PART III CONCLUSIONS

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CHAPTER 1 Results of the Survey

Mineral exploration was carried out in the Umm ad Damar area during the past three years from 1998. The work carried out included analysis and interpretation of existing data, geological survey, geophysical surveys (IP and TEM methods), and drilling (16 drill holes, total length of 4,492m). The results of the above surveys are summarized as follows.

1. The geology of the survey area consists mainly of rhyodacite, dacite, and andesite and their pyroclastic rocks belonging to the Late Proterozoic Arj Group, and these units are accompanied by jasper. These units are intruded by diorite, quartz diorite, tonalite, andesite, dacite, rhyodacite, and basalt. Andesite and andesitic pyroclastic rocks of Late Proterozoic Mahd Group overlies the above units unconformably in the western margin of the survey area. Of the above units, jasper and dacitic breccia occur near Jabal Sujarah in the northwestern part of the survey area. Granitic rocks occur throughout the survey area, but they are concentrated in the zone from the Umm ad Damar North Prospect to the Umm ad Damar South Prospect.

2. Mineralization containing Cu and Zn occur in four localities of this area. They are Jabal Sujarah district, Umm ad Damar North Prospect, Umm ad Damar South Prospect, and 4/6 Gossan Prospect. The mineralization in the Jabal Sujarah district, 4/6 Gossan Prospect, and a part of Umm ad Damar North Prospect is volcanogenic massive sulfide Cu-Zn mineralization. Also Cu vein mineralization occurs in Umm ad Damar North Prospect and Cu-Zn vein mineralization in Umm ad Damar South Prospect.

3. Chargeability anomalies have been extracted by IP survey in areas other than the above prospects. But only pyrite dissemination and veinlets occur in the high chargeability anomalies, and the Au, Cu, and Zn contents are low.

4. The mineralization in the Jabal Sujarah district is the volcanogenic massive sulfide Cu-Zn type and it occurs in dacitic breccia of the Arj Group. The orebodies consist of massive and pebbly ores and are accompanied by pyrite dissemination. The highest chargeability anomaly (over 30mV/V, 800m elevation) of the entire survey area occurs in this district, and it occurs over an areal extent of 200×200m. These chargeability anomalies are caused by thick pyrite dissemination in the footwall of the massive and pebbly ores. This pyrite disseminated zone consists solely of pyrite and the Au, Cu, and Zn contents are negligible.

There are several layers of massive and pebbly ores and the total thickness of the mineralized zones including the intercalated pyrite dissemination is around 6m. The extent of the mineralized zones containing massive and pebbly ores is around 200m in the strike direction and longer than 250m in the dip direction. Although there are parts rich in Cu and Zn, most of the massive and pebbly ores consist mostly of pyrite and is of low grade.

5. In the Umm ad Damar North Prospect, five rows of Cu vein zones are inferred to occur. They are named No. 1 ~ No. 5 Mineralized Zones. Drilling was carried out for three of these zones. The veins and network ores confirmed by these drill holes consist of chalcopyrite-pyrite hosted by dacite and dacitic pyroclastic rocks of the Arj Group. There are few gangue minerals. Au and Ag grades are low and the margins of the ore veins are strongly chloritized.

Five holes were drilled during the past for No.1 Mineralized Zone, and it is 4.8m thick in average and the grade is Cu 1.40%. For No.2 Mineralized Zone, two holes were drilled and the occurrence of two to three mineralized layers of veinlets and dissemination have been confirmed. These are 3.5m thick in average and the grade is Cu 2.38%. For No.3 Mineralized Zone, four holes were drilled and in UAD-11 hole the ore layer is 3.1m thick and Cu 1.87%. The length of the Nos. 1 and 2 Mineralized Zones is estimated to be 400-500m in the strike direction, and that of No.3 Mineralized Zone about 300m. The grades of metals other than Cu, namely Au and Zn, are both low.

Nos. 4 and 5 Mineralized Zones have not been drilled, but the length in the strike direction is estimated from the surface manifestations to be about 200m and 400m respectively.

Aside from these Cu vein-type mineralization, a volcanogenic massive sulfide-type mineralized zone was confirmed by MJSU-5, but similar mineralized zones have not been found in drill holes in the vicinity and thus this is considered to be of small scale.

6. One row of vein-type Cu-Zn mineralized zone occurs in the Arj Group of Umm ad Damar South Prospect. Eleven hole were drilled for this zone in the past and four of them confirmed the existence of the mineralized zone. Vein-type mineralized zone was not encountered by the drilling carried out to the southwest of the mineralized zone during the present survey. Thus the scale of this mineralized zone is estimated to be 2.1-6.9m thick, 300m in the strike direction, at most 130m in the dip direction. The Cu grade of this zone is 1.99-2.93%. In some drill holes, Au grade of 0.3-1.1g/t and Zn grade of 0.2-3.1% have been obtained.

7. The mineralization observed in 4/6 Gossan Prospect is volcanogenic massive sulfide-type Cu-Zn mineralization in rhyodacitic tuff of the Arj Group. This mineralized body consists of massive, siliceous, and pebbly ores and the ore minerals are chalcopyrite, sphalerite, and pyrite.

Three ore layers occur in this mineralized zone. They occur both above and below (apparent) a basaltic tuff horizon intercalated in the rhyodacitic tuff. The mineralized body below the basaltic tuff is largely divided into two parts. The mineralized body immediately below the basaltic tuff is the thickest in MJSU-2 where the thickness is estimated to be about 3.7m. The grade of this part is Au 0.4g/t, Cu 0.96%, and Zn 2.17%.

The mineralized body in further deeper horizon is also thickest in MJSU-2 and is estimated to be about 9.3m. The grade here is Au 0.4g/t, Cu 1.00%, and Zn 3.67%.

Mineralized body also occurs above the basaltic tuff horizon. This is observed only in the MJSU-6 hole. The average grade is Au less than 0.1g/t, Cu 0.69%, and Zn 3.99% and the thickness is estimated to be around 2.5m.

The size of the two mineralized bodies below the basaltic tuff is estimated to be about 100m in the strike direction and the lengths of the dip direction more than 60m and 120m respectively. The body above the basaltic tuff was confirmed only in one drill hole and the length in both the strike and dip directions is estimated to be around 100m.

CHAPTER 2 Evaluation of the Study Area

Three prospects (Umm ad Damar North Prospect, Umm ad Damar South Prospect, and 4/6 Gossan Prospect) have been known in this survey area for many years, and various exploratory work have been carried out in limited parts of these prospects sporadically since 1966. But final assessment had not been made. Because of this situation, comprehensive assessment of the mineral potential of the total area was carried out during this cooperative exploratory project integrating the results of geological survey, geophysical surveys, and drilling. These work was based on the results of the past surveys and emphasis was laid on confirming the extent of the known ore bodies and on finding new ore deposits.

By drilling the geophysical anomalies extracted by IP geophysical prospecting, new Cu-Zn mineralized zones partly accompanied by Au were discovered in three prospects including the hitherto unknown Jabal

Sujarah district. It became clear, however, that the mineralized zones observed in this survey area do have high-grade parts, but they either converge or disperse in their lateral and downward extension and thus are of small scale. Therefore it is deemed difficult to develop these mineralized zones under the present economic conditions. Also the results of the geophysical surveys indicate that the possibility of locating mineralized zones larger than the known orebodies with further detailed surveys is small.

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APPENDICES

Appendix 1 Results of Microscopic Observation of Thin Section

Sample No.	Locality	Rock type	Texture	phenocryst or fragment								groundmass or matrix								metamorphic or alteration						
				MP	cpx	hb	qz	pl	Kf	op	others	MP	hb	qz	pl	Kf	gl	op	others	ep	chl	amp	ser	tit	cb	others
K9021803	4/6 Gossan	meta-volcanics	subophitic									<○>		○	◎		<◎>	○		○	◎		◎	△		
		weakly meta.		Mafic minerals replaced totally by chlorite and qz. Pl into albite and epidote.																						
K9021804	4/6 Gossan	dacite	subophitic	<△>			○	◎		△		<△>		○	◎	○	<◎>	・	apa (・)		△		△	・	○	
		weakly meta.		Mafic minerals replaced totally by chlorite.																						
K9021805	4/6 Gossan	dacitic tuff	clastic				◎	△		・				◎	○		<◎>	・			△		○	・	○	goe (△)
		weakly meta.		Pl replaced by sericite. Carbonate vein. Sericite occurs along the cracks.																						
M9022013		tuff breccia	clastic to	<△>		<○>		◎		△				○	○	△	<◎>	○		△	○	○	△		△	
		weakly meta.	porphyritic	Hb replaced by secondary amphibole aggregate. Other mafic phenocryst repalced by chlorite. Carbonate vein.																						
M9020909		andesite tuff	porphyritic	<○>			△	◎		・		<○>		△	○		<◎>	○		○	○	○	○	・	○	
		weakly meta.		Mafic minerals replaced totally by chlorite and carbonate. Pl into albite, sericite and epidote.																						
M9021004		andesitic lapilli tuff	clastic	<○>	△			◎		△				△	○		<◎>	△		○	◎		△		○	
		weakly meta.		Mafic mineral except cpx replaced totally by chlorite. Pl into sericite and epidote. Epidote vein.																						
M9021801		jasper	microcrystalline											◎				○								
				Calcednic quartz and hematite.																						
K9022803	UAD N.	dacite	porphyritic	<○>			○	◎		△				◎	◎	○	<◎>	△		○	○			△		
		weakly meta.		Mafic minerals replaced totally by chlorite and epidote. Pl partly by sericite and epidote.																						
K9030101	UAD N.	trachytic andesite	trachytic	<△>								<○>		◎	◎		<◎>				◎		△			
		weakly meta.		Mafic minerals and groundmass totally replaced by chlorite, quartz and albite. Plagioclase into sericite.																						
M9020804	UAD N.	andesite	porphyritic	<○>				◎		△		<△>		○	◎		<◎>	・		○	○			△		
		weakly meta.		Mafic minerals replaced totally by chlorite and epidote. Opaque minerals into titanite.																						
K9021305	UAD N.	porphyritic diorite	porphyritic	<○>				◎		△				◎	◎	○		△		○	○		△	△	△	
		weakly meta.		Myrmekite texure is widespread. Mafic minerals replaced totally by chlorite and epidote.																						
K9022701	UAD N.	dacite	porphyritic	<○>			○	○	△	△		<△>		◎	○	○		・			◎		△			goe(○)
		weakly meta.		Mafic minerals repalced totally by chlorite and goethite.																						
K9022502	UAD N.	dacite	porphyritic	<○>				◎		・				○	○		<◎>	△	apa (・)		◎					
		weakly meta.		Mafic minerals replaced totally by chlorite. Quartz vein.																						
K9022004	UAD N.	dacite	porphyritic			○		◎		△				△	○		<◎>	△		○	◎		○		○	
		weakly meta.		Hornblende is strongly replaced by chlorite and carbonate. Plagioclase into sericite.																						
K9022005		porphyritic diorite	porphyritic	<△>		<○>		◎		・			<△>	○	◎	○		△		△	○	○	○	△	○	
		weakly meta.	to subophitic	Hornblende replaced totally by green amphibole and chlorite. Myrmekite texure is common.																						
K9022401	UAD S.	microdiorite	subophitic			<◎>	○	◎		△										○			△	△	○	cly(◎)
		weakly meta.		Hornblende decomposed into clay minerals. Plagioclase into epidote and albite.																						
K9021806	UAD S.	microdiorite	subophitic			<○>		◎		△				○	◎			△		△	○	○		△		
		weakly meta.		Hornblende totally into green amphibole and chlorite. Plagioclase into epidote and albite.																						
K9021807	UAD S.	andesite	porphyritic			<○>	△	○		・				◎	○		<◎>	△	apa (・)	○	○	○				
		weakly meta.		Quartz xenocryst surrounded by amphibole. Hornblende by green amphibole. Plagioclase by partly epidote.																						
K9021302		tonalite	holocrystalline	<○>			○	◎	△	△										○	○		△		△	
		weakly meta.		Mafic minerals replaced totally by chlorite and epidote. Pl into sericite and epidote. Carbonate vein.																						
K9021401		dacite	porphyritic	<○>			◎	○		△				◎	○		<◎>	△		△	○		○	△	△	
		weakly meta.		Mafic minerals replaced totally by carbonate and chlorite. Pl partly into sericite.																						
K9021403		metabasalt	porphyritic		○			○				<△>			◎		<◎>	・		○	○	○		△	△	
		weakly meta.		Cpx partly by amphibole and chlorite. Pl by epidote. Epidote and carbonate veins.																						
K9022001		tonalite	holocrystalline			<○>	○	◎	○	△	apa (・)									△	△	○	△			
		weakly meta.		Hornblende totally by green amphibole and chlorite. Pl by epidote and sericite.																						
K9022002		dacite	porphyritic	<△>			◎	○		△				◎	○	△	<○>	△			○		○		○	
		weakly meta.		Mafic minerals replaced totally by chlorite and carbonate. Pl by sericite.																						
K9022003		basalt	porphyritic	<△>				△		・		<○>			○		<◎>	△		○	○				○	
		weakly meta.		Amygdule filled by epidote. Mafic minerals replaced by chlorite. Carbonate and quartz veins.																						
K9022101		andesite	porphyritic	<○>				◎		△				○	◎	△	<◎>	△		△	○		△		○	
		weakly meta.		Mafic minerals replaced totally by chlorite and epidote. Pl partly by sericite. Carbonate and chlorite veins.																						

abbrev. MP=pseudomorphs of mafic minerals, cpx=clinopyroxene, pl=plagioclase, op=opaque minerals, qz=quartz, hb=hornblende, kf=K-feldspar, epi=epidote,
gl=glass or microcrystalline aggregate, amp=green amphibole, cb=carbonate, ser=sericite, tit=titanite, apa=apatite, cly=clay minerals

< > shows totally decomposed

◎abundant, ○common, △small, ・rare

Appendix 1 Results of Microscopic Observation of Thin Sections

Sample No.	Symbol	Locality	Rock type	Texture	Phenocrysts or fragmnets								Groundmass or matrix									Metamorphic or alteration						
					MP	clp	hb	qz	pl	Kf	op	others	MP	clp	hb	qz	pl	gl	Kf	op	others	epi	chl	amp	ser	tit	cb	others
K0020505	r	B-12 Anomaly	Rhyodacite	glomero-					◎	*						○	○					○	△		*		△	
			weakly meta	porphyritic	Feldspars are moderately altered to epidote and carbonate. Late microfractures are filled mainly by quartz and minor epidote, chlorite and carbonate.																							
K0020502	Adb	B-12 Anomaly	Rhyodacite	porphyritic				*	△	*						○	*			*		◎	○				○	
			weakly meta		Rock is affected by propylitic alteration where feldspars are mostly altered to epidote and carbonate.																							
K0020501	d	B-12 Anomaly	Dacite	porphyritic				△	○		*					○	△	<>				○	○		*		○	
			weakly meta		Feldspars are moderately altered to epidote, carbonate and chlorite. Glassy material is mostly altered to chlorite. Late fractures are filled by quartz, carbonate, and epidote.																							
K0021406	Ar	Southeast of J-18	Rhyodacite	glomero-				○	◎	△						○	○			*		*	△				△	
			weakly meta	porphyritic	Matrix is weakly chloritized and carbonatized. Carbonate forms patchy alteration. Locally mild iron staining along microfracture is due to oxidation of sulfides.																							
K0021408	r	Southeast of J-18	Rhyodacite	porphyritic				○	○	*						◎	△			*			○		*		△	
			weakly meta		Weakly schistosed, some quartz phenocrysts show rotational effect and pressure shadows. Late microfractures parallel to shear plane are filled by quartz and carbonate.																							
K0013001	Ad	East of 4/6 Gossan	Dacite	glomero-					◎	*						○	△	<>		*		*	◎				△	
			weakly meta	porphyritic	Feldspars phenocrysts are mostly altered to carbonate, chlorite and epidote. Matrix is moderately chloritized. Late microfractures filled with carbonate.																							
K0020802	Ar	South of J-18	Rhyodacite	glomero-				△	◎	*	*					○	△					*	○		*		△	goe *
			weakly meta	porphyritic	Qz phenocrysts rimmed by silica. Feldspars phenocrysts are altered to cb, chl, & epi. Two types cb noted (iron-rich & iron-poor). Matrix is moderately chloritized.																							
K0012901	Ad	South of J-18	Andesite	porphyritic					○							△	◎			*		*	○				△	
			weakly meta	& vesicular	Andesite or dacite. Mafics totally altered to chl +/- epi. Amygdules (?) filled with chl, cb, epi & qz.																							
K0013002	Ad	East of 4/6 Gossan	Andesite	porphyritic					◎								◎	<>		*		△	◎				△	
			weakly meta	& vesicular	Basaltic andesite. Mafics totally altered to chl, epi, & cb. Amygdules filled with chl & qz.																							
K0021405	Ad	South of J-18	Andesite	intersertal													○			○		○	◎				△	
			weakly meta	& vesicular	Mafics totally altered to chl +/- epi. Plagioclase mostly altered to epi, chl & cb. Locally amygdules filled with chl, epi, cb & qz. Microfractures with epi, cb and qz fillings.																							

