	tu	205	-3.6	5.86
13	Quartz	7.5	10	po	185	-	-
14	Quartz	7.5	12	po	217	-	-
15	Quartz	5.0	10	tr	194	-3.9	6.30
16	Quartz	10.0	13	po	220	-2.8	4.65
17	Quartz	7.5	10	po	204	-	-
18	Quartz	12.5	10	po	173	-3.6	5.86
19	Quartz	5.0	12	po	217	-	-
20	Quartz	5.0	10	po	185	-	-

eg: egg irr: irregular po: polymorph sq: square tr:triangle wg: wedge



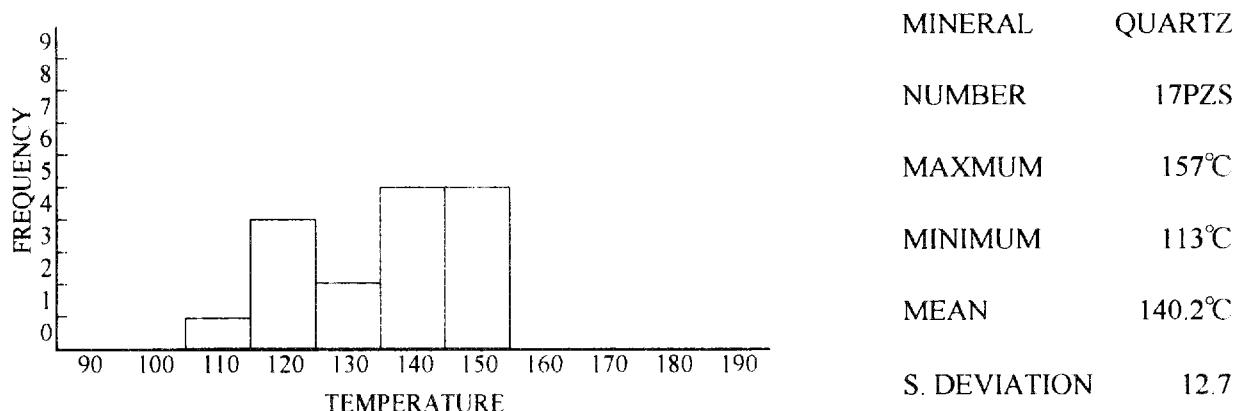
MINERAL	QUARTZ
NUMBER	20PZS
MAXMUM	231°C
MINIMUM	173°C
MEAN	208.4°C
S. DEVIATION	14.9

FigFII-2-3 TABLA DE LA MEDICION DE LA TEMPERATURA HOMOGENEA
Y LA DISTRIBUCION DE LA FRECUENCIA

Sample No.: F-5 (MJMI-11 241.96~241.99m)

No.	Mineral	Size (m μ)	Volume ratio (%)	Form	Temperature (°C)	Melting Temp (°C)	NaCl wt (%)
1	Quartz	5.0	10	po	145	-0.6	1.05
2	Quartz	5.0	7	po	147	-0.2	0.35
3	Quartz	2.5	5	eg	121	-	-
4	Quartz	<2.5	5	eg	128	-	-
5	Quartz	7.5	10	po	152	-0.4	0.71
6	Quartz	5.0	10	po	148	-0.6	1.05
7	Quartz	5.0	7	wg	150	-0.6	1.05
8	Quartz	2.5	7	po	157	-	-
9	Quartz	<2.5	5	eg	135	-	-
10	Quartz	<2.5	5	eg	128	-	-
11	Quartz	5.0	10	po	153	-0.5	0.88
12	Quartz	5.0	10	po	147	-0.7	1.23
13	Quartz	5.0	12	tr	155	-0.1	0.18
14	Quartz	2.5	7	po	138	-	-
15	Quartz	2.5	5	eg	125	-	-
16	Quartz	<2.5	5	eg	142	-	-
17	Quartz	<2.5	3	eg	113	-	-

eg: egg irr: irregular po: polymorph sq: square tr:triangle wg: wedge



PHOTOMICROGRAPH

AP-30

Thin section

(Sample locality)

MJMI-8 (T-2) 150.5m Fm.MEZCALERA Sandstone

MJMI-10(T-7) 92.1m Lithic tuff

MJMI-11(T-9) 116.7m Hornblende Andesite

(abbreviation)

Q : Quartz, Pl : Plagioclase, Ho : Hornblende, Cc: Calcite

Frag: Fragment

Left : Open Nicol, Right : Cross Nicol

AP-31

Polish section

(Sample locality)

