第Ⅲ部 結論及び提言

第四部 結論及び提言

第1章 結 論

ウム・アダマール地域における第3年次調査として,第1年次及び第2年次に実施した地質調査,物理探査(IP 法及び TEM 法)及びボーリング調査により抽出された有望地域において,深部の地質状況を把握し,Au,Cu 及び Zn の鉱化状況の詳細を解明することを重点課題として,計8 孔,全掘進長2,340.65mのボーリング調査を実施した。

その結果は以下の通り要約される。

- ① 調査地域には Jabal Sujarah 地区、Umm ad Damar North プロスペクト、Umm ad Damar South プロスペクト及び 4/6 Gossan プロスペクトの4箇所に、Au、Cu 及び Zn を含む鉱化作用が認 められる。今年次は、Jabal Sujarah 地区、Umm ad Damar North プロスペクトと Umm ad Damar South プロスペクトの中間地区、4/6 Gossan プロスペクトでボーリング調査を実施した。Umm ad Damar North プロスペクトと Umm ad Damar South プロスペクトの中間地区では物理探査で得 られた有望地域を対象とした。
- ② Jabal Sujarah 地区には Cu 及び Zn を含む塊状鉱及び礫状鉱と黄鉄鉱鉱染からなる火山性塊状硫化物型鉱化作用がデイサイト質火山砕屑岩類中に分布する。塊状鉱や礫状鉱は頁岩,細粒凝灰岩,緑泥石化岩など挟在し、全体としての厚さは 6m 程度と推定される。今年次のボーリング調査では塊状鉱及び鉱染部を捕捉できたが、いずれも Cu 及び Zn を含まない。第2年次の調査結果と総合すると、塊状鉱及び礫状鉱の一部は Cu 及び Zn を含むが、それらの大部分は低品位であると言える。また、その走向方向の拡がりは 200m 程度であり、狭く限られている。黄鉄鉱鉱染帯については 100m 程度の厚さを見込めるが、Au、Cu 及び Zn ともに低品位である。
- ③ 4/6 Gossan プロスペクトには塊状鉱, 珪質鉱, 礫状鉱などからなる火山性塊状硫化物型鉱化 作用が分布する。第2年次に捕捉した鉱化帯の深部延長及び南方延長の調査を実施した。深部 延長部では Zn に富む塊状鉱を捕捉できたが, その厚さは 1.8m 程度と薄いものであった。南方 延長部では鉱化作用を認めることはできなかった。これらの結果,本プロスペクトに賦存する 鉱化帯は3枚あるが,最も優勢な鉱化帯でも厚さ 9.3m 以下,走向延長 100m 程度,傾斜延長 120m 以上と小規模な鉱化帯であると考えられる。
- ④ Umm ad Damar North プロスペクトと Umm ad Damar South プロスペクトの中間地区で高充電率 異常域であり、さらに導電性プレートが推定される箇所を対象に調査を実施した。この結果、 高充電率異常は黄鉄鉱鉱染及び細脈の存在に起因したものであることを明らかにできたが、捕 捉した鉱化帯は Au、Cu、Zn に乏しいものであった。

第2章 将来への提言

- ① 4/6 Gossan プロスペクトには、Cu 及び Zn に富む塊状鉱や礫状鉱など火山性塊状硫化物型鉱化 作用が存在するが、その規模は小さいと判断される。よって、本プロスペクトにおいてこれ以 上の調査は必要ない。
- ② Jabal Sujarah 地区において、火山性塊状硫化物型鉱化作用をターゲットに調査を行ったが、 一部に Cu 及び Zn に富む塊状鉱や礫状鉱を認めたのみで、大部分は低品位であった。鉱床分布 範囲も狭いものと判断される。よって、本地区においてこれ以上の調査は必要ない。
- ③ Umm ad Damar North プロスペクト及び Umm ad Damar South プロスペクト周辺の,高充電率異 常域であり,さらに導電性プレートが推定される箇所は黄鉄鉱鉱染及び細脈群からなる鉱化帯 であり,これ以上の調査は必要ない。

参考文献

- Bowen, R. A. and Smith, G. H., 1981. An Overview Study of the Jabal Sayid District: Technical Record RF-TR-01-2, 72p.
- BRGM-OF-07-6 (Open-file Report). Review of Gold Mineralization in the Arabian Schield, 4/6 Gossan, Umm ad Damar District: 10p.
- Chinkul, M., 1983. A Study of the Fluid Inclusions and O & H Stable Isotopes at Jabal Sayid and its Bearing on the Mineralization: Unpublished Ms.c. Thesis: Faculty of Earth Sci., King Abdul Aziz University, Jeddah, Kingdom of Saudi Arabia, 174p.
- Conraux, J., 1969. Aqiq-Umm ad Damar Drilling Hole Results: BRGM 15p.
- DGMR, 1994. Mineral Resources of Saudi Arabia: 322p.
- Hakim, H. D. and Chinkul, M., 1989. A Fluid Inclusion Study on Mahd adh Dhahab Gold Deposit, Saudi Arabia: JKAU: Earth Sci., vol.2, pp.51-68.
- Harvey T. V., 1984. Ground Geophysical Surveys at the Umm ad Damar Prospect, 1402 to 1404 Program (February 1982 to December 1983): Open-File Report RF-OF-04-12, 44p.
- Howes, D. R., 1984. Mineral Exploration of the Umm ad Damar Prospect: 1403-1404 Program (March 1983 to January 1984), Open-File Report RF-OF-04-4, 44p.
- Kemp, J., Gros, Y., and Prian, J., 1982. Explanatory Note to the Geologic Map of the Mahd adh Dhahab Quadrangle, Sheet 23E, Kingdom of Saudi Arabia: pp.1-39.
- Lewis, P. J. and Martin, G. J., 1983. Mahd adh Dhahab Gold-silver Deposit, Saudi Arabia ,Mineralogical Studies Associated with Metallurgical Process Evaluation: pp.63-72.
- Luce, R. W., O'Neil, J. R., and Rye, R. O., 1979. Mahd adh Dhahab: Precambrian Epithermal Gold Deposit, Kingdom of Saudi Arabia: U.S. Geological Survey (Saudi Arabian Project Report 256), 33p.
- Ramsom, D. M., 1982. Geology and Mineralization of the Umm ad Damar South Prospect, Jabal Sayid District, Kingdom of Saudi Arabia :Riofinex Geological Mission, 59p.
- Ramsom D. M., 1984. Regional Geology of the Umm ad Damar Area and Geology of the North Prospect: Open-File Report RF-OF-04-9, 23p.
- RF-1979-9. 6.2 Umm ad Damar: pp.95-98.

- Rye, R. O., Hall, W. E., Cunningham, C. G., Czamanske, G. K. Afifi, A. M., and Stacey, J. S., 1982. Preliminary Mineralogic, Fluid Inclusion, and Stable Isotope Study of the Mahd adh Dhahab Gold Mine, Kingdom of Saudi Arabia: Open-File Report USGS-OF-03-4, 26p.
- Sabir, H., 1981. Metalogic and Textural Features of Sulfide Mineralization at Jabal Sayid (Saudi Arabia): Bulletin du BRGM Section II, no.1-2/1980-1981, pp.103-111.
- Sahl, M. A., 1979. Geology and Mineralization at Umm ad Damar Area: Faculty of Earth Sciences, King Abdul Aziz University, pp.183-221.

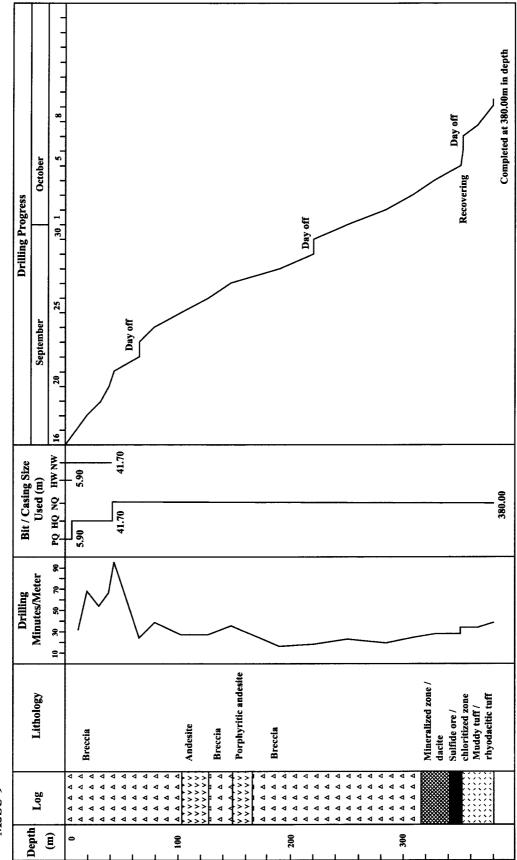
巻末資料

MJS	SU-9			Suve	y Period			Total Man-day			
Operation		Pe	riod	Day	Work Da	y O	ff Day	Engineer	Worker		
Transportation	Preparation	Sep.	16,2000								
Drilling		Sep. 16-	Oct. 9,2000	24	21		3	144	41		
Dismantling		Oct.	9,2000								
Total				24	21		3	3 144 41			
Drilling Lengt	h	(m)		(m)	C	ore Recovery	of Each 10	ch 100m Hole			
Length Planne	d	275.00	Overburden	1.50	D 1	C T T 1	Core	Cumulat	ive Core		
		105.00	Core	279.25	Depth of (m)		Recovery	Reco	very		
Increase/Decre	ease in Length	105.00	Length	378.25	(m	(%)				(%	6)
Lead Della		200.00	Core	00.5	0.00 to 1	00.00 98.3		0.00 to 100.00 98.3		98	.3
Length Drilled		380.00	Recovery	99.5	100.00 to	200.00	100.0	100.0 99.1			
Working Hour	s	(h)	(%)	(%)	200.00 to	200.00 to 300.00		99	.4		
Drilling		184.9	62.5	60.9	300.00 to	380.00	100.0	99	.5		
Other Work		92.1	31.1	30.3							
Recovering		19.0	6.4	6.3		Efficien	cy of Drillir	ng			
Subtotal		296.0	100.0	97.5	Total Length	/ Drilling	m	day	m/day		
Preparation		3.5		1.2	Perio		380.00	24.0	15.83		
Dismantlemen	t	4.0		1.3	Total Length / 7	Fotal Drilling	m	shift	m/shift		
Transportation	l			0.0	Shif	ts	380.00	40.0	9.50		
Grand Total		303.5		100.0	Dril	ling Length /	Each Diam	eter (m)			
	Casing	Pipe Inser	ted		Bit Size	Drilling Le			igth (m)		
C:		Metrag	ge/Drilling	Recovery	PQ	5.90		4.	15		
Size	Metrage (m)	Leng	th (%)	(%)	HQ	35.80 35.8		80			
HW	5.90	D	1.6	100.0	NQ	338.	30	338	.30		
NW	41.70	0	11.0	100.0							

Appendix 1 Summary of Drilling Operation of MJSU-9

Appendix 2 Record of Drilling Operation of MJSU-9

	Drilling	Length			Total		Shi	ft	Man W	orking
Date	Shift 1	Shift 2	Dril			ength	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Sep. 16	2.00	9.40	11.40		9.65		2	2	7	2
Sep. 17	3.80	4.15	7.95	19.35	7.95	17.60	2	2	7	2
Sep. 18	6.00	4.90	10.90		10.90	28.50	2	2	7	2
Sep. 19	5.55	2.65	8.20	38.45	8.20	36.70	2	2	7	2
Sep. 20	2.75	2.40	5.15	43.60	5.15	41.85	2	2	7	2
Sep. 21	14.40	7.30	21.70	65.30	21.70	63.55	2	2	7	2
Sep. 22	Day off									
Sep. 23	6.35	6.70	13.05	78.35	13.05	76.60	2	2	7	2
Sep. 24	12.65	11.10	23.75	102.10	23.75	100.35	2	2	7	2
Sep. 25	9.90	15.00	24.90	127.00	24.90	125.25	2	2	7	2
Sep. 26	10.00	10.00	20.00	147.00	20.00	145.25	2	2	7	2
Sep. 27	24.00	19.30	43.30	190.30	43.30	188.55	2	2	7	2
Sep. 28	17.70	12.00	29.70	220.00	29.70	218.25	2	2	7	2
Sep. 29	Day off									
Sep. 30	14.30	15.70	30.00	250.00	30.00	248.25	2	2	7	2
Oct. 1	15.00	19.25	34.25	284.25	34.25	282.50	2	2	7	2
Oct. 2	12.75	11.65	24.40	308.65	24.40	306.90	2	2	7	2
Oct. 3	7.35	12.00	19.35	328.00	19.35	326.25	2	2	7	2
Oct. 4	14.00	8.75	22.75	350.75	22.75	349.00	2	2	7	2
Oct. 5	1.80		1.80	352.55	1.80	350.80	1	2	7	2
Oct. 6	Day off									
Oct. 7	2.45	10.70	13.15	365.70	13.15	363.95	2	2	7	2
Oct. 8	9.10	5.20	14.30	380.00	14.30	378.25	2	2	7	2
Oct. 9									4	1
Total			380.00		378.25		39	40	144	41



Appendix 3 Drilling Progress of MJSU-9

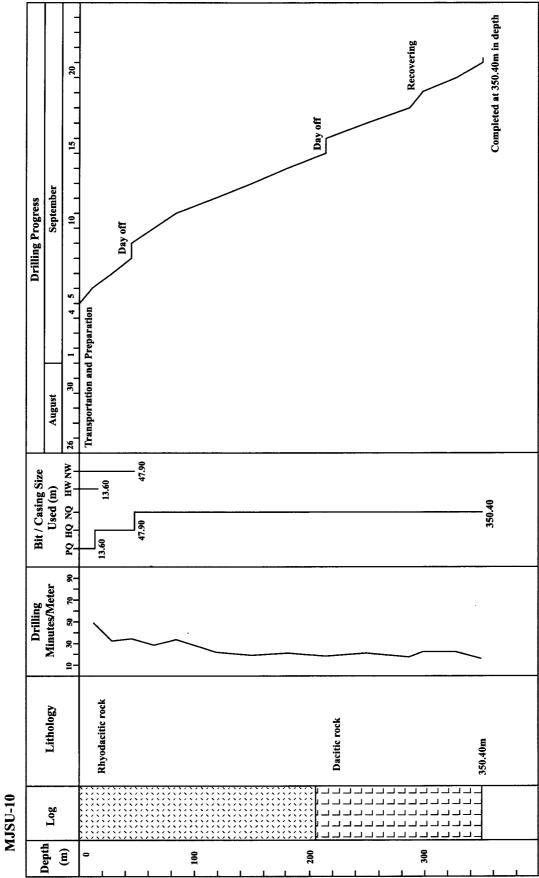
6-NSLM

					8 1						
MJS	U-10			Suv	ey Period			Total Man-	day		
		P	eriod	Day	Work Day		Off Day	Engineer	Worker		
Operation			a (
	n/Preparation		Sep.4,2000	10	9		1	63	14		
Drilling			Sep.20,2000	16	14		2	98	28		
Dismantling		Sep.	21,2000								
Total				26	23		3	161	42		
Drilling Leng	th	(m)		(m)	(Core R	Recovery of Each 1	00m Hole			
Length Plann	ed	250.00	Overburden	4.90	Depth of Hole		Core Recovery	Cumulative	Core		
Increase/Decr	ease in	100.40	Core	345.50		The Core Recovery		Recover	у		
Length		100.40	Length	545.50	(m)		(%)	(%)			
Length Drille	d	350.40	Core	98.6	0.00 to 100.00	0	95.1	95.1			
	u	550.40	Recovery	96.0	100.00 to 200.0	00	100.0	97.6			
Working Hou	rs	(h)	(%)	(%)	200.00 to 300.0	00	100.0	98.4			
Drilling		136.8	65.1	49.0	300.00 to 350.4	40	100.0	98.6			
Other Work		64.2	30.6	23.0							
Recovering		9.0	4.3	3.2			Efficiency of Drill	ing			
Subtotal		210.0	100.0	75.3	Total Length	/	m	day	m/day		
Preparation		52.5		18.8	Drilling Perio	od 🗍	350.40	16.0	21.90		
Dismantleme	nt	1.5		0.5	Total Length / T	`otal	m	shift	m/shift		
Transportatio	n	15.0		5.4	Drilling Shift	s	350.40	28.0	12.51		
Grand Total		279.0		100.0	Dri	illing I	Length / Each Diar	neter (m)			
Casing Pig	pe Inserted				Bit Size			Core Leng	th		
Size	Matraga (m)	Metrag	e/Drilling	Recovery	PQ					8.70	
Size	Metrage (m)	Leng	th (%) [(%)	HQ	IQ 34.30		34.30			
HW	13.60		3.9	100.0	NQ		302.50	302.50	<u> </u>		
NW	47.90	1	3.7	100.0							

Appendix 4 Summary of Drillung Operation of MJSU-10

Appendix 5 Record of Drilling Operation of MJSU-10

	Drilling	Length		Daily	Total		Sh	ift	Man W	orking
Date	Shift 1	Shift 2	Dril	ling	Core	Length	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Aug. 26	Transportation							1	7	
Aug. 27	Transportatio	on						1	7	
Aug. 28	Preparation							1	7	2
Aug. 29	Preparation							1	7	2
Aug. 30	Preparation							1	7	2
Aug. 31	Preparation							1	7	2
Sep. 01	Day off									
Sep. 02	Preparation							1	7	2
Sep. 03	Preparation							1	7	2
Sep. 04	Preparation							1	7	2
Sep. 05	6.25	5.90	12.15	12.15	7.25	7.25	2	2	7	2
Sep. 06	5.55	10.55	16.10	28.25	16.10	23.35	2	2	7	2
Sep. 07	9.80	7.30	17.10	45.35	17.10	40.45	2	2	7	2
Sep. 08	Day off									
Sep. 09	3.75	14.85	18.60	63.95	18.60	59.05	2	2	7	2
Sep. 10	6.95	12.95	19.90	83.85	19.90	78.95	2	2	7	2
Sep. 11	14.05	19.65	33.70	117.55	33.70	112.65	2	2	7	2
Sep. 12	15.00	17.30	32.30	149.85	32.30	144.95	2	2	7	2 2 2 2 2 2 2
Sep. 13	15.10	16.00	31.10	180.95	31.10	176.05	2	2	7	2
Sep. 14	18.00	15.00	33.00	213.95	33.00	209.05	2	2	7	2
Sep. 15	Day off									
Sep. 16	21.00	14.05	35.05	249.00	35.05	244.10	2	2	7	2
Sep. 17	21.95	15.45	37.40	286.40	37.40	281.50	2	2	7	2
Sep. 18	Recovering	11.55	11.55	297.95	11.55	293.05	2	2	7	2 2 2 2 2
Sep. 19	15.00	15.00	30.00	327.95	30.00	323.05	2	2	7	
Sep. 20	18.00	4.45	22.45	350.40	22.45	345.50	2	2	7	2
Sep. 21										
Total			350.40		345.50		28	37	161	42



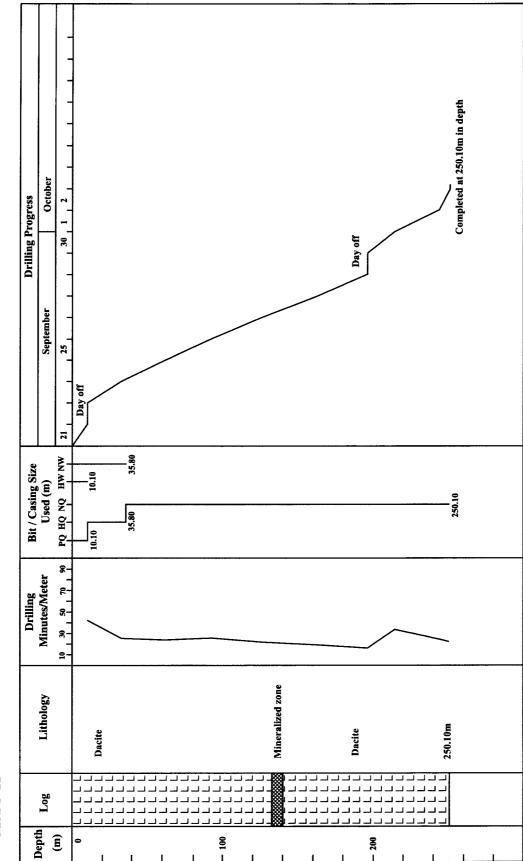


мі	SU-11			Suv	ey Period			Total M	Total Man-day	
Operation	50 11	Р	eriod	Day	Work Day		Off Day	Engineer	Worker	
Transportati	on/Preparation	Sep.	21,2000							
Drilling		Sep.21 -	Oct. 2,2000	12	10		2	70	20	
Dismantling		Oct	.2,2000							
Total				12	10		2	70	20	
Drilling Len	gth	(m)		(m)	Core Re	cover	y of Each 100m H	ole		
Length Plan	ned	250.00	Overburden	2.50	Depth of Ho	ام	Core Recovery	Core Recovery Cumulative C		
Increase/De	crease in	0.10	Core	247.60				Reco	very	
Length		0.10	Length	247.00	(m)	(m) (%)		(%	6)	
Length Drill	ad	250.10	Core	99.0	0.00 to 100.0)0	97.5	97	.5	
		250.10	Recovery	99.0	100.00 to 200	.00	100.0	98	.8	
Working Ho	ours	(h)	(%)	(%)	200.00 to 250	.00	100.0	99	.0	
Drilling		99.4	73.6	71.5						
Other Work		35.6	26.4	25.6						
Recovering		0.0	0.0	0.0		E	fficiency of Drillin	ıg		
Subtotal		135.0	100.0	97.1	Total Length	ι/	m	day	m/day	
Preparation		1.0		0.7	Drilling Perio	od	250.10	12.0	20.84	
Dismantlem	ent	3.0		2.2	Total Length / T	Fotal	m	shift	m/shift	
Transportati	on	0.0		0.0	Drilling Shif	ts	250.10	19.0	13.16	
Grand Total		139.0		100.0	Drilli	ing Le	ngth / Each Diam	eter (m)		
	Casing	g Pipe Inse	erted		Bit Size	D	rilling Length	Core I	ength	
Size	Materia ()	Metrag	ge/Drilling	Recovery	PQ		10.10 7.60		50	
Size	Metrage (m)	Leng	th (%)	(%)	HQ	25.80 25.80		80		
HW	10.10		4.0	100.0	NQ	NQ 214.20 214.20		.20		
NW	35.80		14.3	100.0						

Appendix 7 Summary of Drilling Operation Of MJSU-11

Appendix 8 Record of Drilling Operation of MJSU-11

	Drilling	Length		Daily	Total		Shi	ft	Man We	orking
Date	Shift 1	Shift 2	Dril	ling	Core I	ength	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Sep. 21	3.50	6.60	10.10	10.10	7.60	7.60	2	2	7	2
Sep. 22	Day off									
Sep. 23	8.00	14.70	22.70	32.80	22.70	30.30	2	2	7	2
Sep. 24	12.50	16.40	28.90	61.70	28.90	59.20	2	2	7	2
Sep. 25	14.10	16.70	30.80	92.50	30.80	90.00	2	2	7	2
Sep. 26	16.30	16.90	33.20	125.70	33.20	123.20	2	2	7	2
Sep. 27	18.40	18.70	37.10	162.80	37.10	160.30	2	2	7	2
Sep. 28	20.80	12.20	33.00	195.80	33.00	193.30	2	2	7	2
Sep. 29	Day off									
Sep. 30	8.60	9.40	18.00	213.80	18.00	211.30	2	2	7	2
Oct. 01	14.00	15.50	29.50	243.30	29.50	240.80	2	2	7	2
Oct. 02	6.80		6.80	250.10	6.80	247.60	2	2	7	2
Total			250.10		247.60		20	20	70	20



Appendix 9 Drilling Progress of MJSU-11

MJSU-11

MJSU-12			Suvey	Period			Total Man-	day	
Operation	Pe	eriod	Day	Work I	Day	Off Day	Engineer	Work er	
Transportation/Preparation	Oct	2,2000							
Drilling	Oct. 2, 2000	- Oct.11,2000	10	9		1	56	18	
Dismantling	Oct.1	1,2000							
Total			10	9		1	56	16	
Drilling Length	(m)		(m)	Cor	e Recove	ery of Each 100m	Each 100m Hole		
Length Planned Increase/Decrease in		Overburden	1.20	Depth of	Hole	Core Recovery	Cumulative Recover		
Length	0.00	Core Length	248.80	(m)		(%)	(%)	• • • • •	
		Core		0.00 to 10	00.00	98.8	98.8		
Length Drilled	250.00	Recovery	99.5	100.00 to 2	200.00	100.0	99.4		
Working Hours	(h)	(%)	(%)	200.00 to 2	250.00	100.0	99.5		
Drilling	91.7	75.2	73.7						
Other Work	30.3	24.8	24.3						
Recovering		0.0	0.0		E	fficiency of Drilli	ng		
Subtotal	122.0	100.0	98.0	Total Len	ngth /	m	day	m/day	
Preparation	1.0		0.8	Drilling P	Period	250.00	10.0	25.00	
Dismantlement	1.5		1.2	Total Length		m	shift	m/shif t	
Transportation			0.0	Drilling S	Shifts	250.00	16.0	15.63	
Grand Total	124.5		100.0	Dr	illing Le	ngth / Each Diam	ieter (m)		
Casing Pipe Inserted				Bit Size	Dri	lling Length	Core Leng	gth	
Size Motro - ()	Metrage/Dr	illing Length	Recovery	PQ	4.00 2.8		2.80		
Size Metrage (m)	(%)	(%)	HQ	HQ 20.70 20.70				
HW 4.00	1.6		100.0	0 NQ 225.30 225.30		225.30			
NW 24.70	9.9		100.0						