Abbrev. MP=pseudomorphs of mafic minerals, cpx=clinopyroxene, pl=plagioclase, op=opaque minerals, qz=quartz, hb=hornblend, Kf=K-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 ○ common △ small * rare

Appendix 1 Results of Microscopic Observation of Thin Section

Drill Hole No.	Sample No.	Rock type	Texture	phenocryst or fragment								groundmass or matrix								metamorphic or alteration						
				MP	cpx	hb	qz	pl	Kf	op	others	MP	hb	qz	pl	Kf	gl	op	others	ep	chl	amp	ser	tit	cb	others
MJSU-1	12	Rhyodacite	porphyritic				◎	○		△				○	○		<◎>	・	apa (・)		○		○			
		weakly meta		Sericite develops stongly along cracks and partly replace plagioclase. Devitrified glass partly into chlorite.																						
	75	Rhyodacite lapilli tuff	clastic				○	○		○				○	○		<◎>	△			・		○		○	
		weakly meta		Sericite occurs widely as a layer. Carbonate occurs in a matrix and as a vein.																						
	129	Rhyodacite coarse tuff	clastic to porphyritic				○	○		△				○	○		<◎>	・			△		◎	・	・	
		weakly meta		Sericite widely develops with a mesh-like structure.																						
	199	Dacite tuff	clastic				◎	○		△				○	○		<◎>	・			△		△		○	
		weakly meta		Carbonate vein is common. Chlorite and sericite replace devitrified glass.																						
	248	Volcanic breccia	clastic				◎	△	△	・				○	△		<◎>	・			○		○		△	
		weakly meta		Sericite occurs as a layer replacing matrix. Chlorite replaces devitrified glass.																						
MJSU-2	45	Basalt	partly trachytic									<○>		○	◎		<◎>	・			○		△		◎	
		weakly meta		Most of the minerals and glass are carbonatized and chloritized. Sericite occurs along a crack.																						
	63	Basalt	originally aphyric									<○>		○	○		<◎>	△			◎		△		○	
		weakly meta		Mafic minerals are totally replace by chlorite, sericite and carbonate. Carbonate vein.																						
	65	Microdiorite	micro-ophitic									<○>		○	◎		<◎>	・			◎		△		○	
		weakly meta		Glassy part and mafic minerals are totally replaced by chlorite and carbonate.																						
	75	Basalt	porphyritic					○						△	○		<◎>	○	apa (・)		◎		○	・	△	
		weakly meta		Glassy part is totally replaced by chlorite and sericite. Sericite occurs along cracks.																						
	106	Basaltic tuff	clastic to sub-trachytic									<○>		○	◎	△	<◎>	○			◎		△		○	
		weakly meta		Mafic minerals are totally replaced by chlorite and carbonate. Amygdule is filled by quartz and carbonate.																						
	120	Basaltic tuff	clastic				○	○		△				○	○		<◎>	○			◎		○		○	
		weakly meta		Glassy part is totally replaced by chlorite, sericite and carbonate. carbonate vein.																						
MJSU-3	10	Dacite	porphyritic	<○>			○	<○>	○	・		<○>		○	<○>		<◎>	・			◎		○	・	△	
		weakly meta		Glass and mafic minerals is into chlorite and sericite. Plagioclase is strongly replaced by sericite.																						
	25	Silicified volcanic rock	porphyritic				○	<○>						◎	<○>			・	apa (・)		○		○			
		weakly meta		Matrix is strongly silicified.																						
	41	Silicified volcanic rock	porphyritic				○	<○>						◎	<○>			・			△		◎		△	
		weakly meta		Matrix and feldspar are strongly silicified and sericitized. Carbonate vein.																						
	63	Dacitic lapilli tuff	clastic	<○>			○	◎	△	・		<○>		○	○		<○>	・		○	○		△		△	
		weakly meta		Mafic minerals and matrix are replaced by chlorite and sericite. Plagioclase strongly by epidote and sericite.																						
	89	Dacite	porphyritic	<○>			○	◎	△	・		<○>		○	◎	△		・		○	○		○		△	
		weakly meta		Mafic minerals are replaced by chlorite. Plagioclase strongly by epidote and sericite.																						
	131	Porphyritic dacite	porphyritic	<○>			○	◎		・		<○>		○	◎			・		○	○		・		△	
		weakly meta		Mafic minerals is replaced by chlorite. plagioclase by epidote. Carbonate vein.																						
	150	Microdiorite	sub-trachytic									<○>		○	◎			△	apa (・)		◎		△	・	○	
		weakly meta		Mafic minerals is replaced totally by chlorite. plagioclase by sericite. Carbonate vein.																						
	171	Dacite coarse tuff	clastic	<△>			○	○		・				◎	○		<◎>	・			△		◎			
		weakly meta		Mafic minerals by chlorite. Glassy part is by sericite.																						

Appendix 1 Results of Microscopic Observation of Thin Section

Drill	Sample	Rock type	Texture	phenocryst or fragment								groundmass or matrix								metamorphic or alteration						
Hole No.	No.			MP	cpx	hb	qz	pl	Kf	op	others	MP	hb	qz	pl	Kf	gl	op	others	ep	chl	amp	ser	tit	cb	others
MJSU-3	217	Rhyodacite coarse tuff	clastic to	〈△〉			○	〈○〉		・		〈△〉		○	〈○〉		〈◎〉	・			△		○			
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase is replaced strongly by sericite. Carbonate vein.																						
	232	Dacite	porphyritic	〈○〉			○	〈○〉		△		〈△〉		○	〈○〉		〈◎〉	・		○	○		○		○	
		weakly meta		Mafic minerals are replaced by epidote and chlorite. Plagioclase is replaced mainly by sericite. Carbonate vein.																						
	243	Porphyritic dacite	porphyritic	〈○〉			○	〈○〉		・		〈○〉		○	○		〈◎〉	△		◎	△		○		○	
		weakly meta		Mafic minerals are replaced by epidote and chlorite. Plagioclase is replaced mainly by sericite. Carbonate vein.																						
MJSU-4	15	Diorite	ophitic	〈○〉			○	○	○	△	apa (・)									○	○		△		○	
		weakly meta		Mafic minerals are by epidote and chlorite. Plagioclase is locally by epidote. Graphic texture develops.																						
	30	Dolerite	micro-ophitic					△				〈○〉	○	△	◎					○	○		△	△	○	
		weakly meta		Mafic minerals except for hornblende are replaced by chlorite. Plagioclase is partly by epidote.. carbonate vein.																						
	40	Diorite	equigranular	〈○〉			○	〈◎〉		△	apa (・)										○		◎		○	
		weakly meta		Plagioclase and mafic minerals are replaced totally by chlorite and sericite. Carbonate vein.																						
	45	Silicified volcanics	porphyritic?	〈○〉						△				◎	○						○			・	○	
		weakly meta		Mafic minerals are replaced by chlorite. Carbonate vein is common.																						
	52	Rhyodacite coarse tuff	clastic to	〈△〉			○	〈△〉		・				◎	○		〈◎〉	△	apa (・)		○		○	・	△	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase is replaced by sericite.																						
	80	Porphyritic andesite	porphyritic			○		◎		○			〈△〉	△	○		〈◎〉	・		○	○	・	△	△	○	
		weakly meta		Hornblende is partly by chlorite, carbonate and actinolite. plagioclase by epidote. Carbonate vein.																						
	95	Porphyritic andesite	porphyritic	〈△〉				◎		・		〈△〉		○	◎	△		・		◎	○			△	○	
		weakly meta		Mafic minerals are replaced by chlorite, epidote and carbonate. Plagioclase by sericite and carbonate.																						
	121	Rhyodacite lapilli tuff	clastic to	〈△〉			○	〈○〉	○	△				○	○		〈◎〉	△			○		○	・	○	
		weakly meta	porphyritic	Mafic minerals and matrix are by chlorite, carbonate and sericite. Plagioclase partly by sericite and carbonate.																						
	136	Dacite coarse tuff	clastic to	〈○〉			○	〈○〉		○		〈△〉		◎	○	△		△			○		○	・	◎	
		weakly meta	porphyritic	Mafic minerals are by chlorite and carbonate. Plagioclase is by sericite and carbonate.																						
	175	Andesite	porphyritic	〈○〉			○	〈◎〉		△		〈○〉		○	◎	○		・		◎	○		・	△	○	
		weakly meta		Mafic minerals are replaced by chlorite. Plagioclase is replaced strongly by sericite.																						
	193	Andesite lapilli tuff	clastic to	〈○〉			○	〈◎〉		△		〈○〉		○	◎	○		・		◎	○		△	・	○	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase is replaced strongly by sericite. Carbonate vein.																						
	222	Andesite lapilli tuff	clastic to	〈○〉			○	〈◎〉		△		〈○〉		○	◎	○		・		◎	○		・	△	○	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase is replaced strongly by sericite. Carbonate vein.																						
	238	Andesite lapilli tuff	clastic to	〈○〉			○	〈◎〉		・		〈○〉		◎	○	△		・		◎	○		○	・	○	
		weakly meta	porphyritic	Mafic minerals by chlorite and carbonate. Plagioclase by sericite and epidote. Carbonate and sericite veins.																						
	259	Dacitic lapilli tuff	clastic to				○	〈○〉		△								・			○		○		◎	
		strongly by carbonate	porphyritic	Plagioclase and matrix are strongly replaced by carbonate. Sericite occurs as a layer. Chlorite vein.																						
	282	Rhyodacite coarse tuff	clastic to											◎	○			△	apa (・)		○		◎	・	△	
		silicified	porphyritic	Strongly silicified. Sericitization and chloritization are widespread. Carbonate vein.																						
	288	Dacite	porphyritic	〈○〉				〈○〉		△		〈○〉		○	◎	○		△	apa (・)		○		○	・	○	
		weakly meta		Mafic minerals are replaced by chlorite. Plagioclase is by sericite. Carbonate vein.																						

Appendix 1 Results of Microscopic Observation of Thin Section

Drill	Sample	Rock type	Texture	phenocryst or fragment								groundmass or matrix								metamorphic or alteration						
Hole No.	No.			MP	cpx	hb	qz	pl	Kf	op	others	MP	hb	qz	pl	Kf	gl	op	others	ep	chl	amp	ser	tit	cb	others
MJSU-4	296	Rhyodacite tuff	clastic to				○	〈△〉		・				◎	○	○		・			○		○	・	△	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite and sericite. Plagioclase phenocryst totally by sericite.																						
MJSU-5	25	Diorite	porphyritic	◎			○	◎		△	apa (・)								zir (・)		○		○		・	
		weakly meta		Hornblende is partly replaced by chlorite. Plagioclase is strongly by epidote and sericite.																						
	63	Diorite	ophitic	〈○〉			○	〈◎〉	△	○										△	○		○	△	△	
		weakly meta		Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite. Carbonate vein.																						
	115	Dacitic lapilli tuff	clastic to	〈○〉			○	〈○〉						○	○		〈◎〉	・			◎		○			
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase phenocryst totally by sericite																						
	124	Andesite lapilli tuff	clastic to	〈○〉			○	〈○〉				〈○〉		○	○		〈◎〉	・		○	○				◎	
		weakly meta	porphyritic	Mafic minerals are by chlorite. Plagioclase phenocryst strongly by epidote and sericite. Carbonate vein.																						
	138	Dolerite	ophitic	〈○〉	△	◎	△	◎		・										○	○	・			△	
		weakly meta		Clinopyroxene is strongly by chlorite and carbonate. Orthopyroxene(?) is totally by chlorite.																						
	165	Andesite lapilli tuff	clastic to	〈○〉			○	〈○〉				〈○〉		○	○		〈◎〉	・		◎	○				○	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite. Carbonate vein.																						
	194	Andesite coarse tuff	clastic to	〈○〉			○	〈○〉		△		〈○〉		○	◎		〈○〉	△		◎	○				○	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite.																						
	210	Andesite lapilli tuff	clastic to	〈○〉			○	〈○〉		△		〈○〉		○	◎		〈○〉	△		◎	○			・	○	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite. Carbonate vein.																						
	264	Rhyodacite	porphyritic	〈○〉			○	○				〈○〉		○	◎	△	〈○〉	・		△	○		△		○	
		weakly meta		Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite and epidote. Carbonate vein.																						
	249	Rhyodacite lapilli tuff	clastic to	〈○〉			○			○		〈○〉		○	○		〈◎〉	・			○		◎		○	
		weakly meta	porphyritic	Mafic minerals by chlorite. Matrix strongly by sericite and chlorite. sericite occurs as a layer. Carbonate vein.																						
	283	Rhyodacite lapilli tuff	clastic to				○							○	○		〈◎〉	・	apa (・)		○		◎		・	
		weakly meta	porphyritic	Matrix strongly by sericite and chlorite. sericite layer develops.																						
	315	Dacitic lapilli tuff	clastic to	〈○〉			○	○		△		〈○〉		○	○	△	〈◎〉	・		○	○		○		○	
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite and epidote. Carbonate vein.																						
	337	Dacitic lapilli tuff	clastic to	〈○〉			○	〈○〉				〈△〉		○	○	△	〈◎〉	・			◎		○			
		weakly meta	porphyritic	Mafic minerals are replaced by chlorite. Plagioclase phenocryst strongly by sericite.																						
MJSU-6	47	Basaltic tuff	clastic to	〈○〉				〈△〉		○		〈△〉		○	○		〈◎〉	・			◎				○	
		weakly meta	porphyritic	Mafic minerals and matrix are replaced totally by chlorite. Carbonate vein.																						
	58	Basaltic fine tuff	clastic to	〈△〉				〈○〉						△	◎		〈◎〉	・			○		△		○	
		weakly meta	porphyritic	Mafic minerals and matrix are replaced by chlorite. plagioclase partly by sericite. Carbonate vein.																						
	74	Dolerite	micro-ophitic									〈◎〉		△	◎			△			◎				○	goe (△)
		weakly meta		Mafic minerals are totally replaced by chlorite and goethite.																						
	132	Dacitic tuff	clastic to				○	〈○〉		△				○	○		〈○〉	・			○		△	・	△	
		weakly meta	porphyritic	Matrix is replaced by chlorite and sericite. Plagioclase phenocryst is highly by sericite.																						
	145	Basaltic fine tuff	clastic to	〈○〉				〈○〉		△					◎		〈◎〉	△			◎			・	○	
		weakly meta	porphyritic	Most of the minerals and matrix are replaced by chlorite and carbonate.																						