MJMI-8 173.9m(P-1), MJMI-8 189.73m(P-4)

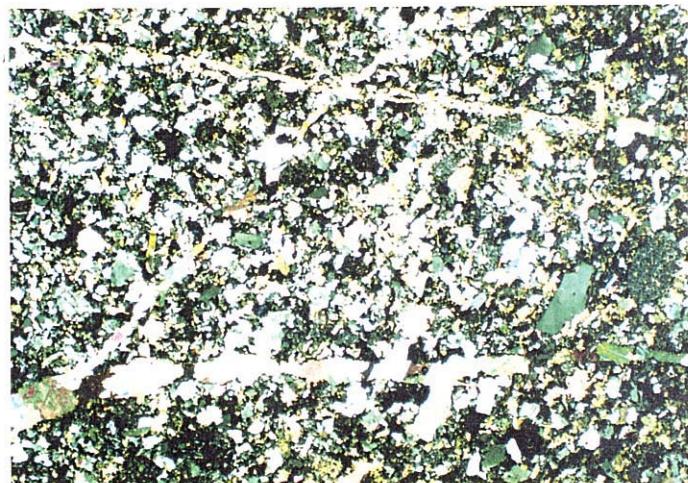
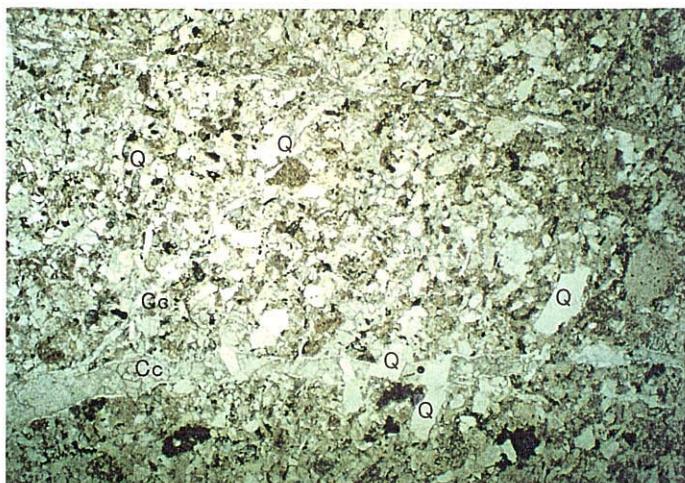
MJMI-10 190.7m(P-6), MJMI-10 193.6m(P-7)

MJMI-10 238.78m(P-8), MJMI-12 195.3m(P-10)

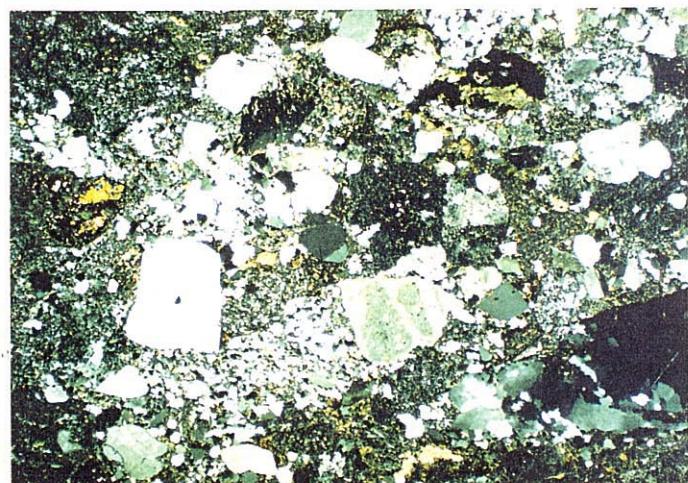
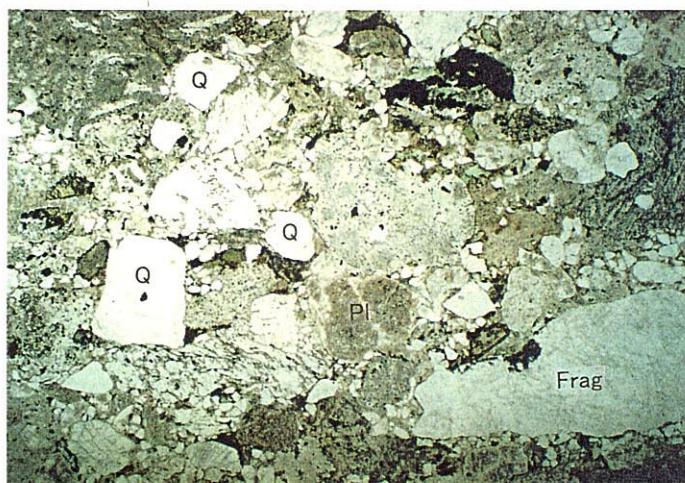
(abbreviation)

