

Date M/D/Y	Museum	Object #	Object type	ESEM Analysis #	Type	Mag	Description	SEM jpg/tif	Notes
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	2	BSE	x35	flat part		denrites
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	3	SE	x900	porosity of gold dendrite		porosity of gold dendrite
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	4	SE	x2000	porosity of gold dendrite		porosity of gold dendrite
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	5	SE	x500	porosity of gold dendrite		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	6		x140	dendrites in flat area		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	7		x75	dendrites in flat area		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	8		x75	Hypermap of dendrites		hypermap of dendrites
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	9		x40	frog-dendrites on leg		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	10		x80	frog-dendrites on leg		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	11	BSE	x55	frog-dendrites on leg		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	12	BSE	x45	Solder are near edge		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	13	SE	x45	Solder are near edge		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	14		x750	Solder clos-up		Spectrum Autu ID of Cd, Zn, Re, Rb
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	15	BSE		Dark area in Solder		Spectrum of dark area in solder
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	16			closeup of solder		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	17			repair at end with conservation materials		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	18			solder towards center		

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July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	19		x35	along solder line		
July-13-2009	NMAI	237887	ring	1		x25	Dendrites at crevice		Coated in conservation material
July-13-2009	NMAI	237887	ring	2			Dendrites in circle		dendrites
July-13-2009	NMAI	237887	ring	3			Dendrites in circle at higher mag		dendrites
July-13-2009	NMAI	237887	ring	4			dendrites at edge		dendrites
July-13-2009	NMAI	237887	ring	5			dendrites at edge		dendrites-spectrum of raised circle.. Peak at 1.65? Other parts too coated in conservation materials
July-13-2009	NMAI	237887	ring	6			raised area of circle		dendrites
July-13-2009	NMAI	237887	ring	7			raised circle- scratches		scratches
July-13-2009	NMAI	8234	Nose ring	1			area with bulge of metal		
July-13-2009	NMAI	8234	Nose ring	2			area with bulge of metal and scratches from working		
July-13-2009	NMAI	8234	Nose ring	3			closeup of scratches/toolmarks		
July-13-2009	NMAI	8234	Nose ring	4			closeup of scratches/toolmarks		
July-13-2009	NMAI	8234	Nose ring	5			closeup of inside scratches		
July-13-2009	NMAI	8234	Nose ring	6			scratches from lower mag		
July-13-2009	NMAI	8234	Nose ring	7			scratches on other side		
July-13-2009	NMAI	8234	Nose ring	8			scratches on other side closeup		
July-13-2009	NMAI	8234	Nose ring	9			dendrites on edge		
July-13-2009	NMAI	8234	Nose ring	10		x20	dendrites lower mag		
July-13-2009	NMAI	8234	Nose ring	11			scratches in polished surface		
July-13-2009	NMAI	8234	Nose ring	12	spectrum		scratches in polished surface		
July-13-2009	NMAI	8234	Nose ring	13	spectrum		middle connecting bar on inside		
July-13-2009	NMAI	8234	Nose ring	14			scratches on metal bump		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	20			upclose area around solder		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	21			lower mag of area around solder		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	22			solder with corrosion		
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	23			spectrum of solder		solder
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	24	spectrum	474	corrosion around interior solder		solder, Zn??