Appendix 1 Results of Microscopic Observation of Thin Section

Drill Hole No.	Sample No.	Rock type	Texture	phenocryst or fragment								groundmass or matrix								metamorphic or alteration						
				MP	cpx	hb	qz	pl	Kf	op	others	MP	hb	qz	pl	Kf	gl	op	others	ep	chl	amp	ser	tit	cb	others
MJSU-7	72	Basaltic fine tuff	clastic to	<○>				<△>		○		<△>		△	◎		<◎>	△			◎		○	·	△	
		weakly meta	porphyritic	Mafic minerals by chlorite. Plagioclase phenocryst by sericite. Matrix by chlorite and sericite. Qz vein.																						
	202	Rhyodacite tuff	clastic to				○	○		△				◎	○			·	apa (·)		○		◎		○	
		weakly meta	porphyritic	Matrix is replaced highly by chlorite, sericite and carbonate. Pleochroic carbonate: ankerite																						
	210	Basalt	porphyritic	<○>				<○>				<○>			○		<○>	·			◎		△	·	◎	
		weakly meta		Plagioclase is replaced highly by chlorite, sericite and carbonate. Matrix strongly by carbonate and chlorite.																						
	240	Rhyodacite	porphyritic	<△>			○	△		△				◎	○			·	apa (·)		△		○	·	△	
		weakly meta		Mafic mineral (biotite?) is replaced by sericite. Sericite occurs commonly as a layer.																						
MJSU-8	10	Basalt	porphyritic	<△>				○				<△>		△	○		<◎>	△			○				◎	goe(△)
		weakly meta		Mafic minerals are replaced totally by chlorite. Matrix is by carbonate and chlorite. Carbonate vein.																						
	20	Porphyritic basalt	porphyritic	<○>				◎		·		<○>			◎		<◎>	·		○	◎		△		○	
		weakly meta		Mafic phenocryst are by carbonate. Matrix is by chlorite. Plagioclase is by carbonate and epidote.																						
	39	Rhyodacite tuff?	clastic to	<△>			○	△		○		<△>		◎	○		<◎>	△			○		△	△	○	
		highly silicified	porphyritic	Mafic minerals are by chlorite. Devirified glass is by chlorite(or clay minerals)																						
	57	Rhyodacite coarse tuff	clastic to	<△>			○	○		△				◎	○		<◎>	·		○	○		○	△	○	
		weakly meta	porphyritic	Mafic minerals are replaced by carbonate. Carbonate vein.																						
	91	Volcanic breccia	clastic				○	△		△				◎	○		<◎>	△			○		○			
		weakly meta		Mafic minerals(?) are replaced mainly of aggregates o opaque minerals. Quartz vein.																						
	98	Volcanic breccia	clastic				○	△		△				◎	○		<◎>	△			○		○			
		weakly meta		Mafic minerals(?) are replaced mainly of aggregates o opaque minerals.																						
	183	Sandstone?	clastic				◎	○		△	apa (·)										○		○	△		
		weakly meta		Grain boundaries and glassy materials are highly replaced by sericite.																						
	192	Porphyritic andesite	porphyritic	<△>			△	<◎>		△		<△>		○	<○>		<◎>	·		◎	○			△	○	prh(△)
		weakly meta		Plagioclase(saussurite) is partly replaced by prehnite and epidote. Mafic minerals are by chlorite and carbonate.																						
	207	Pumiceous volcanic breccia	clastic				○							◎	○		<◎>	△					○			
		weakly meta		Fragment of qz aggregate is common. Glassy part is replaced by sericite.																						
	226	Andesite	porphyritic	<○>				<◎>		○		<△>		◎	○		<◎>	·		○	○				△	
		weakly meta		Plagioclase, totally sussurite, is replaced partly by epidote. Mafic minerals are by chlorite and epidote.																						
	233	Volcanic breccia	clastic				○					<○>		◎	○		<◎>	△					○	·		goe(△)
		weakly meta		Mafic minerals are replaced by chlorite. Sericite occurs at the grain boundaries among fragments.																						
	244	Volcanic breccia	clastic	<△>				<△>		△		<△>		◎	○			△		○	○			△	○	prh(△)
		weakly meta		Mafic minerals by chlorite and epidote. Plagioclase strongly by epidote. Prehnite and carbonate veins.																						

abbrev. MP=pseudomorphs of mafic minerals, cpx=clinopyroxene, pl=plagioclase, op=opaque minerals, qz=quartz, hb=hornblende, kf=K-feldspar epi=epidote,
gl=glass or microcrystalline aggregate, amp=green amphibole, cb.=carbonate, ser=sericite, tit=titanite, apa=apatite, cly=clay minerals, prh=prehnite

< > shows almost totally decomposed

◎abundant, ○common, △small, ·rare

Appendix 1　Results of Microscopic Observation of Thin Section

Sample No.	Drill Hole No.	Depth (m)	Rock type	Texture	Phenocrysts or fragments								groundmass or matrix									metamorphic or alteration						
					MP	clp	hb	qz	pl	Kf	op	others	MP	clp	hb	qz	pl	gl	Kf	op	others	epi	chl	amp	ser	tit	cb	others
T-1	MJSU-14	84.1	dacitic fine tuff, weakly meta	porphyritic, weakly foliated					○	△	△					△		△	△				○				△	
					glassy shards and pumice fragments are devitrified and weakly to moderately chloritized.																							
T-2	MJSU-14	88.0	meta-dacitic to meta-andesitic	highly foliated and sheared												△	◎					△	◎				(*)	
					Highly sheared and foliated rock of felsic to intermediate composition.																							
T-3	MJSU-14	136.8	meta-andesitic to dacitic fine tuff	foliated & sub-porphyritic					(*)		(*)					(*)	◎			(*)		(*)	○		(*)		◎	
					Feldspars phenocrysts are mostly altered to carbonate and chlorite. Late fractures are filled by carbonate.																							
T-4	MJSU-14	167.2	fine tuff of meta-dacitic compo.	highly foliated and sheared				(*)	(*)		(*)					△	△					(*)	◎		△		○	
					highly sheared and schistosed rock of phyllitic composition.																							
T-5	MJSU-14	188.5	highly sheared metavolcanic r.	strongly foliated & cataclased				○			△					○							◎		△		◎	
					The rock has suffered both ductile and brittle deformation.																							
T-6	MJSU-10	60.0	meta-rhyodacitic fine tuff	porphyritic & foliated				△			△					◎						(*)	○		◎			
					Phyllosilicates comprised of sericte and chlorite are the main alteration products.																							
T-7	MJSU-10	77.0	meta-siltstone, very fine-grained	deformed & foliated				△			(*)					◎									◎			
					Metasiltstone or metavolcanic fine (ash) tuff of felsic composition.																							
T-8	MJSU-10	93.0	meta-rhyodacitic fine tuff	porphyritic & highly foliated				○	(*)		(*)					◎	(*)		(*)				○		◎		△	
					Deformation is marked by flattening, stretching, and fragmentation of quartz grains.																							
T-9	MJSU-10	99.5	reworked crystal-rich tuff	highly sheared & mylonitized				○	△							○	○					(*)	○		◎		△	
					Poorly sorted and crystal rich.																							
T-10	MJSU-10	133.5	meta-rhyolite	porphyritic & foliated				○	△		(*)					○	○			(*)		(*)	○		○		(*)	
					Matrix recrystallized, granular and foliated.																							
T-11	MJSU-10	210.0	meta-rhyodacitic fine tuff	highly sheared & mylonitized				△	○							○	○					(*)	○		○			
					very strongly deformed and sheared rock.																							
T-12	MJSU-10	265.0	meta-rhyodacitic fine crystal tuff	highly sheared & foliated				○	△							○	○			(*)		(*)	○		○			
					Crystal-rich rhyodacitic fine tuff																							
T-13	MJSU-11	57.6	meta-rhyodacitic tuff or lava	porphyritic, weakly foliated				○	△		△					○	○						○		△		△	
					Rock is affected by chlorite-sericite-carbonate and silica alteration.																							
T-14	MJSU-11	75.3	meta-rhyodacitic tuff or lava	porphyritic, sheared & foliated				○	△		△					○	△					△	○		△		(*)	
					Strikingly similar to sample no. T-13 in texture and mineral composition.																							
T-15	MJSU-9	58.8	meta-rhyodacitic fine lithic tuff	fine-grained sub-porphyritic				○								○				(*)					◎			
					Effect of recrystallization is locally noticed on phenocrysts crystal margins.																							
T-16	MJSU-9	90.0	meta-rhyodacitic fine (ash) tuff	moderatly foliated and sheared				△			(*)					○									◎			
					Locally augen-shaped quartz-eye noticed.																							
T-17	MJSU-9	122.0	reworked meta-rhyodacitic tuff	groundmass fine to medi.-grained			△									○						△	(*)		◎		(*)	
					Epidote-chlorite has completely replaced former amphibole phenocrysts.																							
T-18	MJSU-9	138.1	phyllite or meta-siltstone	fine-grained & highly foliated							△										◎	(*)			◎			
					Locally zoisite occurs as gangue mineral to opaques.																							
T-19	MJSU-9	193.5	meta-rhyodacite tuff or lava	highly sheared & protomylonitic				○			△					◎	△								◎			
					Strong shearing has produced protomylonitic occelleur fabric.																							

Appendix 1 Results of Microscopic Observation of Thin Section

Sample No.	Drill Hole No.	Depth (m)	Rock type	Texture	Phenocrysts or fragments								groundmass or matrix									metamorphic or alteration						
					MP	clp	hb	qz	pl	Kf	op	others	MP	clp	hb	qz	pl	gl	Kf	op	others	epi	chl	amp	ser	tit	cb	others
T-20	MJSU-9	206.4	meta-rhyodacitic fine tuff	porphyritic & weakly foliated				○			(*)					◎						(*)			◎		△	
					Feldspars are completely replaced by sericite.																							
T-21	MJSU-9	219.0	meta-fine (ash) tuff	weakly foliated				○			△					○						(*)			◎		(*)	
					Meta fine (ash) tuff of felsic composition.																							
T-22	MJSU-9	228.0	white-mica schist	extremely fine and foliated							○														◎			
					The rock is affected by pervasive white mica alteration.																							
T-23	MJSU-9	370.9	pervasively chloritized rock	very fine-grained and foliated												○				△			◎		△			
					Primary texture and mineral composition is obliterated by strong chlorite and patchy sericite alteration.																							
T-24	MJSU-12	69.3	microdiorite	fine intersertal and sheared													◎			○			◎				△	
					The rock shows intersertal fabric, where plagioclase grains are randomly oriented and their inter grain spaces are filled by secondary alteration minerals.																							
T-25	MJSU-12	135.7	meta-rhyodacite tuff or lava	porphyritic and deformed				○	△							◎				△			◎		○			
					The felsic rock matrix accompanies phenocrysts and broken fragments of quartz and plagioclase.																							
T-26	MJSU-13	41.9	meta-rhyodacitic lapilli tuff	porphyritic weakly deformed				○								○						△	◎		○		(*)	
T-27	MJSU-13	61.8	meta-rhyolite crystal tuff or lava	porphyritic weakly foliated				◎	△							○	○			(*)			○		△		(*)	
					Meta-rhyolitic-rhyodacitic crystal rich tuff, moderately deformed, sheared and granulated.																							
T-28	MJSU-13	67.1	mylonitized felsic rock	highly deformed and sheared				◎	○																◎			
					Coarse-grained fabric of quartz and plagioclase phenoclasts suggests that probably the former rock was plutonic and of granitic composition. That was strongly sheared and mylonitized																							
T-29	MJSU-13	82.9	meta-rhyodacitic tuff	porphyritic, weakly deformed & sheared				○			(*)					○				(*)					◎		(*)	
T-30	MJSU-13	170.0	meta-rhyolite crystal tuff or lava	porphyritic weakly foliated				◎	○		△					○	△								○			
					Strikingly similar to sample no. T-27 in texture and mineral composition except locally graphic intergrowth of quartz over plagioclase is noticed.																							
T-31	MJSU-15	300.2	meta-rhyodacitic lithic tuff	porphyritic weakly foliated				○			(*)					○						△	△		◎			
					The foliations are marked by suborientation of sericite patches.																							
T-32	MJSU-15	304.6	meta-rhyodacitic lithic tuff	porphyritic weakly foliated				○			○					○						△	○	△				
					Amphibole occurs in extremely fine-grained acicular form and in places forms disseminated rosettes.																							

Abbrev. MP=pseudomorphs of mafic minerals, cpx=clinopyroxene, pl=plagioclase, op=opaque minerals, qz=quartz, hb=hornblend, Kf=K-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　　△ small

○ common　　(*) rare

Appendix 2 Results of Microscopic Observation of Polished Section

First Phase

Localities		Sample No.	Rock Name	py	cp	te	bo	sp	pr	he	ma	il	ga	co	ml
Jabal Sayid		K9030305	massive ore	◎	△			△							
		K9030306	massive ore	◎	○			○	△		△				
		K9030307	silicified ore	◎	○			△	△						
Mahd adh Dhahab		K9030308	cp-sp quartz vein	△	○		△	◎					△		
		K9030310	cp-ga massive vein	△	○	△		◎		△		△	△		
Umm ad Damar Prospect	West Hill	K9030102	gossan	△						◎					
	Southeast Hill	K9030301	sulfide veinlet ore, UAD-6 No.17	◎	○			△	△		△			△	
Umm ad Damar South Southeast Extension		K9021409	quartz vein		◎					◎				○	△

Second Phase Geological Survey

Localities		Sample No.	Depth (m)	Rock Name	py	cp	co	cc	sp	ga	pr	ma	he	ge	an
Umm ad Damar South	UAD-4	108P	108.1	Py-cp-qtz vein	◎	△			△						
		111P	111.5	Py-cp-qtz vein	◎	○			○			△			
		112P1	112.2	Disseminated sp-py ore	◎	○	△		○			△			
		112P2	112.6	Disseminated sp-cp-py ore	◎	◎			○			△			
Umm ad Damar North	UAD-6	99P	99.1	Cp-py stringers	◎	◎	△		△		△			△	△
		104P	104.7	"Cp-py stringers, dissemination"	◎	○	△		△		△			△	
		111P	111.1	Cp-py stringers	◎	○	△		△					△	
		243P	243.6	"Cp-py stringers, dissemination"	◎	○								△	
South of 4/6 Gossan		K0013101		Siliceous Fe-oxides										◎	
Northeast of M-27 Anomaly		K0022403		Quartz vein? with Cu-oxides		△								△	

abbrev. an:Anatase, bo:Bornite, cc:Chalcocite, co:Covellite, cp:chalcopyrite, ga:Galena, ge:Goethite, he:Hematite, il:Ilmenite, ma:Magnetite, ml:Malachite, qtz:Quartz, pr:Pyrrhotite, py:Pyrite, sp:Sphalerite, te:Tetrahedrite-Tennentite

◎abundant, ○common, △small

Appendix 2　Results of Microscopic Observation of Polished Section

Second Phase　Drilling Exploration

Localities		Sample No.	Depth (m)	Rock Name	py	cp	co	cc	te	sp	ga	cl	al	hs	na	ma	he	an
4/6 Gossan	MJSU-1	153P	153.5	cp-py-sp stringers	◎	○				◎	○							
		215P	215.5	cp-py-sp vein	◎	○				◎	△			△				
	MJSU-2	122P	122.4	cp-py breccia ore	○	◎				△								
		124P	124.3	py-cp-sp breccia ore	◎	○				◎	△		△					
		131P	131.2	py-sph-cp massive ore	◎	○	△			◎	△							
		132P	132.1	py-cp-sp massive ore	◎	○	△			◎	△							
		135P	135.7	py breccia ore	◎	△				△	△							
		141P	141.2	py-cp massive ore	◎	◎	△			△								
Umm ad Damar North	MJSU-3	214P	214.9	cp-py network vein	○	◎				○	△							
		220P	220.6	py-cp network vein	○	◎										○	△	
	MJSU-4	143P	143.3	"py-cp vein, 4cm wide"	◎	◎				○								△
		149P	149.9	py-cp veinlets	○	◎				△								○
		156P	156.1	"py-cp vein, 15cm wide"	○	◎				○	△	△						△
		279P	279.1	py-cp veinlets	○	◎				△								
Umm ad Damar North	MJSU-5	81P	81.8	disseminated & layered cp-py	◎	◎				△								△
		96P	96.8	cp-py veinlets	△	◎				△								
		236P	236.1	"cp veinlets, 15cm wide"	△	◎												△
		271P	271.2	massive py	◎	○				△								
		273P	273.1	layered py-cp-sp	△	◎				○								○
		329P	329.6	"cp veinlets, 1.5m wide"	○	◎						△						△
4/6 Gossan	MJSU-6	135P	135.2	thinly banded breccia ore consisting of sp-py-cp	△	△	△	△		◎	△		△					
northeast of 4/6 Gossan	MJSU-7	60P	60.2	"cp-qtz vein, 20cm wide"	△	◎			△	△								
		63P	63.3	"cp-qtz veinlets, 1-2cm wide"	◎	◎				△		△			△			△
		76P	76.6	"cp-qtz veinlets, 15cm wide"	◎	△				△		△						△
Jabal Sujarah	MJSU-8	73P1	73.3	"py-cp massive ore fragment, 4×4cm"	○	○				△		△						
		73P2	73.5	"sp massive ore fragment, 7×7cm"	○	○				◎								
		83P	83.0	py-cp massive ore	◎	△												△

abbrev. al:Altaite, an:Anatase, cc:Chalcocite, cl:Clausthalite, co:Covellite, cp:chalcopyrite, ga:Galena, he:Hematite, ma:Magnetite, na:Naumannite, qtz:Quartz, py:Pyrite, sp:Sphalerite, te:Tetrahedrite-Tennentite