Sph : Sphalerite, Gn : Galena, Py : Pyrite, Cp :
Chalcopyrite

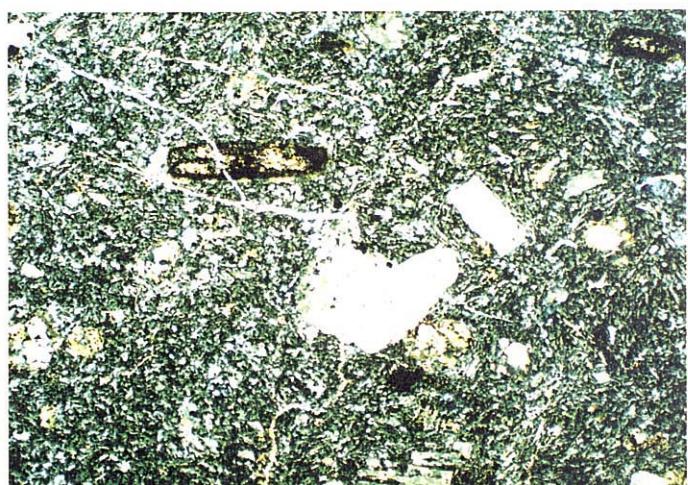
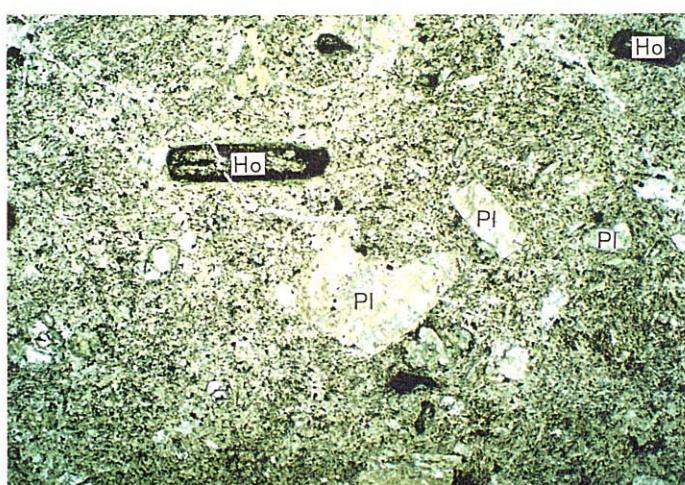
Th : Tetrahedrite, Unk : unknown Ag-mineral



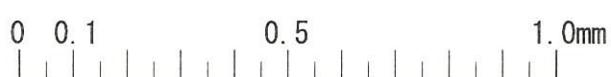
MJMI-8 150.50~150.55m (T-2)

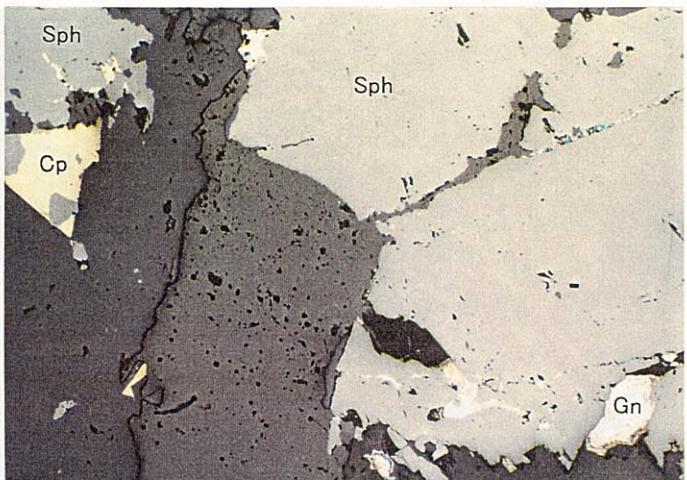


MJMI-10 92.10~92.17m (T-7)