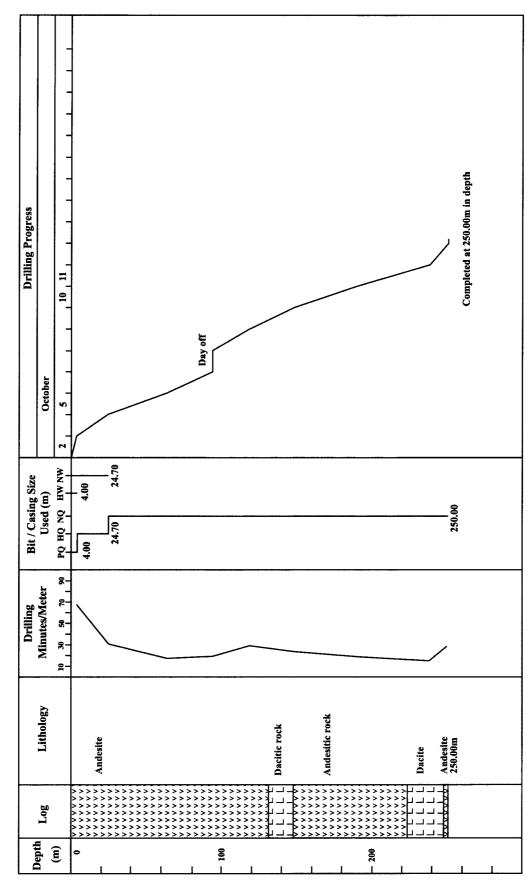
Appendix 10 Summary of Drilling Operation of MJSU-12

Appendix 11 Record of Drilling Operation of MJSU-12

	Drilling	Length		Daily '	Total		Shi	ft	Man W	orking
Date	Shift 1	Shift 2	Dril	ling	Core L	ength	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Oct. 2		3.55	3.55	3.55	2.35	2.35	1	1	3	
Oct. 3	8.15	13.00	21.15	24.70	21.15	23.50	2	2	7	
Oct. 4	15.40	23.60	39.00	63.70	39.00	62.50	2	2	7	2
Oct. 5	21.00	9.00	30.00	93.70	30.00	92.50	2	2	7	2
Oct. 6	Day off									
Oct. 7	7.40	17.15	24.55	118.25	24.55	117.05	2	2	7	2
Oct. 8	11.05	18.40	29.45	147.70	29.45	146.50	2	2	7	2
Oct. 9	17.70	24.30	42.00	189.70	42.00	188.50	2	2	7	2
Oct. 10	25.00	23.00	48.00	237.70	48.00	236.50	2	2	7	2
Oct. 11	12.30		12.30	250.00	12.30	248.80	1	1	4	
Total			250.00		248.80		16	16	56	10



MJSU-12



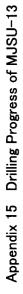
 \mathcal{G}

MJSU	1-13			Suvey I	Period			Total M	an-day
Operation	5-15	Ре	riod	Day	Work Da	ıy	Off Day	Engineer	Worker
Transportatior	n/Preparation	Oct 9	9,2000						
Drilling		Oct. 9- 0	ct.23,2000	15	13		2	91	26
Dismantling		Oct.2	3,2000						
Total				15	13		2	91	26
Drilling Lengt	h	(m)		(m)	Co	ore Reco	overy of Each	100m Hole	
Length Planne	d	250.00	Overburden	0.90	Dth of D	Tala	Core	Cumulati	ve Core
Increase/Decre	ease in	0.00	Com Longth	249.10	Depth of H	Depth of Hole Recovery H		Recov	/ery
Length		0.00	Core Length	249.10	(m)	(m) (%)		(%)
Level Delle		250.00	Core	99.6	0.00 to 100	0.00	99.1	99.	1
Length Drilled	l	230.00	Recovery	99.0	100.00 to 20	00.00	100.0	99 .	6
Working Hour	rs	(h)	(%)	(%)	200.00 to 25	50.00	100.0	99 .	6
Drilling		127.3	66 .0	64.9					
Other Work		65.7	34.0	33.5					
Recovering			0.0	0.0		Eff	iciency of Dri	illing	
Subtotal		193.0	100.0	98.5	Total Leng	th /	m	day	m/day
Preparation		2.0		1.0	Drilling Pe	riod	250.00	15.0	16.67
Dismantlemen	ıt	1.0		0.5	Total Length	/ Total	m	shift	m/shift
Transportation	1			0.0	Drilling Sh	ifts	250.00	26.0	9.62
Grand Total		196.0		100.0	Drill	ing Len	gth / Each Di	ameter (m)
Casing Pip	e Inserted				Bit Size			Core L	ength
Siza	Materia (m)	Metrage/Dr	illing Length	Recovery	PQ	3.00		2.1	0
Size	Metrage (m)	(%)	(%)	HQ 26.90		26.9	00	
HW	3.00	1.2		100.0	00.0 NQ 220.10 220.1		10		
NW	29.90	12.0		100.0					

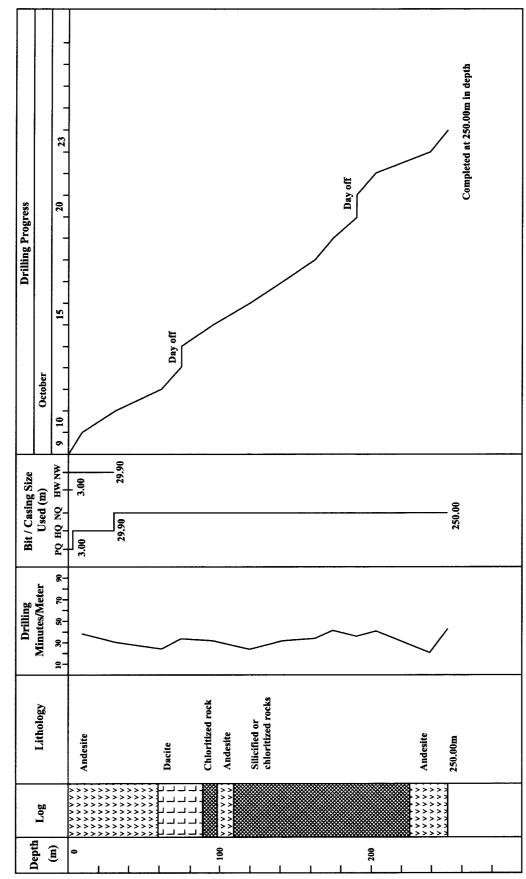
Appendix 13 Summary of Drilling Operation og MJSU-13

Appendix 14 Record of Drilling Operation of MJSU-13

	Drilling	Length		Daily	' Total		Shi	ft	Man W	orking
Date	Shift 1	Shift 2	Dril	ling	Core	Length	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Oct 9	1.10	8.00	9.10	9.10	8.20	8.20	2	2	7	2
Oct 10	13.25	8.60	21.85	30.95	21.85	30.05	2	2	7	2
Oct 11	17.30	13.05	30.35	61.30	30.35	60.40	2	2	7	2
Oct 12	8.70	3.85	12.55	73.85	12.55	72.95	2	2	7	2
Oct 13	Day off									
Oct 14	6.15	15.50	21.65	95.50	21.65	94.60	2	2	7	2
Oct 15	17.50	6.60	24.10	119.60	24.10	118.70	2	2	7	2
Oct 16	7.70	13.85	21.55	141.15	21.55	140.25	2	2	7	2
Oct 17	9.85	11.20	21.05	162.20	21.05	161.30	2	2	7	2
Oct 18	4.00	8.30	12.30	174.50	12.30	173.60	2	2	7	2
Oct 19	5.55	9.55	15.10	189.60	15.10	188.70	2	2	7	2
Oct 20	Day off									
Oct 21	7.20	6.10	13.30	202.90	13.30	202.00	2	2	7	2
Oct 22	16.10	19.10	35.20	238.10	35.20	237.20	2	2	7	2
Oct 23	8.60	3.30	11.90	250.00	11.90	249.10	2	2	7	2
Total			250.00		249.10		26	26	91	26



MJSU-13



2.2

МЈ	SU-14			Suvey P	eriod			Total M	an-day		
Operation		Pe	riod	Day	Work I	Day	Off Day	Engineer	Worker		
Transportati	on/Preparation	Aug. 26 -	Sep.3,2000	8	7		1	49	7		
Drilling		Sep. 4 - S	ep.14,2000	12	10		2	70	10		
Dismantling		Sep.1	6,2000								
Total				20	17		3	119	17		
Drilling Len	gth	(m)		(m)	(Core Reco	overy of Each	100m Hole	100m Hole		
Length Plan	ned	375.00	Overburden	0.00	Denth of	11-1-	Core	Cumulati	ve Core		
Increase/De	crease in	100.40	Com Longth	274.60	Depth of	Hole	Recovery	Reco	very		
Length		-100.40	Core Length	274.60	(m) (%)		(%)	⁶) (%)			
I an ath Daill	- 4	274.60	Core	100.0	0.00 to 1	00.00	100.0	100	.0		
Length Drill	ed	274.00	Recovery	100.0	100.00 to	200.00	100.0	100	.0		
Working Ho	ours	(h)	(%)	(%)	200.00 to	274.60	100.0	100	.0		
Drilling		92.3	61.5	45.6							
Other Work		54.2	36.1	26.8							
Recovering		3.5	2.3	1.7		Eff	iciency of Dr	illing			
Subtotal		150.0	100.0	74.1	Total Ler	ngth /	m	day	m/day		
Preparation		35.0		17.3	Drilling F	Period	274.60	12.0	22.88		
Dismantlem	ent	2.5		1.2	Total Lengt	h / Total	m	shift	m/shift		
Transportati	on	15.0		7.4	Drilling S	Shifts	274.60	22.0	12.48		
Grand Total		202.5		100.0	Dri	lling Len	gth / Each Di	ameter (n	1)		
Casing F	ipe Inserted				Bit Size Drilling Length		ng Length	Core L	ength		
Size	Matraga (ma)	Metrage/Dr	illing Length	Recovery	PQ	PQ 5.95 5.95		5			
Size	Metrage (m)	(%)	(%)	HQ 26.80 26.80		30				
HW	5.95	2.2		100.0	00.0 NQ 241.85 241.8		85				
NW	32.75	11.9		100.0		1					

Appendix 16 Summary of Drilling Operation of MJSU-14

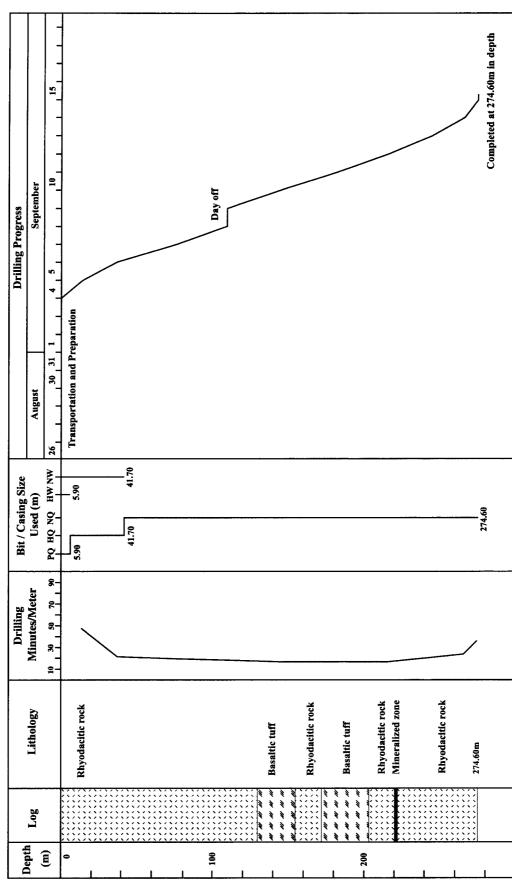
Appendix 17 Record of Drilling Operation of MJSU-14

	Drilling	Length		Daily	Total		Shi	ît	Man Working	
Date	Shift 1	Shift 2	Dri	lling	Core I	ength	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Aug. 26	Transporta	tion						1	7	
Aug. 27	Transporta	tion						1	7	
	Preparation							1	7	2
Aug. 29	Preparation	1 I						1	7	2
Aug. 30	Preparation	1 I						1	7	2
Aug. 31	Preparation	1 I						1	7	2
Sep. 01	Day off									
Sep. 02	Preparation	n						1	7	2
Sep. 03	Preparation	1 I						1	7	2
Sep. 04	3.80	9.65	13.45	13.45	13.45	13.45	2	2	7	2
Sep. 05	11.35	12.30	23.65	37.10	23.65	37.10	2	2	7	2
Sep. 06	19.00	20.00	39.00	76.10	39.00	76.10	2	2	7	2
Sep. 07	16.20	17.00	33.20	109.30	33.20	109.30	2	2	7	2
Sep. 08	Day off									
Sep. 09	16.60	18.50	35.10	144.40	35.10	144.40	2	2	7	2
Sep. 10	21.50	15.20	36.70	181.10	36.70	181.10	2	2	7	2
Sep. 11	22.50	11.90	34.40	215.50	34.40	215.50	2	2	7	2
Sep. 12	12.45	16.15	28.60	244.10	28.60	244.10	2	2	7	2
Sep. 13	15.00	6.00	21.00	265.10	21.00	265.10	2	2	7	2
Sep. 14	6.00	3.50	9.50	274.60	9.50	274.60	2	2	7	2
Sep. 15	Day off									
Sep. 16										
Total			274.60		274.60		20	28	126	32

1.1



MJSU-14



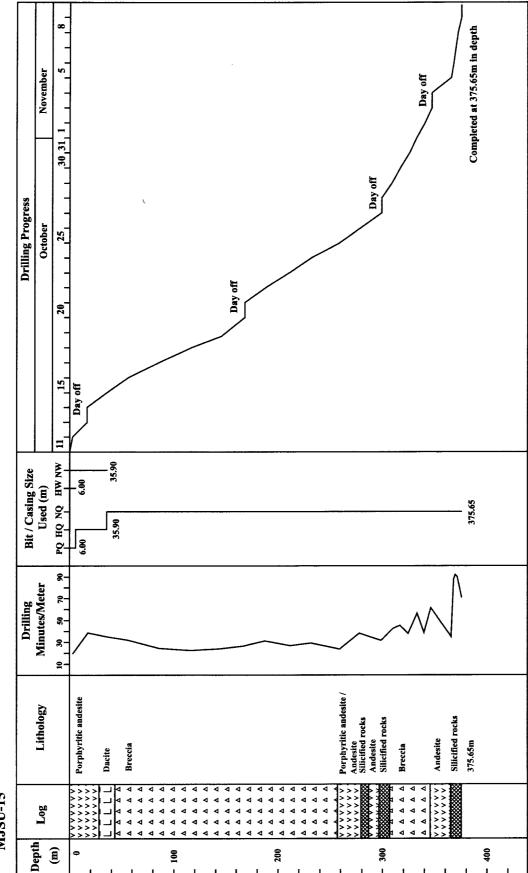
· .

	Аррении			-					
м	ISU-15			Suvey	/ Period			Total M	an-day
Operation	150-15	Р	eriod	Day	Wor	k Day	Off Day	Engineer	Worker
Transportat	ion/Preparation	Oct 11, 2000							
Drilling		Oct 11 - 1	Nov. 8, 2000	29	2	25	4	171	49
Dismantling	3	Nov.	9, 2000	1		1		7	2
Total				30		26	4	178	51
Drilling Ler	ngth	(m)		(m)		Core Reco	very of Each	100m Hole	
Length Plan	ned	375.00	Overburden	1.80			Core	Cumulat	ive Core
Increase/Decrease in Length		0.65	Core Length	373.85	Depth of Hole (m)		Recovery (%)	Recovery (%)	
Length Drilled		375.65	Core Recovery	99.5	0.00 to 100.00 100.00 to 200.00		98.2 100.0	<u>98.2</u> 99.1	
Working Ho	ours	(h)	(%)	(%)	200.00	to 300.00	100.0	99	.4
Drilling		92.3	61.5	45.6	200.00 to 375.65		100.0	99.5	
Other Work		57.7	38.5	28.5					
Recovering				0.0		Effi	ciency of Dr	illing	
Subtotal		150.0	100.0	74.1	Total Leng	th / Drilling	m	day	m/day
Preparation		35.0		17.3	Pe	riod	375.65	29.0	12.95
Dismantlen	ent	2.5		1.2		ngth / Total	m	shift	m/shift
Transportat	ion	15.0		7.4		ig Shifts	375.65	49.0	7.67
Grand Total	l	202.5		100.0			gth / Each Di		<u></u>
	Casing	Pipe Inser			Bit Size		Length	Core L	
Size	Metrage (m)		ge/Drilling	Recovery	PQ		00	4.2	
	U ()	Leng	·	(%)	HQ		.90	29.	
HW	6.00		1.6	100.0	NQ	339	9.75	339	.75
NW	35.90		9.6	100.0					

Summary of Drilling Operation of MJSU-15 Appendix 19

Appendix 20 Record of Drilling Operation of MJSU-15

	Drilling	Length		Daily			Sh		Man W	
Date	Shift 1	Shift 2	Dril	ling	Core I	ength	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Oct. 11		3.05	3.05	3.05	1.25	1.25	1	1	3	1
Oct. 12	8.00	6.00	14.00	17.05	14.00	15.25	2	2	7	2
Oct. 13	Day off									
Oct. 14	12.65	6.20	18.85	35.90	18.85	34.10	2	2	7	2
Oct. 15	10.90	9.40	20.30	56.20	20.30	54.40	2	2	7	2
Oct. 16	12.80	16.80	29.60	85.80	29.60	84.00	2	2	7	2
Oct. 17	16.20	15.00	31.20	117.00	31.20	115.20	2	2	7	2 2 2 2 2 2 2 2
Oct. 18	15.55	13.25	28.80	145.80	28.80	144.00	2	2	7	2
Oct. 19	12.00	9.00	21.00	166.80	21.00	165.00	2	2	7	2
	Day off									
Oct. 21	8.95	12.05	21.00	187.80	21.00	186.00	2	2	7	2 2 2 2 2 2 2 2
Oct. 22	11.85	11.80	23.65	211.45	23.65	209.65	2	2	7	2
Oct. 23	6.20	14.00	20.20	231.65	20.20	229.85	2	2	7	2
Oct. 24	7.00	20.15	27.15	258.80	27.15	257.00	2	2	7	2
Oct. 25	7.95	11.05	19.00	277.80	19.00	276.00	2	2	7	
Oct. 26	10.20	10.80	21.00	298.80	21.00	297.00	2	2	7	2
Oct. 27	Day off									
Oct. 28	3.75	5.95	9.70	308.50	9.70	306.70	2	2	7	2
Oct. 29	2.85	5.25	8.10	316.60	8.10	314.80	2	2	7	2
Oct. 30	4.15	5.00	9.15	325.75	9.15	323.95	2	2	7	2
Oct. 31	4.35	2.00	6.35	332.10	6.35	330.30	2	2	7	2
Nov. 1	5.70	2.80	8.50	340.60	8.50	338.80	2	2	7	2
Nov. 2	1.95	4.20	6.15	346.75	6.15	344.95	2	2	7	2
Nov. 3	Day off									
Nov. 4	11.25	7.65	18.90	365.65	18.90	363.85	2	2		2
Nov. 5	1.50	0.95	2.45	368.10	2.45	366.30	2	2		2
Nov. 6	1.10	0.95	2.05	370.15	2.05	368.35	2	2	7	2
Nov. 7	1.10	0.75	1.85	372.00	1.85	370.20	2	2		2
Nov. 8	1.90	1.75	3.65	375.65	3.65	373.85	2	2		2
Nov. 9	Dismantleme	ent						1	7	2
Nov. 10	Day off									
Nov. 11	Dismantleme	ent						1	7	2
Nov. 12	Dismantleme							1	7	2
Nov. 12	Dismantleme							1	7	2
Total			375.65		373.85		49	53	199	57



Appendix 21 Drilling Progress of MJSU-15

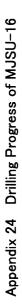
MJSU-15

MJS	U-16			Suvey P	eriod			Total M	an-day
WIJ 3	0-10	Pe	riod	Dav	Work E	Dav	Off Day	Engineer	Worker
Operation			nou	<i>Du</i>)		- u j			
Transportation	n/Preparation	Oct. 2	4, 2000						
Drilling		Oct 24 - 0	Oct.31,2000	8	7		1	49	14
Dismantling		Nov.	1,2000	1	1			7	2
Total				9	8		1	56	16
Drilling Leng	th	(m)		(m)		Core Rec	overy of Each	00m Hole	
Length Planne	ed	200.00	Overburden	1.70	Depth of Hole		Core	Cumulati	ve Core
Increase/Decr	ease in	10.00	Com Lonoth	208.30	•	Hole	Recovery	Reco	very
Length		10.00	Core Length	208.30	(m)		(%)	(%)	
		Core		99.2	0.00 to 100.00		98.3	98.3	
Length Drille	d	210.00 Recovery		99.2	100.00 to 2	200.00	100.0	99.2	
Working Hou	rs	(h)	(%)	(%)	200.00 to 210.00		100.0	99	2
Drilling		79.1	76.8	70.3					
Other Work		23.9	23.2	21.2					
Recovering				0.0	Effici	ency of l	Drilling		
Subtotal		103.0	100.0	91.6	Total Ler	ngth /	m	day	m/day
Preparation		2.0		1.8	Drilling P	eriod	210.00	8.0	26.25
Dismantleme	nt	7.5		6.7	Total Lengtl	n / Total	m	shift	m/shift
Transportatio	n			0.0	Drilling S	Shifts	210.00	14.0	15.00
Grand Total		112.5		100.0	Drilling	Length /	Each Diameter	(m)	
Casing Pip	be Inserted				Bit Size	Drill	ing Length	Core L	ength
0.		Metrage/Dr	illing Length	Recovery	PQ		6.00	4.3	0
Size	Metrage (m)	(%)	(%)	HQ			29.	90
HW	6.00	2	2.9	100.0	NQ 174.10		174.10		
NW	35.90	1	7.1	100.0					

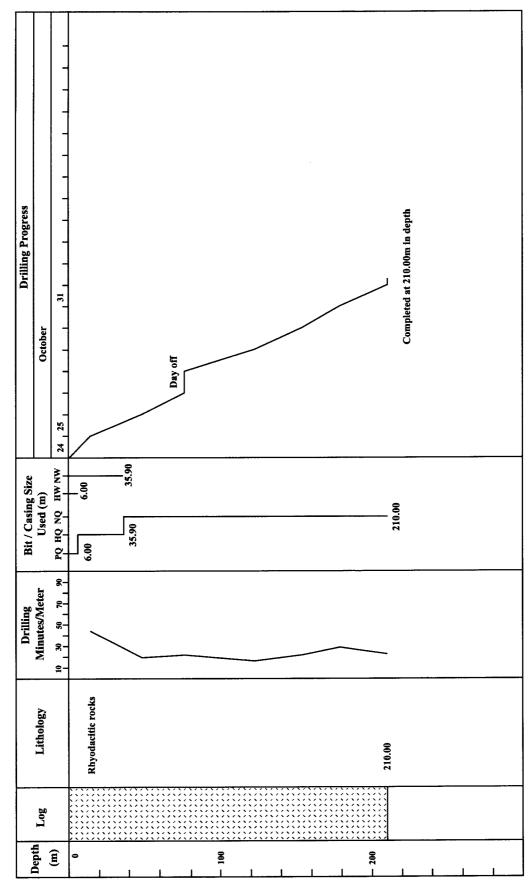
Appendix 22 Summary of Drilling Operation of MJSU-16

Appendix 23 Record of Drilling Operation of MJSU-16

	Drilling	Length		Daily T	otal		Shift		Man W	orking
Date	Shift 1	Shift 2	Dril	ling	Core	Length	Drilling	Total	Engineer	Worker
	(m)	(m)	(m)	(Cum. m)	(m)	(Cum. m)	(Shift)	(Shift)	(man)	(man)
Oct. 24	6.00	8.00	14.00	14.00	12.30	12.30	2	2	7	2
Oct. 25	14.20	20.00	34.20	48.20	34.20	46.50	2	2	7	2
Oct. 26	19.50	8.40	27.90	76.10	27.90	74.40	2	2	7	2
Oct. 27	Day off									
Oct. 28	25.20	21.00	46.20	122.30	46.20	120.60	2	2	7	2
Oct. 29	15.60	15.85	31.45	153.75	31.45	152.05	2	2	7	2
Oct. 30	9.35	15.60	24.95	178.70	24.95	177.00	2	2	7	2
Oct. 31	17.40	13.90	31.30	210.00	31.30	208.30	2	2	7	2
Nov. 1	Dismantlen	nent						1	7	2
Nov. 2										
Total			210.00		208.30		14	15	56	16