July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	25	Map		map of solder on inside		

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July-13-2009	NMAI	233891	ring with braided edge, frogs and solder?	26			solder at very end		
July-13-2009	NMAI	237887	ring	15			top edge		dendrites
July-13-2009	NMAI	237887	ring	16			top edge		
July-13-2009	NMAI	8234	Nose ring	15			interior side of cross bar		dendrites
July-13-2009	NMAI	8234	Nose ring	16			join with flat side		
July-13-2009	NMAI	8234	Nose ring	17			closeup near end		scratches
July-13-2009	NMAI	8234	Nose ring	18			end with triangle		
July-13-2009	NMAI	240645	Nose ring	1			closeup near end		
July-13-2009	NMAI	240645	Nose ring	2			duplicate of above		
July-13-2009	NMAI	240645	Nose ring	3			end with triangle		
July-13-2009	NMAI	240645	Nose ring	4			triangle indentation closeup		
July-13-2009	NMAI	240645	Nose ring	5		639	other end		scratches
July-13-2009	NMAI	240645	Nose ring	6		1k			scratches and porosity
July-13-2009	NMAI	240645	Nose ring	7			other end overview		
July-13-2009	NMAI	240645	Nose ring	8	BSE and spectrum		ring		
July-14-2009	NMAI	230154	Tubular bead	1		35	overview of solder		
July-14-2009	NMAI	230154	Tubular bead	2	BSE	35	overview of solder		
July-14-2009	NMAI	230154	Tubular bead	3	Map	35	Au-Cu boundary at solder		Au-Cu boundary at solder
July-14-2009	NMAI	230154	Tubular bead	4	Map		map os solder slightly higher up		shows boundary of Ag/Cu and Au
July-14-2009	NMAI	230154	Tubular bead	5	Map		map os solder slightly higher up		shows boundary of Ag/Cu and Au
July-14-2009	NMAI	230154	Tubular bead	6	Hypermap		solder		shows higher Ag concentration
July-14-2009	NMAI	230154	Tubular bead	7			overview of textured area of solder		
July-14-2009	NMAI	230154	Tubular bead	8			closeup of textured area of solder		
July-14-2009	NMAI	230154	Tubular bead	9		200	closeup of textured area of solder		shows flattened porous texture and scratches from finishing
July-14-2009	NMAI	230154	Tubular bead	10	Hypermap	200	closeup of textured area of solder		shows homogenous gold with Cu rich and Ag rich grains
July-14-2009	NMAI	230154	Tubular bead	11	Hypermap		at end with raised ring		shows raised edge and Ag/Cu solder
July-14-2009	NMAI	230154	Tubular bead	12			center with normal metal		
July-14-2009	NMAI	230154	Tubular bead	13			other end, no solder		
July-14-2009	NMAI	230154	Tubular bead	14			other end, center, normal metal		
July-14-2009	NMAI	230154	Tubular bead	15			other end, center, normal metal		
July-14-2009	NMAI	230154	Tubular bead	16			other end, center, normal metal		
July-14-2009	NMAI	230154	Tubular bead	17			normal metal surface (no solder)		grain structure? Polished?
July-14-2009	NMAI	240651_6	Fishhook	1			Large fishhook, overview of hook		
July-14-2009	NMAI	240651_6	Fishhook	2			solder area		Area of solder appears to be mostly covered by conservation material that obstructs imaging
July-14-2009	NMAI	240651_6	Fishhook	3			solder area		scratches on solder appear very regular

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July-14-2009	NMAI	240651_6	Fishhook	4			solder area		scratches
July-14-2009	NMAI	240651_6	Fishhook	5	map		solder area		scratches
July-14-2009	NMAI	240651_6	Fishhook	6	map		area near hook		
July-14-2009	NMAI	240651_6	Fishhook	7	spectrum		closeup metal near hook		
July-14-2009	NMAI	240651_4	Fishhook	1			solder		
July-14-2009	NMAI	240651_4	Fishhook	2	Map		map of solder/metal join		slight difference in Cu concentration
July-14-2009	NMAI	240651_4	Fishhook	3	Map		map of solder/metal join		slight difference in Cu concentration
July-14-2009	NMAI	240651_4	Fishhook	4		173	closeup of surface texture		
July-14-2009	NMAI	240651_4	Fishhook	5			very closeup of surface texture		
July-14-2009	NMAI	240651_4	Fishhook	6			very closeup of surface texture		
July-14-2009	NMAI	240651_4	Fishhook	7			overview of surface texture		
July-14-2009	NMAI	240651_4	Fishhook	8					
July-14-2009	NMAI	240651_4	Fishhook	9			tip		
July-14-2009	NMAI	240651_4	Fishhook	10	Hypermap		solder		
July-14-2009	NMAI	240651_6	Fishhook	8	Hypermap		hypermap of small area on solder (directly on top) in between gunge		
July-14-2009	NMAI	240651_6	Fishhook	9			Overview of wher ethe analysis/hypermap above was taken		
July-14-2009	NMAI	240651_1	Fishhook	1			overview of eye		striations are very regular and continue for most of length
July-14-2009	NMAI	240651_1	Fishhook	2					
July-14-2009	NMAI	240651_1	Fishhook	3					
July-14-2009	NMAI	240651_1	Fishhook	4			closeup of folds at bend		
July-14-2009	NMAI	240651_1	Fishhook	5			closeup of folds at bend		
July-14-2009	NMAI	240651_1	Fishhook	6			closeup of striations		
July-14-2009	NMAI	240651_1	Fishhook	7			striations		
July-14-2009	NMAI	240651_1	Fishhook	8			striations		
July-14-2009	NMAI	240651_1	Fishhook	9			striations		
July-14-2009	NMAI	240651_1	Fishhook	10			striations		
July-14-2009	NMAI	240651_1	Fishhook	11			striations		
July-14-2009	NMAI	240651_3	Fishhook	1			Overview of eye		
July-14-2009	NMAI	240651_3	Fishhook	2			overview of body		AI present in all analyses doen today due to AI foil on stage and closeness of samples to stage.