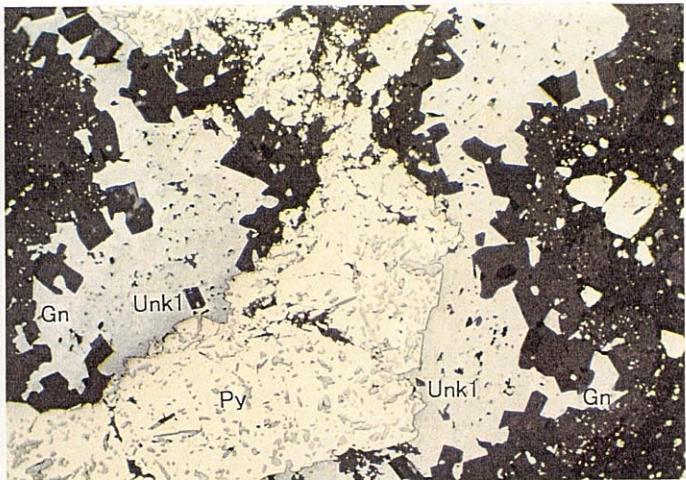


MJMI-11 116.70~116.75m (T-9)





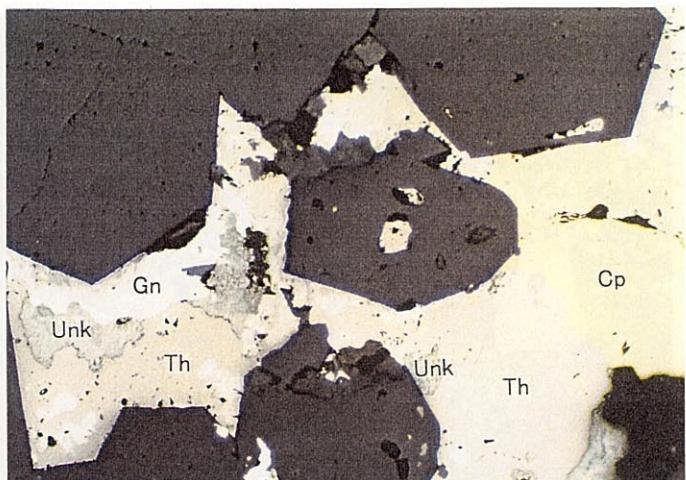
MJMI-8 173.90~174.00m (P-1)



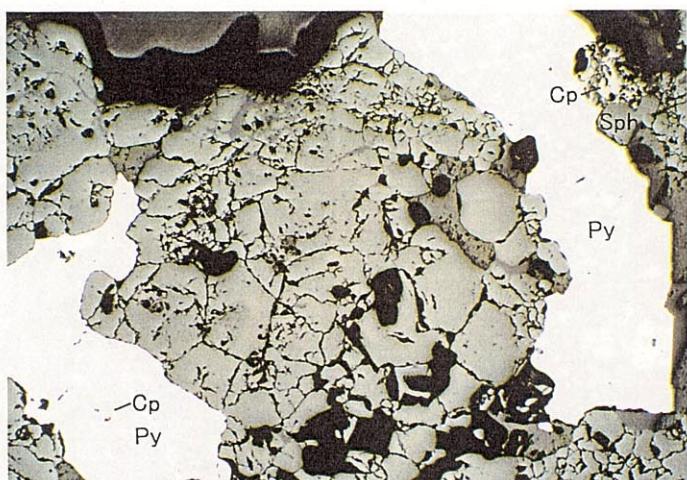
MJMI-8 189.73~189.81m (P-4)



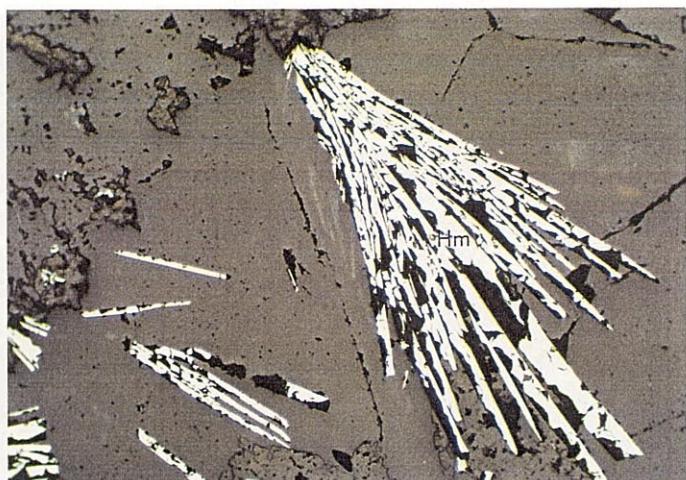
MJMI-10 190.70~190.73m (P-6)



MJMI-10 193.63~193.65m (P-7)



MJMI-10 238.78~238.88m (P-8)



MJMI-12 195.30~195.33m (P-10)