MJSU-16



em	Size	Bit No.	MJSU-14	MJSU-9	MJSU-13	Drilling Meter MJSU-16	age / Each Bit MJSU-10	MJSU-11	MJSU-12	MJSU-15	Total (n
	PQ	#845578/8	5.95	5.90	3.00	6.00			2.20	6.00	20
		#843657/6 #19907					1.30	10.10	1.80	0.00	18
1		#19911					5.50				
		Subtotal	5.95	5.90	3.00	6.00	13.60	10.10	4.00	6.00	54
ł	HQ	Average #3987-12/9	26.80	7.50		17.25		T			51
	шę	#8460118/10	20.00	0.60		11120					(
		#9383402/9		11.15							1
		#9283407/9 #9283403/9	<u>+</u>	5.10							
		#81737		4.05	26.90	2.00					32
		#9283647/9 #R68309				4.60	34.30				34
		#9283409/9						25.80	40 80		25
		#928364/9	26.90	35.80	26.90	23.85	34.30	25.80	20.70 20.70	29.90 29.90	224
		Subtotal Average	26.80	33.80	20.90	23.03	54.50	25.60	20.70	27.70	22
ŀ	NQ	#186547/10		5.90							
		#186548/10	3.00	2.95						2.60	_
		#186549/10 #186552/10	1	49.95						2.00	49
		#2143133/10			1.10						48
		#2143136/10 #2143138/10	20.50	27.75	4.65					40.85	4
		#2143139/10	<u> </u>		7.05					7.40	
		#2143141/10	-							21.10	2
		#2143142/10 #8459201/10	╂	4.90	20.35	38.45					
		#8459352/10	+	4.70						0.40	1
		#8459365/10								0.70	1
		#8459367/10 #8459368/10	7.60	3.50						1.70	1
		#8459369/10	-							1.75	
		#8459371/10		2.80							
		#8459373/10			48.80	55.80				1.70	10
ų.		#8459374/10 #8459375/10			40.00	55.60				8.20	10
d B		#8459376/10								27.10	2
Diamond Bi		#8459379/10								<u>6.55</u> 3.45	
Diar		#8459382/10 #8459383/10								8.75	
-		#8459384/10			39.75						3
		#8459385/10						22.30		<u>21.30</u> 9.50	4
		#8459386/10 #8459387/10		14.90	2.00						1
		#8459389/10				62.00				4.45	5
		#8459391/10 #8459392/10				53.90				2.60	
		#8459393/10						-		23.10	2
		#8459396/10 #8459398/10			27.65					17.45	2
		#8459399/10		59.85	38.55	27.00					12
		#8459400/10		16. <u>70</u>	16.70					56.25	3
		#8459401/10 #8459884/10			1.00						
		#9284225/9		04.05			64.00	10.00			7
		#9284329/9 #9284334/9		24.05			61.65				é
		#9284335/9					39.15				3
		#9284337/9 #9284761/9	76.55	17.90							1
		#9284856/9						76.25	3.00		1
		#9284865/9		42.55	2.10					20.90	4
		#9284869/9 #9284875/9	- <u>+</u>		17.45					20.90	
		#9284876/9				5.00					3
		#9284881/9 #9284885/9	36.85	1.95 18.65							1
		#9284896/9		10.00			114.70				11
		#9284897/9 #9284901/9		44.00			23.00				4
	1	#9284966/9	1	44.00		_				37.50	
		#9284967/9						105.65	222.30		22
		#9284969/9 #9284970/9						105.05		14.20	
		#9739333/9	97.35							220.75	2.0
		Subtotal	241.85	338.30	220.10	180.15	302.50	214.20	225.30	339.75	2,00
		Average Total	274.60	380.00	250.00	210.00	350.40	250.10	250.00	375.65	2,3
em	Size	Bit No.		MIGUO			Each Reaming MJSU-10	Shell MJSU-11	MJSU-12	MJS	Total
	PO	#81626	MJSU-14 5.95	MJSU-9 5.90	MJSU-13 3.00	MJSU-16 6.00	MUSU-10	M120-11	19130-12	M12	
=	¹ V	#83516					13.60	10.10	4.00	6.00	
Shell	HQ	#53972	26.80	35.80	26.90	22.20		75 00	20.70	29.90	1
Reaming	NQ	#6WR1746 #8795112	241.85	338.30	220.10	181.80	34.30	25.80	20.70	29.90	9
E C	l "V	#879529	241.03	550.50	220.10		302.50	214.20	225.30		7
		#8795126			250.00	210.00	350.40	250.10		339.75	3

7 ¹

Expendable	1		r			Dmill L	Iole No.				Total
Items	Spec.	Unit	MISU-9	MJSU-10	MJSU-11	MJSU-12		MJSU-14	MJSU-15	MJSU-16	Amount
Diesel Fuel	<u> </u> i	1	1,855	1,505	960	820	1,235	990	2,370	695	10,430
Gasoline		1	398	278	195	165	263		485	138	2,112
Hydraulic.		1	20			20	20	4	20		
Oil Engine Oil		1		10	42			-	91		
Engine Oil Gear Oil		1	60 3	10	42	22	42	40	5	20	326
Grease		l	15	1 8	1	2	$\frac{2}{10}$	3	15	6	76
Polymer		kg	15	0		Z	10				
GS550		kg	243	196	128	117	141	123	248	77	1,273
GS20		1					31		10		41
Lubtub		kg	10	20	25	20	3		7		85
Solcut		1	141		18	10	78	76	28	35	386
Stop Plus		kg	7	3	2	2	7	2	9	1	33
Inner Tube	PQ	pcs		1				1			2
Outer Tube	PQ	pcs		1				1			2
Adapter Coupling	PQ	pcs		1				1			2
Locking											
Coupling	PQ	pcs		1	-			1			2
Landing Ring	PQ	pcs						1			1
Stop Ring	PQ	pcs	1					1			2
Core Lifter	PQ	pcs	1	1				1			3
Core Lifter Case	PQ	pcs	1	1				1			3
Inner Tube	HQ	pcs		1				2			3
Outer Tube	HQ	pcs		2				1			3
Inner Tube											
Head Assem.	HQ	pcs		1				2			3
Adapter	HQ	pcs		1				1			2
Coupling	···~	pes		`							
Locking Coupling	НQ	pcs		1				1			2
Landing Ring	HQ	pcs						1			1
Stop Rong	HÒ	pcs						2			2
Core Lifter	HQ	pcs	4			1		2			7
Core Lifter	НQ	pcs				1		2			3
Case	щų	pes				1		-			5
Inner Tube	NQ	pcs		3			2	2			7
Outer Tube	NQ	pcs		1				1	1		3
Inner Tube Head Assem.	NQ	pcs		1				2			3
Adapter											
Coupling	NQ	pcs	1	1	1			1	2	1	7
Locking Coupling	NQ	pcs	1	1	1			1	2	1	7
Landing Ring	NQ	pcs		1				1		1	3
Stop Ring	NQ	pes	1	2				2		1	5
Core Lifter	NQ	pcs	13	6	7	2	4		5	3	46
Core Lifter Case	NQ	pcs	4	5	1			3	1		14
Stabilizer	NQ	pcs		1						1	2
Shut off							_				
Valve	NQ	pcs					2	2			4
Core Box	PQ	pcs	3	5	4	2	2	2	3	3	24
Core Box	HQ	pcs	11	9	8	6	8	5	9	7	63
Core Box	NQ	pcs	75	67	47	50	50		74	39	459
Water (m ³)			400	260	170	120	270	200	410	110	1,940

Appendix 26	Consumables Used

Appendix 27 Geological Log of MJSU-9 to MJSU-16

,

Date Started Sep. 16, 2000 Date Completed : Oct. 8, 2000

Easting : E 707.184 Northing : N 2,620.785 Elevation (mSL) : 966

Inclination : -55

Azimuth : 155

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
0 –	0000	0 – 1.5 m Gravel	
		1.5 – 1.9m Weathered rock	
		1.9 – 2.7m Porphyritic dacite (?), weathered	
5 –		2.7 – 8.5m Accidental lapillu tuff	
5 -			2.7 – 8.5m Weak silicified
	inn an a	8.5 – 8.9m Gray argillized rock	
10 -		8.9 – 10.1m Weak limonitized zone, argillized rock	
10	$\overset{\sim}{\sim}\overset{\sim}{\sim}$		
		10.1 - 11.9m Weathered rock, whitish	
		11.9 - 12.5m Limonitized zone, brecciated	
		12.5 – 13.4m Sheared zone(silicified rock and argillized rock)	
15 -		13,4 – 16,25m Strong silicified rock, weakly	
		limonitized	
	-111111	(Water loss at drilling time from 15.35 to 15.55m)	
		16.25 – 16.75m Limonitized zone	
		16.75 – 17.2m Argillized zone	
20 -		17.2 – 18.7m Weakly silicified rock with limonite	
		network	
		18.7 – 19.35m Silicified zone with limonite network	
		19.35 – 24.55m Silicified breccia intruded by	
25 -		porphyritic andesite	
		(Water loss at drilling time around 19.35m)	
		24.55 – 25.2m Silicified rock with limonite network	
30 -			
30 -		25.2 – 27.65m Silicified volcanic breccia, matrix silicified, limonite along crack	
		27.65 − 29.8m Breccia of sili rock, matrix is hematite	
		29.8 – 32.4m Porphyritic rock, weak silicified,	
35 -			
		32.4 – 34.7m Silicified lapillistone, fragment size	34.9 – 39.0m Limonite dissemination
		mostly <1cm	
		34.7 – 34.9m Breccia of sili rock, matrix is hematite	
40 -		34.9 – 50.0m Silicified volcanic breccia to	39.0 – 41.5m Py dissemination in breccia
		lapillistone, limonite along crack. Both breccia and matrix are silicified.	
			41.5 – 50.2m Py dissemination and veinlets in
45 -			matrix
		4	
			47.1 - 49.2m Limonite veinlets, partly limonite stained
_			Stan150
50 -		I	

Inclination : -55

Azimuth : 155

Easting : E 707.184 Northing : N 2,620.785 Elevation (mSL) : 966

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
_			
		50.0 – 52.0m Lapilli tuff	50 – 52m Py weak dissemi
-	ŎŎŎŎ		
_	$\nabla \nabla \nabla \nabla \nabla$		52 – 66m Py dissemination is weak to medium. We
			silicification
		52.0 – 66.0m Volcanic breccia, matrix composed of Qtz-Py, fragment : rhyodacite, shale, dacite, size	
		<pre></pre> <pre> <pre></pre> <pre></pre> <pre> <pre< td=""><td></td></pre<></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>	
-	$\nabla \nabla \nabla \nabla \nabla$		
_			
		(FOO THE HERE THE MARK should be	
		<- 58.8m Thin section : T-15 Meta-rhyodacitic lithic tuff	
	$\nabla \Delta \Delta \Delta \Delta$		
_			
	00000		
_			
-		66.0 – 79.4m Silicified volcanic breccia	66 – 79.4m Strong sili., Py medium dissemi.
-	$\nabla \nabla \nabla \nabla \nabla$		
_			
-	<u>ּעַלַעַל</u>		
-			
_			
_			
-			
-			
_		2	
-			79.4 – 92.9m Py weak dissemi
-	$\nabla \Delta \Delta \Delta$	79.4 – 97.9m Volcanic breccia, fragment :	
_		porphyrite, chert, shale, silicified rocks	
		4	
-		4	
_		4	
-		4	
_		Q Q	
		4	
	$\forall \nabla \nabla \nabla$	d	
		3	
_			
-			
-		4	92.9 – 93.2m Strong oxidized zone, hematite
-		4	stained
_		đ	
			93.2 – 97.9m Oxidized zone, hematite in matrix
-			
-		97.9 – 103.7 Silicified volcanic breccia	97.9 – 103.7m Py dissemi. weak
		4	
		4	

2'

Easting : E 707.184

Azimuth : 155

Inclination : -55

Northing: N 2,620.785 Elevation (mSL): 966

Drilled by SGS/BRGM

	Lithology	Mineralization & Alteration
	$\nabla \Delta d$	
- 22	<u>·</u> ·]	
-		
5 - 1		
	☆☆↓ 103.7 – 107.8m Andeiste	
		107.3 – 107.8m sheared, limonite stained
	107.3 – 107.8m Sheared, limonite stained	107.8 – 109.9m Py dissemi. medium, limonite along
	107.8 - 109.9m Sheared silicified breccia	crack
0 - 4	109.9 - 111.0m Jasper, sheared	109.9 – 111.0m Py or limonite fill fracture.
5 - 22	^^ 111.0 − 127.4m Andesite	
-		
20 - 122		
-122		
- 22	AAA AAAA <	
	AAA rhyodacitic tuff	
25		
	⊽∇1 ∇∇1 127.4 − 133m Silicified volcanic breccia	
	$\nabla \nabla \nabla$ 1212 = 122 - Receipt filled with orderite	127.4 – 131.3m Py dissemi. weak to medium, partly
30 — ⊽♡	$\nabla \nabla \nabla d$	limonitized
	$\nabla \Delta \Delta$	
\diamond	133 – 134 2m Breccia	
- \$\$	\sim	
25 <u>-</u> ∇ ∇		133.0 – 140.6m Py dissemi. medium
$\nabla \nabla$	/ ☆ ☆ ∮ / ♡ ♡ ∮ 134,2 − 140,6m Silicified volcanic breccia	
$\nabla \nabla$	$^{\prime}\nabla\nabla$	
$\nabla \nabla$		
$\nabla \nabla$	V ∇ ∇ V ∇ ∇ V ∇ ∇ V − 138.1m Thin section : T−18 Phyllite or meta-	
$\nabla \nabla$	v ở ở siltstone 2 ở ở s	
-00		140.6 – 142.6m Py dissemi. medium to strong
-00	◇ q	
1		
10		142.6 – 148.7m Py dissemi. medium
15	لَّسُمُ 142.6 – 148.7 Silicified breccia	
10'		
-4/2		
-1		
50		

Easting : E 707.184

Azimuth : 155

Date Started Sep. 16, 2000 Date Completed : Oct. 8, 2000

Northing : N 2,620.785 Elevation (mSL) : 966

Inclination : -55

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
0 —			
-			
-		149.7 166- D-mbusitie endocito	148.7 – 166.0m Rarely Py very weak dissemi
	****	148.7 – 166m Porphyritic andesite	(40.7 - 100.011) Rarely Fy Very weak dissenti
-			
_			
-			
5 —			
_			
			i
-			
-			
0 —			
_			
-			
_			
_			
-	~ ~ ^ ^ /		
5 —			
-			
_			
-		166 – 189.6m. Volcanic breccia, pale blue glass	166.0 – 181.0m Py dissemi. medium
_		spotted or fragments, rarely vein-like formed	
0 —			
_			
_			
-	0000		
5 —			
•			
_	ĮŽŽŽŽ	v J	
-	$\nabla \nabla \nabla \nabla$		
_			
0 —			
-			181.0 - 182.0m Py band-formed disseminate ore
			to the restored y build to mode abooming to be
-			
-	$\nabla \nabla \nabla \nabla$	4	182.0 - 184.0m Py band-formed disseminated zone
		4	with qtz
-		4	
5		A	184.0 – 188.5m Py fills breccia. Breccia also Py–
		4	disseminated.
-		4	
-		4	
		N N	
-		4	188.5 – 189.6m Qtz-Py fill breccia
-			
^		4	
0 -	$\nabla \Delta \nabla \Delta$	4	189.6 – 195.7m Py fills fine-sized breccia
-			
	$\nabla \Delta \nabla \Delta$	4	
-		189.6 – 195.7m Conglomerate-like lapillistone to	
-			
		4	
-			
95 —		telsic rock of rhyodacitic composition	
	$\nabla \Delta \nabla \Delta$		
-		4	
-		↓ ↓ 195.7 – 205.0m Volcanic breccia with spotted pale	195.7 – 200.0m Py fills breccia. (like flow-filling)
		I 195.7 – 205.0m Volcanic breecia with spotted pale v blue glass and glass veinlets	
-		7	
		4	
		N	1

Azimuth : 155

Easting: E 707.184 Northing: N 2,620.785 Elevation (mSL): 966

Inclination : -55

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
_	$\Delta \Delta \Delta \Delta \Delta$		
-			200.0 – 205.0m Py medium dissemination and
_	<u>ŽŽŽŽŽ</u>		veinlets
_	$\Delta \Delta \Delta \Delta \Delta$		
	ŏŏŏŏ∢		
-	$\nabla \Delta \Delta \Delta d$	<- 206.4m Thin section : T-20 Meta-rhyodacitic	205.0 – 217.0m Py fills breccia
_	$\nabla \Delta \Delta \Delta \Delta$	fine tuff	
		205.0 – 217.0m Volcanic breccia, smaller breccia is	
_	$\Box \Delta \Delta \Delta \Delta d$	subangular and larger is angular. No pale blue glass	
_			
	$\nabla \nabla \nabla \nabla \nabla$		
_			
-	ŎŎŎŎŎ		
-			
	$\dot{\Delta}$		
_			
_		217.0 - 219.0m Volcanic breccia containing	
-		siltstone big fragments	217.0 – 219.0m Py dissemination weak
_			
		<-219.0m Thin section : T-21 Meta-tuff of felsic composition	
		Composition	219.0 – 221.5m Qtz-Py fill breccia
-		219.0 – 222.6m Lapillistone, max size of fragments is	
_	-00000	3cm.	
	$\Delta \Delta \Delta \Delta \Delta$		221,5 – 222.6m Py fills breccia
-			
_		222.6 – 234.2m Volcanic breccia with black to gray	
_		bands (chlorite?) or patch, and pale blue glass patch	
_			222.6 – 234.2m Py lens and dissemination in
-	$\nabla \nabla \nabla \nabla \nabla$		chloritized parts
_			
		<- 228.0m Thin section : T-22 White-mica schist	
-			
_			
-			
-			
_			
	$\nabla \nabla \nabla \nabla \nabla$		
-			
-		234.2 - 246.2m Lapillistone to lapilli tuff Shape of	234.2 - 246.7m Qtz-Py fill breccia partly with
-		fragments mainly subrounded, with pale blue glass elongated like veinlet or spotted	strong Py dissemination
	$\nabla \Delta \nabla \Delta$		
-			
_			
	$\nabla \Delta \nabla \Delta$	2	
-		7	
	$\nabla \Delta \nabla \Delta$	4	
-		N N	
_			
		4	
-		246.2 – 246.7m Sandstone(?) with glass spots	
		2	
			046 7 054 Fm Du diagoni yang wook
	411.11		
			246.7 – 254.5m Py dissemi. very weak

1

Easting : E 707.184 Northing : N 2,620.785 Elevation (mSL) : 966

Azimuth : 155 Inclination : -55

Drilled by SGS/BRGM

^		Lithology	Mineralization & Alteration
0 —			
-	$\lambda \lambda \lambda$	250.4 - 250.7m Black band (chlorite?) with pale blue	
-	XXX	glass, like muddy tuff	
-			
-			
5 —		250.7 – 276.1m Lapilli tuff, partly coarse to sandy	
		tuff-like, in some parts pale blue glass elongated	254.5 – 267.0m Py -Qtz fill breccia., Py veinlet-like
			from 257.0 to 258.5m.
-			
) —			
			260.2m Qtz-Py vein, 10cm in width
-			
-			
_			
5			
	1. Sek		267.0 – 271.8m Weakly Py dissemi.
	1. Sov		
0 -			
	1222		
		4	271.8 - 276.1m Py-Qtz fills breccia
		S S S S S S S S S S S S S S S S S S S	
5 -		x x	
5			
	-	276.1 – 281.0m Dacitic coarse tuff with pale blue	
	_	glass patch (tuff?)	
- 08			
	_	281.0 – 281.5m Pale blue glass rich rock	
			281.5 – 283.0m Strong silicified and Py dissemi.
		281.5 – 283.0m Silicified rock	medium
		7	
		4	
35 -		∛ √ 283.0 – 289.3m Volcanic breccia, partly pale blue	
		Y	283.0 – 289.3m Qtz-Py dissemi.
		4	
		3	
	~~~^	- √ 289.3 – 289.8m Andesite	
90 -		4	289.8 – 292.8m Py–Qtz fill breccia
	$\neg \nabla \nabla \nabla \nabla$		292.8 – 297.55m Py dissemi. very weak
295 -			
		4	
		4	
		¢.	
	- 4. 1		
		. A	

Easting : E 707.184 Northing : N 2,620.785 Elevation (mSL) : 966

Azimuth : 155

Inclination : -55

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
300 —			
			297.55 – 310.0m Py fills breccia
		297.55 – 310.0m Volcanic breccia or tuff breccia with elongated glass patch. Frgaments are mainly	297.35 - 310.0m Fy his breccia
		angular.	
305 —			
			306.4 – 309.0m Strong silicified
310 -			
		310.0 – 315.7m Volcanic breccia with pale blue	310.0 – 315.7m Py lensy dissemination medium to
		glass	strong
315 -			
		315.7 – 318.5m Mineralized zone, partly strongly	315.7 – 318.5m Py-Qtz veinlets and Py strong
	-	chloritized and weakly epidotized	dissemi
320 -		318.5 – 321.6m Silicified dacite(?)	318.5 – 321.6m Qtz-Py veinlets 3 to 4/m, but Py dissemi. very weak
	, ^ ^ ^		
		321.6 – 324.9m Chloritized tuff(?)	321.6 – 324.9m Py veinlets or lens abundant
325 -	Babac	324.9 – 326.9m Dacite with qtz and green patch	
		(intrusive)	
		326.9 – 328.1m Chloritized rock	326.9 – 328.1m Py lens abundant
330 -		328.1 – 334.6m Dacite (?, intrusive)	
			331.1m Qtz (-Py) vein 4cm wide
		N	
		N N	334.6 – 336.7m Pv–Qtz fill fine-sized breccia
335 -		334.6 – 337.4m Lapillistone	334.0 - 330.7m Py-Qtz IIII IIne-sized Dreccia
		337.4 – 339.7m Chloritized zone, a side of core	336.7 − 337.4m Py fills fine−sized breccia
		consists of dacite	337.4 – 339.7m Abundant Py lens in chloritized zone
340 -		339.7 – 339.9m Silicified breccia	
340 -		339.9 – 341.25m Chloritized zone	339.7 – 341.25m Py-chlorite banded zone, partly cutted by Qtz-Py vein
		341.25 – 343.4m Sulfide ore	341.25 - 343.4m Py-Qtz banded ore
		343.4 – 343.9m Chloritized rock	343.4 - 343.9m Py banded dissemination
	->>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	343.9 – 345.0m Sulfide ore	343.9 – 345.0m Py-Qtz banded ore, cutted by Qtz
345 -		Ę	vein (2cm in width)
		345.0 – 347.3m Chloritized rock	345.0 - 347.3m Py dissemi. strong
		347.3 – 349.0m Sulfide ore	347.3 – 349.0m Banded ore with Py (–Cp) – Qtz, cutted by Qtz–Py veinlets
		349.0 - 349.5m Dacite (?)	349.5 – 350.0m Py–Qtz fill fine-grained breccia, cutted by Qtz–Py vein
350 -	0.0	1	

2 °

Date Started Sep. 16, 2000 Date Completed : Oct. 8, 2000

Northing: N 2,620.785 Elevation (mSL): 966

Easting : E 707.184 Azimuth : 155

Inclination : -55

Drilled by SGS/BRGM

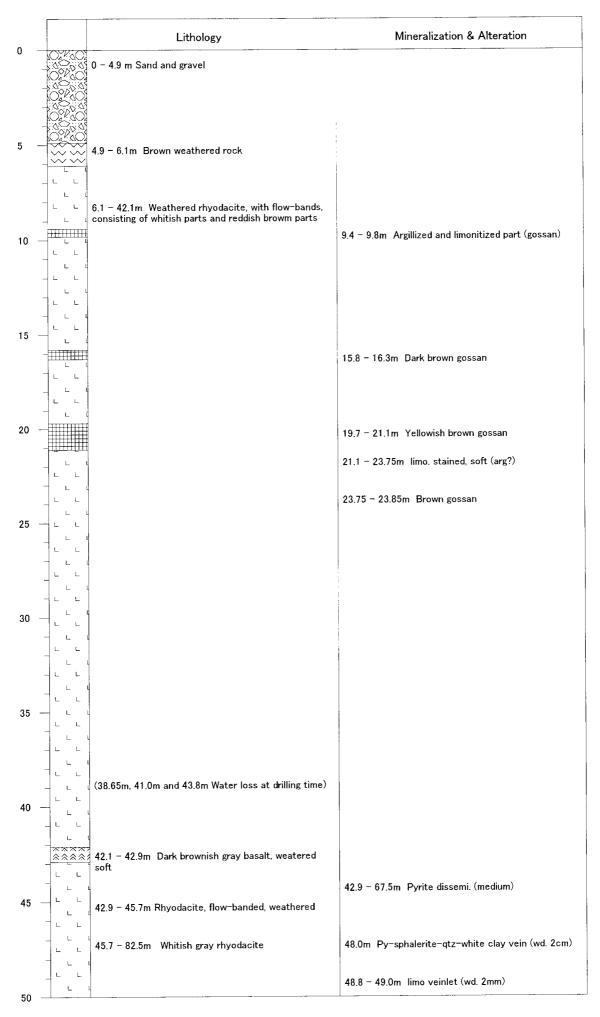
50	Lithology	Mineralization & Alteration
50 — _ _	349.5 – 350.0m Silicified Iapillistone 350.0 – 350.8m Chloritized rock 350.8 – 351.8m Sulfide ore	350.0 − 350.3m Py lens or bands 350.3 − 350.8m Py dissemi 350.8 − 351.8m Qtz−Py banded ore or vein 351.8 − 352.55m Py lens and dissemi
-	351.8 – 352.55m Chloritized rock 352.55 – 353.4m Silicified rock	352.55 – 353.4m Qtz-Py Vein or Sili. rock with Py lens
55 —	353.4 – 354.6m Weakly laminated argillaceous tuff	353.4 – 355.1m Py lens and dissemi
-	354.6 – 355.1m Chloritized rock	355.1 - 355.5m Abundant Py lens in Strongly Py dissemi. tuff (?)
-	2 ( ( ) 355.1 – 355.5m Tuff (?)	355.5 – 356.9m Strong Py dissemination
-	355.5 – 356.9m Silicified rock	356.9 - 357.7m Py-Qtz banded ore
0 —	356.9 – 357.7m Sulfide ore	357.7 – 359.9m Strong Py dissemi.
-	357.7 – 359.9m Argillized muddy tuff with white elongated glass patch	308.5 – 308.6m Strongly silicified and very strongly Py dissemi
-	1	308.6 – 380.0m Py dissemi.
5 —	362.0 – 363.6m Sheared black mudstone or tuffaceous mudstone	
-	363.6 – 375.0m Muddy tuff or chloritized rock, weakly sheared	
0 —		
	C- 370.9m Thin section : T-23 Strongly chloritized rhyodacitic tuff	
75 —		
	375.0 - 380.0m Rhyodacitic tuff (?)	
30 -		

Date Started Sep. 05, 2000 Date Completed : Sep. 22, 2000

Easting: E 709.028 Northing: N 2,618.808 Elevation (mSL): 954

Azimuth : 300 Inclination : -55

Drilled by SGS/BRGM



### Drill Hole No. : MJSU-10 Date Started Sep. 05, 2000 Date Completed : Sep. 22, 2000

Easting: E 709.028 Northing: N 2,618.808 Elevation (mSL): 954

Azimuth : 300 Inclination : -55

Drilled by SGS/BRGM

	Lithology	Mineralization & Alteration
	45.7 - 82.5m Whitish gray rhyodacite	42.9 - 59.75m Weak silicified
		1
	ц.   - ц	
L		1
	L	
	- ↓ └── <- 60.0m Thin section : T−6 Meta-rhyodacitic fine	
	L <b>tuff</b>	
	- 4 L	
	_ 4	65.2 – 66.7m Glass part weakly argillized
	_ Q	66.7 - 67.5m Weakly silicified
L L	_ L _ L	67.5 – 70.6m Py dissemi. medium to strong, partly accompanied by Cp, rarely Sp, sili.
	L	70.6 – 85.1m Silicified
	L	70.6 ~ 71.0m Py dissemi medium
-	L	71.0 - 86.5m Py dissemi medium, weakly arg + sili
L	L	
	L	
- L		
- L	└ └ └ <- 77.0m Thin section : T-7 Meta-siltstone or	
- L	L meta-volcanic fine tuff of felsic composition	
	82.5 – 83.6m Dark green basalt (andesite?)	
; ,		
	└   └ └ 83.6 - 90.2m Whitish gray rhyodacite	86.5 – 88.0m Py weak dissemi
_ L		88.4m and 88.9m Cp-Sp-Qtz veinlets (wd. 1cm)
-  L		
) –		88.0 – 90.0m Py dissemi weak to medium
	90.2 – 95.3m Rhyodacitic tuff, pale greensih gray	90.0 – 99.1m Py dissemi weak
$\downarrow$	ンンン ンンン <- 93.0m Thin section : T-8 Meta-rhyolitic to	30,0 - 33,1111 ry Uissenni weak
	rhyodacitic tuff	
5	95.3 – 96.0m Rhyodacitic lapilli tuff	
Ť.	96.0 – 99.1m Rhyodacitic tuff	
	>>>> ※ ※ ※ 99.1 - 100.1m Basalt, dark gray	
	888 999.1 - 100.1m Basait, dark gray	

J-10 Date Started Sep. 05, 2000 Date Completed : Sep. 22, 2000

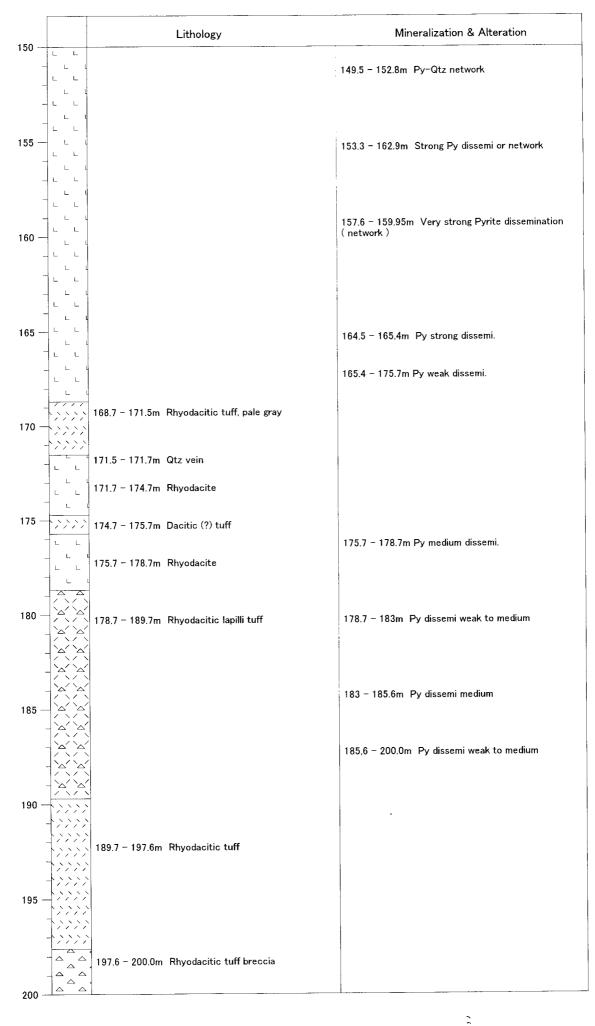
Easting : E 709.028 Northing : N 2,618.808 Elevation (mSL) : 954

Azimuth : 300 Inclination : -55

		Lithology	Mineralization & Alteration
100			
-{.	~~~~		
-	///// ////////////////////////////////	100.1 - 110.0m Rhyodacitic tuff, pale gray	
	///// \\\\\		106.3 – 107.8m Py dissemi strong
			107.8 – 110.0m. Py dissemi medium
110		110.0 – 110.7m Basalt, dark gray	I
-		110.7 – 113.3m Rhyodacitic tuff	110.7 – 113.3m Py dissemi weak
-	~~~~		
	×	113.3 - 116.15m Basalt	
	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	116.15 – 116.9m Rhyodacitic tuff, pale green 116.9 – 117.5m Basalt	116.15 – 116.9m Py dissemi medium
-		117.5 - 119.1m Rhyodacitic tuff	117.5 – 119.1m Py dissemi medium, 117.6 –
	<u>, , , , ,</u>	110.1 110.7 Decel	118.0m strong Py dissemi
120 -			119.7 – 122.6m Py strong dissemi ( or network)
	///// \\\\\	119.7 – 132.6m Rhyodacitic tuff	
125 —			
_			
-	///// \\\\\		126.7 – 128.0m Py-Qtz network, wd max 2cm
+			
	///// 、、、、、		126.7 – 171.5m Py dissemi weak to medium
130 —			129.85 – 131.6m Py-Qtz network
_		122.0 125.1. Dhuada ita without flowshoud	
_	L I	132.6 - 135.1m Rhyodacite without flow-band <- 133.5m Thin section : T-10 Meta-rhyolite	
	$ \otimes \otimes \otimes \otimes $ $ \otimes \otimes \otimes \otimes \otimes $ $ \otimes \otimes \otimes \otimes \otimes $	135.1 – 136.8m Pale gray basalt	
_	LL		137.9 - 139.7m Py-Qtz network
140 —	L L	136.8 – 168.7m Rhyodacite, whitish gray	
	LI		
-		4	141.5 – 142.2m Py (–Cp) – Qtz network, wd max
-	- L L		3mm
-	LI	u l	
145 —	L L	- 	144.9 – 147.5m Py-Qtz network, wd max 5cm
-	L L L I		
-	L L		
		4	
150 🔟	L	4	
100			