July-14-2009	NMAI	240651_5	Fishhook	1			tip of hook overview		
July-14-2009	NMAI	240651_5	Fishhook	2			closeup of scratches		irregular scratches
July-14-2009	NMAI	240651_5	Fishhook	3			closeup of scratches		
July-14-2009	NMAI	240651_6	Fishhook	10			overview of eye an break		
July-14-2009	NMAI	240651_6	Fishhook	11			closeup of break		
July-14-2009	NMAI	240651_6	Fishhook	13			point of hook		
July-14-2009	NMAI	240651_6	Fishhook	14			closeup of scratches at point		
July-14-2009	NMAI	230154	Tubular bead	18			area of solder		
July-14-2009	NMAI	230154	Tubular bead	19			closeup of solder		
July-15-2009	NMAI	163860_1	Tubular beads (26)	1			overview of torn end		
July-15-2009	NMAI	163860_1	Tubular beads (26)	2			other end		
July-15-2009	NMAI	163860_1	Tubular beads (26)	3		850	closeup of previous view		possible flattened surface and possible join
July-15-2009	NMAI	163860_1	Tubular beads (26)	4			map across possible join		

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July-15-2009	NMAI	163860_1	Tubular beads (26)	5		700	closeup of join		join?
July-15-2009	NMAI	163860_1	Tubular beads (26)	6			top of where join becomes visible 1/2 way down		No elemental difference over "joins" in bead 1
July-15-2009	NMAI	163860_3	Tubular beads (26)	1			overview of bottom end.		Several lines could be join line?
July-15-2009	NMAI	163860_3	Tubular beads (26)	2			overview of slightly above 1st image		
July-15-2009	NMAI	163860_3	Tubular beads (26)	3			closeup of side higher up		possible join line visible along edge
July-15-2009	NMAI	163860_3	Tubular beads (26)	4			closeup of area 3		scratches
July-15-2009	NMAI	163860_3	Tubular beads (26)	5					
July-15-2009	NMAI	163860_4	Tubular beads (26)	1			overview of top of bead		no evidence of solder. No elemental variation across bead
July-15-2009	NMAI	163860_4	Tubular beads (26)	2	map		map of bottom end and TIFF		no join line or elemental difference
July-15-2009	NMAI	163860_5	Tubular beads (26)	1			overview of top end		slight burr
July-15-2009	NMAI	163860_5	Tubular beads (26)	2			line along R edge		slight evidence of line
July-15-2009	NMAI	163860_5	Tubular beads (26)	3		1k	closeup of line along edge		
July-15-2009	NMAI	163860_5	Tubular beads (26)	4		210	line along edge		
July-15-2009	NMAI	163860_5	Tubular beads (26)	5	map	1.3k	closeup of line		No elemental variation across line
July-15-2009	NMAI	163860_5	Tubular beads (26)	6			closeup of line		random scratches and marks across lines post-joining
July-15-2009	NMAI	163860_6	Tubular beads (26)	1			Overview of end with torn edges and burrs		
July-15-2009	NMAI	163860_6	Tubular beads (26)	2			overview of line farther down		
July-15-2009	NMAI	163860_6	Tubular beads (26)	3			overview of line farther down		
July-15-2009	NMAI	163860_6	Tubular beads (26)	4			overview of line farther down		line stops 1/2 way down
July-15-2009	NMAI	163860_6	Tubular beads (26)	5			bottom end		
July-15-2009	NMAI	163860_6	Tubular beads (26)	6			closeup of line 1/2 way down		scratches and polishing extend over
July-15-2009	NMAI	163860_6	Tubular beads (26)	8		200	shows lines extending over join		
July-15-2009	NMAI	163860_7	Tubular beads (26)	1			edge of bead 7 overview		no join visible on exposed side
July-15-2009	NMAI	163860_8	Tubular beads (26)	1			bottom edge overview		
July-15-2009	NMAI	163860_8	Tubular beads (26)	2			closeup of bottom edge		line across bottom edge
July-15-2009	NMAI	163860_9	Tubular beads (26)	1			bottom edge overview		
July-16-2009	NMAI	8223	frog pendant	1	SE		overview of nose from top		propped facing up so top of mouth visible and break edges visible along
July-16-2009	NMAI	8223	frog pendant	2			overview of break towards PL		
July-16-2009	NMAI	8223	frog pendant	3			side of nose		
July-16-2009	NMAI	8223	frog pendant	4	map + spectrum		closeup of break edge		some variation in Cu/Au from exterior to interior