◎abundant, ○common, △small

Appendix 2 Results of Microscopic Observation of Polished Section

Third Phase Drilling Exploration

Sample No.	Drill Hole No.	Depth (m)	Mineralization type	py	cp	co	cc	te	sp	ga	pr	ma	ru
P-1	MJSU-14	203.1	sub-massive and foliated	◎	△		△		△	△	△	△	
P-2	MJSU-14	204.2	sub-massive	◎	○				△				
P-3	MJSU-14	219.9	sub-massive pyritic	◎	△				△				
P-4	MJSU-14	220.3	laminated massive sulfide	○	○	△		△	◎				
P-5	MJSU-14	220.8	laminated massive sulfide	○	○	△			◎				
P-6	MJSU-14	221.5	laminated massive sulfide	◎	○	△			◎				
P-7	MJSU-10	139.8	sub-massive and foliated	◎	△				△				
P-8	MJSU-10	159.5	weakly foliated massive sulfide	◎	△				△				△
P-9	MJSU-11	135.7	sub-massive	◎	△				△				
P-10	MJSU-11	153.4	sub-massive and strongly foliated	◎					△				
P-11	MJSU-9	66.6	disseminated & aggregations	◎	△				△				
P-12	MJSU-9	138.1	deformed & densely aggregated	◎	△				△				
P-13	MJSU-9	197.6	sub-massive	◎	△				△				△
P-14	MJSU-9	342.0	massive to submassive	◎	△				△				△
P-15	MJSU-9	344.0	submassive & foliated	◎	△				△				△
P-16	MJSU-9	348.0	massive	◎	△				△	△			
P-17	MJSU-9	357.1	massive, recrystallized & foliated	◎	△				△				
P-18	MJSU-12	164.7	fracture fillings	◎	△				△				△
P-19	MJSU-13	91.8	submassive and foliated	◎	△								△
P-20	MJSU-13	188.5	submassive & foliated	○	△								△

abbrev. cc:Chalcocite, co:Covellite, cp:chalcopyrite, ga:Galena, ma:Magnetite, pr:Pyrrhotite, py:Pyrite, ru:Rutile, sp:Sphalerite, te:Tetrahedrite-Tennentite

◎abundant, ○common, △small

Appendix 3　Results of X-ray Diffraction Analysis

First Phase

Localities		Sample No.	Rock Name	qt	cl	ch	se	ep	ta	ab	al	gy	tr	py	cp	sp
Jabal Sayid		K9030303	py, cp disseminated altered rock	◎		◎	△		△					○	○	
Mahd adh Dhahab		K9030309	host rock of quartz vein	◎		◎	△	△						○	○	
		K9030310	host rock of cp-ga massive vein	◎		○				○						△
West of Jabal Sujarah		K9030105	jasper	◎										△		
Jabal Sujarah		K9030302	carbonatized rock	○	◎	△		△								
Northwest of Umm ad Damar South		M9022701	epidotized rock	△	◎	△		△					◎			
Umm ad Damar North Prospect	West Hill	K9022801	hematite rock	◎		○	△									
		K9022802	dacite	◎		◎	△									
	Southeast Hill	K9030301	sulfide veinlet ore, UAD-6 No.17	○		◎								△		
Umm ad Damar South Prospect		K9022409	clay	◎		△					○	△				

Second Phase　Geological Survey

Localities (Drill Hole No.)		Sample No.	Depth (m)	Rock Name	qt	tr	cl	ch	se	pl	ep	ta	py	cp	he
Umm ad Damar South	UAD-4	112X	112.9	Chloritized rock	△		◎	△				◎	△	△	
		114X	114.5	Chloritized rock	◎		○	△					△		
West of Umm ad Damar South Prospect		K0020801		Strongly epidotized andesitic rock	△	◎	△	△			○				
West of J-18 Anomaly		K0021402		Silicified dacitic rock with hematite	◎				△						△
West of J-18 Anomaly		K0021403		Silicified and clayey dacitic rock with hematite	◎										△
North of MJSU-7		K0020602		Carbonatized rhyodacitic rock	◎		△	△	△						
Northeast of MJSU-7		K0020601		Ferruginous rhyodacitic rock	◎										△
North of Jabal Sujarah		K0020504		"Silicified rock with hematite, jasper?"	◎										
North of M-27 Anomaly		K0022401		Strongly silicified dacitic rock with hematite	◎			△	△						
J-18 Anomaly		K0022408		Rhyodacitic rock with hematite	◎			△	△						

Abbrev. ab:Albite, al:Alunite, ch:Chlorite, cl:Calcite, cp:Chalcopyrite, ep:Epidote, gy:Gypsum, py:Pyrite, qt:Quartz, se:Sericite, sp:Sphalerite, ta:Talc, tr:Tremolite

◎abundant　○common　△small

Appendix 3 Results of X-ray Diffraction Analysis

Second Phase   Drilling Exploration

Localities (Drill Hole No.)		Sample No.	Depth (m)	Rock Name	qt	cl	ch	se	pl	py	cp
4/6 Gossan	MJSU-2	98X	98.6	Rhyodacitic lapilli tuff	◎		△	◎	○		
		117X	117.4	Basaltic tuff	◎	○	◎		△		
		125X	125.7	Rhyodacitic lapilli tuff	△		◎			○	
		129X	129.0	Rhyodacitic lapilli tuff	◎		△	△			
		142X	142.2	Rhyodacitic tuff	○		◎				
		144X	144.7	Rhyodacitic tuff	◎		△	△	△		
Umm ad Damar North	MJSU-3	211X	211.5	Porphyritic dacite	◎		○	△			
		217X	217.5	Rhyodacitic coarse tuff	◎		△	△			
		224X	224.5	"Silicified volcanic rocks, rhyodacitic?"	◎		△		△		
Umm ad Damar North	MJSU-4	56X	56.3	Strongly silicified rhyodacitic? rock	◎	△	◎	○		△	
		61X	61.5	Silicified rhyodacitic rock	◎	△		◎			
		131X	131.6	Rhyodacitic coarse tuff	◎	◎	○	△			
		138X	138.0	Dacitic coarse tuff	◎	△	◎	○			
		143X	143.1	Chloritized part	◎	△	◎	○		△	
		145X	145.3	Dacitic coarse tuff	◎	△	◎	○		○	
		285X	285.8	Pyritized part	◎	△	○	○		○	
Umm ad Damar North	MJSU-5	79X	79.6	Strongly chloritized part	◎	○	◎	○		△	
		96X	96.3	Strongly chloritized part	◎	◎	○				
		236X	236.1	Chloritized part	◎		◎			△	○
		246X	246.6	Chloritized part			◎			△	
		270X	270.6	Chlorite & siliceous layer in thinly banded pyrite ore	◎	△	○	△			
		274X	274.3	Chlorite & siliceous layer in banded pyrite ore	△		◎			△	△
		331X	331.1	Strongly chloritized part	△		◎				△
northeast of 4/6 Gossan	MJSU-6	134X	134.2	Qtz-vein in graphite	◎		○	△			
Jabal Sujarah	MJSU-8	41X	41.7	"Brecciated silicified rock, rhyodacitic tuff?"	◎	◎		○			
		74X	74.6	Clayey fine tuff	△		△	◎		◎	
		141X	141.8	Pumiceous volcanic breccia	◎		△	△		△	
		184X	184.9	Pumiceous lapilli tuff			△	◎		○	

Abbrev. ch:Chlorite, cl:Calcite, cp:Chalcopyrite, pl:Plagioclase, py:Pyrite, qt:Quartz, se:Sericite

◎abundant ○common △small

Appendix 3　Results of X-ray Diffraction Analysis

Third Phase　Drilling Exploration

Sample No.	Drill Hole	Depth (m)	qt	pl	kf	ch	se	mi	cl	py	Sample No.	Drill Hole	Depth (m)	qt	pl	kf	ch	se	mi	cl	py
X-01	MJSU-2	30.40	◎	△		○	△				X-31	MJSU-14	260.10	◎	△		△	△	?		
X-02	MJSU-2	51.20	◎	△		○	△	?	△		X-32	MJSU-14	274.00	◎	○		△	○			
X-03	MJSU-2	83.70	◎	△		△	△				X-33	MJSU-10	36.00	◎			△	△			
X-04	MJSU-2	167.60	◎	△		△	△				X-34	MJSU-10	55.00	◎			△	△			
X-05	MJSU-2	181.50	◎	△		△	△				X-35	MJSU-10	74.00	◎			△	△			△
X-06	MJSU-2	200.00	◎	△		△	○				X-36	MJSU-10	140.00	◎			△	△	?		△
X-07	MJSU-2	220.50	◎	△		△	△				X-37	MJSU-10	159.00	○	?	△	△	△			△
X-08	MJSU-2	236.40	◎	△		△	△		△		X-38	MJSU-10	172.20	◎			△	△			
X-09	MJSU-2	249.40	◎	△		△	△				X-39	MJSU-11	47.80	◎	△		△	△			
X-10	MJSU-14	19.80	◎	△		○	?	△			X-40	MJSU-11	135.70	◎			△	△			△
X-11	MJSU-14	45.10	◎	△		○	?	△			X-41	MJSU-11	233.00	◎	△		△	△			
X-12	MJSU-14	64.50	◎	△		△	△	△	△		X-42	MJSU-9	50.90	◎				△			△
X-13	MJSU-14	85.30	○	○		○	△		?		X-43	MJSU-9	70.10	◎							△
X-14	MJSU-14	104.70	◎	△		○	?	△	△		X-44	MJSU-9	85.00	◎				△			△
X-15	MJSU-14	125.10	○	△		○	△	△	△		X-45	MJSU-9	130.80	◎			△	△			△
X-16	MJSU-14	136.80	○	△		○	△	△~?	△		X-46	MJSU-9	174.60	◎			△	△			△
X-17	MJSU-14	151.00				◎	△		△		X-47	MJSU-9	228.00	◎				△			△
X-18	MJSU-14	170.10	◎	△		△	△	△	△	△	X-48	MJSU-9	295.00	◎			△	△			△
X-19	MJSU-14	193.10	○	△		○	△		?	?	X-49	MJSU-9	350.50				◎				△
X-20	MJSU-14	200.10	○~△	△		△			△		X-50	MJSU-9	358.20	○			△	△			△
X-21	MJSU-14	203.60	◎			△	△			?	X-51	MJSU-9	366.60	◎			△	△			△
X-22	MJSU-14	207.00	◎	△		△	△				X-52	MJSU-12	107.60	△			◎	○		△	△
X-23	MJSU-14	210.20	◎	△		△	△				X-53	MJSU-12	142.00	○	△		◎	△		△	△
X-24	MJSU-14	212.00	◎			△	△		△	△	X-54	MJSU-12	164.70	○	○		○			△	△
X-25	MJSU-14	214.50	◎	△		△	△			△	X-55	MJSU-12	191.70	○	○		○			△	△
X-26	MJSU-14	219.50	◎	△		△	△				X-56	MJSU-13	82.20	◎	△		△	△	△	△	△
X-27	MJSU-14	221.10	◎			○	△				X-57	MJSU-13	92.50	◎	△		◎	△		△	△
X-28	MJSU-14	222.10	◎			◎	△				X-58	MJSU-13	117.80	◎	△		△	△		△	
X-29	MJSU-14	230.20	◎	△		△	△				X-59	MJSU-13	185.20	○			◎			△	△
X-30	MJSU-14	240.10	◎	△		△	○				X-60	MJSU-13	200.50	◎			△	△	△	△	△

Abbrev. ab:Albite, al:Alunite, ch:Chlorite, cl:Calcite, cp:Chalcopyrite, ep:Epidote,kf:Potash feldspar, mi:Minesotaite, py:Pyrite, qt:Quartz, se:Sericite

◎:Abundant, ○:Common, △:Small amount, ?:Probable

Appendix 4 Results of Fluid Inclusion Study

Localities		Sample No.	Rock Name	Kind of Inclusions	Homogenization Temperature (°C)					Salinity (wt% eq. NaCl)					Other Analytical Results		
					Number of Measured Inclusions	Min	Max	Average	Standard Deviation	Number of Measured Inclusions	Min	Max	Average	Standard Deviation	Microscopic Observation of Polished Section	Ore Assay	X-ray Diffraction Analysis
Jabal Sayid Deposit		K9030307	silicified ore	liquid-rich two-phase	22	111	309	260	47	5	0.7	10.9	8.3	1.7	py(◎), cp(○), sp(△), po(△)	-	-
Mahd adh Dhahab Mine		K9030308	988mL,cp-sp qz vein	liquid-rich two-phase	15	147	276	221	46	14	0.6	1.2	0.9	0.2	"py(△), cp(○), bn(△), sp(◎), ga(△)	-	-
Mahd adh Dhahab Mine		K9030309	quartz vein	liquid-rich two-phase	12	174	233	198	19	5	0.1	0.4	0.2	0.2	-	-	qz(◎), chl(◎), ser(△), epi(△), py(○), cp(○)
Umm ad Damar		K9022006	quartz vein	liquid only	0	-	-	-	-	2	12.3	14.4	13.3	1.5	-	Cu 1.48%	-
Umm ad Damar North Prospect	West Hill	K9030102	gossan	liquid only	0	-	-	-	-	3	11.7	12.5	12.2	0.4	py(△), hem(◎)	Cu 0.14%	-
Umm ad Damar North Prospect	West Hill	K9030103	quartz vein	mostly liquid-rich two-phase	11	172	240	193	31	11	4.9	7.3	6.2	0.9	-	Ag 18.9g/t, Cu 0.17%	-
Umm ad Damar North Prospect	Southeast Hill	K9030301	sulfide veinlet ore, UAD-6 NO.17	liquid-rich two-phase	1	>430		-	-	1	6.0		-		py(◎), cp(○), sp(△), po(△), mt(△), cv(△)	Cu 0.19%	qz(○), chl(◎), py(△)
Umm ad Damar North Prospect	Southeast Extension	K9022501	quartz vein	liquid only or liquid-rich two-phase	2	147	175	161	20	3	13.1	13.5	13.4	0.2	-	Cu 0.11%	-
Umm ad Damar North Prospect	Southeast Extension	K9022505	silicified ore	liquid-rich two-phase	10	147	191	164	14	4	12.4	18.4	14.7	2.8	-	Cu 0.60%	-
Umm ad Damar South Prospect		K9022402	silicified rock	liquid-rich two-phase	20	150	181	160	12	5	1.5	4.1	3.2	1.0	-	-	-
Umm ad Damar South Prospect		K9022403	qz-hem veinlet rock	liquid-rich two-phase	19	149	191	164	12	5	3.9	4.9	4.4	0.4	-	Cu 0.06%	-
Umm ad Damar South Prospect		K9022406	silicified ore	liquid-rich two-phase	23	132	175	148	12	6	3.6	5.6	5.0	0.7	-	Ag 18.2g/t, Cu 1.91%	-
Umm ad Damar South Southeast Extension		K9021402	quartz vein	liquid only	0	-	-	-	-	1	0.5		-	-	-	Cu 0.45%	-
Umm ad Damar South Southeast Extension		K9021404	quartz vein	liquid-rich two-phase(CO_2?)	2	81	90	85	6	0	-	-	-	-	-	Cu 0.45%	-

abbrev. py = pyrite, cp = chalcopyrite, sp = sphalerite, po = pyrrhotite, bn = bornite, ga = galena, hem = hematite, mt = magnetite, cv = covelline, qz = quartz, chl = chlorite, ser = sericite, epi = epidote