Date Started Sep. 05, 2000 Date Completed : Sep. 22, 2000 Drill Hole No. : MJSU-10 Easting : E 709.028 Northing: N 2,618.808 Elevation (mSL) : 954

Azimuth: 300 Inclination : -55



Azimuth : 300

Easting : E 709.028 Northing : N 2,618.808

Elevation (mSL) : 954 Inclination : -55

		Lithology	Mineralization & Alteration
200 —			
-		200.0 – 202.7m Laminated tuff	200.0 – 202.7m Py medium impregnation along bedding
-	L :	202.7 - 203.5m Rhyodacite or tuff breccia	202.7 205.8m Py weak dissemi
-	* ? ? ? ? ?	203.5 - 205.3m Rhyodacitic tuff	
205 —		205.3 - 205.8m Dacitic Iapilli tuff	
-		205.8 – 216.6m Dacitic tuff, small green patch tuff, rarely qtz fragments	
210  -		<− 210.0m Thin section : T−11 Highly sheared rhyolitic to rhyodacitic tuff	
 215 -			214.7 – 215.9m Qtz-Py veinlets
- 220 		216.6 - 223.4m Qtz-eye dacitic tuff with small green patch, qtz eye 0.5 - 1cm in diameter	218.6 – 218.9m Qtz-Py veinlets
 225 — -	- 11 - 11 100000000000000000000000000000	223.4 – 226.9m Dacitic fine tuff, similar to laminated tuff	223.4 – 226.9m Py medium dissemi
- - 230		226.9 – 234.5m Dacitic tuff with small green patch and partly Qtz–eye	226.9 – 239.1m Qtz-Py veinlets seldomly
- - 235 —			
- - 240 —			
-		239.1 – 245.5m Dacitic tuff with small green patch and partly Qtz-eye	239.1 – 245.5m Qtz-Py veinlets 2/m
245 — - -		green patch and Qtz-eve	245.5 – 251.6m Py weakly dissemi
- 250 —			

Easting : E 709.028

Azimuth : 300

Date Started Sep. 05, 2000 Date Completed : Sep. 22, 2000

Northing : N 2,618.808 Elevation (mSL) : 954

Inclination : -55

Drilled by SGS/BRGM

: •

)	Lithology	Mineralization & Alteration
- //*		250.1m Qtz-Py veinlets, 5cm in wide
11		
		251.6 - 261.2m Py-Qtz veinlets 2 or 3/m
	251.6 – 261.2m Dacitic tuff, partly containing small	
5 - "		
- //		
11	// ^{\\\}	
o ⊣″,∾		
- //``		
		261.2 - 270.5m Py(-Qtz) veinlets 1 or 2/m
<b>'</b>	,∨,  <- 265.0m Thin section : T-12 Rhyodacitic	
$ \bigvee_{v \neq v} v_{v}$	<pre>crystal-rich tuff</pre>	
$-\sqrt{\sqrt{2}}$	$\checkmark$	
	270.5 - 272.0m Dacitic tuff with small green patch	
- 1575		
- 12/22	272.0 – 273.5m Dacitic fine tuff	
- ////		
5 -		
5 _ //\\ //\\	273.5 – 276.2m Dacitic tuff with small grenn patch	273.5 - 276.2m Py veinlets 3 or 4/m
	276.2 – 277.7m Dacitic coarse tuff	
- 12		
	277.7 – 284m Dacitic tuff, partly containing small	
0 - //``	green patch	
- 11		283 – 284m Iregular-formed Py veinlets
5		
Ē		286.9 – 287.0m & 287.9 – 288.0m Laminated Qtz-
	286.6 – 288.8m Dacitic tuff, partly muddy	Py zones
	288.8 - 290.9m Dacitic tuff or dacite	
	290.9 – 291.4m Rhyodacitic fine tuff	
		291.4 – 293.6m Seldomly Qtz-Py veinlets
4	291 4 – 293.6m Tuff	
	291.4 – 293.6m Tuff	
	293.6 - 304.4m Dacitic tuff with small green patch	
	and Qtz-eye	
- 11	// ^{\$\$\$}	
-		297.5 – 298.5m Py weakly dissemi
1//		

Easting : E 709.028 Azimuth : 300 Inclination : -55

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
) —	111 11		
-	11 11		
_	11 11		
	11 11		301.0 - 302.4m Qtz veinlets and Py weakly dissesmi
-	11/ 11/		
	11 11		
	11 ⁵⁵ 11 ⁵⁵		
; —			
	11 ³⁰ 11 ³⁰		
	11 11	304.4 – 309.95m Dacitic tuff without green patch,	
_	11 11	partly Qtz-eye bearing	
	111 11		307.0m Qtz vein, 10cm in width
	111 11		
_	11 11		
	11 11		
) —			309 − 309.95m Py weakly dissemi., fine−sized
	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$		
	VVV	309.95 – 314.3m Dacite, grayish green	
			309.95 – 314.3m Py dissemi very weakly
			SUSSO STAUNTY dissent very weakly
	v v v v		
-	V V V		
	11 11		
5 —	11 11		
_	11 11		
	11 11	314.3 – 330 7m Dacitic tuff, partly Qtz-eye bearing	
_			
_	11 ²² 11 ²⁴		
	11 11		317.5 – 318.95m Py weak dissemi
-	11 11		
)	1111 11		
,	11 11		
_	11 11		
	11 11		
	11 11		
	11 11		
	11 11		
_	11 11		321.6 – 350.4m Py weakly dissemi
; —	11 11		
,	11 11		
	11 11		
	11 11		
	11 11		
-	11 11		
	11 11		
_	11/ 11/		
) —	111 11		
_			
_	vvvv		
		330.7 – 340.2m Dacite	
-	VVVV		
_	vvvv		
; —	$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$		
_	vvvv		
	v v v		
_	v V v V v		
	, v v v		
	ÚVÚV,		
	1 V V V		
	11-11-		
	11 11		
	11 ¹¹ 11 ¹¹ 11 ¹¹ 11 ¹¹		
( 	11 ¹¹ 11 ¹¹ 11 ¹¹ 11 ¹¹		
(  		340.2 - 350.4m Dacitic tuff	
(  		340.2 - 350.4m Dacitic tuff	
(  		340.2 – 350.4m Dacitic tuff	
		340.2 - 350.4m Dacitic tuff	
		340.2 – 350.4m Dacitic tuff	
		340.2 – 350.4m Dacitic tuff	
		340.2 – 350.4m Dacitic tuff	
		340.2 – 350.4m Dacitic tuff	
		340.2 – 350.4m Dacitic tuff	
		340.2 – 350.4m Dacitic tuff	

3 ∉

Easting : E 710.023

Azimuth: 150

-11 Date Sta

Inclination : -55

Northing : N 2,618.581

Drilled by SGS/BRGM

; '

Mineralization & Alteration Lithology 0 Sand 2.5 - 5.3m Whitish brown weathered rock 5 5.3 - 6.8m Fractured and weathered rock, brown 6.8 - 11.9m Strong weathered rock, brown 10 V  $\vee$ 11.9 - 29.8m Weathered dacite (?), whitish brown 11.9 - 25.0m Limonite veinlets 1 to 2/m v .v 15  $\vee$ V V 20 25  $\mathbf{v}$ 25.0 – 29.8m Limonite dissemination 25.1m and 29.6m Water loss at drilling time V 25.0 - 31.8m Quartz-Limonite veinlets 30 ν V 29.8 - 35.9m Weakly disseminated pyrite 29.8 - 35.9m Grayish green dacite, small quartz V  $\mathbf{V}$ V phenocryst bearing v N.  $\vee$ 31.8 – 65.5m Qtz-Py veinlets 2 to 3/m  $\,$ v  $\vee$ V V 35 V V V V V 35.9 - 96.2m Py dissemination is very weak to weak 35.9 - 55.0m Grayish green dacite, chloritized v V feldspar bearing V  $\mathbf{v}$ V ν V V 40 45 V 50

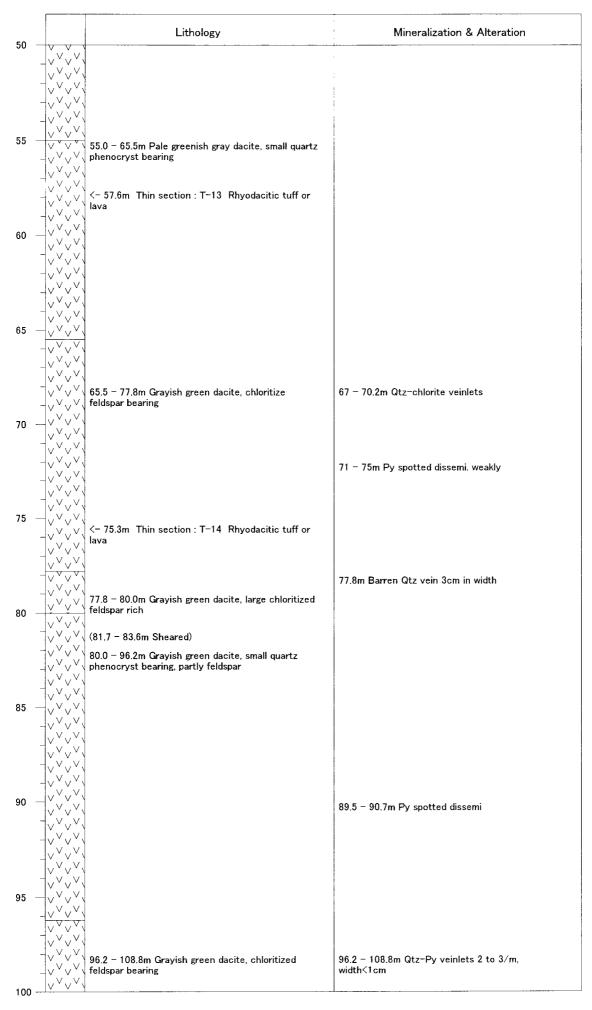
Azimuth: 150

50-11 Date Star

Elevation (mSL) : 963

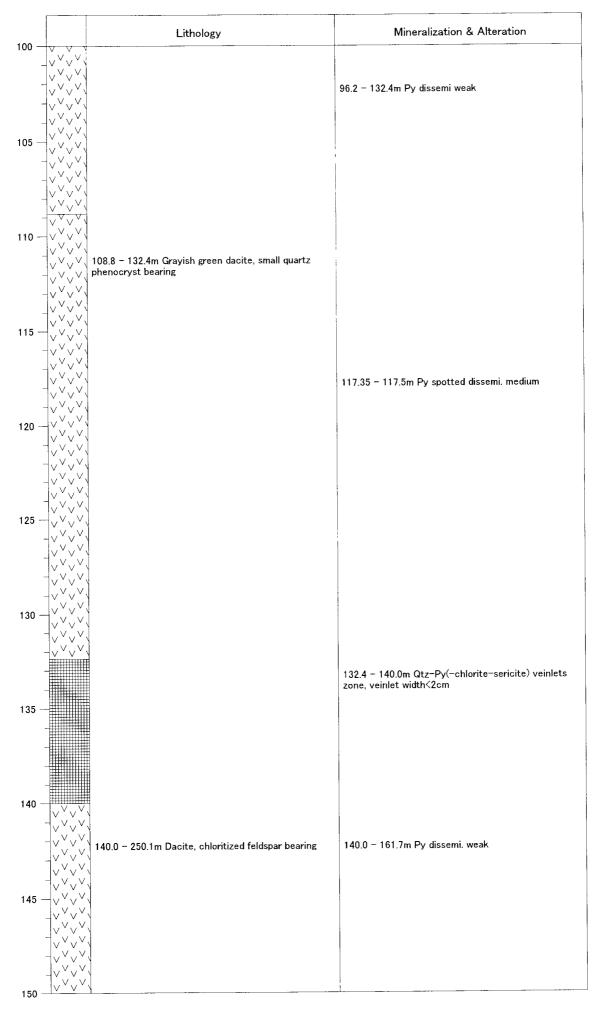
Easting : E 710.023 Northing : N 2,618.581

Inclination : -55



Easting : E 710.023 Azimuth : 150 Inclination : -55

Drilled by SGS/BRGM



27

Azimuth : 150

Easting : E 710.023

Inclination : -55

Date Started Sep. 21, 2000 Date Completed : Oct. 2, 2000

Northing : N 2,618.581 Elevation (mSL) : 963

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
150 —			
		140.0 – 250.1m Dacite, chloritized feldspar bearing	
-			
155 —			152.4 - 155.7m Py-Qtz veinlets 5/m, partly accompanied with Cp?
			155.7 – 169.5m Py weak to medium dissemi.
-			
160 -			
-			161.7 - 186.5m Py dissemi. medium
			161.7 – 162.4m Qtz-Py veinlet zone
165 —			163.6 – 165.8m Py-Qtz veinlet zone
-			168.8 – 169.5m Qtz-Py veinlet zone
170 -			100.0 - 109.5m Qtz Fy Vennet zone
-			
175 —			
			177.8m Py-Qtz vein, 20cm wide
180 -			
			182.0–182.4m Py-Qtz veinlets, high angle
			169.5 - 186.5m Py spotted dissemi. weak to
185 —			medium
			186.5 – 201.2m Py spotted dissemi. weakly
190 -			182.4 - 201.2m Qtz-Py veinlets 1 to 2/m
105			
195 —			
000			
200 -	-l		

38

Azimuth : 150

Date Started Sep. 21, 2000 Date Completed : Oct. 2, 2000

Northing: N 2,618.581 Elevation (mSL): 963

Easting : E 710.023 Inclination : -55

20		Lithology	Mineralization & Alteration
- 00			
	VVVV		
-	$\vee$ $\vee$ $\vee$	140.0 - 250.1m Dacite, chloritized feldspar bearing	
-			
)5 –			
0 -			
-	l vvv		
5 -	<u></u>		
	<u> </u> vvvv'		215.8m Qtz-Py veinlet width 2cm
			216.5 – 220.5m Py weakly dissemi
20 -			
		,	
25 -			201.2 - 250 tm Otz-Py veinlets 1 to $2/m$ partly Py
			201.2 - 250.1m Qtz-Py veinlets 1 to 2/m, partly Py dissemi. very weakly
	$\vee^{\vee}\vee^{\vee}$		
		N N N N N N N N N N N N N N N N N N N	
30 -			
		Y	
35	$\dashv_{\vee}^{\vee}\vee_{\vee}^{\vee}\vee$		
		N N	
		Ý	
		N N	
		]	
40			
		Ň	
		4	
		$\mathbf{A}$	
245	<u></u>		
		,	
	$- _{v}^{v}v_{v}^{v}v$	· 1	
	$- \vee \vee \vee \vee$		
250		· · · · · · · · · · · · · · · · · · ·	

Northing : N 2,617.550 Elevation (mSL) : 965

Easting : E 709.939 Azimuth : 270

Inclination : -55

_		Lithology	Mineralization & Alteration
0 -	0000		
		0 - 1.2m Gravel	1
			1
		1.2 − 6.2m Grayish green andesite, sheared at 3.8− 5.8m, 6.9−7.4m, and 9.7−10.0m	
5 -			
		6.2 – 8.1m Porphyritic andesite	
10 -		8.1 - 14.8m Andesite	
	12222		
15 -		14.8 – 15.9m Porphyritic andesite	
		15.9 – 131.1m Andesite, dark greenish gray	
20 -			19.6 – 20.7m Limonite weakly disseminated
25 -			1.2 – 141.2m Limonite along crack
	-2222		
30 -			
	1~~~~		
35 -			
	10000	36.0 – 37.8m sheared zone	
40 -			
	비슷승승승선		
45 -			
		48.5 – 51.0m sheared zone	
		1	1

Easting : E 709.939

Azimuth : 270

Date Started Oct. 2, 2000

Inclination : -55

Date Completed : Oct. 11, 2000

Northing: N 2,617.550 Elevation (mSL): 965

		Lithology	Mineralization & Alteration
_		15.9 – 131.1m Andesite, dark greenish gray	
_	22221	15.9 – 151.111 Andesite, dark greenisti gray	
-	22221		1
_			
-			
_	AAAA		58 – 59m Py–Qtz veinlets a few
_			
-	AAAA		
-			
-			
_			
_			63.7 – 88m Py weakly dissemi
-	2222	64.6 – 67.8m sheared zone	
-			
	2222		
-	12222		
-		<-69.3m Thin section : T-24 Microdiorite	
-			
-			
5 —			1.2 – 141.2m Limonite along crack
		75.7 – 75.9m sheared (water loss at drilling time)	
		70.7 - 70.911 Sheared (watch loss at drining time)	
-			
		78.7m Water loss at drilling time	
) –			
,		1	
	2222		
5 -		1	
		84.1 – 87.7m weakly sheared	
		1	
	-12222	3	
		1	
) –		1	88 – 93.7m Rarely Py dissemi
	12222	2	
		2	
		3	
		1	
		1	
5 -			
, -		93.7 – 96.7m sheared zone	93.7 – 102.0m Py weakly dissemi
	-	1	
	10000	а С	

Date Started Oct. 2, 2000

Date Completed : Oct. 11, 2000

Northing : N 2,617.550 Elevation (mSL) : 965

Easting : E 709.939 Azimuth : 270

Inclination : -55

_		Lithology	Mineralization & Alteration
0			
-			
-		15.9 – 131.1m Andesite, dark greenish gray	
-		103.1 – 103.6m sheared zone	
_			
5			
0			
-			
-			
-			
-			
0			
			110.6 – 111.7m Partly Py dissemi strong
-			111.7 – 117.2m Py dissemi very weak
-			
5 —		114 7m 120 2m and 124 85m Water lass at drilling	
_		114.7m, 120.2m and 124.85m Water loss at drilling time	
_			
-		117.2 – 119.5m sheared	
-			
20			
-			
-			
-			
25 —		123 – 128.8m sheared	124.8 – 131.1m Py dissemi weak
_			
_			
-			
-			
80 -			1.2 – 141.2m Limonite along crack
-			
-			
	j`v`v]		
	VVVV	131.1 – 140.1m Dacitic tuff or Dacite, whitish greenish gray	131.1 – 140.1m Py lens-formed veinlets 3 to 5/m
-		Brooman Brak	
85 —			
-		<=135.7m Thin section : Meta-rhyodacite tuff or	
	$  ^{\vee} ^{\vee} ^{\vee} ^{\vee} $	lava	
	],`v,`v,`		
10	11.11		
-			
-	11 11	140.1 – 143.1m Dacitic to andesitic tuff	140.1 – 143.1 Py lens-formed veinlets abundant
-	11 11		-
	__`v``v``v	4	
		•	
15		143.1 - 147.6m Dacite or andesite	
-			
		Water loss at drilling time from 144.7m to 147.7m	
	11 11 11	147.6 - 150.9m Am d = -141 - fin = 40.00	
	11 11 11	147.6 – 150.8m Andesitic fine tuff	
		4	

Easting : E 709.939 Northing : N 2,617.550 Elevation (mSL) : 965

Inclination : -55

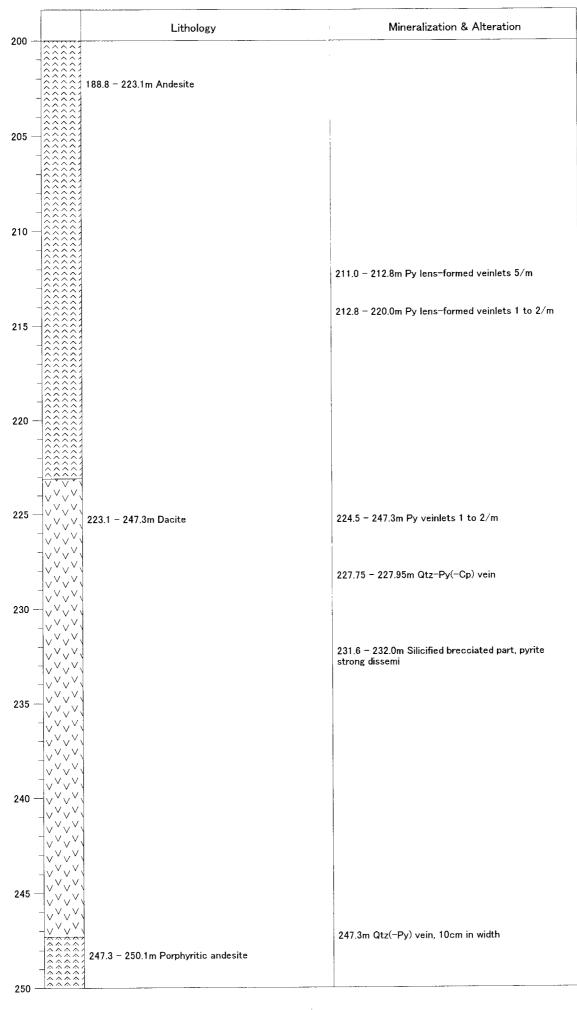
Azimuth : 270

1 — <u></u>	Lithology	Mineralization & Alteration
	150.8 – 175.1m Andesite	150.8 – 160.4m Py veinlet (lens-formed) 2 to 4/m
7222		
		160.4 – 163.3m Py weak dissemi and veinlets
- 222		
		163.3 – 165.9m Py fills fractures of rock
5 - 2222	<u> </u>	
	ŝ1	
	Â	
- 222		
-		
	<u> </u>	171.5 – 172.6m Py veinlets 4/m
	<u> </u>	171.9 – 172.8m Py dissemi medium
$5 - \frac{2}{2}$		
- 11 11 1	// 1751 - 185.2m Andesitic tuff	
11 11 1		
0 - //////		
1. 11		
	<i>"</i>	180.0 - 185.2m Py veinlets 1 to 2/m
- 11 11 .		
5 — // // /		
	ŝ	
	185.2 – 186.8m Qtz-feldspar eye andesite	185.2 – 198.1m Py weak dissemi
- 11.11		
- 11 11 ,	186.8 – 188.8m Andesitic tuff	186.8 – 198.1m Py veinlets 1 to 2/m
11 11		
0 - 222	188.8 – 223.1m Andesite	
-222		
	<u> </u>	1001 - 1027 - De diagoni work to modium
		190.1 - 192.7m Py dissemi weak to medium
	<u>^1</u>	
-1222		
5 -		
ĭ   <u>ô</u> ôô		
-1222		
	<u></u>	