July-16-2009	NMAI	8223	frog pendant	4			entire break edge		
July-16-2009	NMAI	8223	frog pendant	5		250	close up of crevice		
July-16-2009	NMAI	8223	frog pendant	6		1.5K	closeup		porosity (couldn't get elemental analysis because in shadow)
July-16-2009	NMAI	8223	frog pendant	7			closeup of scratches on gold surface		
July-16-2009	NMAI	8223	frog pendant	8	Hypermap		hypermap of gold surface just to PR of nose on lip		
July-16-2009	NMAI	8219	frog pendant	1			overview of break edge at top		
July-16-2009	NMAI	8219	frog pendant	2	map		closeup of surface texture		
July-16-2009	NMAI	8219	frog pendant	3	SE and Hypermap		farther down break edge, closeup		hypermap shows exterior vs. interior
July-16-2009	NMAI	8219	frog pendant	4	Hypermap		Hypermap of break edge farther down		

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July-16-2009	NMAI	8219	frog pendant	5			closeup of interior metal and spectrum of interior metal		
July-16-2009	NMAI	8219	frog pendant	6		3k	very closeup of interior metal		
July-16-2009	NMAI	8219	frog pendant	7			break edge closer to other end		
July-16-2009	NMAI	8219	frog pendant	8			hypermap of break edge (above)		grain structure? Equiaxed? Reheated?
July-16-2009	NMAI	8219	frog pendant	9			bottom of leg		shows dendritic structure
July-16-2009	NMAI	8219	frog pendant	10			closeup of grain structure		grain structure, porosity
July-16-2009	NMAI	8219	frog pendant	11			overview of this area (above)		
July-16-2009	NMAI	8219	frog pendant	12			overview of dendrites in this area		dendrites
July-16-2009	NMAI	242462	Bell	1			overview of suspension loop on back		covered in thick layer of clear lacquer
July-16-2009	NMAI	242462	Bell	2			spectrum of surface metal on suspension loop		impossible to image because completely coated.. Changed positions
July-16-2009	NMAI	242462	Bell	3			overview of spangle hole		
July-16-2009	NMAI	242462	Bell	4			edge of spangle hole		toolmarks?
July-16-2009	NMAI	242462	Bell	5	image and spectrum	150	close up of spangle		scratches and toolmarks, spectrum of surface: 94%Au, 3%Ag, 2%Cu
July-16-2009	NMAI	8223	frog pendant	9			area at top between body and PL foot		
July-16-2009	NMAI	8219	frog pendant	13			eye overview (PR)		
July-16-2009	NMAI	8219	frog pendant	14			closeup of area around eye		porosity
July-16-2009	NMAI	8219	frog pendant	15	image and hypermap		center of back overview		
August-25-2009	NMAI	163858	2 convex beads (bead 1)	1					
August-25-2009	NMAI	163858	2 convex beads (bead 1)	2	SE	37	Overview of edge		Lots of scratches, partially coated
August-25-2009	NMAI	163858	2 convex beads (bead 1)	3	SE	100	Closeup inside edge		Crevice/line along edge, possible join
August-25-2009	NMAI	163858	2 convex beads (bead 1)	4	SE	21	top edge		Crevice/line along edge, possible join
August-25-2009	NMAI	163858	2 convex beads (bead 1)	5	SE	30	top edge		Crevice/line along edge, possible join
August-25-2009	NMAI	163858	2 convex beads (bead 1)	6	SE	250	possible join at edge		Crevice/line along edge, possible join
August-25-2009	NMAI	163858	2 convex beads (bead 1)	7	Map	95	just checked if blob was inclusion. Map shows it isn't		
August-25-2009	NMAI	163858	2 convex beads (bead 2)	8	SE/Spectrum		platinoïd inclusion Top area to get overall composition		98%Au 2%Ag
August-25-2009	NMAI	163858	2 convex beads (bead 2)	9	SE	21	Overview of edge		
August-25-2009	NMAI	163858	2 convex beads (bead 2)	10	SE	21	Overview of edge		
August-25-2009	NMAI	163858	2 convex beads (bead 2)	11	SE	80	Closeup of crevice in edge		Toolmark? Elemental map showed no variation. All Au with a littleAg
August-25-2009	NMAI	163858	2 convex beads (bead 2)	12	SE	200	Crevice		

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August-25-2009	NMAI	163858	2 convex beads (bead 2)	13	SE	420	Beginning of crevice		
August-25-2009	NMAI	163859	Conical bead	1	Spectrum	600	Beginning of crevice		97.8% Au 2.19%Ag