◎abundant, ○common, △small

Appendix 5 Results of Ore Assay (1)

First Phase

Localities		Sample No.	Rock Name	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Fe (%)
4/6 Gossan Prospect		K9021701	gossan	3.7	287	1.96	3.45	0.61	35.33
		K9021702	gossan	1.6	23.6	0.58	1.49	1.98	31.25
		K9021703	gossan	<0.1	3.4	6.59	0.04	1.70	12.61
		K9021801	gossan	<0.1	2.3	0.05	<0.01	0.03	4.63
		K9021802	gossan	<0.1	1.9	0.03	0.01	0.01	11.29
West of Jabal Sujarah		K9030105	jasper	0.4	5.9	0.21	<0.01	<0.01	2.02
North of Umm ad Damar South		K9022006	quartz vein, wd 0.3m	<0.1	0.8	1.48	<0.01	<0.01	3.01
Southeast of Jabal Sujarah		M9021504	quartz vein, wd 0.12m	<0.1	0.4	0.09	<0.01	<0.01	2.15
Umm ad Damar North Prospect	West Hill	K9021101	gossan	0.3	3.3	10.12	<0.01	0.04	8.97
		K9030102	gossan	<0.1	2.2	0.14	<0.01	0.01	12.18
		K9030103	quartz vein	0.3	18.9	0.17	<0.01	0.02	9.23
		K9022704	gossan	0.6	4.5	5.67	0.32	0.40	42.13
		K9022705	gossan	0.4	1.9	0.05	<0.01	0.04	25.66
	Southeast Hill	K9030301	sulfide veinlet ore, UAD-6 No.17	<0.1	3.8	0.19	<0.01	0.01	17.49
		K9022702	gossan	<0.1	0.5	0.04	<0.01	<0.01	22.88
		K9022703	gossan	<0.1	0.6	0.13	<0.01	0.02	33.28
	Southeast Extension	K9022501	quartz vein	<0.1	1.5	0.11	<0.01	0.03	6.38
		K9022503	gossan	<0.1	2.3	0.52	<0.01	0.03	28.28
		K9022504	quartz vein	<0.1	1.5	0.60	<0.01	0.02	5.56
		K9022505	silicified ore	0.1	8.1	2.04	0.01	0.06	11.94
Umm ad Damar South Prospect		K9022403	quartz-hematite veinlet rock	<0.1	1.7	0.06	<0.01	<0.01	14.00
		K9022404	gossan	6.2	5.5	0.89	<0.01	0.04	57.44
		K9022405	quartz veinlet rock	0.2	5.5	0.21	<0.01	0.05	7.43
		K9022406	silicified ore	0.4	18.2	1.91	<0.01	0.36	5.24
		K9022407	silicified rock	1.4	13.1	1.07	0.03	0.41	20.74
		K9022408	ore containing Cu-oxide minerals	0.3	7.3	7.91	<0.01	1.22	18.71
		K9030313	ore containing Cu-oxide minerals	3.0	14.7	0.76	0.01	0.40	38.02
Umm ad Damar South, Southeast Extension		K9021303	gossan, wd 0.3m	0.2	15.0	14.44	<0.01	0.02	13.20
		K9021402	quartz vein, wd 1.0m	<0.1	1.0	0.45	<0.01	<0.01	0.54
		K9021404	quartz vein, wd 0.3m	<0.1	1.6	0.45	<0.01	<0.01	1.01
		K9021405	silicified rock, wd 2～3m	<0.1	0.9	0.82	<0.01	<0.01	0.38
		K9021409	quartz vein, wd 0.3m″	<0.1	0.9	1.25	0.05	<0.01	1.39
		K9021506	siliceous ore, float	<0.1	18.6	4.50	<0.01	<0.01	1.39

Appendix 5 Results of Ore Assay (2)

Second Phase Geological Survey

Drill Hole No.	Sample No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)	Fe (%)
UAD-4	1	105.95	107.95	2.00	0.30	21.2	1.88	0.05	0.00	4.98	-
	2	107.95	109.95	2.00	0.35	26.8	2.37	0.07	0.00	6.98	-
	3	109.95	112.05	2.10	0.36	20.8	1.67	0.56	0.00	8.75	-
	4	112.05	114.05	2.00	1.00	38.4	3.56	3.60	0.00	15.50	-
	5	114.05	115.00	0.95	1.44	40.8	4.06	1.96	0.00	8.25	-
K0013101		4/6 Gossan Prospect			<0.05	<1.0	0.01	0.01	0.01	-	31.09
K0020503		B-12 Chargeability Anomaly			<0.05	3.2	0.04	0.02	0.11	-	2.30
K0020603		O-21 Chargeability Anomaly			<0.05	1.8	0.09	0.01	0.00	-	14.91
K0020604		O-21 chargeability Anomaly			<0.05	<1.0	0.06	0.02	0.00	-	19.77
K0021401		West of J-18 Chargeability Anomaly			<0.05	<1.0	0.02	0.01	0.00	-	14.44
K0021402		West of J-18 Chargeability Anomaly			0.08	6.2	0.02	0.01	0.00	-	8.86
K0021403		West of J-18 Chargeability Anomaly			<0.05	<1.0	0.02	0.01	0.00	-	8.33
K0021404		4/6 Gossan Prospect			0.05	1.4	0.01	0.01	0.01	-	3.31

Appendix 5　Results of Ore Assay (3)

Second Phase　Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-1	6.30	7.95	1.65	<0.05	0.6	<0.01	<0.01	<0.01	0.14
	13.50	14.55	1.05	<0.05	0.6	<0.01	<0.01	<0.01	<0.05
	14.55	15.00	0.45	<0.05	0.7	<0.01	0.01	<0.01	<0.05
	15.00	15.75	0.75	<0.05	0.6	<0.01	<0.01	<0.01	<0.05
	15.75	17.40	1.65	<0.05	0.7	0.01	0.01	<0.01	<0.05
	17.40	18.65	1.25	<0.05	0.6	<0.01	0.01	<0.01	<0.05
	23.05	24.20	1.15	<0.05	0.5	<0.01	0.01	<0.01	0.32
	24.20	25.75	1.55	<0.05	0.6	<0.01	0.01	<0.01	1.05
	25.75	26.65	0.90	<0.05	0.5	<0.01	0.01	<0.01	0.43
	26.65	27.30	0.65	<0.05	0.6	0.01	0.01	<0.01	1.45
	31.00	32.75	1.75	<0.05	0.6	<0.01	<0.01	<0.01	1.95
	32.75	33.75	1.00	<0.05	0.6	<0.01	0.01	<0.01	1.40
	46.90	47.90	1.00	<0.05	1.0	0.01	0.01	<0.01	<0.05
	47.90	48.90	1.00	<0.05	1.2	0.04	0.01	<0.01	1.50
	48.90	49.90	1.00	<0.05	1.1	0.01	0.01	<0.01	0.26
	55.85	56.85	1.00	<0.05	0.7	<0.01	0.01	<0.01	0.40
	91.05	92.20	1.15	<0.05	2.7	0.01	0.51	0.01	10.50
	96.35	96.50	0.15	<0.05	13.2	2.19	0.01	0.01	5.92
	96.50	97.50	1.00	<0.05	0.9	0.02	0.01	<0.01	3.10
	97.50	98.50	1.00	<0.05	1.3	0.01	0.01	<0.01	5.20
	98.50	99.50	1.00	<0.05	1.5	0.02	0.01	<0.01	3.80
	99.50	100.50	1.00	<0.05	1.1	0.03	0.01	<0.01	1.26
	100.50	101.50	1.00	<0.05	1.1	0.06	0.01	<0.01	3.10
	101.50	102.50	1.00	<0.05	1.0	0.02	<0.01	<0.01	4.30
	102.50	103.50	1.00	<0.05	0.7	0.03	<0.01	<0.01	2.80
	103.50	104.20	0.70	<0.05	1.0	0.11	<0.01	<0.01	7.05
	120.85	121.50	0.65	<0.05	2.5	0.04	0.01	0.01	1.51
	122.50	123.00	0.50	<0.05	9.4	0.47	0.17	0.05	2.00
	123.00	123.10	0.10	<0.05	5.8	0.70	0.76	0.06	1.94
	150.70	151.60	0.90	<0.05	2.1	0.02	0.01	0.01	1.43
	151.60	152.30	0.70	<0.05	1.0	<0.01	0.01	<0.01	1.57
	152.70	153.40	0.70	<0.05	3.4	0.02	0.02	0.01	2.80
	153.40	154.10	0.70	0.05	8.3	0.09	0.26	0.11	4.42
	154.10	155.30	1.20	<0.05	0.7	<0.01	0.01	<0.01	3.15
	208.90	209.05	0.15	<0.05	4.1	0.37	0.16	0.01	1.30
	212.75	212.85	0.10	0.33	213.0	0.90	2.98	1.09	7.70
	215.45	215.60	0.15	0.48	150.0	0.95	1.91	0.48	4.66
MJSU-2	41.45	41.85	0.40	<0.05	<0.5	0.01	0.04	<0.01	0.48
	41.85	43.35	1.50	<0.05	<0.5	0.08	0.03	<0.01	1.72
	43.35	43.60	0.25	0.05	1.3	0.36	0.04	<0.01	1.00
	64.20	64.40	0.20	<0.05	4.6	0.16	0.06	<0.01	0.95
	106.25	107.25	1.00	<0.05	3.0	<0.01	0.02	<0.01	10.67
	107.25	108.25	1.00	<0.05	1.3	0.01	0.04	<0.01	5.70
	108.25	109.05	0.80	<0.05	1.0	<0.01	0.02	<0.01	4.04
	121.15	121.60	0.45	0.12	14.9	1.70	0.18	0.02	18.05
	121.60	122.30	0.70	0.14	18.6	0.17	0.03	0.01	1.32
	122.30	122.90	0.60	0.28	10.7	2.71	0.08	<0.01	11.04
	122.90	123.90	1.00	0.12	7.0	0.07	0.02	<0.01	3.95
	123.90	124.25	0.35	0.06	3.4	0.09	0.08	0.01	1.75
	124.25	124.75	0.50	0.65	55.4	1.66	9.81	0.45	14.00
	124.75	125.10	0.35	1.00	63.1	1.03	5.90	1.30	7.96
	125.10	125.40	0.30	1.40	44.9	0.99	6.81	0.68	10.34
	125.40	126.20	0.80	0.10	3.9	0.03	1.21	0.16	3.34
	126.20	127.15	0.95	<0.05	2.3	0.01	0.04	<0.01	2.15
	127.15	128.10	0.95	<0.05	1.9	0.01	0.02	<0.01	1.08
	128.10	128.20	0.10	0.30	12.6	0.96	0.19	<0.01	23.30
	128.20	129.05	0.85	<0.05	0.8	<0.01	0.03	<0.01	0.65
	129.05	130.10	1.05	<0.05	0.5	0.01	0.04	<0.01	0.20
	130.10	130.40	0.30	0.56	13.3	0.89	3.65	0.02	11.75
	130.40	130.50	0.10	0.74	1.5	0.23	0.03	<0.01	2.00
	130.50	131.15	0.65	0.67	28.8	0.68	9.55	0.03	21.70
	131.15	132.10	0.95	0.13	37.6	1.46	24.68	0.09	28.50
	132.10	133.10	1.00	0.21	21.7	1.78	4.41	0.57	6.40

Appendix 5　Results of Ore Assay (4)

Second Phase　Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-2	133.10	133.90	0.80	0.21	9.7	1.23	3.95	0.01	7.10
	133.90	134.15	0.25	<0.05	7.6	0.48	1.97	0.02	23.00
	134.15	134.90	0.75	0.18	9.9	0.29	4.13	0.62	3.25
	134.90	136.20	1.30	<0.05	12.5	0.67	0.81	<0.01	26.55
	136.20	137.20	1.00	<0.05	2.8	0.20	0.10	<0.01	1.20
	137.20	137.40	0.20	0.70	51.6	4.79	0.24	0.01	23.60
	137.40	138.00	0.60	<0.05	2.8	0.20	0.09	<0.01	1.20
	138.00	138.90	0.90	0.14	12.9	0.50	0.22	<0.01	11.25
	138.90	139.10	0.20	0.08	8.0	0.32	0.12	<0.01	4.65
	139.10	140.30	1.20	0.19	11.1	1.17	0.50	<0.01	5.50
	140.30	141.15	0.85	0.35	6.1	0.32	0.55	<0.01	13.83
	141.15	141.55	0.40	5.83	15.8	4.58	0.08	<0.01	33.83
	141.55	142.25	0.70	<0.05	4.5	1.05	0.12	0.01	18.70
	221.85	222.00	0.15	<0.05	9.0	0.03	0.71	<0.01	3.90
	224.05	224.15	0.10	<0.05	1.5	0.10	0.51	<0.01	0.85
	229.05	229.20	0.15	<0.05	5.3	0.02	0.46	<0.01	2.50
MJSU-3	5<0.01	51.90	1.90	<0.05	1.6	<0.01	0.01	<0.01	1.30
	51.90	53.30	1.40	<0.05	1.0	0.01	0.02	<0.01	1.53
	55.90	56.15	0.25	<0.05	1.7	0.07	0.05	<0.01	5.75
	56.15	57.10	0.95	0.06	1.4	0.02	0.02	<0.01	2.50
	57.10	59.05	1.95	<0.05	0.8	0.01	0.01	<0.01	2.65
	59.05	59.90	0.85	<0.05	1.2	0.01	0.01	<0.01	1.40
	68.85	71.85	3.00	<0.05	1.3	0.02	0.01	<0.01	2.55
	71.85	72.60	0.75	<0.05	1.3	0.02	0.01	<0.01	1.70
	81.55	83.55	2.00	<0.05	0.9	0.02	0.02	<0.01	2.20
	83.55	85.60	2.05	<0.05	1.1	0.04	0.02	<0.01	2.60
	95.65	97.75	2.10	<0.05	1.3	0.19	0.09	<0.01	7.00
	104.60	106.20	1.60	0.09	0.8	0.01	0.01	<0.01	2.00
	106.20	107.80	1.60	0.07	1.0	0.01	0.02	<0.01	1.70
	107.80	11<0.01	2.20	<0.05	1.0	0.02	0.01	<0.01	1.80
	114.80	116.25	1.45	<0.05	1.1	0.01	0.01	<0.01	2.10
	116.25	117.70	1.45	<0.05	1.1	<0.01	0.01	<0.01	0.35
	117.70	119.20	1.50	<0.05	1.0	0.02	<0.01	<0.01	1.50
	119.20	120.75	1.55	<0.05	0.6	0.03	<0.01	<0.01	1.25
	153.15	154.50	1.35	<0.05	0.5	0.01	0.01	<0.01	2.10
	154.50	157.40	2.90	<0.05	0.6	0.01	0.01	<0.01	9.50
	157.40	159.00	1.60	<0.05	2.8	0.37	0.02	<0.01	2.80
	159.00	160.55	1.55	<0.05	2.3	0.19	0.01	<0.01	0.60
	160.55	162.85	2.30	<0.05	0.9	0.09	0.01	<0.01	1.30
	162.85	164.45	1.60	<0.05	1.1	0.01	0.01	<0.01	0.90
	164.45	164.75	0.30	<0.05	1.5	0.09	0.01	<0.01	1.70
	177.60	178.50	0.90	<0.05	1.1	0.06	0.02	<0.01	1.50
	188.20	188.75	0.55	<0.05	3.9	1.57	0.02	<0.01	8.45
	188.75	189.45	0.70	<0.05	0.9	0.02	0.01	<0.01	0.40
	189.45	192.15	2.70	<0.05	1.1	0.09	0.01	<0.01	1.20
	204.25	206.70	2.45	<0.05	1.8	0.23	0.01	<0.01	<0.05
	206.70	208.60	1.90	<0.05	1.9	0.33	0.01	<0.01	<0.05
	208.60	210.60	2.00	<0.05	0.9	0.03	0.01	<0.01	<0.05
	210.60	212.45	1.85	<0.05	0.9	0.03	0.01	<0.01	0.25
	212.45	214.70	2.25	<0.05	1.0	0.09	0.01	<0.01	1.20
	214.70	215.05	0.35	<0.05	13.3	5.05	0.06	<0.01	5.10
	215.05	217.05	2.00	<0.05	0.8	0.01	<0.01	<0.01	0.26
	217.05	218.90	1.85	<0.05	1.2	0.08	0.01	<0.01	1.60
	218.90	220.10	1.20	<0.05	0.8	0.02	0.01	<0.01	8.45
	220.10	220.90	0.80	<0.05	6.6	2.48	0.03	<0.01	3.00
	220.90	223.50	2.60	<0.05	0.7	0.03	0.01	<0.01	1.25
	223.50	226.30	2.80	<0.05	0.8	0.01	<0.01	<0.01	4.00
	241.85	243.25	1.40	<0.05	<0.5	0.06	0.01	<0.01	4.38
MJSU-4	31.50	32.50	1.00	<0.05	<0.5	<0.01	0.01	<0.01	0.73
	32.50	33.30	0.80	<0.05	<0.5	0.01	0.01	<0.01	0.40
	33.30	34.20	0.90	<0.05	<0.5	<0.01	0.01	<0.01	0.64
	55.30	56.30	1.00	<0.05	<0.5	0.02	<0.01	<0.01	0.47
	56.30	57.70	1.40	<0.05	<0.5	0.01	<0.01	<0.01	0.48