Easting : E 709.939 Northing : N 2,617.550 Elevation (mSL) : 965

Inclination : -55

Azimuth : 270



USU-13 Date Started Oct. 9, 2000

Easting : E 709.835 Northing : N 2,617.120 Elevation (mSL) : 965

Inclination : -55

Azimuth : 330

0 -		Lithology	Mineralization & Alteration
U –		0 – 0.9m Sand and Fragments of andesite	
		0.9 – 6.0m Dark greenish gray andesite, weakly	0.9 – 54.4m Limonite along crack
		fractured	
5	-		
		6.0 - 6.65m Limonitized rock	
			6.0 – 6.65m Limonitized rock
		6.65 – 10.8m Porphyritic andesite	
10 -			
		10.8 – 17.2m Rhyodacitic tuff	
15			
15 -			
		16.05m Water loss at drilling time	
		17.2 – 17.7m Rhyodacite	17.2 – 17.7m Weakly silicified zone
20 -		17.7 – 31.0m Rhyodacitic tuff breccia, partly	
		epidotized	
		24.0m Water loss at drilling time	
25 -			
30 -			
		31.0 - 32.3m Rhyodacite	
		32.3 – 41.0m Rhyodacitic tuff, partly epidotized	
35 -			
		34.0m Water loss at drilling time	
40			
40 -	<u>}}}</u>		
		41.0 - 52.6m Rhyodacitic tuff with mega-sized quartz-eye	
			43.4 – 44.0m Py (–limo) dissemi weak
45 ·		<-41.9m Thin section : Meta-rhyodacitic lapilli tuff	ידד ד.טור אין אוווט, עראד ד.טר אין אוווט, די
			43.4 - 52.6m Py veinlets 1 to 2/m
50			

12

B Date Started Oct. 9, 2000

Northing : N 2,617.120 Elevation (mSL) : 965

Easting : E 709.835 Azimuth : 330

Inclination : -55

		Lithology	Mineralization & Alteration
50 -			:
		52.6 – 59.1m Rhyodacitic tuff	
55 -			
60 –		59.1 – 60.2m Rhyolitic tuff	
	- L 4	60.2 – 62.9m Rhyolite	60.2 – 62.9m Py weak dissemi
		<-61.8m Thin section : Meta-rhyolite crystal tuff	
		or lava 62.9 – 64.8m Rhyolitic lapilli tuff	
65 -			
00	L	64.8 – 66.0m Rhyolite	64.8 - 66.0m Py weakly spotted and veinlets
	- L C	66.0 - 69.0m Rhyolite with quartz-eye	66.0 - 69.0m Weakly silicified
		<-67.1m Thin section : Mylonitized felsic rock	
70 -		69.0 - 88.4m Rhyodacite	69.0 – 86.0m Py very weakly dissemination, weakly
			silicified
	- L L		71.3m Py lens-like veinlet, 2cm in width
			72.1 – 72.7m Strongly silicified and Py weakly dissemi
75 -			74.1m Py veinlets (lens-like) with chlorite, 1nm
			wide
80 -			
	- L L		
		<-82.9m Thin section : Meta-rhyodacitic tuff	
05			
85 -			
	- 1/2 1/2 1/1	88.4 – 89.5m Fault clay and sheared silicified rock	
90 -			
			89.5 – 98.1 m Py veinlets 5/meter, weakly Py dissemi
		89.5 – 98.1m Chloritized rock	
			91.8m Py veinlets zone, 10cm in width
95 -			
	-		
	-00000		
100 -			

JSU-13 Date Started Oct. 9, 2000 Date Completed : Oct. 23, 2000

Northing: N 2,617.120 Elevation (mSL): 965

Easting : E 709.835 Azimuth : 330

Inclination : -55

Drilled by SGS/BRGM

		Lithology	Mineralization & Alteration
) —	~~~~		
_	2222	98.1 – 109.0m Andesite, chloritized	98.1 – 182.5m Py weak dissemi
	2222	98.1 - 109.0m Andesite, chioritized	90.1 - TOZ.JIII FY WEAK UISSEIII
-			
	<u>^</u> ^^		
_			98.1 – 109.0m Qtz-Py veinlets 1 to 2/m
_	2222		
5			
_	$\Delta \Delta \Delta \Delta \lambda$		
_	2222		
	2222		
-	2222		
	<u>^</u> ^^^		
-	XXXX		
) —	$\boxtimes$		
,	XXXX		
_	KXXX		
	$\otimes$	109.0 – 122.1m Andesite, silicified (leached)	
-	$\otimes$	4	
	KXXX		
_	$\boxtimes$		
_	$\boxtimes$		
	$\otimes$		
5 —	$\otimes$	<	
	$\otimes$	<	
-	$\otimes$	114.2 – 117.55m Water loss at drilling time	
	$\boxtimes$		
	$\boxtimes$		
_	$\boxtimes$	)	
	XXXX		
-	$\otimes$	4	
	$\bigotimes$	<	
0 —	$\otimes$	×	
	$\bigotimes$	×	
_	KXXX		
-		]	
	7888888	122.1 – 123.7m Chloritized rock with quartz-eye	
-	1333333	122.1 - 123.7m Ghionuzeu rock with quartz eye	122.1 – 123.7m Py-Qtz veinlets 1 to 2/m
	2000	<u> </u>	
-	10000	3	
5		1	
5		123.7 – 129.0m Andesite, silicified (leached)	
-		1	
		1	
_			
-	in the second		
_	133333	129.0 – 130.9m Chloritized rock	129.0 – 130.9m Py veinlets 5/meter
0 —	188888		
_	100000		
	11 11		
-	11 11	130.9 – 132.4m Dacitic tuff, silicified	
	7777777	ป	
-	188888	N	132.4 - 137.2m Py veinlets 3 to 5/m
	188881	N	
_	188888		
5 —	1333333	132.4 – 137.0m Chloritized andesite. Water loss at	
	B1313131		
-	4888888	drilling time	
	18888855	3	
-	<u>5909</u>		
-	Ľvľv		
	1V.)V.)	137.0 – 139.4m Dacite (?), chloritized	
-	$\forall \nabla^{\vee} \nabla^{\vee}$	N	
0 —	LL		
J	L	d	
-	LL		
		139.4 – 142.2m Rhyodacite	
-	trease	4	141.15 – 142.2m Py dissemination weak to medium
	188888	Y	
-	188888	142.2 – 145.2m Chloritized dacite(?)	
-	78989895	1	
	133333	N N	142.2 - 145.2m Py veinlets 1 to 2/m
5 —	-0.0.000	<u>}</u>	
-	L	l l	
_	LL	145.2 – 147.4m Rhyodacite, chloritized	
	1	1	
-			
-			
-		147.4 - 148.7m Rhyodacite	
-	1.1.1.1	↓ 147.4 ~ 148.7m Rhyodacite ↓ ↓ 148.7 – 149.7m Chloritized rock	148.7 – 149.7m Py veinlets 5/m

É '

Date Completed : Oct. 23, 2000 Date Started Oct. 9, 2000

Northing: N 2,617.120 Elevation (mSL): 965 Easting : E 709.835

Azimuth : 330

Inclination : -55

150	Lithology	Mineralization & Alteration
	149.7 – 153.7m Rhyodacite, 151.1m Wd. 10cm chloritized zone	151.1m Chloritized zone with Py veinlets and dissemi
	u v	153.0 - 153.7m Py medium dissemination
	153.7 – 155.1m Chloritized rock	153.7 - 155.1m Py dissemi
	, 155.1 - 159.3m Rhyodacite	155.1 – 159.3m Py veinlets 1/m
	4 2 159.3 – 160.6m Chloritized rock 4	
	160.6 – 182.5m Rhyodacite	
165 — L L L	U L	
	u u	
- L L - L 170 - L	u	
	<-170.0m Thin section : Meta-rhyolite crystal tuff or lava	
	L L	
	L	
	l	
	L L	
	1 182.5 – 183.0m Basalt (intrusive)	182.5 – 183.0m Qtz-Py or -Limonite veinlets
 185 — {{{{{{{{{{{{{{{{{{{{{{}}}}}}}}}}}}}}	183.0 – 184.0m Rhyodacite 184.0 - 184.6m Sheared rhyodacite	
	184.6 – 188.4m Chloritized rock	184.6 – 188.4m Py dissemi medium
	188.4 – 215.2m Rhyodacite	188.4 – 196.4m Py dissemi very weak
- r -7[[][][		
200	1	

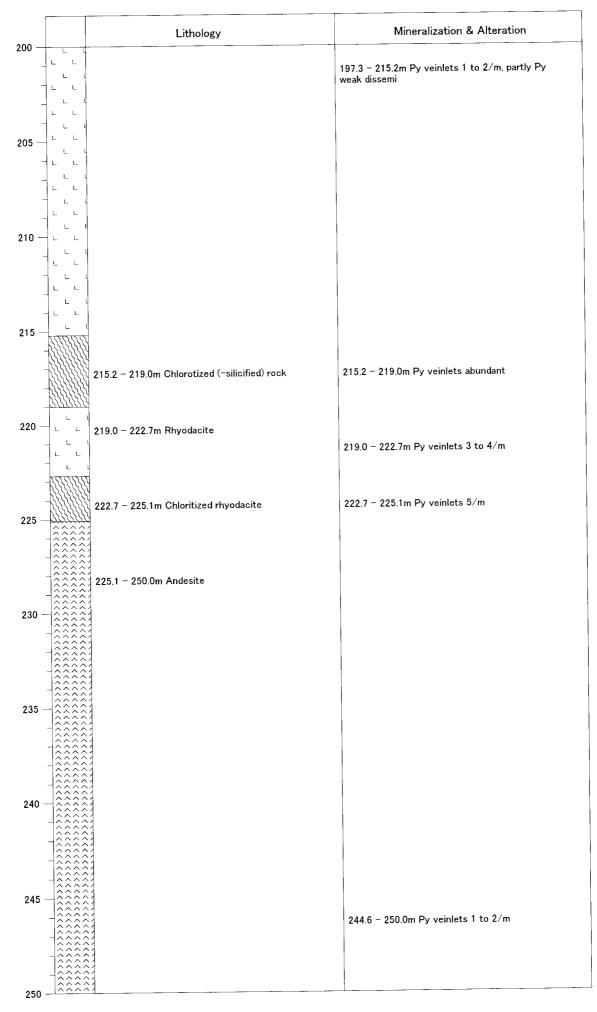
Easting : E 709.835

Azimuth : 330

Date Started Oct. 9, 2000

Northing : N 2,617.120 Elevation (mSL) : 965 Inclination : -55

Drilled by SGS/BRGM



0.1

# Drill Hole No. : MJSU-14 Date Started Sep. 04, 2000 Date Completed : Sep. 14, 2000

Easting : E 708.595 Northing : N 2,617.720 Elevation (mSL) : 964

Azimuth : 245 Inclination : -55

Drilled by SGS/BRGM

_	Lithology	Mineralization & Alteration
	(mrav	2.6 - 4.0m Weakly spotted limonite (hematite) in
		silicified breccia
	4	
	4	
	,	
0		8.9 – 13.5m Quartz-calcite-sericite-chlorite veinlet,
	•	wd <1cm
	•	
	4	
	•	13.5 – 14.2m Hema+limo. network + stained
5	•	14.2 - 18.0m Weakly spotted py - limo aggregates in
		breccia
	•	
	19.05m and 21.85m Water loss at drilling time	18.0m Spotted py aggregates in matrix
		19.0 – 22.7m Partly py spotted aggregates in breccia (max. 3mm)
	∖ 19.0 − 22.7m Rhyodacitic lappili tuff	(max. smin)
- 22		
	⊒ 22.7 – 22.9m Rhyodacitic tuff	22.7m Quartz veinlet wd. 1cm parallel to bedding
	22.9 – 36.9m Rhyodacitic tuff breccia, pale greenish gray	23.7m Py aggregates in lens form in matrix (wd 1cm, length 3cm)
		25.8m Py aggregates in lens form in matrix (wd 0.7cm)
	•	
	•	
		30.6m Quartz venlet cutted by py-cp-qtz veinlet (wd
	•	1cm)
	_	33.0m – Very weakly py dissemi. in matrix
	4	
	e	
	•	
		36.9 - 60.2m Partly py aggregates mainly in matrix
	36.9 – 60.2m Rhyodacitic lapilli tuff, pale green	
45 - 2		
io <u>17 (7</u>		

ţ٢

Drill Hole No. : MJSU-14 Da

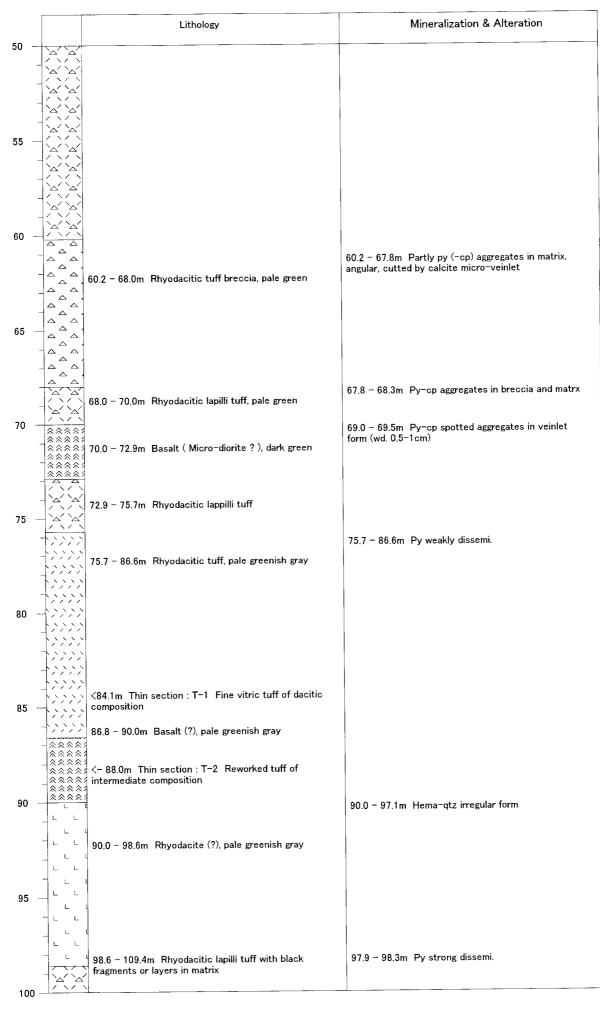
Azimuth : 245

Date Started Sep. 04, 2000 Date Completed : Sep. 14, 2000

Easting : E 708.595 Northing : N 2,617.720 Elevation (mSL) : 964

Inclination : -55

Drilled by SGS/BRGM



4. . - Easting : E 708.595 Northing : N 2,617.720 Elevation (mSL) : 964

Inclination : -55

Azimuth : 245

Drilled by SGS/BRGM

00	Lithology	Mineralization & Alteration
	98.6 – 109.4m Rhyodacitic lapilli tuff with black fragments or layers in matrix	98.6 – 109.4m Py dissemi. (medium)
05		
10	109.4 – 115.0m Rhyodacite, massive, partly flow- banded, pale greenish gray	109.4 – 115.0m Py dissemi. (medium), partly py-qtz aggregates 2x4mm
	u u •	1150 - 1020m Dudianami modium ta waak
	- 115.0 – 122.0 Rhyodacitic tuff breccia, partly rhyodacite	115.0 – 122.0m Py dissemi. medium to weak
	122.0 – 129.55m Rhyodacitic tuff, pale greenish gray 123.1 – 123.3m Basalt	122.0 – 132.65m Py dissemi. weak
		125.6 – 126.5m Weakly arg.
	129.55 - 132.65m Basaide tuit	
	132,65 – 135.75m Basalt(?)	132.7m Several Cp-Qtz veinlets
	135.75 - 136.8m Basalt 136.5 - 138.8m Basalt <- 136.8m Thin section : T-3 Meta-andesitic to	136.5 – 141.5m Py dissemi. weak
	138.8 – 139.5m Basaltic tuff 139.5 – 141.5m Rhyodacite, flow-banded	140.2 - 141.1m Many Py-Qtz veinlets parallel to bedding, wd. 1 to 2cm.
	141.5 - 144.5m Basait - Dasaitic tum	141.5 – 154.4m Py dissemi. weak to medium
	144.5 – 146.3m Rhyodacitic tuff, partly containing basalt breccia	
		148.0 – 150.5m Py-Qtz veinlets – network

33

U-14 Date Started Sep. 04, 2000 Date Completed : Sep. 14, 2000 Northing : N 2,617.720 Elevation (mSL) : 964