August-25-2009	NMAI	163859	Conical bead	2	SE	30	Inner edge		Partially coated with lacquer, burr on
August-25-2009	NMAI	163859	Conical bead	3	SE	55	Inner edge		burr on inside
August-25-2009	NMAI	163859	Conical bead	4	SE+spectrum	140	closeup of edge		Scratches in surface from polish?, 98.6%Au 1.37%Ag
August-25-2009	NMAI	163857	2 Tubular Beads (bead 1)	1	SE	42			
August-25-2009	NMAI	163857	2 Tubular Beads (bead 1)	2	SE	85	edge of end		partially coated
August-25-2009	NMAI	163857	2 Tubular Beads (bead 1)	3	SE	400	middle center		scratches in surface
August-25-2009	NMAI	163857	2 Tubular Beads (bead 1)	4	SE	42	other end		
					Spectrum	1k	Same as above		98%Au, 2% Ag
August-26-2009	NMAI	8238	frag of croc head	1					
August-26-2009	NMAI	8238	frag of croc head	1	BSE	90	Center break edge		Cu on exterior
August-26-2009	NMAI	8239	bird head	1	Hypermap	90	Center break edge		Heterogenous concentration of Cu and Ag and Au, 60%Au, 31%Cu, 7.2%Ag
August-26-2009	NMAI	8239		1	BSE	75	Overview break edge of wing		Intergranular corrosion, enriched
August-26-2009	NMAI	8239		2	Hypermap	75	Overview break edge of wing		71%Cu, 27%Au, 1.7%Ag, compared to XRF data interior has MUCH higher Cu than exterior
August-26-2009	NMAI	8239		3	BSE	1.4k	Trying to get image of enriched surface		
August-26-2009	STRI	MIT5136	section of bird pendant	1	SE	14	Overview of beak		
August-26-2009	STRI	MIT5136		1	BSE	95	Au exterior, Cu interior		Mag and scale wrong on map
August-26-2009	NMAI	240653	Large ring sheathing	1	Map	95	Au exterior, Cu interior		Mag and scale wrong on map
August-26-2009	NMAI	240653	Large ring sheathing	2	SE	14	Cap at end		
August-26-2009	NMAI	240653	Large ring sheathing	3	SE	15	cap at other end		clearly folded back on itself
August-26-2009	NMAI	240653	Large ring sheathing	4	SE	37	closeup of fold on end		
August-26-2009	NMAI	240653	Large ring sheathing	5	SE	180	closeup of fold on end		Alumino silicate with Fe. Clay was charging and couldn't get good image
August-26-2009	NMAI	240653	Large ring sheathing	6	SE	80	interior os sheathing with material near end		Alumino silicate with Fe. Clay was charging and couldn't get good image
August-26-2009	NMAI	240653	Large ring sheathing	7	SE and spectrum	450	material inside sheathing		Alumino silicate with Fe. Clay was charging and couldn't get good image
August-26-2009	NMAI	240653	Large ring sheathing	8	SE	32	very edge of end showing clay		
August-26-2009	NMAI	240653	Large ring sheathing	9	SE	14	interior opening with clay		
August-26-2009	NMAI	240653	Large ring sheathing	10	SE	27	center top		shear fracture from hammering and scratches from polishing
August-26-2009	NMAI	240653	Large ring sheathing	11	SE	55	center top		shear fracture from hammering and scratches from polishing
August-26-2009	NMAI	240649	solid ring	1	SE and spectrum	1.5K	closeup of scratches		96%Au, 2% Cu, 1.4% Ag, (XRF results were 77% Au, 17%Cu, 4%Ag)
August-26-2009	NMAI	240649	solid ring	2	SE	23	interior bend of ring at center		
August-26-2009	NMAI	240649	solid ring	3	SE, Map, Spectrum	25	interior bend of ring at center		Crevice (shear fracture from hammer), map shows same composition on both sides of line/fracture

Date M/D/Y	Museum	Object #	Object type	ESEM Analysis #	Type	Mag	Description	SEM jpg/tif	Notes
August-26-2009	NMAI	240649	solid ring	4	SE, Map, Spectrum	23	end cap at end of ring		
August-26-2009	NMAI	240652	solid ring	7	SE, Map, Spectrum	23	other end		
August-26-2009	NMAI	240652	solid ring	1	SE, Map, Spectrum	27	Center top		mostly coated with lacquer
August-26-2009	NMAI	240652	solid ring	2	spectrum	27	just gold area		95%Au, 2%Ag, 3%Cu
August-26-2009	NMAI	240652	solid ring	3	SE	37	end/cap where it folds over		
August-26-2009	NMAI	240652	solid ring	4	SE	37	other end		
August-26-2009	NMAI	240652	solid ring	9	SE	180	closeup of fold at end		porosity?