Appendix 5 Results of Ore Assay (5)

Second Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-4	60.25	61.25	1.00	<0.05	<0.5	<0.01	<0.01	<0.01	0.08
	61.25	62.25	1.00	<0.05	<0.5	<0.01	<0.01	<0.01	0.18
	62.25	63.15	0.90	<0.05	<0.5	0.05	0.01	<0.01	1.20
	63.15	64.30	1.15	<0.05	<0.5	0.01	0.01	<0.01	0.65
	64.30	65.15	0.85	<0.05	<0.5	0.02	0.01	<0.01	3.15
	65.15	66.15	1.00	<0.05	<0.5	0.02	0.01	<0.01	1.40
	66.15	67.20	1.05	<0.05	<0.5	0.02	<0.01	<0.01	0.25
	67.20	67.60	0.40	<0.05	<0.5	0.01	0.01	<0.01	0.43
	67.60	67.85	0.25	0.06	<0.5	0.01	<0.01	<0.01	0.22
	111.40	111.65	0.25	0.07	12.0	1.82	0.10	<0.01	5.40
	133.15	133.30	0.15	0.07	1.8	0.24	0.02	<0.01	13.80
	140.50	141.00	0.50	<0.05	15.1	1.31	0.05	<0.01	3.30
	141.00	142.00	1.00	0.12	20.8	7.65	0.02	<0.01	5.66
	142.00	143.10	1.10	<0.05	0.5	0.10	0.02	<0.01	0.53
	143.10	143.40	0.30	0.28	24.7	10.40	0.19	<0.01	12.20
	143.40	144.85	1.45	<0.05	4.0	0.20	0.03	<0.01	0.83
	144.85	145.00	0.15	0.14	27.3	4.77	0.02	<0.01	6.53
	145.00	146.40	1.40	<0.05	2.4	0.15	0.01	<0.01	0.32
	146.40	146.60	0.20	0.15	38.6	4.60	0.03	<0.01	5.77
	146.60	147.30	0.70	<0.05	0.7	0.09	0.01	<0.01	0.40
	147.30	147.80	0.50	<0.05	16.7	1.37	0.01	<0.01	2.10
	147.80	148.80	1.00	<0.05	4.4	0.18	0.01	<0.01	0.82
	148.80	149.80	1.00	<0.05	0.6	0.09	0.01	<0.01	0.43
	149.80	149.90	0.10	<0.05	4.0	0.32	0.03	<0.01	0.95
	149.90	151.50	1.60	<0.05	1.4	0.13	0.02	<0.01	0.54
	151.50	153.00	1.50	<0.05	0.8	0.07	0.02	<0.01	1.54
	153.00	154.50	1.50	<0.05	<0.5	0.07	0.03	<0.01	2.80
	154.50	155.50	1.00	<0.05	<0.5	0.02	0.01	<0.01	2.10
	155.50	156.05	0.55	<0.05	5.1	2.54	0.07	<0.01	3.40
	156.05	156.20	0.15	<0.05	12.0	18.95	0.87	0.04	12.94
	156.20	157.45	1.25	<0.05	2.3	0.38	0.02	<0.01	1.41
	157.45	158.25	0.80	<0.05	9.9	1.82	0.02	<0.01	2.50
	158.25	158.55	0.30	<0.05	1.2	0.29	0.03	<0.01	1.30
	158.55	158.85	0.30	0.07	17.7	3.64	0.07	<0.01	4.00
	158.85	160.50	1.65	<0.05	<0.5	0.05	0.02	<0.01	0.70
	160.50	162.00	1.50	<0.05	0.6	0.09	0.04	<0.01	1.02
	162.00	162.85	0.85	<0.05	0.7	0.06	0.03	<0.01	0.07
	162.85	163.00	0.15	<0.05	20.9	2.72	0.03	<0.01	2.80
	163.00	163.30	0.30	<0.05	1.0	0.04	0.02	<0.01	0.83
	163.30	163.40	0.10	<0.05	7.4	1.82	0.05	<0.01	2.40
	213.10	213.20	0.10	<0.05	4.0	1.36	0.03	<0.01	2.28
	213.65	213.85	0.20	0.09	7.8	1.34	0.02	<0.01	3.90
	215.00	215.15	0.15	<0.05	4.3	0.64	0.02	<0.01	3.33
	217.00	217.10	0.10	<0.05	4.9	0.76	0.05	<0.01	3.42
	226.75	226.85	0.10	<0.05	13.0	3.28	0.03	<0.01	3.33
	227.25	228.05	0.80	<0.05	2.0	0.35	0.01	<0.01	1.06
	241.20	242.05	0.85	<0.05	<0.5	0.05	0.01	<0.01	0.75
	242.05	242.80	0.75	<0.05	0.7	0.05	0.03	<0.01	0.80
	263.50	263.75	0.25	<0.05	0.8	0.09	0.06	<0.01	2.62
	263.75	265.10	1.35	<0.05	<0.5	0.09	0.01	<0.01	0.78
	265.10	267.05	1.95	<0.05	<0.5	0.17	0.01	<0.01	0.92
	272.70	273.25	0.55	0.07	1.1	1.11	0.01	<0.01	1.42
	278.95	279.35	0.40	<0.05	6.9	2.72	0.03	<0.01	4.63
	285.70	286.75	1.05	<0.05	0.7	0.04	0.01	<0.01	4.40
	292.30	292.60	0.30	<0.05	<0.5	<0.01	0.01	<0.01	4.60
	292.60	293.00	0.40	<0.05	<0.5	0.01	0.02	<0.01	17.34
	293.00	294.25	1.25	<0.05	<0.5	0.01	0.01	<0.01	2.20
	294.25	295.30	1.05	<0.05	<0.5	0.01	0.01	<0.01	2.00
MJSU-5	77.70	79.40	1.70	0.05	2.8	0.19	0.03	<0.01	5.67
	79.40	79.90	0.50	<0.05	11.0	1.86	0.03	<0.01	3.71
	79.90	80.55	0.65	<0.05	5.4	0.83	0.06	<0.01	2.90
	80.55	80.95	0.40	0.13	35.9	4.62	0.17	<0.01	7.88
	80.95	81.70	0.75	0.07	2.1	0.16	0.02	<0.01	<0.05

Appendix 5 Results of Ore Assay (6)

Second Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-5	81.70	82.55	0.85	0.12	27.8	4.28	0.07	<0.01	11.07
	82.55	84.00	1.45	<0.05	2.2	0.36	0.02	<0.01	16.03
	84.00	85.50	1.50	<0.05	0.8	0.09	0.01	<0.01	7.29
	85.50	87.00	1.50	<0.05	2.2	0.19	0.01	<0.01	9.61
	87.00	88.90	1.90	<0.05	1.9	0.15	0.01	<0.01	7.42
	88.90	89.90	1.00	<0.05	10.5	1.42	0.04	<0.01	3.45
	89.90	90.90	1.00	0.11	12.0	0.95	0.03	<0.01	8.83
	90.90	91.90	1.00	0.08	15.8	1.59	0.03	<0.01	8.39
	91.90	93.20	1.30	<0.05	15.7	3.33	0.03	<0.01	4.90
	93.20	94.70	1.50	<0.05	1.4	0.17	0.01	<0.01	0.70
	94.70	95.50	0.80	<0.05	1.5	0.41	0.02	<0.01	1.15
	95.50	96.50	1.00	0.10	15.3	4.25	0.01	<0.01	6.44
	96.50	97.50	1.00	<0.05	12.4	4.21	0.01	<0.01	4.79
	97.50	98.50	1.00	<0.05	12.1	4.10	0.02	<0.01	3.86
	98.50	99.50	1.00	<0.05	12.9	2.85	0.02	<0.01	2.45
	99.50	99.90	0.40	0.36	5.8	2.12	0.02	<0.01	2.58
	99.90	101.00	1.10	<0.05	2.6	0.35	0.02	<0.01	1.50
	109.65	111.00	1.35	0.05	<0.5	0.13	0.01	<0.01	0.08
	111.00	112.50	1.50	0.10	0.6	0.13	0.01	<0.01	0.15
	112.50	114.00	1.50	<0.05	0.9	0.49	0.01	<0.01	1.20
	114.00	114.50	0.50	<0.05	3.8	1.38	0.01	<0.01	1.15
	151.30	151.65	0.35	<0.05	0.6	0.29	0.02	<0.01	3.20
	229.80	231.30	1.50	<0.05	0.6	0.20	<0.01	<0.01	0.75
	231.30	232.80	1.50	0.05	<0.5	0.29	<0.01	<0.01	1.30
	232.80	233.90	1.10	<0.05	<0.5	0.13	<0.01	<0.01	0.63
	233.90	234.50	0.60	<0.05	0.5	0.50	0.01	<0.01	3.82
	234.50	235.30	0.80	<0.05	0.5	0.41	0.01	<0.01	14.11
	235.30	235.65	0.35	<0.05	2.9	3.24	0.01	<0.01	6.56
	235.65	236.05	0.40	<0.05	<0.5	0.44	0.01	<0.01	1.42
	236.05	236.20	0.15	<0.05	3.0	1.06	0.01	<0.01	4.88
	236.20	237.30	1.10	<0.05	<0.5	0.05	0.02	<0.01	1.06
	237.30	238.55	1.25	0.10	6.6	0.66	0.02	<0.01	11.64
	238.55	239.20	0.65	<0.05	1.5	0.39	0.01	<0.01	6.37
	239.20	239.35	0.15	<0.05	2.1	0.93	0.01	<0.01	6.11
	239.35	239.55	0.20	<0.05	0.7	0.51	0.02	<0.01	6.91
	239.55	239.75	0.20	0.06	0.9	0.51	0.02	<0.01	20.50
	239.75	239.95	0.20	0.60	<0.5	0.18	0.01	<0.01	5.93
	239.95	240.45	0.50	0.13	3.5	0.54	0.02	<0.01	17.26
	240.45	241.80	1.35	<0.05	<0.5	0.03	<0.01	<0.01	1.00
	241.80	242.60	0.80	0.08	<0.5	0.07	0.01	<0.01	2.90
	242.60	243.90	1.30	0.05	<0.5	0.07	0.01	<0.01	1.60
	243.90	245.65	1.75	<0.05	<0.5	0.07	0.01	<0.01	0.70
	245.65	247.70	2.05	<0.05	2.0	1.02	0.02	<0.01	6.34
	247.70	249.80	2.10	<0.05	<0.5	0.05	0.01	<0.01	1.05
	249.80	250.20	0.40	<0.05	1.0	0.21	0.03	<0.01	4.50
	250.35	251.70	1.35	<0.05	2.2	0.62	0.02	<0.01	3.90
	252.15	253.80	1.65	0.09	1.0	0.34	0.01	<0.01	1.91
	253.90	255.45	1.55	<0.05	1.4	0.81	0.01	<0.01	5.13
	255.45	256.30	0.85	0.12	21.9	2.58	0.02	<0.01	9.30
	268.90	269.75	0.85	<0.05	1.8	0.95	0.01	<0.01	9.20
	269.75	270.20	0.45	<0.05	<0.5	0.04	0.01	<0.01	0.99
	270.20	271.10	0.90	<0.05	0.9	0.23	0.01	<0.01	16.30
	271.10	271.55	0.45	<0.05	2.0	1.06	0.01	<0.01	32.30
	271.55	271.85	0.30	0.09	8.6	2.49	0.02	<0.01	6.32
	271.85	273.45	1.60	<0.05	3.3	1.48	0.01	<0.01	1.95
	273.45	274.20	0.75	0.10	2.1	2.01	0.01	<0.01	5.20
	274.20	275.40	1.20	<0.05	1.0	0.27	1.01	<0.01	8.73
	275.40	276.35	0.95	0.06	<0.5	0.11	0.02	<0.01	0.80
	276.35	277.15	0.80	0.27	2.6	0.70	0.01	<0.01	2.16
	277.15	277.80	0.65	<0.05	<0.5	0.04	0.01	<0.01	0.45
	277.80	278.15	0.35	<0.05	1.7	1.06	0.01	<0.01	3.36
	278.15	28<0.01	1.85	<0.05	1.1	0.34	0.01	<0.01	1.40
	28<0.01	280.35	0.35	<0.05	<0.5	0.28	0.01	<0.01	1.54

Appendix 5　Results of Ore Assay (7)