Easting : E 708.595 Northing : N 2, Azimuth : 245 Inclination : -55

Drilled by SGS/BRGM

50		Lithology	Mineralization & Alteration
50 —	/// /// . 		
	11 111		150.5 - 152.6m Qtz-Py network
-			
-			
_	~~~ ~~		154.0 – 154.2m Py veinlets – network
55 —		154.4 - 154.6m Lapilli tuff ( basic ?)	155.4m Py disseminated band, wd.2cm
_			100.4m Fy disseminated band, wa.zom
	`````		
	1111	154.6 – 158.6m Rhyodacitic tuff, pale greenish gray	
			158.6 – 159.6m Py dissemi very weak
-		158.6 – 159.6m Rhyodacitic Iapilli tuff	159.6 - 160.8m Py-Qtz veinlets, Py dissemi medium
60 —		159.6 – 160.8m Basalt, dark gray	to strong
-			160.8 – 165.7m Py dissemi very weak, partly Py-Qtz
_		100.0 100.1. Dhuada this tuff model levilli tuff polo	aggregates
_	>>>>>	160.8 – 166.1m Rhyodacitic tuff, partly lapilli tuff, pale greenish gray	
_			
65 —			165.7 – 166.3m Py-Qtz veinlets, Py dissemi strong,
-		166.1 – 168.8m Black shale or shale flattened ball in	silicified
-		rhyodacitic tuff <- 167.2m Thin section : T-4 Phyllite (meta-	166.3 – 168.8m Py dissemi medium
-		volcanic equivalent of fine dacitic tuff)	168.8 – 169.1m Py weak to medium disseminated
_		160 9 - 160 1- Breating tuff	
70	$\langle \rangle \rangle$	168.8 - 169.1m Basaltic tuff	
, 0		169.1 – 170.8m Rhyodacitic lapilli tuff	169.1 – 170.8m Py medium dissemi.
-		170.8 - 171.7m Basaltic tuff	170.8 – 172.3m Py-dùtszemitstoologoy dissemi medium to strong
-			
-	$\delta \circ \delta \circ \delta$	171.7 – 176.8m Basalt breccia in rhyodacite or	
~	0000	rhyodacitic tuff	172.3 – 176.8m Py dissemi weak to medium
75 —	$\diamond$ $\diamond$ $\diamond$		
-			
-			
_			
	111 111	176.8 – 182.0m Basaltic tuff, dark gray	176.8 – 179.0m. Py weak dissemi.
-			
80 —	· /// /// · /// ///		
-			179.0 - 182.0m Py-Qtz aggregates or veinlets rich
-	7777		
-	12222	182.0 - 185.6m Rhyodacitic tuff containing black mud	182.0 – 185.6m Py dissemi weak, partly Py-Cp strong
-		patch	dissemi.
85 —	$\begin{bmatrix} & & & & \\ & & & & \\ & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ $		
	0000		
-	$\left  \begin{array}{c} \circ & \circ \\ \circ & \circ \end{array} \right $		
-	0000	185.6 – 190.9m Basalt breccia filled with rhyodacite	185.6 – 190.9m Py dissemi weak to nul.
-	$\diamond \diamond \diamond \diamond$		
-	$\diamond$ $\diamond$	C→ 188.5m Thin section : T−5 Highly sheared meta− volcanic rock	
90 -	$\circ$ $\circ$ $\circ$ $\circ$ $\circ$		
-			
_	111 111		190.9 – 195.7m Py dissemi weak, Many Py~Qtz
	111 111		veinlets (wd.<1cm)
95 -		1	
			195.7 – 196.3m A lot of Cp-Py patch, Py patch
	-11 111	∫ 196.3 – 198.9m Basaltic tuff, dark gray	(wd.<3mm) and basaltic tuff layers in tuff
		198.9 - 199.2m Tuff with black mud patch, basalt fragments	
	111 111		198.9 – 202.9m Py weak dissemi.

2, 2

Easting : E 708.595

Azimuth : 245

Northing : N 2,617.720 Elevation (mSL) : 964

Inclination : -55

Drilled by SGS/BRGM

000		Lithology	Mineralization & Alteration
200 –		199.2 – 202.9m Dark gray basaltic tuff	
		203.2 - 204.1m Rhyodacitic tuff with black mud patch, gray	202.9 – 203.2m Siliceous tuff with black mud patch, Qtz layers, Py–Qtz patch and Py impregnation
205 -		204.45 – 204.5m Gray muddy tuff	204.1 – 204.45m Gray tuffacous mud with Py-Cp- Sp-Qtz inpregnation and layers
		204.5 – 209.6m Rhyodacitic tuff, partly with black mud patch, pale greenish gray	
210 -		209.6 – 210.9m Rhyodacitic Iapilli tuff, pale greenish gray	209.6 – 210.9m Py weak dissemi
		210.9 – 214.1m Rhyodacitic lapilli tuff with black mud patch	210.9 – 214.1m Py weak dissemi, weakly sili 214.1 – 215.5m Strong silicified, Py weak dissemi
215 -		214.1 – 215.5m Whitish gray strong silicified rock with mud patch	215.5 – 219.15m partly Py or Py-Cp veinlets and
		215.5 – 219.15m Lapilli tuff with mud patch	aggregats 219.15 – 219.8m Py-Cp patch, Py weak dissemi,
		219.15 – 219.8m Muddy lapilli tuff	219.10 210.0m Py Op patent, Py weak disconny partity Py-Cp aggregates 219.8 – 220.1m Py-Cp strongly impregnated in mud
220 -		219.8 – 220.1m Black mud	220.1 - 220.2m Barren Qtz vein
		- 220.9 – 221.0m Black shale 221.0 – 221.2m Gray muddy tuff	220.2 – 220.9m Fine banded ore (Sp rich + Py-Cp or
225 -		221.75 – 221.8m Black shale 221.8 – 222.35m Muddy lapilli tuff	unknown mineral rich), wd of bands 1 to 15 mm 220.9 - 221.0 Py weak dissemi
		222.35 – 233.6m Rhyodacitic lapilli tuff with mud	221.0 – 221.2m Py or Cp patch, black shale patch, Py-Cp-Sp dissemi strong
		patch, partly tuff breccia	221.2 – 221.75m Massive sulfide ore, weakly banded with Sp rich + Py–Cp rich, Qtz–clay layers
230 -			221.75 – 221.8m Silicified 221.8 – 222.35m Py weak dissemi, partly Py(-Cp)
			aggregates
235 -		233.6 – 242.6m Rhyodacitic tuff breccia	234.5 – 234.9m weak sili, Py strongly spotted dissemi
240 -			
		•	
245 -		242.6 – 250.0m Rhyodacitic lapilli tuff with black mud patch	244.1 – 245.7m Py-Cp-Qtz veinlets
		242.6 – 250.0m Rhyodacitic lapilli tuff, pale greenish gray	
250 -	/ \/ \	<u>\</u>	L

 $\lesssim 4$ 

Drill Hole No. : MJSU-14Date Started Sep. 04, 2000Date Completed : Sep. 14, 2000Easting : E 708.595Northing : N 2,617.720Elevation (mSL) : 964

Easting:E 708.595 Azimuth:245

Inclination : -55

	Lithology	Mineralization & Alteration
	250.0 – 254.0m Rhyodacitic lapilli tuff, pale greenish gray	253.3m Py veinlet
255	254.0 - 256.4m Rhyodacitic tuff	
	△   △ ] 256.4 – 265.2m Rhyodacitic tuff breccia	256.4 – 265.2m Weakly silicified, Py weak dissemi.
265 - A	△ △ △ △ △ △ △ △ △ △ △ △ △ △ △ △ △ △ △	
	<ul> <li>△</li> <li>△</li> <li>△</li> <li>△</li> <li>△</li> <li>△</li> <li>△</li> </ul>	265.6 – 274.6m Weakly silicified, Py weak dissemi.

Azimuth: 335

Easting : E 707.367 Northing : N 2,620.625 Elevation (mSL) : 944

Inclination : -70

Drilled by SGS/BRGM

Mineralization & Alteration Lithology 0 00 0 - 1.8m Gravel 1.8 - 5.6m Porphyritic andesite, weathered and carbonatized 4.2 - 4.6m Weakly limonitized ~~~~~ 5 バベベベベベベベ 5.6 - 14.4m Andesite, weathered 5.6 - 7.0m sheared 10 ~~~~ 8.1 - 14.4m sheared ~~~~~~~~~~~~~ ~~~~~ 15 14.4 - 28.0m Porphyritic andesite, weakly fractured and filled with thin calcite veinlets **** (14.4 - 17.05m Water loss at drilling time) いるるるるるる 20 23.1 - 23.3m sheared 25 28.0m Quartz-Pyrite vein, 5cm in width  $\vee^{\vee}$ ′ ∨ [∨] 28.0 - 32.1m Dacite V V 30 V V V V ν V V V ... //`` 32.1 - 33.2m Dacitic coarse tuff 11 V .∨`v V , v v V 35 33.2 - 43.6m Dacite with quartz and feldspar , v v phenocrysts vvv vvv (35.9 - 46.8m Water loss at drilling time) vvv , v _v V V V 40 V ν ١. 42.0 - 43.6m Hematite veinlets and dissemination VVV 43.6 - 45.4m Hematite fills breccia 45 45.4 - 50.6m Volcanic breccia filled with Py-Qtz, 45.4 - 50.6m Pyrite-Quartz fills breccia breccia is subangular to subrounded in form Ċ  $\begin{array}{c} & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$ 50

# U-15 Date Started Oct. 11, 2000 Date Completed :Nov. 8, 2000

Easting: E 707.367 Northing: N 2,620.625 Elevation (mSL): 944

Azimuth : 335

Inclination : -70

		Lithology	Mineralization & Alteration
	$\sim \sim \sim$	50.6 – 51.9m sheared – argillized breccia with Qtz– Py	
7 7 7 7 –	$\nabla \nabla \nabla \nabla \nabla$	51.9 - 60.3m Lapillistone to lapilli tuff with Qtz-Py, with ochre colored silicified glass	50.6 – 60.3m Qtz–Py fills breccia
7 7 7 7 7 7 7 7	$ \begin{array}{c} &                                   $	(55.4 – 56.2m Water loss at drilling time)	
7 7 - ( 7	$\diamond \diamond $		
7 7 7		60.3 – 61.5m Sheared and silicified dacite $\left(?\right)$ filled with Py–Qtz	60.3 - 61.5m Py-Qtz fills breccia 61.5 - 80.0m Qtz-Py fills breccia
7 7 7 7 7	$\Delta \nabla \Delta \nabla$	61.5 – 80.0m Lapillistone filled with Qtz-Py, fragments are mainly subrouded silicified rock. Size of fragments is less than 1cm.	
7 7 7 7 7 7	$\begin{array}{c} & & & & \\ & & & & \\ & & & & \\ & & & & $		
	$\begin{array}{c} & & & & \\ & & & & \\ & & & & \\ & & & & $		
	$\begin{array}{c} & \nabla $		
		80.0 - 81.0m Dacitic tuff (?)	80.0 - 81.0m Py dissemination very weak
			81.0 – 121.7m Qtz–Py fills breccia
-		(82.8 – 85.8m and 88.8 – 91.8m Water loss at drilling time)	
- - -			
5 -		91.8 – 100.0m Coarse tuff filled or disseminate with Qtz-Py, containing plae blue or green argillized glass, partly with big rock fragments(maximum 3cm in length)	
-			
_ _ 00			

Easting : E 707.367

Azimuth : 335

-15 Date Started Oct. 11, 2000 Date Completed :Nov. 8, 2000

Northing: N 2,620.625 Elevation (mSL): 944

Inclination : -70

Drilled by SGS/BRGM

00		Lithology	Mineralization & Alteration
00 —			
_	$\nabla \Delta \nabla \nabla \nabla \nabla$		
-		100.0 - 121.7m Lapillistone filled with Qtz-Py, fragments : conglomerate, chert (?), Py-	
_		disseminated rock, pale blue silicified glass	
05 —			
_	$\Delta \nabla \Delta \nabla Z$		
_			
10			
-			
_		111.8 – 112.0m Argillized zone	
_			
_			
15	$\nabla \Delta \nabla \Delta \nabla$		
_			
-			
-			
- 20			
20 -			
-	ŽĂŽĂ		
-			
-		121.7 – 128.0m (Sheared ) Volcanic breccia filled with Py	121.7 – 128.0m Py-Qtz fills breccia
- 0 m			
25			
-			
-			
-			
-			
30 —		128.0 – 137.8m Volcanic breccia filled with Qtz-Py, partly containing big angular fragments (>5cm) and	128.0 – 142.0m Qtz-Py fills breccia
-		pale blue glassy clay, fragments : chert, ochre	
-			
مح			
35 —			
	<b> </b>		
40	-	137.8 – 142.0m Coarse tuff filled with Qtz-Py and pale blue glass (clay), partly containing argillized	
40 –		breccia (<3cm).	
	-		
		142.0 – 145.4m Pale gray dacite (or andesite) intrusive	
		א שות מאעה 1 1	
45 -			
		145.4 - 154.8m Lapilistone filled with Giz-Py,	145.4 – 176.8m Qtz-Py fills breccia
		fragments < 1cm.	
50 -	$\nabla \Delta \nabla \Delta$	1	

÷?

Easting : E 707.367

Date Started Oct. 11, 2000 Date Completed :Nov. 8, 2000

Northing: N 2,620.625 Elevation (mSL): 944

Inclination : -70 Azimuth : 335

	154.8 – 156.9m Volcanic breccia filled with Qtz-Py 156.9 – 160.8m Lapillistone filled with Qtz-Py.	
	156.9 – 160.8m Lapillistone filled with Qtz-Py.	
	156.9 – 160.8m Lapillistone filled with Qtz-Py.	
	156.9 – 160.8m Lapillistone filled with Qtz-Py.	
	156.9 – 160.8m Lapillistone filled with Qtz-Py.	
	156.9 – 160.8m Lapillistone filled with Qtz-Py.	
$\nabla \nabla $		
$\begin{array}{c} \nabla \nabla \Delta \nabla Z \\ \overline{\Delta} \nabla \Delta \nabla \overline{\Delta} \\ \overline{\Delta} \\ \overline{\Delta} \nabla \overline{\Delta} \\ $		
$\begin{array}{c} \nabla \nabla$	containing pale blue glass	
$\nabla \Delta \nabla \Delta \Lambda$		
$\Delta \nabla \Delta \nabla Z$		
	160.8 – 163.8m Coarse tuff, silicified, filled with Qtz–	
	ry.	
$\Delta \nabla \Delta \nabla d$		
$\Delta \nabla \Delta \nabla I$	163.8 – 169.0m Lapillistone filled with Qtz-Py	
$\nabla \Delta \nabla \Delta \nabla$		
$\nabla \Delta \nabla \Delta \nabla$		
111 11		
	169.0 – 176.8m Silicified dacitic tuff (?) or silicified	
// ^{\\\} // ^{\\\}	brooka (.), shoured and filed with act if y	
11 11		
//×//×		
	176.8 – 179.1m Silicified coarse tuff	176.8 – 179.0m Py dissemination very weak
		:
$\vee \Delta \vee \Delta \vee$	N	
$\nabla \Delta \nabla \Delta \nabla$		
$\nabla \Delta \nabla \Delta \nabla$	1	179.0 – 188.2m and 188.7 – 189.5m Qtz-Py fills breccia
$\nabla \Delta \nabla \Delta \nabla$		
$\nabla \Delta \nabla \Delta \nabla$		
0000'		
$\nabla \Delta \nabla \Delta$		
V 23 V 23	188.2 – 188.7m Fine tuff block with Py dissemi.	188.2 – 188.7m Py medium dissemination
$\Box \nabla \Box \nabla \nabla$		199 5 - 100 2m Lizzanita filla becania
$\nabla \nabla \nabla \nabla$		189.5 – 190.2m Limonite fills breccia
	4	
11 11		100.0 - 100.0 - D diver discontinue 100.2 -
111 11		190.2 - 198.3m Py medium disseminatiom, 198.3 - 198.7m Py dissemination very strong
11 11	190.2 – 198.7m Dacitic tuff (?), sılicified	
11 11		
11 11		
	v  v	
	4	
		Py.         163.8 - 169.0m Lapillistone filled with Qtz-Py         163.8 - 169.0m Lapillistone filled with Qtz-Py         169.0 - 176.8m Silicified dacitic tuff (?) or silicified         breccia (?), sheared and filled with Qtz-Py         176.8 - 179.1m Silicified coarse tuff         188.2 - 188.7m Fine tuff block with Qtz-Py         188.2 - 188.7m Fine tuff block with Py dissemi.         188.7 - 190.2m Lapillistone filled with Qtz-Py         190.2 - 198.7m Dacitic tuff (?), silicified         190.2 - 198.7m Dacitic tuff (?), silicified

Easting : E 707.367 Northing : N 2,620.625 Elevation (mSL) : 944

Azimuth : 335

Inclination : -70

Drilled by SGS/BRGM

000	Lithology	Mineralization & Alteration
200  -	198.7 - 203.1m Breccia composed of mono- lithology (dacite ? ) filled with Py-Qtz. Fragments size is variable.	198.7 - 203.1m Py-Qtz fills breccia
- 205 — - -	203.1 – 210.5m Volcanic breccia with pale blue glass, filled with Qtz–Py	203.1 – 210.5m Qtz–Py fills breccia
- 210 — - -	210.5 – 212.9m Silicified breccia , partly massive silicified rock, or filled with ochre-colored quartz	210.5 – 212.9m Py veinlets or Py fills fractures
215 —	212.9 – 220.8m Rhyodacite or dacite (?), silicified	212.9 – 220.8m Py strong dissemination
220 —		
225 —	220.8 – 227.7m Lapillistone filled with Qtz−Py. partly composed of very fine-grained fragments (coarse sand size)	220.8 – 227.7m Qtz–Py fills breccia
•		227.7 – 227.8m Py strong dissemination
230 -	227.7 – 227.8m Dacite (?) intrusive 227.8 – 232.0m Lapillistone. Abundant fragments filled with Py-Qtz	227.8 – 232.0m Py–Qtz fills breccia
	232.0 – 233.1m Dacite (?) intrusive (?) 233.1 – 235.7m Lapillistone. Abundant fragments	232.0 – 233.1m Py dissemination weak to medium 233.1 – 235.7m Py-Qtz fills breccia
235 -	235.7 – 236.6m Dacitic tuff	235.7 – 236.6m Py dissemination strong
240		236.6 – 240.8m and 241.7 – 243.7m Qtz–Py fills breccia
240 –	241,7 – 243.7m Volcanic breccia, partly containing	
245	 243.7 – 249.2m Dacitic tuff (?) with pale blue glass	243.7 – 249.2m Py dissemi medium
250		

for

## Drill Hole No. : MJSU-15 Dat

Inclination : -70

Easting : E 707.367

Azimuth : 335

Northing : N 2,620.625 Elevation (mSL) : 944

	Lithology	Mineralization & Alteration
VAVA'	fragments	249.2 - 251.2m Qtz-Py fills breccia
$\Delta \nabla \Delta \nabla$	251.2 – 252.8m Silicified Lapillistone cutted by siliceous vein	:
7 A V A Y 7 A V A Y		
	252.8 - 256.6m Dacitic lapilli tuff, partly containing	252.8 – 256.6m Qtz-Py fills breccia
	pale blue glass fragments, rarely this kind of glass fills	
$\nabla \nabla \nabla \nabla$		
<u> </u>		
		256.6 - 271.5m Very rarely Qtz-Py veinlets
	256.6 – 271.5m Porphyritic andesite. Feldspar	
	phenocrysts are 8mm in maximum size.	
		i i i i i i i i i i i i i i i i i i i
	271.5 – 279.7m Silicified andesite or porphyritic	
	andesite	
	1	
$\times\!\!\times\!\!\times$	$\hat{\mathbf{A}}$	
>>>	3	279.7 – 286.4m Py dissemi weak
$\bigotimes$	× × 279.7 – 286.9m Silicified massive rock, fractures	
$\times\!\!\times\!\!\times$	imes filled with pale blue or ochre or dark green silicified	
$\bigotimes$	X glasses. X	
$\times$	X	
>>>	X	
	286.9 – 289.7m Porphyritic andesite ( 289.7 –	286.4 – 289.7m Rarely Py dissemi
	290.2m Silicified breccia with pale blue silicified glass	
	1	
	1	
	290.2 – 296.6m Andesite, dark grayish green	
Ì		
$\times\!\!\times\!\!\times$	296.6 – 306.9m Silicified massive rock, partly fractures filled with Py-Qtz.	
$\bigotimes$	8	296.6 – 299.8m Py dissemi partly
$\times\!\!\!\times\!\!\!\times$	Å	
$\sim\sim\sim$		

Easting : E 707.367

Azimuth : 335

Northing : N 2,620.625 Elevation (mSL) : 944

Inclination : -70

Drilled by SGS/BRGM

300	Lithology	Mineralization & Alteration
300	<- 300.2m Thin section : T-31 Meta-rhyodacitic	
-	lithic tuff	299.8 – 306.9m Py−Qtz partly fills fractures, or Py− Qtz fragments occur
305 —		
310 -	306.9 – 325.0m Silicified breccia. Fragments are mono-lithology and resemble to above massive rock. Commonly pale blue or ochre colored silicified glass fills fractures as vein-like.	306.9 − 325.0m Qtz-Py partly fills breccia. At massive parts Py dissemi weak
315 -		
320 -		
325 –		
330 -	Matrix almost quartz, cutted and filled by pale blue or ochre glass (silicified)	
335 -	335.5 – 337.0m Andesite, intrusive	332.1 – 335.6m Py dissemi strong
340 -	337.0 – 345.5m Conglomerate-like volcanic breccia with pale blue glass, filled with Qtz-Py. Partly green-colored glass with Py dissemination fills fractures. 341.6 – 341.7m Andesite intrusive.	337.0 − 341.6m ,341.7 − 346.5m and 351.1 − 351.4m Qtz−Py fills breccia
345 -	345,5 – 348.6m Andesite, intrusive	
350 -	348.6 – 351.4m Conglomerate-like volcanic breccia with pale blue glass, filled with Qtz-Py. (350.8 – 351.1m Andesite intrusive)	

32

Easting : E 707.367

Azimuth : 335

Northing : N 2,620.625 Elevation (mSL) : 944

Inclination : -70

Drilled by SGS/BRGM

~		Lithology	Mineralization & Alteration
0 —			
-	~~~~		
355 -	×~~~	350.8 – 351.1m Andesite to porphyritic andesite 351.1 – 351.4m Mono-lithologic breccia, filled with	
		Qtz(-Py)	
		351.4 – 355.2m Andesite intrusive	
	-		
		355.2 – 365.1m Porphyritic andesite	
0 -			
_			
365 —	00	365.1 – 367.05m Strongly silicified rock, partly	
		breccia, cutted by green or ochre silicified glass	365.1 – 365.6m A few Py veinlets
			305.1 - 305.0m A few Py verifiets
			365.6 - 366.55m Py fills spotedly some fractures
	1 0 0	367.05 – 372.1m Siliceous sandstone or tuff,	
0		cutted or filled by ochre quartz, partly brecciated	
370 —			367.15 - 372.1m Partly Py filling fractures or
			occurring spotedly, almost barren for sulfide
	$\diamond \diamond \diamond \diamond$		
		372.1 – 373.5m Andesite	
		filled with ochre quartz, again fractured and filled	373.5 – 375.65m Py fills fractures with green or
15	0 0	with green or ochre quartz	ochre quartz
5 -	$ \diamond\diamond\diamond\diamond\rangle$	4	

67

Easting : E 708.566 Northing : N 2,617.598 Elevation (mSL) : 960 Azimuth : 245 Inclination : -55

	Lithology	Mineralization & Alteration
	0 - 1.7m Gravel	
		:
	1.7 – 12.2m Rhyodacitic tuff breccia, weathered,	4.5 – 21.2m Limonite along crack
	greenish color	
$5 \rightarrow $	12.2 - 30.2m Rhyodacitic tuff, grayish green, partly	15.2 – 15.7m Limonite atrongly stained
	essential tuff breccia or rhyodacite	
		16.2 – 30.2m Pyrite very weakly disseminated
0		19.5m Limonite weakly stained ( 20cm in width )
		16.8 – 23m Py veinlets 3 to 5/m
5		
*>>>> *>>>>>		
0	-	30m Quartz veinlets with malachite
_ \\\ \\		
5	33.4 – 38.9m Dacitic tuff, pale greenish gray	
		33.4 - 75.6m Partly bedded ( foliated ? ) Pyrite aggregates
12227		
	38.9 − 48.2m Rhyodacitic tuff, glassy	
	\ \	
5 - ////		
	48.2 – 50.0m Rhyodacitic tuff breccia, with	

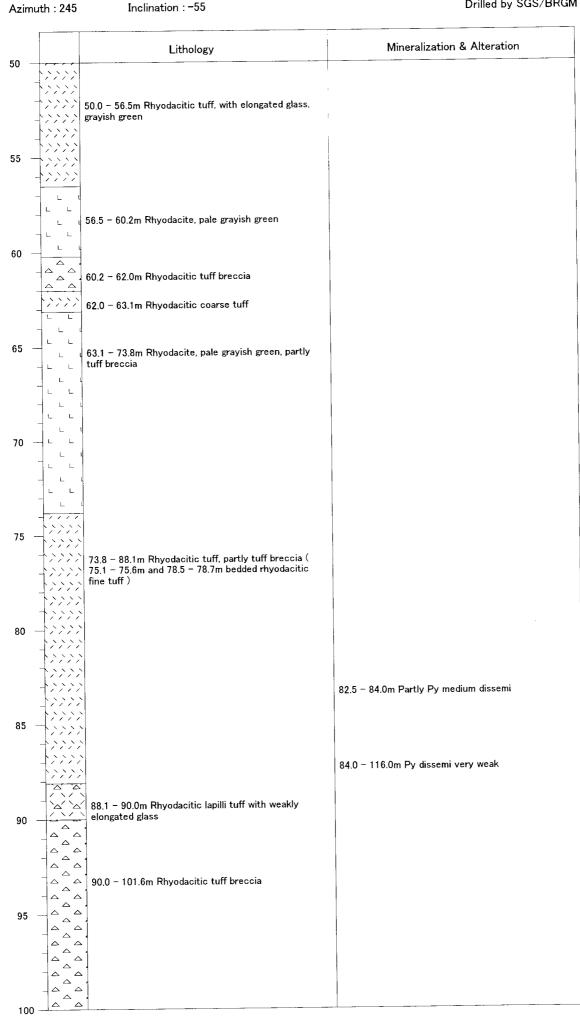
Date Started Oct. 24, 2000

Date Completed : Oct. 31, 2000

Elevation (mSL) : 960 Northing: N 2,617.598

Drilled by SGS/BRGM

Easting : E 708.566 Azimuth : 245



Drill Hole No. : MJSU-16

SU-10 Date

Easting : E 708.566 Northing : N 2,617.598 Elevation (mSL) : 960 Azimuth : 245 Inclination : -55

Drilled by SGS/BRGM

100		Lithology	Mineralization & Alteration
100			:
105 —		101.6 – 132.4m Rhyodacitic lapilli tuff, pale grayish green	
-			
110 —			
115 -			
			116.0 – 122.8m Partly bedded Py dissemi medium
120 —			
125 -			122.8 – 133.9m Py very rarely dissemi
130 -			
	L	132.4 – 133.9m Rhyodacite, glassy, sheared	
135 -	<i>ヽヽヽヽヽ</i> - <i>ヽヽヽヽ</i>	133.9 – 136.5m Rhyodacitic tuff with elongated glass	133.9 – 136.5m Partly bedded Py dissemi, whitish gray color, weakly silicified
		136.5 – 140.3m Rhyodacite, sheared	
140 -		4 - -	
		140.3 - 148.4m Rhyodacitic tuff with glass	
			140.3 – 148.4m Py weak dissemi
145 -			
		148.4 – 149.0m Basalt, intrusive	
150 -	1		

Drill Hole No. : MJSU-16 Easting : E 708.566 Nor

Azimuth : 245

J-16 Date St

Inclination : -55

Northing: N 2,617.598 Elevation (mSL): 960

Drilled by SGS/BRGM

50	Lithology	Mineralization & Alteration
	u –149.0 – 154.0m Rhyodacite, weak silicified	148.4 – 154.0m Py dissemi weak to medium, partly Py–Qtz veinlets bands
	↓ ↓ ↓ 154.0 – 162.1m Dacite with quartz phenocrysts,	154.0 - 162.1m Py weak dissemi
	weak silicified ( intrusive?)	
60		
	162.1 – 165.6m Rhyodacite	
	165.6 – 167.3m Rhyodacitic essential lapilli tuff 167.3 – 167.5m Rhyodacitic accidental lapilli tuff with basaltic tuff fragments	
70	167.5 – 170.5m Rhyodacitic tuff to essential lapilli tuff	
	170.5 – 173.1m Rhyodacitic tuff with elongated glass, rarely lapilli size fragments 173.1 – 173.5m Basalt intrusive	
75		
+ > > > > - ^ > > > > 80 > > > > - > > > > - > > > >	<ul> <li>173.5 - 180.3m Rhyodacitic tuff with elongated</li> <li>glass, rarely lapilli size fragments</li> </ul>	
	180.3 – 210.0m Rhyodacitic tuff with big elongated glass, partly containing breccia-sized fragments, rarely intercalated by thin fine tuff	180.3 - 210.0m Py dissemi very weak
90		
		193.8 – 194.3m Py medium to strong dissemi in grayish color part
195		
  		198.2 – 199.2m Py strong dissemi in grayish white color part

Ċ

Drill Hole No. : MJSU-16Date Started Oct. 24, 2000Date Completed : Oct. 31, 2000Easting : E 708.566Northing : N 2,617.598Elevation (mSL) : 960