					SE	370	surface of gold		porosity and crevices
August-27-2009	NMAI	240656	Bracelet, Bead 1	1					
August-27-2009	NMAI	240656	Bead	2	SE	19	1st bead next to tag		
August-27-2009	NMAI	240656	Bead	3	SE	230	closeup		ragged edge.. Punch? Drill?
August-27-2009	NMAI	240656	Bead	4	SE	180	edge of bead		Cut?
August-27-2009	NMAI	240656	Bracelet, Bell1	5	SE and spectrum	850	center of bead		random scratches, 95%Au, 2%Ag,
August-27-2009	NMAI	240656	Bell	6	SE	23	overview of bottom bell		
August-27-2009	NMAI	240656	Bell	7	SE	270	bottom edge and interior		
August-27-2009	NMAI	240656	Bell	8	SE and hypermap	600	interior and bottom edge of bell		
August-27-2009	NMAI	240656	Bead	9	BSE	110	crevice- body/top		dendrites and spectrum
August-27-2009	NMAI	240656	Bead	10	SE	40	tubular bead #2		
August-27-2009	NMAI	240656	Bell	11	SE	950	tubular bead #2		95%Au, 2%Cu, 1.6%Ag
August-27-2009	NMAI	240656	Bead	12	SE	21	overview of top of bell		
August-27-2009	NMAI	240656	Bead	13	SE	19	end of bead #3		
August-27-2009	NMAI	240656	Bead	14	SE	180	end of bead #3		
August-27-2009	NMAI	240656	Bead	15	SE	27	edge of rolled sheet		toolmark
August-27-2009	NMAI	240656	Bead	16	SE				
August-27-2009	NMAI	240656	Bead	17	SE				
August-27-2009	NMAI	240656	Bell	18	SE and spectrum	450	center bead		96%Au, 1.6%Ag
August-27-2009	NMAI	240656	Bead	19	SE	80	edge of bell with interior		surface not finished
August-27-2009	NMAI	240656	Bead	20	SE	25	end of bead		
August-27-2009	NMAI	240656	Bead	21	SE	100	burr at end		finishing at edge of bead
August-27-2009	NMAI	163864	necklace with small beads	1	SE and map		small bead		homogenous composition
August-27-2009	NMAI	163864	necklace with small beads	2	SE	27	Overview of bead		
August-27-2009	NMAI	163864	necklace with small beads	3	SE				
August-27-2009	NMAI	163864	necklace with small beads	4	SE				
August-27-2009	NMAI	163864	necklace with small beads	5	SE, Map	37	Closeup of seam?		Homogenous across join
August-27-2009	NMAI	163864	necklace with small beads	6	SE		Bead join on another bead		
August-27-2009	NMAI	163864	necklace with small beads	7	SE		Bead join on another bead		
August-27-2009	NMAI	163864	necklace with small beads	8	SE		Bead join on another bead		
August-27-2009	NMAI	163864	necklace with small beads	9	SE	130	Edge of bead with crevice		



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August-27-2009	NMAI	163864	necklace with small beads	10	SE	80	closeup of surface		94%Au, 2.5%Ag, 3.2%Cu
August-27-2009	NMAI	163864	necklace with small beads	11	BSE	25	join		
August-27-2009	NMAI	163864	necklace with small beads	11	BSE	23	orange colored bead		Fe staining
August-27-2009	NMAI	163864	necklace with small beads	12	Hypermap				
					SE	1.6K	Closeup of Fe stain		
August-28-2009	NMAI	163863	Necklace with beads	1					
August-28-2009	NMAI	163863	Necklace with beads	2	SE	21	Bead with fracture		
August-28-2009	NMAI	163863	Necklace with beads	5	SE	75	Closeup of bead with fracture		
August-28-2009	NMAI	163863	Necklace with beads	6		23	same bead- line around circumference		
August-28-2009	NMAI	163863	Necklace with beads	7	SE	130	Closeup of line		
August-28-2009	NMAI	163863	Necklace with beads	8	SE				
August-28-2009	NMAI	163863	Necklace with beads	10	SE	19			
August-28-2009	NMAI	163863	Necklace with beads	11	SE	50	tear in metal		
August-28-2009	NMAI	163863	Necklace with beads	12					
August-28-2009	NMAI	163863	Necklace with beads	14	SE				All different sized beads.. Little uniformity. No join lines visible b y bevel at ends