Second Phase　Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-5	285.25	285.50	0.25	<0.05	6.4	1.96	0.01	<0.01	4.33
	285.50	287.40	1.90	<0.05	<0.5	0.03	0.02	<0.01	2.83
	298.95	299.90	0.95	0.18	<0.5	0.24	0.01	<0.01	2.00
	299.90	301.60	1.70	<0.05	1.3	0.31	0.01	<0.01	0.90
	303.55	303.85	0.30	<0.05	<0.5	0.17	0.01	<0.01	1.36
	306.90	308.35	1.45	<0.05	<0.5	0.04	0.01	<0.01	1.25
	308.35	310.30	1.95	<0.05	<0.5	0.12	0.01	<0.01	0.30
	314.95	315.05	0.10	<0.05	<0.5	0.36	0.02	<0.01	1.00
	318.90	319.05	0.15	<0.05	<0.5	0.19	0.01	<0.01	0.50
	328.90	329.90	1.00	<0.05	8.6	7.04	0.02	<0.01	5.00
	329.90	330.40	0.50	0.33	5.2	7.32	0.01	<0.01	3.30
	330.50	331.20	0.70	<0.05	7.4	6.10	0.02	<0.01	5.10
	331.20	331.65	0.45	0.05	<0.5	0.33	0.02	<0.01	2.25
	342.20	342.50	0.30	0.09	0.8	0.47	0.02	<0.01	2.60
MJSU-6	64.15	65.20	1.05	<0.05	0.7	0.02	0.02	<0.01	1.15
	65.20	66.15	0.95	<0.05	<0.5	0.01	0.02	<0.01	1.10
	66.15	66.90	0.75	<0.05	<0.5	0.03	0.03	<0.01	2.25
	83.05	85.00	1.95	<0.05	<0.5	<0.01	0.01	<0.01	1.15
	98.70	99.90	1.20	<0.05	<0.5	<0.01	0.03	<0.01	2.20
	133.20	133.85	0.65	<0.05	4.6	0.28	0.24	0.01	6.50
	133.85	134.75	0.90	<0.05	1.9	0.16	0.48	0.02	1.75
	134.75	135.35	0.60	<0.05	71.6	1.71	16.20	0.36	1<0.01
	135.35	135.75	0.40	<0.05	1.1	0.06	0.47	0.02	1.10
	135.75	136.20	0.45	<0.05	15.0	0.17	0.04	0.02	4.60
	136.20	136.45	0.25	0.06	3.7	0.25	0.02	0.01	1.24
	136.45	136.90	0.45	<0.05	15.4	0.61	0.04	0.01	3.70
	136.90	137.20	0.30	<0.05	2.7	0.03	0.02	<0.01	0.64
	137.20	138.00	0.80	<0.05	40.3	0.97	3.17	0.06	10.70
	138.00	138.85	0.85	<0.05	<0.5	0.03	0.04	<0.01	0.47
	138.85	139.30	0.45	<0.05	3.2	0.23	0.06	0.01	2.90
	139.30	140.10	0.80	<0.05	<0.5	0.02	0.03	<0.01	2.85
	140.10	140.40	0.30	<0.05	<0.5	0.03	0.03	<0.01	2.10
	140.40	141.50	1.10	<0.05	<0.5	0.04	0.03	<0.01	2.60
	154.05	154.25	0.20	<0.05	1.5	0.05	0.22	<0.01	5.40
	154.25	154.60	0.35	<0.05	0.7	0.01	0.02	<0.01	10.60
	154.60	154.85	0.25	<0.05	3.2	0.12	0.03	<0.01	2.14
	166.80	167.05	0.25	<0.05	<0.5	<0.01	0.01	<0.01	2.68
	174.20	174.35	0.15	<0.05	1.4	<0.01	<0.01	<0.01	3.10
	182.15	182.90	0.75	<0.05	2.1	0.10	0.01	<0.01	5.57
	213.55	214.30	0.75	<0.05	<0.5	<0.01	<0.01	<0.01	8.36
	214.30	215.10	0.80	0.05	<0.5	<0.01	0.01	<0.01	1.30
	215.10	215.95	0.85	<0.05	<0.5	<0.01	0.01	<0.01	2.70
	215.95	218.00	2.05	<0.05	<0.5	<0.01	0.01	<0.01	0.80
	218.00	219.90	1.90	<0.05	0.5	<0.01	0.01	<0.01	6.16
	219.90	220.70	0.80	0.07	<0.5	<0.01	0.01	<0.01	2.00
	220.70	220.90	0.20	<0.05	4.0	0.03	<0.01	<0.01	26.15
	220.90	223.00	2.10	<0.05	<0.5	0.01	<0.01	<0.01	7.35
	223.00	225.65	2.65	<0.05	<0.5	<0.01	0.01	<0.01	4.00
	225.65	227.25	1.60	<0.05	<0.5	<0.01	<0.01	<0.01	13.40
	227.25	228.90	1.65	<0.05	0.6	<0.01	<0.01	<0.01	2<0.01
	241.55	243.65	2.10	<0.05	1.2	0.01	0.02	<0.01	2.30
	243.65	244.95	1.30	<0.05	1.4	0.06	0.01	<0.01	1.75
MJSU-7	18.25	20.50	2.25	<0.05	<0.5	0.02	0.01	<0.01	0.62
	25.10	26.75	1.65	<0.05	0.8	0.06	0.04	<0.01	0.57
	28.45	3<0.01	1.55	<0.05	0.7	0.05	0.21	<0.01	0.65
	34.15	35.85	1.70	<0.05	0.6	0.03	0.02	<0.01	1.00
	49.25	49.85	0.60	<0.05	2.4	0.10	0.01	<0.01	3.80
	6<0.01	60.20	0.20	<0.05	9.1	0.91	0.03	<0.01	4.88
	62.85	63.50	0.65	<0.05	29.0	2.05	0.08	<0.01	6.60
	63.50	64.85	1.35	<0.05	3.8	0.33	0.04	<0.01	2.75
	70.15	72.65	2.50	<0.05	1.3	0.03	0.03	<0.01	4.88
	72.65	73.45	0.80	<0.05	1.8	0.09	0.03	<0.01	2.64
	73.45	74.30	0.85	<0.05	1.3	0.08	0.02	<0.01	4.50

Appendix 5 Results of Ore Assay (8)

Second Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-7	74.30	76.55	2.25	<0.05	1.9	0.07	0.05	<0.01	10.80
	76.55	76.70	0.15	<0.05	4.3	0.38	0.45	<0.01	20.32
	76.70	78.05	1.35	<0.05	0.6	0.05	0.03	<0.01	5.38
	79.90	80.15	0.25	<0.05	<0.5	0.05	0.02	<0.01	2.60
	87.20	87.40	0.20	<0.05	1.0	0.04	0.04	<0.01	2.84
	108.25	108.75	0.50	<0.05	3.6	0.10	0.01	<0.01	2.28
	173.85	174.55	0.70	<0.05	1.1	0.04	0.09	0.01	3.00
	174.55	176.00	1.45	<0.05	2.2	0.07	0.22	0.03	2.95
	176.00	178.00	2.00	<0.05	0.9	0.02	0.11	0.01	2.50
	192.65	193.55	0.90	<0.05	3.4	0.04	0.09	0.05	3.20
	193.55	194.55	1.00	<0.05	1.5	0.01	0.33	0.03	3.00
	197.90	198.30	0.40	<0.05	1.0	0.08	0.21	<0.01	2.65
	227.85	228.80	0.95	<0.05	<0.5	0.03	0.18	<0.01	2.80
MJSU-8	14.20	15.00	0.80	<0.05	<0.5	<0.01	0.01	<0.01	0.33
	30.30	30.70	0.40	<0.05	1.2	0.01	0.01	<0.01	0.60
	30.70	31.25	0.55	0.07	1.2	0.01	0.02	<0.01	0.90
	31.25	33.30	2.05	<0.05	<0.5	0.01	0.01	<0.01	4.00
	33.70	35.70	2.00	0.06	0.6	0.01	0.01	<0.01	4.50
	35.70	37.70	2.00	<0.05	0.6	0.02	0.01	<0.01	4.10
	37.70	39.70	2.00	<0.05	0.7	0.03	0.01	<0.01	4.35
	39.70	41.70	2.00	<0.05	0.7	0.02	0.01	<0.01	4.42
	41.70	43.70	2.00	0.09	1.2	0.01	0.03	<0.01	4.30
	43.70	45.65	1.95	0.08	<0.5	0.01	0.02	<0.01	3.69
	69.55	71.95	2.40	<0.05	<0.5	0.01	0.05	<0.01	3.30
	71.95	73.25	1.30	0.06	0.9	0.02	0.19	0.01	5.37
	73.25	73.55	0.30	<0.05	3.9	0.90	12.74	0.01	14.00
	73.55	75.50	1.95	0.06	0.8	0.03	0.06	0.01	10.66
	75.50	77.20	1.70	0.14	1.0	0.02	0.01	0.01	11.35
	77.20	77.40	0.20	2.52	6.1	0.08	0.02	0.03	28.90
	77.40	79.20	1.80	0.07	0.8	0.02	0.01	0.01	12.10
	79.20	81.00	1.80	0.08	0.9	0.02	0.01	0.01	12.64
	81.00	82.65	1.65	0.08	1.1	0.02	<0.01	0.01	11.48
	82.65	83.35	0.70	0.24	19.5	1.57	0.01	0.02	25.00
	83.35	85.10	1.75	0.10	6.2	0.11	0.25	0.01	7.00
	85.10	85.85	0.75	0.51	35.3	0.15	0.24	0.02	13.36
	85.85	87.85	2.00	0.05	4.0	0.01	0.02	0.03	5.62
	87.85	90.75	2.90	<0.05	0.5	0.01	0.01	<0.01	5.55
	90.75	91.95	1.20	<0.05	0.8	0.02	0.02	<0.01	9.00
	91.95	95.00	3.05	<0.05	0.6	0.01	0.01	<0.01	4.07
	95.00	96.95	1.95	<0.05	0.9	0.01	0.01	<0.01	4.80
	97.90	101.10	3.20	0.17	2.0	0.02	0.01	<0.01	8.79
	101.80	104.65	2.85	<0.05	1.0	0.01	0.03	<0.01	6.70
	104.65	107.55	2.90	<0.05	1.3	0.02	0.01	<0.01	9.60
	107.55	11<0.01	2.45	<0.05	1.5	0.04	0.02	0.01	<0.01
	11<0.01	113.00	3.00	<0.05	<0.5	0.01	0.01	<0.01	5.60
	113.00	114.05	1.05	<0.05	0.8	0.02	0.10	<0.01	7.95
	114.05	117.00	2.95	<0.05	<0.5	0.01	0.01	<0.01	4.75
	117.00	12<0.01	3.00	<0.05	0.8	0.01	0.01	<0.01	6.10
	12<0.01	123.00	3.00	0.07	0.9	0.01	0.01	<0.01	5.15
	123.00	124.45	1.45	<0.05	0.5	0.01	0.01	<0.01	5.75
	124.45	125.80	1.35	<0.05	0.5	0.01	0.01	<0.01	4.00
	125.80	128.05	2.25	<0.05	0.7	0.01	0.01	<0.01	6.80
	128.05	129.55	1.50	<0.05	1.0	0.04	0.01	0.01	10.40
	129.55	132.15	2.60	<0.05	1.0	0.02	0.03	<0.01	6.00
	132.15	133.00	0.85	<0.05	1.0	0.03	0.01	<0.01	9.73
	133.00	134.75	1.75	0.07	1.0	0.02	0.01	<0.01	5.15
	134.75	137.70	2.95	<0.05	<0.5	0.01	0.01	<0.01	3.70
	137.70	138.85	1.15	<0.05	0.5	0.01	<0.01	<0.01	4.80
	138.85	139.35	0.50	<0.05	<0.5	<0.01	0.01	<0.01	3.55
	139.35	142.00	2.65	<0.05	<0.5	0.01	0.02	<0.01	5.55
	142.00	143.40	1.40	<0.05	<0.5	0.01	<0.01	<0.01	5.20
	143.40	144.35	0.95	<0.05	<0.5	0.01	<0.01	<0.01	4.60
	144.35	146.00	1.65	<0.05	<0.5	0.01	<0.01	<0.01	6.10

Appendix 5 Results of Ore Assay (9)

Second Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Pb (%)	S (%)
MJSU-8	146.00	147.50	1.50	<0.05	0.7	0.01	0.02	<0.01	4.30
	147.50	149.00	1.50	<0.05	0.6	0.01	0.01	<0.01	4.55
	149.00	150.50	1.50	<0.05	<0.5	0.01	<0.01	<0.01	4.14
	150.50	152.00	1.50	<0.05	0.7	0.01	0.01	<0.01	5.50
	152.00	153.50	1.50	<0.05	0.6	0.01	0.01	<0.01	4.00
	153.50	154.20	0.70	<0.05	0.6	0.01	0.03	0.01	5.10
	154.20	155.45	1.25	<0.05	0.6	0.02	0.04	<0.01	8.80
	155.45	157.00	1.55	<0.05	<0.5	0.01	0.03	0.01	4.02
	157.00	158.75	1.75	<0.05	0.8	0.01	0.01	<0.01	5.52
	158.75	159.95	1.20	<0.05	1.0	0.01	0.04	<0.01	6.45
	159.95	161.50	1.55	<0.05	1.8	0.02	0.04	0.01	7.26
	161.50	163.00	1.50	<0.05	2.5	0.01	0.02	0.01	6.90
	163.00	164.50	1.50	<0.05	2.6	0.01	0.02	0.01	10.12
	164.50	166.00	1.50	<0.05	1.0	0.02	0.04	0.01	6.18
	166.00	167.50	1.50	<0.05	0.7	0.01	0.02	<0.01	4.27
	167.50	169.00	1.50	<0.05	0.5	0.01	0.03	<0.01	4.06
	169.00	170.50	1.50	<0.05	0.6	0.01	0.01	<0.01	5.35
	170.50	172.00	1.50	<0.05	0.7	<0.01	0.02	<0.01	3.90
	172.00	173.50	1.50	<0.05	<0.5	0.01	0.03	<0.01	3.12
	173.50	175.00	1.50	<0.05	1.0	0.01	0.02	<0.01	4.25
	175.00	176.50	1.50	<0.05	0.8	0.01	0.01	<0.01	3.90
	176.50	178.00	1.50	<0.05	1.0	0.01	0.01	<0.01	3.95
	178.00	179.50	1.50	<0.05	0.6	<0.01	0.01	<0.01	3.00
	179.50	181.00	1.50	<0.05	0.6	0.01	0.01	<0.01	3.78
	181.00	182.60	1.60	<0.05	<0.5	0.01	0.01	<0.01	3.39
	183.50	185.00	1.50	<0.05	1.0	0.01	0.01	<0.01	4.22
	185.00	186.05	1.05	<0.05	1.5	<0.01	0.01	<0.01	5.66
	199.00	200.50	1.50	<0.05	<0.5	<0.01	<0.01	<0.01	2.25
	200.50	202.00	1.50	<0.05	<0.5	<0.01	<0.01	<0.01	2.50
	202.00	203.50	1.50	<0.05	<0.5	0.01	<0.01	<0.01	2.42
	203.50	205.00	1.50	<0.05	<0.5	0.01	<0.01	<0.01	1.85
	205.00	206.50	1.50	<0.05	<0.5	0.01	<0.01	<0.01	3.35
	206.50	208.00	1.50	<0.05	<0.5	<0.01	<0.01	<0.01	1.65
	208.00	209.50	1.50	<0.05	<0.5	0.01	<0.01	<0.01	2.25
	209.50	211.15	1.65	<0.05	<0.5	0.01	0.01	<0.01	2.90
	228.45	230.00	1.55	<0.05	<0.5	0.01	<0.01	<0.01	1.15
	230.00	231.45	1.45	<0.05	<0.5	0.01	0.01	<0.01	3.00
	231.45	232.95	1.50	<0.05	0.9	0.01	<0.01	<0.01	1.00
	232.95	233.85	0.90	<0.05	<0.5	0.01	<0.01	<0.01	0.85
	233.85	235.35	1.50	<0.05	<0.5	<0.01	<0.01	<0.01	3.10
	235.35	236.70	1.35	<0.05	0.7	0.01	<0.01	<0.01	4.45

Appendix 5　Results of Ore Assay (10)

Third Phase　Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
	from	to							
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	20	<0.05
	20.70	22.20	1.50	<0.05	5.5	140	23	67	<0.05
	23.70	25.20	1.50	<0.05	3.0	283	23	25	<0.05
	26.70	28.20	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	32	2.93
	47.50	49.00	1.50	<0.05	2.3	1,205	1,050	43	3.17
	49.00	50.50	1.50	<0.05	<1.0	83	44	8	2.94
	50.50	52.00	1.50	<0.05	<1.0	83	44	6	2.73
	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	114	13	4.59
	67.00	68.50	1.50	<0.05	<1.0	124	72	12	3.76
	68.50	70.00	1.50	<0.05	<1.0	179	26	14	4.65
	70.00	71.50	1.50	0.06	1.0	456	149	14	3.90
	71.50	73.00	1.50	0.06	1.5	321	29	16	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	65	14	10	5.02
	89.50	91.00	1.50	0.06	<1.0	66	10	11	5.00
	91.00	92.50	1.50	<0.05	<1.0	62	9	9	4.13
	92.50	94.00	1.50	<0.05	<1.0	64	17	7	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 5 Results of Ore Assay (11)

Third Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
	from	to							
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	43	17	4.37
	145.00	146.50	1.50	<0.05	1.1	195	90	32	4.51
	146.50	148.00	1.50	<0.05	<1.0	83	20	10	4.06
	148.00	148.70	0.70	<0.05	<1.0	71	44	13	4.17
	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
	188.50	190.00	1.50	<0.05	1.0	427	98	75	12.43
	190.00	191.50	1.50	<0.05	1.1	468	68	68	14.04
	191.50	193.00	1.50	<0.05	1.4	376	289	81	11.90
	193.00	194.50	1.50	<0.05	<1.0	297	187	58	8.55
	194.50	196.00	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
	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	42	48	12.98
	214.00	215.50	1.50	<0.05	<1.0	410	39	49	13.07
	215.50	217.00	1.50	<0.05	1.4	400	151	56	11.89
	217.00	218.50	1.50	<0.05	1.5	260	333	45	8.07
	218.50	220.00	1.50	<0.05	1.3	176	582	45	5.72
	220.00	221.50	1.50	<0.05	1.3	185	448	36	6.29
	221.50	223.00	1.50	<0.05	2.2	283	353	86	10.29
	223.00	224.50	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 5 Results of Ore Assay (12)