Azimuth : 245

Inclination : -55

Drilled by SGS/BRGM

	Lithology	Mineralization & Alteration
2222		
2222		1
~~~~		
1111		
>>>> >>>>>		
× × × ×		

Drill Hole No.	Depth (m)	Direction	Inclination
Dilli Hole No.	Depui (m)	(degree)	(degree)
MJSU-9	0.0	155	-55
	100.0	157	-53
	200.0	161	-51
	379.5	163	-48
MJSU-10	0.0	300	-55
	100.0	300	-55
	200.0	300	-51
	300.0	300	-51
	350.0	300	-50
MJSU-11	0.0	150	-55
	100.0	154	-54
	250.0	158	-54
MJSU-12	0.0	270	-55
	100.0	278	-54
	200.0	278	-51
	250.0	279	-50
MJSU-13	0.0	330	55
	100.0	336	54
	249.5	337	53
MJSU-14	0.0	245	-55
	100.0	244	-54
	200.0	245	-52
	274.0	248	-50
MJSU-15	0.0	335	-70
	100.0	340	-68
	200.0	337	-67
	375.0	348	-64
MJSU-16	0.0	245	55
	100.0	250	53
	209.5	250	50

، ر.

Appendix 28 Borehole Deviations of MJSU-9 to MJSU-16

Appendix 29 Results of Ore Assay(1)

Drill	Dept	h (m)	Width	Au	Ag	Cu	Zn	Pb	S
Hole No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-9	2.70	4.20	1.50	<0.05	<1.0	192	77	13	<0.05
	5.70	7.20	1.50	<0.05	<1.0	113	14	11	<0.05
	8.70	10.20	1.50	<0.05	<1.0	100	66	17	0.25
	11.70	13.20	1.50	<0.05	<1.0	104	44	16	0.44
	14.70	16.20	1.50	<0.05	<1.0	34	12	7	<0.05
	17.70	19.20	1.50	<0.05	1.0	86	8 23	20 67	<0.05 <0.05
	20.70 23.70	22.20 25.20	1.50 1.50	<0.05 <0.05	5.5 3.0	140 283	23	25	<0.05
	26.70	23.20	1.50	<0.05	1.7	132	60	18	<0.05
	29.70	31.20	1.50	<0.05	<1.0	92	12	11	<0.05
	32.40	33.90	1.50	0.07	1.4	114	7	27	0.90
	33.90	35.40	1.50	0.06	1.6	73	7	21	0.36
	35.40	36.90	1.50	<0.05	1.4	156	8	22	1.05
	36.90	38.40	1.50	<0.05	1.6	39	7	15	0.44
	38.40	39.90	1.50	<0.05	1.6	19	6	20	0.93
	39.90	41.50	1.60	<0.05	1.7	33	14	21	1.08
	41.50	43.00	1.50	<0.05	1.8	645	10	17	5.11
	43.00	44.50	1.50	<0.05	1.7	76	8	30	2.08
	44.50	46.00	1.50	<0.05	1.7	328	15	29	4.86
	46.00	47.50	1.50	<0.05	1.1	249	20	<u>32</u> 43	2.93 3.17
	47.50 49.00	49.00 50.50	1.50 1.50	<0.05 <0.05	<u>2.3</u> <1.0	1,205	1,050	43	2.94
	49.00 50.50	50.50	1.50	<0.05	<1.0	83	44		2.94
	52.00	53.50	1.50	<0.05	2.3	394	5,505	24	4.38
	53.50	55.00	1.50	< 0.05	<1.0	153	64	12	3.26
	55.00	56.50	1.50	<0.05	<1.0	166	44	11	3.62
	56.50	58.00	1.50	<0.05	<1.0	393	60	16	5.22
	58.00	59.50	1.50	<0.05	<1.0	201	55	16	5.16
	59.50	61.00	1.50	<0.05	<1. 0	317	83	13	4.75
	61.00	62.50	1.50	<0.05	1.2	459	42	15	5.26
	62.50	64.00	1.50	<0.05	1.0	194	44	16	4.65
	64.00	65.50	1.50	<0.05	<1.0	214	44	20	5.00
	65.50	67.00	1.50	<0.05	1.0	168	<u>114</u> 72	<u>13</u> 12	4.59 3.76
	67.00	68.50 70.00	1.50 1.50	<0.05	<1.0 <1.0	<u>124</u> 179	26	12	4.65
	68.50 70.00	70.00	1.50	<0.05 0.06	1.0	456	149	14	3.90
	71.50	73.00	1.50	0.06	1.5	321	29	14	5.83
	73.00	74.50	1.50	0.08	<1.0	259	67	9	3.09
	74.50	76.00	1.50	0.06	1.0	249	29	12	3.53
	76.00	77.50	1.50	0.09	1.0	241	14	13	6.30
	77.50	79.00	1.50	0.07	<1.0	185	36	12	3.86
	79.00	80.50	1.50	0.05	<1.0	199	20	18	6.30
	80.50	82.00	1.50	0.05	1.0	189	26	13	5.38
	82.00	83.50	1.50	<0.05	<1.0	154	15	13	4.91
	83.50	85.00	1.50	<0.05	<1.0	109	22	9	3.55
	85.00	86.50	1.50	< 0.05	<1.0	139	12	9	2.85
	86.50	88.00	1.50	<0.05	<1.0	114	14	10	4.28
	88.00	89.50	1.50	< 0.05	<1.0 <1.0	65	<u> </u>	10 11	5.02
	89.50 91.00	91.00 92.50	1.50 1.50	0.06 <0.05	<1.0 <1.0	66 62	9	9	4.13
	91.00	92.50	1.50	<0.05	<1.0	64	9 17		2.36
	94.00	95.50	1.50	<0.05	<1.0	72	17	10	2.68
	95.50	97.00	1.50	<0.05	<1.0	51	52	7	0.34
	97.00	98.50	1.50	<0.05	<1.0	55	158	10	1.14
	98.50	100.00	1.50	<0.05	<1.0	53	28	10	2.79
	100.00	101.50	1.50	<0.05	<1.0	62	28	10	4.49
	101.50	103.00	1.50	<0.05	<1.0	52	14	10	2.66
	103.00	103.70	0.70	<0.05	<1.0	72	21	13	4.60
	107.80	109.30	1.50	0.05	1.2	116	61	17	3.69
	109.30	109.90	0.60	<0.05	1.1	128	18	14	1.46
	109.90	111.00	1.10	<0.05	1.2	97	68	13	3.12
	127.40	128.90	1.50	<0.05	<1.0	115	36	7	1.96
	128.90	130.40	1.50	<0.05	<1.0	124	70	8	2.29

Appendix 29 Results of Ore Assay(2)

Drill	Dept	h (m)	Width	Au	Ag	Cu	Zn	Pb	S
Hole No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-9	130.40	131.30	0.90	<0.05	<1.0	91	49	7	3.04
	133.00	134.50	1.50	<0.05	1.1	73	43	12	5.23
	134.50	136.00	1.50	<0.05	1.6	76	26	10	5.35
	136.00	137.50	1.50	<0.05	1.0	193	44	9	4.44
	137.50	139.00	1.50	<0.05	1.6	233	69	27	7.27
	139.00	140.50	1.50	<0.05	1.3	232	45	16	7.36
	140.50	142.00	1.50	<0.05	<1.0	96	64	9	5.28
	142.00	143.50	1.50	< 0.05	<1.0	99	32	13	6.55
	143.50	145.00	1.50	<0.05	<1.0	89 195	43 90	<u>17</u> 32	4.37 4.51
	145.00	146.50 148.00	1.50 1.50	<0.05 <0.05	1.1 <1.0	83	20	10	4.06
	146.50 148.00	148.00	0.70	<0.05	<1.0	71	44	13	4.00
	166.00	167.50	1.50	<0.05	<1.0	72	42	16	4.71
	167.50	169.00	1.50	<0.05	1.0	128	81	23	6.73
	169.00	170.50	1.50	<0.05	<1.0	79	80	29	4.14
	170.50	172.00	1.50	< 0.05	<1.0	57	304	16	2.92
	172.00	173.50	1.50	<0.05	<1.0	92	285	28	5.00
	173.50	175.00	1.50	<0.05	<1.0	81	134	35	5.15
	175.00	176.50	1.50	<0.05	<1.0	68	252	84	4.55
	176.50	178.00	1.50	<0.05	<1.0	62	409	71	4.56
	178.00	179.50	1.50	<0.05	1.6	217	410	85	8.66
	179.50	181.00	1.50	<0.05	1.5	189	511	78	5.56
	181.00	182.50	1.50	<0.05	1.8	377	533	118	9.91
	182.50	184.00	1.50	<0.05	1.8	401	532	128	10.62
	184.00	185.50	1.50	<0.05	1.2	250	297	70	7.65
	185.50	187.00	1.50	<0.05	1.3	395	257	99	13.68
	187.00	188.50	1.50	<0.05	1.0	295	189	62	9.18 12.43
	188.50	190.00	1.50	<0.05	1.0	427	98 68	75 68	14.04
	190.00	191.50 193.00	1.50	<0.05	1.1	468 376	289	81	11.90
	191.50 193.00	193.00	<u>1.50</u> 1.50	<0.05 <0.05	<1.0	297	187	58	8.55
	193.00	194.00	1.50	<0.05	1.6	246	125	67	7.70
	196.00	197.50	1.50	<0.05	2.4	479	291	101	8.67
	197.50	199.00	1.50	<0.05	3.9	591	492	115	11.54
	199.00	200.50	1.50	<0.05	4.0	644	390	107	13.96
	200.50	202.00	1.50	<0.05	3.4	648	150	92	12.78
	202.00	203.50	1.50	<0.05	1.5	206	247	54	6.82
	203.50	205.00	1.50	<0.05	<1.0	66	92	31	6.90
	205.00	206.50	1.50	<0.05	<1.0	78	274	35	5.42
	206.50	208.00	1.50	<0.05	<1.0	164	960	49	7.94
	208.00	209.50	1.50	<0.05	1.6	266	616	76	9.59
	209.50	211.00	1.50	<0.05	1.0	425	79	62	13.82
1	211.00	212.50	1.50	<0.05	<1.0	459	37	53	13.15
	212.50	214.00	1.50	<0.05	<1.0	451 410	42	48 49	12.98 13.07
	214.00	215.50	1.50	<0.05	<1.0	410	<u>39</u> 151	49 56	11.89
	215.50	217.00	1.50	<0.05 <0.05	<u> </u>	260	333	45	8.07
	217.00 218.50	218.50 220.00	1.50	<0.05 <0.05	1.3	176	582	45	5.72
	218.50	220.00	1.50	<0.05	1.3	185	448	36	6.29
	220.00	221.50	1.50	< 0.05	2.2	283	353	86	10.29
	223.00	223.00	1.50	<0.05	1.3	219	592	61	11.52
	224.50	226.00	1.50	<0.05	1.3	218	589	59	7.84
	226.00	228.00	2.00	<0.05	1.0	188	145	38	6.07
]	228.00	230.00	2.00	<0.05	<1.0	215	78	40	6.23
	230.00	232.00	2.00	< 0.05	<1.0	194	145	40	5.58
	232.00	234.00	2.00	<0.05	1.0	243	173	41	2.96
	234.00	236.00	2.00	<0.05	<1.0	100	346	21	6.34
	236.00	238.00	2.00	<0.05	<1.0	131	159	21	5.58
	238.00	240.00	2.00	<0.05	<1.0	111	550	19	3.92
	240.00	242.00	2.00	<0.05	<1.0	107	474	21	5.62
	242.00	244.00	2.00	<0.05	<1. 0	77	140	19	4.10
	244.00	246.00	2.00	<0.05	<1.0	90	174	17	3.55
	246.00	248.00	2.00	<0.05	<1.0	103	56	18	3.43

Appendix 29 Results of Ore Assay(3)

Drill Hole	Dept		Width	Au	Ag	Cu	Zn	Pb	S
No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-9	248.00	250.00	2.00	<0.05	1.0	148	60	22	4.30
	250.00	252.00	2.00	<0.05	1.4	224	115	31	6.64
	252.00	254.00	2.00	<0.05	<1.0	149	129	20	4.19
	254.00	256.00	2.00	0.06	<1.0	266	136	41	8.7
	256.00	258.00	2.00	0.06	2.0	212	218	39	11.94
	258.00	260.00	2.00	<0.05	2.2	266	197	53	11.69
	260.00	262.00	2.00	<0.05	1.4	338	276	52	12.00
	262.00	264.00	2.00	<0.05	1.5	302	138	48	9.94
	264.00	266.00	2.00	<0.05	2.1	330	343	56	11.0
	266.00	268.00	2.00	<0.05	2.1	305	212	45	8.50
	268.00	270.00	2.00	<0.05	1.9	143	248	38	6.7
	270.00	272.00	2.00	<0.05	2.2	175	278	107	6.0
	272.00	274.00	2.00	0.05	1.9	184	210	47	9.2
	274.00	276.00	2.00	<0.05	1.9	270	183	80	9.13
	276.00	278.00	2.00	<0.05	1.3	114	209	38	3.8
	278.00	280.00	2.00	<0.05	3.3	119	306	119	8.00
	280.00	282.00	2.00	<0.05	3.6	127	432	304	7.35
	280.00	282.00	2.00	<0.05	3.3	149	608	137	5.74
	282.00	284.00	2.00	<0.05	2.1	120	430	110	6.24
	284.00	288.00	2.00	<0.05	2.1	172	542	181	7.2
					1.2	172	319	86	3.9
	288.00	290.00	2.00	<0.05		301	843		7.7
	290.00	292.00	2.00	<0.05	4.7			626	
	292.00	294.00	2.00	<0.05	2.9	206	608	63	8.3
	294.00	296.00	2.00	<0.05	2.6	215	360	56	9.3
	296.00	297.55	1.55	<0.05	3.8	281	245	54	8.2
	297.55	299.55	2.00	<0.05	2.3	252	113	46	7.5
	299.55	301.55	2.00	<0.05	2.0	342	189	51	9.2
	301.55	303.55	2.00	<0.05	2.9	286	593	42	8.2
	303.55	305.55	2.00	<0.05	2.3	305	269	45	7.9
	305.55	307.55	2.00	0.25	3.8	300	315	46	9.7
	307.55	310.00	2.45	<0.05	2.3	179	184	40	9.10
	310.00	312.00	2.00	<0.05	1.8	144	163	27	8.4
	312.00	314.00	2.00	0.08	5.8	797	451	70	13.4
	314.00	315.70	1.70	0.05	14.5	3,260	582	148	16.9
	315.70	317.70	2.00	0.06	10.1	329	835	82	14.5
	317.70	318.50	0.80	<0.05	9.2	150	1,590	77	26.7
	321.60	323.60	2.00	0.07	8.2	516	724	161	18.1
	323.60	324.90	1.30	0.10	8.2	660	676	108	13.7
	326.90	328.10	1.20	0.22	10.6	347	471	106	16.0
	334.60	336.70	2.10	0.09	4.0	389	690	69	8.4
	336.70	337.40	0.70	<0.05	52.1	295	774	98	28.1
	337.50	339.90	2.40	0.06	42.5	238	649	111	16.0
	339.90	341.25	1.35	0.17	22.5	505	1,700	175	13.5
	341.25	343.40	2.15	0.33	86.6	885	4,540	490	23.6
	343.40	343.90	0.50	<0.05	17.5	192	1,280	166	7.7
	343.90	345.00	1.10	0.47	32.9	2,850	1,200	540	9.5
	345.00	347.30	2.30	0.47	34.1	1,630	1,030	218	16.7
	347.30	349.00	1.70	0.23	34.1	574	1,760	386	18.3
	349.50	350.30	0.80	0.33	16.0	354	1,480	125	14.0
	349.50	350.30	1.00	0.07	20.7	562	996	230	14.0
	351.80	352.55	0.75	<0.05	20.7	184	1,530	200	7.6
				· · · · · · · · · · · · · · · · · · ·		746	2,200	450	10.0
	352.55	353.40	0.85	0.25	19.6	175	335		12.7
	353.40	354.60	1.20	0.09	3.6			92	
	354.60	355.10	0.50	0.12	5.8	239	309	106	14.8
	355.10	355.50	0.40	0.16	8.7	551	708	97	17.9
	355.50	356.90	1.40	0.12	7.5	397	216	95	13.5
	356.90	357.70	0.80	0.16	9.0	805	343	112	21.8
	357.70	359.70	2.00	0.08	3.8	211	437	50	12.3
	359.70	361.70	2.00	0.08	1.2	193	2,380	74	9.3
	361.70	363.70	2.00	0.15	2.9	93	2,910	144	9.7
	363.70	365.70	2.00	0.07	1.6	80	336	45	6.6
						0.5	00	/5	0.0
MJSU-10	5.10	6.10	1.00	< 0.05	<1.0	35	20	<5	2.2

Drill Hole	Deptł	n (m)	Width	Au	Ag	Cu	Zn	РЬ	S
No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-10	9.40	9.80	0.40	<0.05	<1.0	50	50	<5	0.44
ľ	9.80	10.80	1.00	<0.05	<1.0	30	50	<5	0.52
	12.80	13.80	1.00	<0.05	<1.0	30	60	<5	<0.05
ſ	14.80	15.80	1.00	<0.05	<1.0	20	30	<5	0.36
	15.80	16.30	0.50	<0.05	<1.0	35	40	<5	0.52
	16.30	17.30	1.00	<0.05	<1.0	20	60	15	0.34
ſ	18.70	19.70	1.00	<0.05	<1.0	15	40	60	0.54
ľ	19.70	21.10	1.40	<0.05	<1.0	30	110	20	0.39
1	21.10	22.10	1.00	<0.05	<1.0	25	140	<5	<0.05
Ī	22.75	23.75	1.00	<0.05	<1.0	30	190	<5	<0.05
ľ	23.75	23.85	0.10	<0.05	<1.0	50	620	20	0.28
ľ	23.85	24.85	1.00	<0.05	<1.0	35	700	<5	<0.05
	67.50	69.50	2.00	<0.05	<1.0	700	300	<5	4.57
	69.50	71.50	2.00	<0.05	<1.0	470	1440	15	3.65
Ī	71.50	73.50	2.00	<0.05	<1.0	175	370	<5	0.76
	73.50	75.50	2.00	<0.05	<1.0	360	440	<5	2.51
	75.50	77.50	2.00	<0.05	<1.0	170	820	<5	2.00
ľ	77.50	79.50	2.00	<0.05	<1.0	65	490	<5	1.72
	79.50	81.50	2.00	0.12	<1.0	70	760	50	2.32
	81.50	82.50	1.00	<0.05	<1.0	65	1600	70	2.45
	83.60	85.10	1.50	<0.05	<1.0	225	4760	420	3.40
	136.60	137.60	1.00	<0.05	<1.0	45	140	<5	6.00
	137.60	138.60	1.00	<0.05	<1.0	20	80	<5	4.22
	138.60	139.60	1.00	<0.05	<1.0	15	40	<5	4.88
ŀ	139.60	140.60	1.00	<0.05	<1.0	25	60	<5	10.32
	140.60	141.60	1.00	< 0.05	<1.0	10	60	<5	4.76
	141.60	142.60	1.00	<0.05	<1.0	20	70	<5	6.88
	142.60	143.60	1.00	<0.05	<1.0	25	70	<5	5.32
	143.60	144.60	1.00	<0.05	<1.0	15	70	<5	4.36
	144.60	145.60	1.00	<0.05	<1.0	15	60	<5	10.53
	145.60	146.60	1.00	<0.05	<1.0	15	60	<5	13.91
	146.60	147.60	1.00	<0.05	<1.0	10	40	<5	13.61
	147.60	148.60	1.00	<0.05	<1.0	10	40	<5	5.99
	148.60	149.60	1.00	<0.05	<1.0	10	40	<5	6.26
	149.60	150.60	1.00	<0.05	<1.0	15	40	<5	9.37
	150.60	151.60	1.00	<0.05	<1.0	25	20	<5	8.77
	151.60	152.60	1.00	<0.05	<1.0	45	15	<5	14.03
	152.60	153.60	1.00	<0.05	<1.0	20	15	<5	8.75
	153.60	154.60	1.00	<0.05	<1.0	75	60	<5	8.12
	154.60	155.60	1.00	<0.05	<1.0	75	300	<5	10.52
	155.60	156.60	1.00	<0.05	<1.0	35	30	<5	7.43
	156.60	157.60	1.00	<0.05	<1.0	25	20	<5	7.44
	157.60	158.60	1.00	<0.05	<1.0	25	20	<5	13.20
	158.60	159.60	1.00	<0.05	<1.0	150	110	<5	18.88
	159.60	160.90	1.30	<0.05	<1.0	40	20	25	15.23
	160.90	161.90	1.00	<0.05	<1.0	35	10	15	16.20
	161.90	162.90	1.00	<0.05	<1.0	70	15	15	18.48
	162.90	164.50	1.60	<0.05	<1.0	26	420	<5	5.15
	162.90	165.40	0.90	<0.05	<1.0	25	15	<5	13.80
	200.00	201.00	1.00	<0.05	<1.0	35	50	<5	4.47
	200.00	201.00	1.00	<0.05	<1.0	65	30	<5	4.97
	201.00	202.00	0.70	<0.05	<1.0	95	20	<5	4.94
MJSU-11	202.00	4.00	1.50	<0.05	<1.0	33	47	5	0.34
10000-11	5.50	7.00	1.50	<0.05	<1.0	26	40	3	0.36
			1.50	<0.05	<1.0	26	38	4	0.35
	8.50	10.00	1.50	<0.05	<1.0	20		4	0.33
	11.50	13.00		<0.05	<1.0	10	37	3	<0.05
	14.50	16.00	1.50		<1.0	110	80	4	<0.05
	17.50	19.00	1.50	<0.05			29	- 4	<0.05
	20.50	21.00	0.50	<0.05	<1.0	14 12	<u>29</u>	2	<0.05
	23.50	25.00	1.50	<0.05	<1.0		<u></u>	2	<0.05
	1 96 60	27.00	0.50	< 0.05	<1.0	10	48	2	<u>\U.U3</u>
	26.50				11 0	10	00	· · ·	2 50
	130.90 132.40	132.40 133.90	1.50 1.50	<0.05 <0.05	<1.0 <1.0	10 106	66 20	3	3.58 11.77

Appendix 29	Results of Ore Assay(5)
-------------	-------------------------

Drill Hole	Dept	n (m)	Width	Au	Ag	Cu	Zn	Pb	S
No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-12	133.90	135.40	1.50	<0.05	<1.0	48	16	2	8.52
	135.40	136.90	1.50	<0.05	<1.0	172	17	2	10.75
	136.90	138.40	1.50	<0.05	<1.0	20	35	5	8.55
	138.40	140.00	1.60	<0.05	<1.0	14	54	4	8.63
	140.00	141.50	1.50	<0.05	<1.0	12	50	3	4.53
	150.90	152.40	1.50	<0.05	<1.0	6	31	3	2.77
	152.40	155.70	3.30	<0.05	<1.0	8	28	3	4.82
	155.70	157.20	1.50	<0.05	<1.0	6	25	2	5.86
	157.20	158.70	1.50	<0.05	<1.0	10	26	2	3.60
	158.70	160.20	1.50	<0.05	<1.0	8	26	2	2.54
	160.20	161.70	1.50	<0.05	<1.0	8	23	3	7.62
	161.70	162.40	0.70	<0.05	<1.0	8	19	3	8.40
	162.40	163.60	1.20	<0.05	<1.0	8	24	3	7.80
	163.60	165.80	2.20	<0.05	<1.0	10	21	2	10.30
	165.80	167.30	1.50	< 0.05	<1.0	10	24	2	5.73
	167.30	168.80	1.50	<0.05	<1.0	10	30		<u> </u>
	168.80	169.50	0.70	<0.05	<1.0	16	46 45	3	9.06
	169.50	171.00	1.50	<0.05	<1.0	12	45 91	2	4.73
	182.00	182.40	0.40	<0.05	<1.0 <1.0	394	72	12	4.75
	131.10	133.10	2.00	<0.05		125	63	13	3.29
	133.10	135.10	2.00	<0.05 <0.05	<1.0 <1.0	38	29	6	2.37
	135.10	137.10	2.00	<0.05	<1.0	197	41	6	2.92
	137.10 139.10	139.10 140.10	2.00	<0.05	<1.0	139	41	6	1.53
		140.10	2.00	<0.05	<1.0	931	114	8	6.31
	140.10 142.10	142.10	1.00	<0.05	<1.0	1,280	119	8	5.20
	163.30	165.90	2.60	<0.05	<1.0	63	41	8	7.68
	211.00	212.80	1.80	<0.05	<1.0	53	78	8	1.63
	227.75	212.80	0.20	<0.05	<1.0	223	39	18	28.34
	231.60	232.00	0.40	<0.05	<1.0	144	58	8	6.16
MJSU-13	89.50	91.00	1.50	<0.05	<1.0	161	117	7	3.77
M030 13	91.00	92.50	1.50	<0.05	<1.0	23	93	8	10.10
	92.50	94.00	1.50	<0.05	<1.0	37	142	8	1.90
	94.00	95.50	1.50	<0.05	<1.0	15	81	6	3.72
	95.50	97.00	1.50	<0.05	<1.0	24	95	10	12.87
	97.00	98.10	1.10	<0.05	<1.0	88	163	6	4.88
	122.10	123.70	1.60	<0.05	<1.0	335	462	8	4.05
	129.00	130.90	1.90	<0.05	<1.0	1112	334	5	4.78
	132.40	133.90	1.50	<0.05	<1.0	906	291	7	3.12
	133.90	135.40	1.50	<0.05	<1.0	540	472	7	4.13
	135.40	137.20	1.80	<0.05	<1.0	1486	244	8	5.27
	142.20	143.70	1.50	< 0.05	<1.0	883	199	9	4.36
	143.70	145.20	1.50	<0.05	<1.0	1345	192	6	2.44
	148.70	149.70	1.00	<0.05	<1.0	193	230	8	5.99
	153.70	155.10	1.40	<0.05	<1.0	174	211	9	6.97
	159.30	160.60	1.30	<0.05	<1.0	215	191	5	6.10
	184.60	186.40	1.80	<0.05	<1.0	305	399	7	4.74
	186.40	188.40	2.00	<0.05	<1.0	139	659	10	2.70
MJSU-14	69.00	69.50	0.50	<0.05	<1.0	<5	80	<5	0.87
	97.90	98.30	0.40	0.09	<1.0	<5	30	<5	1.88
	109.40	111.40	2.00	0.10	<1.0	<5	80	<5	0.47
	111.40	113.40	2.00	<0.05	<1.0	<5	110	<5	0.75
	113.40	115.40	2.00	<0.05	<1.0	50	100	<5	0.63
	115.40	117.40	2.00	0.69	<1.0	<5	90	<5 <5	0.56
	117.40	119.40	2.00	0.49	<1.0	110	35	<5 <5	0.97
	119.40	121.40	2.00	<0.05	<1.0	40	30		8.09
	140.20	141.10	0.90	<0.05	<1.0	90	250	<5 <5	2.12
	150.50	152.50	2.00	<0.05	<1.0	50	300 190	<5	3.41
	152.50	154.50	2.00	<0.05	<1.0	160		<5	3.95
	165.70	166.30	0.60	<0.05	<1.0	<5	<u>135</u> 250	<5	2.22
	166.30	167.30	1.00	<0.05	<1.0	20		<5	1.83
	167.30	168.30	1.00	0.08	<1.0	530 40	250 300	<5	2.89
	170.80	171.70	0.90	<0.05	<1. 0	40	300	()	2.09

Appendix 29 Results of Ore Assay(6	opendix 29	Results of Ore Assay(6)
------------------------------------	------------	-------------------------

Drill Hole	Dept	h (m)	Width	Au	Ag	Cu	Zn	Pb	S
No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-14	171.70	172.30	0.60	<0.05	4.0	40	250	<5	6.66
	194.70	195.70	1.00	<0.05	<1.0	40	350	<5	2.27
	195.70	196.30	0.60	0.08	5.0	5,300	410	<5	3.44
	196.30	197.30	1.00	<0.05	2.0	2,770	335	<5	3.43
	197.30	198.90	1.60	<0.05	<1.0	480	370	<5	1.43
	198.90	199.20	0.30	<0.05	3.5	300	465	<5	1.43
	201.90	202.90	1.00	<0.05	<1.0	260	3,600	<5	2.36
	202.90	203.20	0.30	<0.05	1.5	120	250	<5	17.60
	203.20	204.10	0.90	<0.05	2.5	500	1,300	<5	1.66
	204.10	204.45	0.35	0.19	12.5	31,000	750	<5	20.30
	204.45	205.45	1.00	<0.05	<1.0	80	75	<5	0.36
	219.15	219.80	0.65	0.16	3.0	2,130	475	<5	5.12
	219.80	220.10	0.30	0.27	7.5	890	500	<5	26.60
	220.10	220.20	0.10	< 0.05	<1.0	340	205 350,000	<5 <5	1.20 25.90
	220.20	220.90	0.70	0.24	34.0 25.0	11,300 5,100	150,000	<5	10.48
	220.90	221.00	0.10	0.25	<1.0	<u> </u>	2,760	<5	1.19
	221.00	221.20 221.75	0.20 0.55	<u><0.05</u> 0.17	51.0	22,800	110,000	<5	30.00
	221.20 221.75	221.75	0.55	<0.05	1.5	760	3,000	<5	4.78
	221.75	222.35	1.00	<0.05	<1.0	100	165	<5	1.41
	234.50	234.90	0.40	<0.05	<1.0	50	750	<5	0.48
MJSU-15	43.60	45.40	1.80	<0.05	<1.0	172	425	33	0.46
10000 10	45.40	47.40	2.00	<0.05	1.9	378	459	57	9.35
	47.40	49.40	2.00	0.06	2.0	431	123	42	11.60
	49.40	51.40	2.00	<0.05	1.5	653	106	63	13.89
	51.40	53.40	2.00	<0.05	1.6	345	105	28	7.43
	53.40	55.40	2.00	<0.05	1.3	156	65	27	5.01
	55.40	57.40	2.00	<0.05	1.3	133	84	28	6.54
	57.40	59.40	2.00	<0.05	<1.0	102	75	24	4.42
	59.40	61.40	2.00	<0.05	1.4	130	113	29	4.52
	61.40	63.40	2.00	<0.05	1.4	116	184	32	5.87
	63.40	65.40	2.00	<0.05	1.1	82	272	22	4.74
	65.40	67.40	2.00	<0.05	1.4	88	329	27	7.07
	67.40	69.40	2.00	<0.05	1.8	72	120	32	5.71
	69.40	71.40	2.00	<0.05	2.4	75	168	39	6.84
	71.40	73.40	2.00	<0.05	1.6	118	71	33	6.48
	73.40	75.40	2.00	<0.05	1.0	94			6.65
	75.40	77.40	2.00	<0.05	<1.0	213	331	84 27 31 30	6.35
	77.40	79.40	2.00	<0.05	1.5	334	165		7.88