August-28-2009	NMAI	163863	Necklace with beads	15	SE	27	Ends have bevel		
August-28-2009	NMAI	163863	Necklace with beads	16	SE	23	Ends have bevel		bevel at ends
August-28-2009	NMAI	163863	Necklace with beads	17	SE	17			
August-28-2009	NMAI	163861	Tubular beads	1	SE	130	closeup of line around edge		
August-28-2009	NMAI	163861	Tubular beads	2	SE	7	overview of bead		Join visible
August-28-2009	NMAI	163861	Tubular beads	3	SE	15	closeup of end		
August-28-2009	NMAI	163861	Tubular beads	4	BSE and map	21	join on bead		homogenous across join (checked 2x)
August-28-2009	NMAI	163861	Tubular beads	5	SE	21			
August-28-2009	NMAI	163861	Tubular beads	6	SE	320	closeup of join with scratches		
August-28-2009	NMAI	163861	Tubular beads	7	SE	400	closeup of join going across		
August-28-2009	NMAI	163866	Bead #1	1	SE	35	overview of tear at seam		delaminating metal at seam of bead
August-28-2009	NMAI	163866	Bead #1	2	SE and hypermap	140	closeup of tear at seam		delaminating metal at seam of bead
August-28-2009	NMAI	163866	Bead #2	3	SE	25	Overview with seam		
August-28-2009	NMAI	163866	Bead #2	4	SE	75	seam		
August-28-2009	NMAI	163866	Bead #2	5	SE and hypermap	1.5k	Closeup of seam		homogenous across join

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August-28-2009	NMAI	163866	Bead #2	6	SE and Spectrum	1.8k	Seam/Join line		homogenous across join
August-28-2009	NMAI	163866	Bead #3	7	SE	21	Overview of interior seam		Counts not high enough for EDS because of location at interior of bead
August-28-2009	NMAI	163866	Bead #3	8	SE	420	Closeup of interior seam		
August-28-2009	NMAI	163866	Bead#4	9	SE	37	Join overview		no variation across join
August-28-2009	NMAI	163866	Bead#4	10	SE+ map	400	closeup of join at edge		
August-28-2009	NMAI	163866	Bead #5	12	SE	37	Join Overview		no variation across join
August-28-2009	NMAI	163866	Bead #6	13	SE	40	Join Overview		
August-28-2009	NMAI	163866	Bead #6	14	SE	450	Closeup of join		
August-28-2009	NMAI	163868	Bead	1	SE	23	Overview of seam		
August-31-2009	NMAI	8237	Bird Pendant (face up)	1					
August-31-2009	NMAI	8237	Bird Pendant	2	SE	50	"break edge" on tail		doesn't look broken- casting flaw sprial is only half cast- casting flaw cracks- intergranular corrosion? 61%Au, 37%Cu, 1.4%Ag 70%Au, 28%Cu, 1.4%Ag
August-31-2009	NMAI	8237	Bird Pendant	3	SE	8	front PL ear		
August-31-2009	NMAI	8237	Bird Pendant	4	SE	400	Belly		
August-31-2009	NMAI	8237	Bird Pendant	5	SE and spectrum	32	Belly		
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	1	SE	420	Beak center		smooth (polished) area higher in Au
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	2	SE	16	between eyes		
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	3	SE and map	21	between eyes		
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	4	SE	15	foot with dent		
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	5	SE	140	closeup of foot with dent		Ag pretty homogenous
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	6	SE	35	PL leg		
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	7	SE	70	Area between back and foot		scratches
August-31-2009	NMAI	8264 (2)	Medium sized frog pendant	8	SE	470	closeup of scratches		scratches
August-31-2009	NMAI	8264 (1)	Small frog pendant	1	SE and spectrum	500	center of back		70%Au, 27%Cu, 2.4%Ag
August-31-2009	NMAI	8264 (1)	Small frog pendant	2	SE		Head		89%Au, 8%Cu, 2.2%Ag