Third Phase Drilling Exploration

Drill Hole No.	Depth (m) from	Depth (m) to	Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
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	8.71
	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	11.07
	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	6.71
	270.00	272.00	2.00	<0.05	2.2	175	278	107	6.07
	272.00	274.00	2.00	0.05	1.9	184	210	47	9.21
	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	3.81
	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
	282.00	284.00	2.00	<0.05	3.3	149	608	137	5.74
	284.00	286.00	2.00	<0.05	2.1	120	430	110	6.24
	286.00	288.00	2.00	<0.05	2.5	172	542	181	7.22
	288.00	290.00	2.00	<0.05	1.2	158	319	86	3.93
	290.00	292.00	2.00	<0.05	4.7	301	843	626	7.71
	292.00	294.00	2.00	<0.05	2.9	206	608	63	8.34
	294.00	296.00	2.00	<0.05	2.6	215	360	56	9.36
	296.00	297.55	1.55	<0.05	3.8	281	245	54	8.24
	297.55	299.55	2.00	<0.05	2.3	252	113	46	7.56
	299.55	301.55	2.00	<0.05	2.0	342	189	51	9.26
	301.55	303.55	2.00	<0.05	2.9	286	593	42	8.29
	303.55	305.55	2.00	<0.05	2.3	305	269	45	7.94
	305.55	307.55	2.00	0.25	3.8	300	315	46	9.79
	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	8.42
	312.00	314.00	2.00	0.08	5.8	797	451	70	13.44
	314.00	315.70	1.70	0.05	14.5	3,260	582	148	16.93
	315.70	317.70	2.00	0.06	10.1	329	835	82	14.52
	317.70	318.50	0.80	<0.05	9.2	150	1,590	77	26.72
	321.60	323.60	2.00	0.07	8.2	516	724	161	18.16
	323.60	324.90	1.30	0.10	8.2	660	676	108	13.77
	326.90	328.10	1.20	0.22	10.6	347	471	106	16.00
	334.60	336.70	2.10	0.09	4.0	389	690	69	8.48
	336.70	337.40	0.70	<0.05	52.1	295	774	98	28.19
	337.50	339.90	2.40	0.06	42.5	238	649	111	16.02
	339.90	341.25	1.35	0.17	22.5	505	1,700	175	13.55
	341.25	343.40	2.15	0.33	86.6	885	4,540	490	23.67
	343.40	343.90	0.50	<0.05	17.5	192	1,280	166	7.70
	343.90	345.00	1.10	0.47	32.9	2,850	1,090	540	9.59
	345.00	347.30	2.30	0.23	34.1	1,630	1,120	218	16.73
	347.30	349.00	1.70	0.33	31.6	574	1,760	386	18.33
	349.50	350.30	0.80	0.07	16.0	354	1,480	125	14.08
	350.80	351.80	1.00	0.24	20.7	562	996	230	14.97
	351.80	352.55	0.75	<0.05	27.7	184	1,530	200	7.60
	352.55	353.40	0.85	0.25	19.6	746	2,200	450	10.02
	353.40	354.60	1.20	0.09	3.6	175	335	92	12.77
	354.60	355.10	0.50	0.12	5.8	239	309	106	14.88
	355.10	355.50	0.40	0.16	8.7	551	708	97	17.99
	355.50	356.90	1.40	0.12	7.5	397	216	95	13.53
	356.90	357.70	0.80	0.16	9.0	805	343	112	21.80
	357.70	359.70	2.00	0.08	3.8	211	437	50	12.33
	359.70	361.70	2.00	0.08	1.2	193	2,380	74	9.30
	361.70	363.70	2.00	0.15	2.9	93	2,910	144	9.73
	363.70	365.70	2.00	0.07	1.6	80	336	45	6.67
MJSU-10	5.10	6.10	1.00	<0.05	<1.0	35	20	<5	2.27
	8.40	9.40	1.00	<0.05	<1.0	15	15	<5	<0.05

Appendix 5 Results of Ore Assay (13)

Third Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
	from	to							
MJSU-10	9.40	9.80	0.40	<0.05	<1.0	50	50	<5	0.44
	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
	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
	18.70	19.70	1.00	<0.05	<1.0	15	40	60	0.54
	19.70	21.10	1.40	<0.05	<1.0	30	110	20	0.39
	21.10	22.10	1.00	<0.05	<1.0	25	140	<5	<0.05
	22.75	23.75	1.00	<0.05	<1.0	30	190	<5	<0.05
	23.75	23.85	0.10	<0.05	<1.0	50	620	20	0.28
	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
	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
	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
	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
	164.50	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
	201.00	202.00	1.00	<0.05	<1.0	65	30	<5	4.97
	202.00	202.70	0.70	<0.05	<1.0	95	20	<5	4.94
MJSU-11	2.50	4.00	1.50	<0.05	<1.0	32	47	5	0.34
	5.50	7.00	1.50	<0.05	<1.0	26	40	3	0.36
	8.50	10.00	1.50	<0.05	<1.0	26	38	4	0.35
	11.50	13.00	1.50	<0.05	<1.0	6	26	4	0.22
	14.50	16.00	1.50	<0.05	<1.0	10	37	3	<0.05
	17.50	19.00	1.50	<0.05	<1.0	110	80	4	<0.05
	20.50	21.00	0.50	<0.05	<1.0	14	29	5	<0.05
	23.50	25.00	1.50	<0.05	<1.0	12	38	2	<0.05
	26.50	27.00	0.50	<0.05	<1.0	10	48	2	<0.05
	130.90	132.40	1.50	<0.05	<1.0	10	66	3	3.58
	132.40	133.90	1.50	<0.05	<1.0	106	20	4	11.77

Appendix 5　Results of Ore Assay (14)

Third Phase　Drilling Exploration

Drill Hole No.	Depth (m) from	Depth (m) to	Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
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	4.50
	167.30	168.80	1.50	<0.05	<1.0	10	30	2	5.73
	168.80	169.50	0.70	<0.05	<1.0	16	46	3	8.74
	169.50	171.00	1.50	<0.05	<1.0	12	45	3	9.06
	182.00	182.40	0.40	<0.05	<1.0	14	91	2	4.73
	131.10	133.10	2.00	<0.05	<1.0	394	72	12	4.65
	133.10	135.10	2.00	<0.05	<1.0	125	63	13	3.29
	135.10	137.10	2.00	<0.05	<1.0	38	29	6	2.37
	137.10	139.10	2.00	<0.05	<1.0	197	41	6	2.92
	139.10	140.10	1.00	<0.05	<1.0	139	47	6	1.53
	140.10	142.10	2.00	<0.05	<1.0	931	114	8	6.31
	142.10	143.10	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	227.95	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
	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	0.56
	117.40	119.40	2.00	0.49	<1.0	110	35	<5	0.97
	119.40	121.40	2.00	<0.05	<1.0	40	30	<5	0.61
	140.20	141.10	0.90	<0.05	<1.0	90	250	<5	8.09
	150.50	152.50	2.00	<0.05	<1.0	50	300	<5	2.12
	152.50	154.50	2.00	<0.05	<1.0	160	190	<5	3.41
	165.70	166.30	0.60	<0.05	<1.0	<5	135	<5	3.95
	166.30	167.30	1.00	<0.05	<1.0	20	250	<5	2.22
	167.30	168.30	1.00	0.08	<1.0	530	250	<5	1.83
	170.80	171.70	0.90	<0.05	<1.0	40	300	<5	2.89

Appendix 5 Results of Ore Assay (15)

Third Phase Drilling Exploration

Drill Hole No.	Depth (m) from	to	Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
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	<5	1.20
	220.20	220.90	0.70	0.24	34.0	11,300	350,000	<5	25.90
	220.90	221.00	0.10	0.25	25.0	5,100	150,000	<5	10.48
	221.00	221.20	0.20	<0.05	<1.0	80	2,760	<5	1.19
	221.20	221.75	0.55	0.17	51.0	22,800	110,000	<5	30.00
	221.75	222.35	0.60	<0.05	1.5	760	3,000	<5	4.78
	222.35	223.35	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
	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	84	27	6.65
	75.40	77.40	2.00	<0.05	<1.0	213	331	30	6.35
	77.40	79.40	2.00	<0.05	1.5	334	165	32	7.88
	79.40	81.40	2.00	<0.05	<1.0	86	167	24	4.46
	81.40	83.40	2.00	<0.05	1.7	98	181	29	5.67
	83.40	85.40	2.00	<0.05	1.6	117	147	33	6.10
	85.40	87.40	2.00	<0.05	1.1	102	146	28	5.74
	87.40	89.40	2.00	<0.05	1.3	74	90	28	4.74
	89.40	91.40	2.00	<0.05	1.8	134	130	55	6.21
	91.40	93.40	2.00	<0.05	1.3	98	110	26	5.79
	93.40	95.40	2.00	<0.05	1.2	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	1.2	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
	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 5 Results of Ore Assay (16)

Third Phase Drilling Exploration

Drill Hole No.	Depth (m) from	to	Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
MJSU-15	127.40	129.40	2.00	<0.05	1.8	264	92	44	10.44
	129.40	131.40	2.00	<0.05	2.0	181	320	35	7.46
	131.40	133.40	2.00	<0.05	1.8	192	132	40	7.81
	133.40	135.40	2.00	0.08	2.8	141	205	53	9.21
	135.40	137.40	2.00	<0.05	1.8	210	143	57	9.00
	137.40	139.40	2.00	<0.05	2.2	291	292	82	10.22
	139.40	142.00	2.60	<0.05	1.3	146	319	50	8.21
	145.40	147.40	2.00	<0.05	1.4	217	212	55	5.78
	147.40	149.40	2.00	<0.05	1.4	128	1170	52	8.82
	149.40	151.40	2.00	<0.05	1.6	108	327	45	6.42
	151.40	153.40	2.00	<0.05	1.3	111	378	61	6.18
	153.40	155.40	2.00	<0.05	2.0	126	1300	105	9.17
	155.40	157.40	2.00	<0.05	1.5	98	409	30	5.97
	157.40	159.40	2.00	<0.05	1.0	144	407	53	6.79
	159.40	161.40	2.00	<0.05	1.3	80	253	35	6.22
	161.40	163.40	2.00	<0.05	2.3	75	511	40	5.21
	163.40	165.40	2.00	<0.05	1.4	106	484	57	7.83
	165.40	167.40	2.00	<0.05	2.1	144	319	70	8.45
	167.40	169.40	2.00	<0.05	1.5	177	199	43	5.17
	169.40	171.40	2.00	<0.05	1.1	139	199	32	5.18
	171.40	173.40	2.00	<0.05	1.7	261	203	42	7.94
	173.40	175.40	2.00	0.05	2.3	343	392	57	11.56
	175.40	177.40	2.00	0.08	2.3	312	353	45	12.06
	177.40	179.40	2.00	<0.05	1.9	302	238	31	7.11
	179.40	181.40	2.00	<0.05	1.5	210	317	33	5.20
	181.40	183.40	2.00	<0.05	1.2	83	239	40	6.92
	183.40	185.40	2.00	<0.05	1.3	71	419	41	8.04
	185.40	187.40	2.00	<0.05	2.0	98	418	51	9.47
	187.40	189.40	2.00	<0.05	1.1	107	237	32	6.41
	189.40	191.40	2.00	<0.05	2.5	84	592	37	3.74
	191.40	193.40	2.00	<0.05	1.2	61	69	21	3.18
	193.40	195.40	2.00	<0.05	1.2	63	58	19	3.34
	195.40	197.40	2.00	<0.05	1.3	82	140	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	34	8.60
	203.40	205.40	2.00	<0.05	1.2	106	191	34	6.26
	205.40	207.40	2.00	0.06	1.3	124	393	34	5.98
	207.40	209.40	2.00	<0.05	1.6	94	254	35	5.24
	209.40	211.40	2.00	<0.05	1.5	81	251	48	5.21
	211.40	213.40	2.00	<0.05	1.4	68	102	17	2.61
	213.40	215.40	2.00	<0.05	1.4	79	159	39	5.71
	215.40	217.40	2.00	<0.05	2.0	111	253	48	7.18
	217.40	219.40	2.00	<0.05	1.2	68	417	31	3.64
	219.40	221.40	2.00	<0.05	1.4	78	172	33	4.81
	221.40	223.40	2.00	<0.05	1.0	61	48	22	2.65
	223.40	225.40	2.00	<0.05	1.7	70	437	28	5.93
	225.40	227.40	2.00	<0.05	1.5	79	466	29	5.48
	227.40	229.40	2.00	<0.05	2.8	110	273	35	5.54
	229.40	231.40	2.00	<0.05	3.1	176	216	39	6.11
	231.40	233.40	2.00	<0.05	1.2	100	209	20	2.31
	233.40	235.40	2.00	<0.05	1.9	330	92	43	7.53
	235.40	237.40	2.00	<0.05	1.6	230	125	37	4.97
	237.40	239.40	2.00	<0.05	2.1	113	115	22	4.18
	239.40	241.40	2.00	<0.05	<1.0	98	271	18	3.67
	241.40	243.40	2.00	<0.05	1.8	95	187	17	3.53
	243.40	245.40	2.00	<0.05	<1.0	47	49	8	2.70
	245.40	247.40	2.00	<0.05	<1.0	44	34	11	3.73
	247.40	249.40	2.00	<0.05	1.6	61	24	12	3.84
	249.40	251.40	2.00	<0.05	1.3	91	20	10	4.69
	251.40	253.40	2.00	<0.05	1.9	128	24	13	4.37
	253.40	255.40	2.00	<0.05	2.4	55	16	7	3.04
	255.40	256.60	1.20	<0.05	1.1	100	33	11	2.80

Appendix 5 Results of Ore Assay (17)

Third Phase Drilling Exploration

Drill Hole No.	Depth (m)		Width (m)	Au (g/t)	Ag (g/t)	Cu ppm	Zn ppm	Pb ppm	S (%)
	from	to							
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

Appendix 6 Location of Drill Holes

Hole No.	Prospect	Coordinates (UTM)		Elevation	Azimuth	Inclination	Drilled Length
MJSU-1	4/6 Gossan	N 2,617.501	E 708.478	955m	245°	-55°	251.60m
MJSU-2	4/6 Gossan	N 2,617.686	E 708.524	958m	245°	-55°	250.00m
MJSU-3	UAD North	N 2,619.288	E 709.596	957m	225°	-55°	250.00m
MJSU-4	UAD North	N 2,619.582	E 709.167	958m	260°	-55°	304.25m
MJSU-5	UAD North	N 2,619.738	E 709.148	963m	260°	-55°	346.20m
MJSU-6	4/6 Gossan	N 2,617.812	E 708.555	964m	245°	-55°	250.00m
MJSU-7	4/6 Gossan	N 2,618.171	E 708.792	956m	245°	-55°	250.00m
MJSU-8	Jabal Sujarah	N 2,620.623	E 707.196	955m	25°	-70°	250.00m
MJSU-9	Jabal Sujarah	N 2,620.800	E 707.175	966m	155°	-55°	380.00m
MJSU-10	UAD N-S	N 2,618.813	E 709.022	954m	300°	-55°	350.40m
MJSU-11	UAD N-S	N 2,618.582	E 710.015	963m	150°	-55°	250.10m
MJSU-12	UAD N-S	N 2,617.557	E 709.947	965m	270°	-55°	250.00m
MJSU-13	UAD N-S	N 2,617.122	E 709.841	965m	330°	-55°	250.00m
MJSU-14	4/6 Gossan	N 2,617.723	E 708.560	964m	245°	-55°	274.60m
MJSU-15	Jabal Sujarah	N 2,620.601	E 707.371	944m	335°	-70°	375.65m
MJSU-16	4/6 Gossan	N 2617.598	E 708.566	960m	245°	-55°	210.00m

Abbrev. UAD:Umm ad Damar

UAD N-S:Area between Umm ad Damar North and South