	79.40	81.40	2.00	< 0.05	<1.0	86			<u>4.46</u> 5.67
	81.40	83.40	2.00	<0.05	1.7	98			6.10
	83.40	85.40	2.00	<0.05	1.6	117 102	147	28	5.74
	85.40	87.40 89.40	2.00 2.00	<0.05 <0.05	<u> </u>	74	90	28	4.74
	87.40	<u>89.40</u> 91.40	2.00	<0.05	1.3	134	130	55	6.21
	89.40 91.40	91.40	2.00	<0.05	1.8	98	110	26	5.79
	93.40	95.40	2.00	<0.05	1.3	165	146	27	5.02
	95.40	97.40	2.00	<0.05	1.3	162	155	25	4.42
	97.40	99.40	2.00	<0.05	1.3	128	66	30	4.94
	99.40	101.40	2.00	<0.05	1.0	137	106	27	4.63
	101.40	103.40	2.00	<0.05	1.1	114	129	28	5.29
	103.40	105.40	2.00	<0.05	1.0	85	78	27	4.85
	105.40	107.40	2.00	<0.05	<1.0	66	52	26	5.13
	107.40	109.40	2.00	<0.05	<1.0	76	58	24	4.75
	109.40	111.40	2.00	<0.05	<1.0	71	283	36	5.30
	111.40	113.40	2.00	<0.05	<1.0	74	163	30	4.69
	113.40	115.40	2.00	<0.05	1.4	68	186	67	4.50
	115.40	117.40	2.00	<0.05	1.3	65	635	54	5.04
	117.40	119.40	2.00	<0.05	1.3	85	113	40	6.30
	119.40	121.40	2.00	<0.05	1.5	128	347	39	6.49
	121.40	123.40	2.00	<0.05	1.4	259	84	58	12.24
1	123.40	125.40	2.00	<0.05	2.4	544	68	69	15.83
	125.40	127.40	2.00	< 0.05	2.6	612	97	77	17.18

Appendix 29 Results of Ore Assay(7)

$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	(%) 14 10.44 35 7.46 10 7.81 33 9.21 57 9.00 32 10.22 50 8.21 55 5.78 52 8.82
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	35 7.46 40 7.81 53 9.21 57 9.00 32 10.22 50 8.21 55 5.78
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10 7.81 53 9.21 57 9.00 32 10.22 50 8.21 55 5.78
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	53 9.21 57 9.00 32 10.22 50 8.21 55 5.78
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	53 9.21 57 9.00 32 10.22 50 8.21 55 5.78
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	57 9.00 32 10.22 50 8.21 55 5.78
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	32 10.22 50 8.21 55 5.78
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	50 8.21 55 5.78
145.40 147.40 2.00 <0.05 1.4 217 212 147.40 149.40 2.00 <0.05	55 5.78
147.40 149.40 2.00 <0.05 1.4 128 1170 149.40 151.40 2.00 <0.05	
149.40 151.40 2.00 <0.05 1.6 108 327 151.40 153.40 2.00 <0.05	12 I X X Z
151.40 153.40 2.00 <0.05 1.3 111 378 153.40 155.40 2.00 <0.05	15 6.42
153.40 155.40 2.00 <0.05 2.0 126 1300 1	6.18
	30 5.97
	53 6.79
	35 6.22
	40 5.21
	57 7.83
	70 8.45 43 5.17
	32 5.18
	12 7.94
	57 11.56
	12.06
	31 7.11
	33 5.20
	6.92
	1 8.04
	51 9.47
	32 6.41
	37 3.74
	21 3.18
	9 3.34
	25 4.08
197.40 199.40 2.00 0.05 1.7 160 259	50 9.02
199.40 201.40 2.00 <0.05 1.4 128 201	23 6.96
201.40 203.40 2.00 <0.05 2.5 174 311	8.60
203.40 205.40 2.00 <0.05 1.2 106 191	34 6.26
	34 5.98
	35 5.24
	18 5.21
	7 2.61
	39 5.71
	18 7.18
	31 3.64
	33 4.81
	22 2.65
	28 5.93
	29 5.48
	35 5.54
	<u>39 6.11</u>
	20 2.31
	43 7.53
	37 4.97
	22 4.18
	18 3.67
	18 <u>3.67</u> 17 <u>3.53</u>
	11 3.73
	12 3.84
	10 4.69
251.40 253.40 2.00 <0.05 1.9 128 24	13 4.37
	7 3.04
253.40 255.40 2.00 <0.05 2.4 55 16	11 2.80

	Appendix 29	Results of Ore Assay(8)
--	-------------	-------------------------

Drill Hole	Dept	h (m)	Width	Au	Ag	Cu	Zn	Pb	S
No.	from	to	(m)	(g/t)	(g/t)	ppm	ppm	ppm	(%)
MJSU-15	303.65	305.65	2.00	<0.05	1.9	95	29	13	6.98
	305.65	307.65	2.00	<0.05	1.0	84	107	5	2.36
	307.65	309.65	2.00	<0.05	1.9	137	1220	17	7.28
	309.65	311.65	2.00	<0.05	1.1	182	572	10	3.07
	311.65	313.80	2.15	<0.05	<1.0	87	485	8	3.03
	332.10	334.10	2.00	<0.05	<1.0	82	133	15	3.23
	334.10	336.10	2.00	<0.05	<1.0	76	194	16	4.65
	336.10	338.10	2.00	<0.05	<1.0	106	105	16	2.58
	348.60	350.40	1.80	<0.05	<1.0	191	31	15	4.74
	350.40	351.40	1.00	<0.05	<1.0	128	115	20	2.56
MJSU-16	133.90	135.90	2.00	<0.05	<1.0	<0.01	<0.01	<0.01	0.91
	135.90	137.90	2.00	<0.05	<1.0	<0.01	0.01	<0.01	1.13
	193.80	194.30	0.50	< 0.05	3.2	0.02	<0.01	<0.01	9.76
	198.20	199.20	1.00	<0.05	1.1	<0.01	<0.01	<0.01	8.87

Sample	Drill Hole					a	henocry	Phenocrysts or fragments	sments		╞			grout	groundmass or matrix	or matrix			\vdash		metamo	metamorphic or alteration	Iteration	
No.	No.	Depth (m)	Rock type	Texture	ЧW	ch do	zp dr	ā	ž	0 o	others	MP	clp hb		ā	130	Kf	o do	others	epi chl		ser	tit cb	others
- -	M. ISH-14	1 18	dacitic fine tuff,	porphyritic, weakly		$\left \right $	$\left \right $		⊲		$\left \right $	\vdash		⊲		⊲	⊲			\square		-	A	
-			weakly meta	foliated	glassy shar	ards and	pumice	ds and pumice fragments are devitrified and weakly to moderately chloritized	are devi	itrified an	id weak	y to mod	lerately c	shloritize	jd.									
T-9	M. ISI I-14	AR D	meta-dacitic to	quality										⊲	0			\square	\square	0 0			(*)	
-	+ 0000W		meta-andesitic	sheared	Highly sheared	eared ai	d foliate	and foliated rock of felsic to intermediate composition.	felsic to	intermed	iate con	position.												
T-3	M.ISI 1-14	136.8	meta-andesitic to	foliated & sub-				*		(*				٤	0			(*)		○ €	_	(*)	O	
-			dacitic fine tuff	porphyritic	Feldspars		rysts are	phenocrysts are mostly altered to carbonate and chlorite. Late fractures are filled by	Itered to	carbonat	te and c	hlorite.	Late frac	stures ar	re filled b	y carbonate.	nate.							
T-4	M ISI 1-14	167.2	fine tuff of meta-	highly foliated and			(*)	(*)		(*				Þ	Þ					(*)		∇	0	
			dacitic compo.	sheared	highly sh	eared ar	d schiste	highly sheared and schistosed rock of phyllitic composition	of phyllit	ic compo	sition.													
1	M ISH -14	100 5	highly sheared	strongly foliated &						Δ				0						0		⊲	0	
-			metavolcanic r.	cataclased	The rock h	has suf	ered bot	as suffered both ductile	and brittle deformation.	e deform	ation.													
4 F			meta-rhyodacitic	porphyritic &		-	<			⊲				0						0 *		0		
		0.00	fine tuff	foliated	Phyllosilica	cates cc	mprised	ites comprised of sericte and chlorite are the main alteration products.	and chlo	rite are t	he main	alteratic	n produ	cts.										
r H			meta-siltstone.	deformed &		┝				(*	╞	-		0				-	ŀ	-	_	0		
<u>.</u>		2.2	very fine-grained	foliated	Metasiltstone	tone or	netavolc	or metavolcanic fine (ash) tuff of felsic composition	(ash) tuff	of felsic	compos	sition.												
ł			meta-rhyodacitic	porphyritic & highly	-		F	*		(*				0	(*)		*	┝	╞			0		
8 <u>-</u>	01-OSCM	93.0	fine tuff	_		ion is m	arked by	Deformation is marked by flattening, stretching, and fragmentation of quartz grains.	, stretchi	ng, and f	ragment	ation of	quartz gi	rains.										
+			reworked crystal-	highly sheared &		-	Ľ				╞				0				-	○ €	-	0	Þ	
5 -	01-0SCM	6.99	rich tuff		Poorly sor		ed and crystal rich.		1										1					
	M ICI -10	1005		porphyritic &		┝	F	4		•	\vdash	┝			0			*	-) (*)		0	(*)	
			mera-myonre	foliated	Matrix re	crystalli.	ted, gran	Matrix recrystallized, granular and foliated	oliated.															
÷	M 101 - 10	0100	meta-rhyodacitic	highly sheared &		\vdash	4	0						0	0			-		0 *	_	0		
-			fine tuff	mylonitized	very stro	ngly def	ormed an	very strongly deformed and sheared rock.	I rock.															
÷		0 Jan	meta-rhyodacitic	highly sheared &		┝	P	4		-		-		0	0			*	\mid	○ €		0		
21_1			fine crystal tuff	foliated	Crystal-rich rhyodacitic fine tuff	ich rhyc	dacitic fi	ne tuff																
T-13	M.ISH-11	£7.6	meta-rhyodacitic	porph				4		م	\square			0	0			\vdash					Δ	
-		_	tuff or lava	foliated	Rock is aff	affected by	by chlori	chlorite-sericite-carbonate and silica alteration	e-carbon	ate and :	silica alti	eration.												
T_11	M ISIL-11	75.2	meta-rhyodacitic	porphy				م		Þ				0	Δ				-			Δ	(*)	
-			tuff or lava	foliated	Strikingly	/ similar to	to sample no.	3 no. T−1.	T-13 in texture and mineral composition.	ire and m	ineral cu	ompositik	'n.											
T_16	M ICI I-0	50 0	meta-rhyodacitic	fine-grained sub-										0				(*)				0		
<u>e</u> 1_1		0.00	fine lithic tuff		Effect of	recryst	Ilization	Effect of recrystallization is locally	noticed on phenocrysts crystal margins.	in pheno	crysts ci	rystal m _č	argins.											
T 10	0 131 11	000	meta-rhyodacitic	moderatly foliated	-		⊲			(*)	-			0								0		
		0.06	fine (ash) tuff	and sheared	Locally a	ugen-sh	aped qué	Locally augen-shaped quartz-eye noticed.	oticed.															
1-17	M ICI I-0	199.0	reworked meta-	groundmass fine to		\vdash	∇							0						(*) 🛛		0	(*)	
	6 DODINI	0.221	rhyodacitic tuff	medigrained	Epidote-cl	chlorite	has com	hlorite has completely replaced former amphibole phenocrysts	placed for	rmer amp	hibole p	henocry	sts.											
T-18	M ISI I-0	1 38 1	phyllite or meta-	fine-grained &						Þ									0	(*)		0		
-	2000		siltstone	highly foliated	Locally zoisite	oisite o	curs as	occurs as gangue mineral to	neral to (opaques.														
T-10	M.ISLI-0	103 5	meta-rhyodacite	highly sheared &						4				0	⊲							0		
-	· >>>==		tuff or lava	protomylonitic	Strong s.	hearing	ias produ	Strong shearing has produced protomylonitic occelleur fabric.	mylonitik	s occeller	ur fabric													

Appendix 30 Results of Microscopic Observation of Thin Section

ч. т 2 Appendix 30 Results of Microscopic Observation of Thin Section

		Death (2)	Doold Amon	Tautie		-	FIDEROCLASES OF ITABILIEDUES	SUS OF IL	agillenua					grou	10mabu	groundmass or matrix	×				metam	metamorphic or alteration	or attera	tion	
No.	No.	veptri (m/	ROCK LYPE		МР	clp	hb qz	a	Kf	0 0	others	MP 0	clp hl	zp dr	đ	8	Кf	op ot	others	epi chl	hl amp	Ser	Ę,	ę	others
T_30		106	meta-rhyodacitic	porphyritic &						(*)				0				I		(*)		0		⊲	
n7_1	e norw	£00.4	fine tuff	weakly foliated	Feldspars are		npletely	epiaced.	completely replaced by sericite	e.															
		0100	meta-fine (ash)	unably foliated						Þ				0					Ĺ	(*)		0		*	
17_1	R DODIN	613.0	tuff	weakiy rollated	Meta fine (ash	\sim	tuff of felsic composition	ic compo	sition.																
T-39	M ISH-0	0.800	ubita-mina schist	extremely fine and						0									L			0			
77	0000	0.022		foliated	The rock is aff		ted by pt	rvasive v	ected by pervasive white mica alteration	a alterat	ion.														
T_33		0 01.6	pervasively	very fine-grained									-		_			⊲			0	⊲			
C7_		0.0.0	chloritized rock	and foliated	Primary textur	¢	and miner	al compo	mineral composition is obliterated by strong chlorite and	obliterat.	ed by str	rong chla	wite and	patchy sericite alteration	sericite a	Iteration									
T-24	M ISH-12	6.09	mineralization	fine intersertal and											0			0	\vdash		0			⊲	
		0.60		sheared	The rock show	5	nterserte	I fabric, \	intersertal fabric, where plagioclase grains are randomly oriented and their inter grain spaces are filled by secondary alteration minerals.	gioclase	grains aı	re rando	mly orien	ited and	their int	er grain (paces at	e filled b	y secon	dary alte.	ration mi	nerals.			
T_05	M ICI -10	125.7	meta-rhyodacite	porphyritic and				Ø		Π				0				⊲		0	6	0			
C7_		1.001	tuff or lava	deformed	The felsic roch	~	latrix acc	ompanie:	matrix accompanies phenocrysts and broken fragments of quartz and plagioclase.	ysts and	d broken	fragmen	ts of qua	irtz and j	olagiocla	se.									
T-26	MJSU-13	419	meta-rhyodacitic	porphyritic weakly		\vdash			\square	Η		\vdash	\vdash		Ц			$\left - \right $	$\left \right $	0 7	0	0		(*)	
2	2	2	lapilli tuff	deformed																					
T-97	M.ISH-13	618	meta-rhyolite crystal	porph			0	⊲						0	0			(*)		0		Þ		(*)	
		2.12	tuff or lava	foliated	Meta-rhyolitic	yolitic-ri	yodacitic	crystal	-rhyodacitic crystal rich tuff, moderately deformed,	moderat	ely defor	med, she	eared and	sheared and granulated.	ited.										
Т-28	M.ISH-13	R7 1	mylonitized felsic	highly			0	0														0			
	21 0000		rock	sheared	Coarse-grained fa	ained fabric	: of quartz	ind plagioc	of quartz and plagioclase phenoclasts suggests that probably the former rock	lasts suggi	ests that p	robably the	former ro	ick was plui	was plutonic and of	of granitic (omposition	L That was	s strongly :	sheared an	granitic composition. That was strongly sheared and mylonitized	, Po			
T-29	MJSU-13	82.9	meta-rhyodacitic	porphyritic, weakly						(*)				0				(*	$\left - \right $	H		0		(*)	
	2		tuff	deformed & sheared																					
T-30	MJSU-13	170.0	meta-rhyolite crystal	porpt			0			⊲				0	4			$\left \right $				0			
			tuff or lava	toliated	Strikingly simil	y similar	ar to sample no.	s no. T-27	7 in textu	ire and i	in texture and mineral composition except locally graphic intergrowth of quartz over plagioclase is noticed	ompositi	on excet	ot locally	graphic	intergro	wth of gu	artz ove:	r plagioc	ase is n	oticed.				
T-21	MICILIE	300.2	meta-rhyodacitic	porphyritic weakly				_		(*)				0						\[\] \] \] \] \] \] \] \] \] \] \] \] \]		0			
5	2 0000	2.000 F	lithic tuff	foliated	The foliations	ations are	s marked	by subor	marked by suborientation of sericite patches.	of serici	ite patch	les.													
T_30	M ICH-15	304 G	meta-rhyodacitic	porphyritic weakly						0				0						0 ▼	▼				
70 1	2000	0.500	lithic tuff	foliated	Amphibole oc	ile occur	s in extre	mely fine	curs in extremely fine-grained acicular form and in places forms disseminated rosettes.	acicular	· form an	d in plac.	es forms	dissemi	nated ro	settes.									

Abbrev. MP=pseudomorphs of mafic minerals, cpx≃clinopyroxene, pl=plagioclase, op=opaque minerals, qz=quartz, hb=hornblend, KFK-feldspar, epi=epidote, gl=glass or microcrystalline aggreagte, amp-green amphibole, cb=carbonate. ser≅sericite, tit=titanite, apa≅apatite, cly≅clay minerals. ♦> shows totally decomposed ■ abundant (*) rare ● common

Sample	Drill Hole	Depth											
No.	No.	(m)	Mineralization type	ру	ср	со	cc	te	sp	ga	pr	ma	ru
P-1	MJSU-14	203.1	sub-massive and foliated	0	Δ		Δ		Δ	Δ	Δ	Δ	
P-2	MJSU-14	204.2	sub-massive	0	0				Δ				
P-3	MJSU-14	219.9	sub-massive pyritic	0	Δ				Δ				
P-4	MJSU-14	220.3	laminated massive sulfide	0	0	Δ		Δ	0				
P-5	MJSU-14	220.8	laminated massive sulfide	0	0	Δ			0				
P-6	MJSU-14	221.5	laminated massive sulfide	0	0	Δ			0				
P-7	MJSU-10	139.8	sub-massive and foliated	0	Δ				Δ				
P8	MJSU-10	159.5	weakly foliated massive sulfide	0	Δ				Δ				Δ
P-9	MJSU-11	135.7	sub-massive	0	Δ				Δ				
P-10	MJSU-11	153.4	sub-massive and strongly foliated	0					Δ				
P-11	MJSU-9	66.6	disseminated & aggregations	0	Δ				Δ				
P-12	MJSU-9	138.1	deformed & densely aggregated	0	Δ				Δ				
P-13	MJSU-9	197.6	sub-massive	0	Δ				\triangle				Δ
P-14	MJSU-9	342.0	massive to submassive	0	Δ				Δ				Δ
P-15	MJSU-9	344.0	submassive & foliated	0	Δ				Δ				Δ
P-16	MJSU-9	348.0	massive	0	Δ				Δ	Δ			
P-17	MJSU-9	357.1	massive, recrystallized & foliated	0	Δ				Δ				
P-18	MJSU-12	164.7	fracture fillings	0	Δ				Δ				Δ
P-19	MJSU-13	91.8	submassive and foliated	0	Δ							L	Δ
P-20	MJSU-13	188.5	submassive & foliated	0	Δ								Δ

Appendix 31 Results of Microscopic Observation of Polished Section

abbrev. cc:Chalcocite, co:Covellite, cp:chalcopyrite, ga:Galena, ma:Magnetite, pr:Pyrrhotite, py:Pyrite, ru:Rutile,

sp:Sphalerite, te:Tetrahedrite-Tennentite

 \bigcirc abundant, Ocommon, \triangle small

_

Sample	1	Depth			· · · · ·	r	r	··	- <u>-</u>	
No.	Drill Hole	(m)	qt	pl	kf	ch	se	mi	cl	ру
X-01	MJSU-2	30.40	0	Δ		0	Δ		· ·	
X-02	MJSU-2	51.20	0	Δ		0	Δ	?		
X-03	MJSU-2	83.70	Ø	Δ		Δ	Δ			
X-04	MJSU-2	167.60	Ø	Δ		Δ	Δ			
X-05	MJSU-2	181.50	<u> </u>			Δ	Δ			
X-06	MJSU-2	200.00	<u> </u>			Ą	<u> </u>			
X-07	MJSU-2	220.50	0	Ā		Δ	Δ			
X-08	MJSU-2	236.40	0	Δ		Δ	Δ			L
X-09	MJSU-2	249.40	Q	Δ			Δ	·		
X-10 X-11	MJSU-14 MJSU-14	19.80 45.10	0			0	?			
X-12	MJSU-14 MJSU-14	64.50	0				Δ			
X-12	MJSU-14 MJSU-14	85.30	— ŏ	6		$\overline{0}$			$\frac{\Delta}{?}$	
X-14	MJSU-14 MJSU-14	104.70	<u> </u>	۲ <u>۲</u>		ŏ	?			
X-14	MJSU-14 MJSU-14	125.10	- ŏ			10	Δ		$+\Delta$	
X-16	MJSU-14	136.80	- ŏ	$\overline{\Delta}$		ŏ	$\overline{\Delta}$	$\Delta \sim ?$		
X-17	MJSU-14	151.00	0			ŏ	$\overline{\Delta}$	<u></u>	$+\Delta$	
X-18	MJSU-14	170.10	0	Δ		Å		Δ		Δ
X-19	MJSU-14	193.10	Ő	$\overline{\Delta}$		ð	$\overline{\Delta}$	<u> </u>	$\frac{\Delta}{2}$	2
X-20	MJSU-14	200.10	o∼∆	$\overline{\Delta}$		X			$\frac{1}{\Delta}$	<u> </u>
X-21	MJSU-14	203.60	0	<u> </u>		$\overline{\Delta}$	Δ			?
X-22	MJSU-14	207.00	Ő	Δ		$\overline{\Delta}$	$\overline{\Delta}$			
X-23	MJSU-14	210.20	Ö	$\overline{\Delta}$		$\overline{\Delta}$	$\overline{\Delta}$			
X-24	MJSU-14	212.00	ŏ			$\overline{\Delta}$	$\overline{\Delta}$			Δ
X-25	MJSU-14	214.50	ŏ	Δ		$\overline{\Delta}$	$\overline{\Delta}$		+	$\overline{\Delta}$
X-26	MJSU-14	219.50	ŏ	$\overline{\Delta}$		$\overline{\Delta}$				
X-27	MJSU-14	221.10	ŏ			ō	$\overline{\Delta}$			
X-28	MJSU-14	222.10	ŏ			ŏ	$\overline{\Delta}$			
X-29	MJSU-14	230.20	ŏ			Ă			-	
X-30	MJSU-14	240.10	ō	Δ	-	Δ	0			
X-31	MJSU-14	260.10	0	Δ		Δ	Δ	?		
X-32	MJSU-14	274.00	0	0		Δ	0			
X-33	MJSU-10	36.00	0			Δ	Δ			
X-34	MJSU-10	55.00	0			Δ	Δ			
X-35	MJSU-10	74.00	Ø			Δ	Δ			Δ
X-36	MJSU-10	140.00	0			Δ	Δ	?		Δ
X-37	MJSU-10	159.00	0	?	Δ	Δ	Δ			Δ
X-38	MJSU-10	172.20	Ø			Δ	Δ			
X-39	MJSU-11	47.80		Δ		Δ	Δ			L
X-40	MJSU-11	135.70	Ø			Δ	Δ			Δ
X-41	MJSU-11	233.00	0	Δ		Δ	Δ		_	
X-42	MJSU-9	50.90	0	L		L	Δ			Δ
X-43	MJSU-9	70.10	0			ļ				Δ
X-44	MJSU-9	85.00	0		L		Δ			Δ
X-45	MJSU-9	130.80	0			<u> </u>				
X-46	MJSU-9	174.60	0			Δ	Δ			$\overline{\Delta}$
X-47	MJSU-9	228.00	<u> </u>			<u> </u>				
X-48 X-49	MJSU-9 MJSU-9	295.00 350.50	0							Δ
X-49 X-50	MJSU-9 MJSU-9	350.50	0			Å	Δ			$\overline{\Delta}$
X-50	MJSU-9 MJSU-9	366.60	<u>\</u>			$\overline{\Delta}$	$\overline{\Delta}$			$\overline{\Delta}$
X-51 X-52	MJSU-12	107.60	<u> </u>			6	ð			$\overline{\Delta}$
X-52	MJSU-12 MJSU-12	142.00		Δ		ő	X			$\overline{\Delta}$
X-54	MJSU-12	164.70	— <u>ŏ</u> —	ō		ő	<u> </u>		$\frac{\Delta}{\Delta}$	$\overline{\Delta}$
X-55	MJSU-12 MJSU-12	191.70	— <u>ŏ</u> —	ŏ		ŏ				$\overline{\Delta}$
X-56	MJSU-13	82.20	— <u>ŏ</u> —	Ă		Ă	Δ	Δ	$\overline{\Delta}$	$\overline{\Delta}$
X-57	MJSU-13	92.50	— <u> </u>	$\overline{\Delta}$		ō	$\overline{\Delta}$		$\overline{\Delta}$	$\overline{\Delta}$
X-58	MJSU-13	117.80		$\overline{\Delta}$		Ă	$\overline{\Delta}$		$\overline{\Delta}$	
X-59	MJSU-13	185.20	— <u>ŏ</u> —			ō			$\overline{\Delta}$	
X-60	MJSU-13	200.50	<u>ö</u>			Ă	Δ	Δ	$\overline{\Delta}$	$\overline{\Delta}$
				L				L	1.	

Appendix 32 Results of X-ray Diffraction Analysis

Abbrev. ab:Albite, al:Alunite, ch:Chlorite, cl:Calcite, cp:Chalcopyrite, ep:Epidote,kf:Potash feldspar, mi:Minesotaite,

py:Pyrite, qt:Quartz, se:Sericite

 \bigcirc :Abundant, \bigcirc :Common, \triangle :Small amount, ?:Probable