August-31-2009	NMAI	8264 (1)	Small frog pendant	3	SE and spectrum		suspension loop (PL)		
August-31-2009	NMAI	8264 (1)	Small frog pendant	4	SE		interior body		
August-31-2009	NMAI	8237	Bird Pendant (face down)	6			PR foot		
August-31-2009	NMAI	8237	Bird Pendant (face down)	7	SE	7	inside back of head		(39/60, 88/11 Au/Cu)- Cu rich/Au rich phases, Dendrites
August-31-2009	NMAI	8237	Bird Pendant (face down)	9	SE and hypermap	230	back cetner of suspension loop		
August-31-2009	NMAI	8264 (3)	Large frog pendant	1	SE	150	back of PL wing		scratches and loss of enriched surface layer
August-31-2009	NMAI	8264 (3)	Large frog pendant	2	SE	13	back of head		
August-31-2009	NMAI	8264 (3)	Large frog pendant	3	SE	550	closeup of scratches		
August-31-2009	NMAI	8264 (3)	Large frog pendant	4	SE	45	closeup of scratches		
August-31-2009	NMAI	8264 (3)	Large frog pendant	5	SE	25	back of squiggle		
August-31-2009	NMAI	8264 (3)	Large frog pendant	6	spectrum		back of squiggle		

Date M/D/Y	Museum	Object #	Object type	ESEM Analysis #	Type	Mag	Description	SEM jpg/tif	Notes
August-31-2009	NMAI	8264 (1)	Small frog pendant turned over	6	SE	70	inside back of body		
August-31-2009	NMAI	8264 (1)	Small frog pendant turned over	7	SE	16	back center		95%Au, 4% Cu, 1.1%Ag
August-31-2009	NMAI	233537	thin ring with frogs	1	SE	18	edge of PL front		Burr
August-31-2009	NMAI	233537	thin ring with frogs	2	SE	19	frog		
August-31-2009	NMAI	233537	thin ring with frogs	3	SE	650	center of band		grain structure/porosity
August-31-2009	NMAI	233537	thin ring with frogs	4	SE and spectrum	950	area near edge		74%Au, 22%Cu, 3.7%Ag
August-31-2009	NMAI	242461	Fat ring with frogs	1	SE	750	copper area		38%Au, 59%Cu, 1.9%Ag
August-31-2009	NMAI	242461	Fat ring with frogs	2	SE and spectrum		Frog closest to top		70%Au, 28%Cu, 1.4%Ag
August-31-2009	NMAI	242461	Fat ring with frogs	3	SE	85	End of band		
August-31-2009	NMAI	242461	Fat ring with frogs	4	Spectrum		Amorphous area between details in band		77%Au, 10%Cu, <b>12%Ag - Solder??</b>
September-2- 2009	NMAI	240644	Sheet nose ring	1	SE	25	Inside band		88%Au, 10%Cu, 1.3%Ag
September-2- 2009	NMAI	240644	Sheet nose ring	2	BSE	25	Overview of end		coppery interior
September-2- 2009	NMAI	240644	Sheet nose ring	3	BSE	85	Closeup of edge		High copper interior and high gold surface
September-2- 2009	NMAI	240644	Sheet nose ring	4	SE	750	Closeup of surface		scratches
September-2- 2009	NMAI	240644	Sheet nose ring	5	SE	18	Closeup of surface		Surface texture
September-2- 2009	NMAI	233536	ring	1	SE	14	Interior view of raised square		
September-2- 2009	NMAI	233536	ring	2	SE	27	frog on right end (view from top)		
September-2- 2009	NMAI	233536	ring	3	BSE and hypermap	30	frog on right end (view from top)		96%Au, 2%Ag, 1.8%Cu
September-2- 2009	NMAI	233536	ring	4	BSE	900	porosity (closeup of top of frog)		porosity
September-2- 2009	NMAI	233536	ring	5	SE	37	top edge		
September-2- 2009	NMAI	233536	ring	6	BSE	80	top edge		porosity and burnished areas with similar composition
September-2- 2009	NMAI	240661	anthropomorphic pendant	1	SE	19	back PR arm		Dendrite (and wax)
September-2- 2009	NMAI	240661	anthropomorphic pendant	2	SE	95	Closeup of back PR arm		dendrites
September-2- 2009	NMAI	240661	anthropomorphic pendant	3	SE	2.5K	border between dendrites in center of back PR arm		dendrites
September-2- 2009	NMAI	240661	anthropomorphic pendant	4	SE and spectrum	950	border between dendrites in center of back PR arm		71%Au, 47%Cu, 6%Ag























