

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62040

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223455													
WG223455LCSW2	LCSW	04/21/07 9:51	WC070404-1	820		786.4	mg/L	95.9	80	120			
L62040-03DUP	DUP	04/21/07 13:19			121	121.4	mg/L				0.3	20	
WG223455LCSW5	LCSW	04/21/07 13:33	WC070404-1	820		799.9	mg/L	97.5	80	120			
L62049-02DUP	DUP	04/21/07 14:33			7	7.3	mg/L				4.2	20	RA
WG223455LCSW8	LCSW	04/21/07 15:51	WC070404-1	820		805.8	mg/L	98.3	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.939	mg/L	97	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.09	0.09			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	1		1.04	mg/L	104	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	1	U	1.032	mg/L	103.2	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	1	U	1.052	mg/L	105.2	85	115	1.92	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.02		.01954	mg/L	97.7	90	110			
WG223236ICB	ICB	04/18/07 5:01				.00045	mg/L		-0.0012	0.0012			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.00625		.00661	mg/L	105.8	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.00625	.0004	.00644	mg/L	96.6	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.00625	.0004	.00643	mg/L	96.5	70	130	0.16	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.05		.0524	mg/L	104.8	90	110			
WG223236ICB	ICB	04/18/07 5:01				U	mg/L		-0.0015	0.0015			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.05		.05165	mg/L	103.3	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.05	.0021	.04881	mg/L	93.4	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.05	.0021	.04872	mg/L	93.2	70	130	0.18	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223486													
WG223486ICV	ICV	04/23/07 20:44	II070419-1	2		2.0318	mg/L	101.6	95	105			
WG223486ICB	ICB	04/23/07 20:48				U	mg/L		-0.009	0.009			
WG223486LFB	LFB	04/23/07 21:05	II070418-2	.5		.5106	mg/L	102.1	85	115			
L61994-02AS	AS	04/23/07 21:13	II070418-2	.5	.006	.5273	mg/L	104.3	85	115			
L61994-02ASD	ASD	04/23/07 21:17	II070418-2	.5	.006	.5397	mg/L	106.7	85	115	2.32	20	
L62040-05AS	AS	04/23/07 22:19	II070418-2	1	.064	1.0391	mg/L	97.5	85	115			
L62040-05ASD	ASD	04/23/07 22:32	II070418-2	1	.064	1.055	mg/L	99.1	85	115	1.52	20	

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Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.05		.05109	mg/L	102.2	90	110			
WG223236ICB	ICB	04/18/07 5:01				U	mg/L		-0.0003	0.0003			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.05		.04984	mg/L	99.7	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.05	U	.0395	mg/L	79	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.05	U	.03915	mg/L	78.3	70	130	0.89	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.05		.05182	mg/L	103.6	90	110			
WG223236ICB	ICB	04/18/07 5:01				U	mg/L		-0.0003	0.0003			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.05		.05127	mg/L	102.5	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.05	.0032	.04473	mg/L	83.1	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.05	.0032	.04422	mg/L	82	70	130	1.15	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	100		98.35	mg/L	98.4	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.6	0.6			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	67.97554		70.2	mg/L	103.3	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	67.97554	103	168.56	mg/L	96.4	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	67.97554	103	167.79	mg/L	95.3	85	115	0.46	20	

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223331													
WG223331ICB	ICB	04/19/07 9:54				U	mg/L		-3	3			
WG223331ICV	ICV	04/19/07 9:54	WI070314-1	55		56.1	mg/L	102	90	110			
WG223331LFB2	LFB	04/19/07 10:13	WI070205-1	30		30.7	mg/L	102.3	90	110			
L62039-02DUP	DUP	04/19/07 10:54			43	42.8	mg/L				0.5	20	
L62039-01AS	AS	04/19/07 11:05	10XCL	30	170	193	mg/L	76.7	90	110			M2
WG223331LFB3	LFB	04/19/07 13:05	WI070205-1	30		30.9	mg/L	103	90	110			
WG223331LFB1	LFB	04/19/07 13:34	WI070205-1	30		30.3	mg/L	101	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.916	mg/L	95.8	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.03	0.03			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	.5		.485	mg/L	97	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	.5	U	.49	mg/L	98	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	.5	U	.481	mg/L	96.2	85	115	1.85	20	

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Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.895	mg/L	94.8	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.03	0.03			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	.5		.482	mg/L	96.4	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	.5	U	.48	mg/L	96	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	.5	U	.471	mg/L	94.2	85	115	1.89	20	

Conductivity @25C M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223455													
WG223455PBW1	PBW	04/21/07 9:38				U	µmhos/cm		-10	10			
WG223455LCSW1	LCSW	04/21/07 9:40	PCN26780	1408.8		1383	µmhos/cm	98.2	80	120			
L62040-03DUP	DUP	04/21/07 13:19			2930	2960	µmhos/cm				1	20	
WG223455PBW2	PBW	04/21/07 13:20				U	µmhos/cm		-10	10			
WG223455LCSW4	LCSW	04/21/07 13:22	PCN26780	1408.8		1369	µmhos/cm	97.2	80	120			
L62049-02DUP	DUP	04/21/07 14:33			3430	3440	µmhos/cm				0.3	20	
WG223455LCSW7	LCSW	04/21/07 15:39	PCN26780	1408.8		1382	µmhos/cm	98.1	80	120			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.925	mg/L	96.3	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.03	0.03			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	.5		.491	mg/L	98.2	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	.5	U	.502	mg/L	100.4	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	.5	U	.49	mg/L	98	85	115	2.42	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223547													
WG223547ICV	ICV	04/24/07 8:29	WI070412-6	.3		.2914	mg/L	97.1	90	110			
WG223547ICB	ICB	04/24/07 8:29				U	mg/L		-0.015	0.015			
WG223466LRB	LRB	04/24/07 8:55				U	mg/L		-0.015	0.015			
WG223466LFB	LFB	04/24/07 8:55	WI070412-2	.2		.1796	mg/L	89.8	90	110			
L62018-04DUP	DUP	04/24/07 8:55			.007	.0077	mg/L				9.5	20	RA
L62021-01LFM	LFM	04/24/07 9:00	WI070412-2	.2	U	.2437	mg/L	121.9	90	110			M1
L62040-07DUP	DUP	04/24/07 9:04			.038	.0382	mg/L				0.5	20	RA
L62040-08LFM	LFM	04/24/07 9:04	WI070412-2	.2	U	.1817	mg/L	90.9	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223457													
WG223457ICV1	ICV	04/23/07 9:38	WC070407-2	1.992		2.02	mg/L	101.4	95	105			
WG223457ICB	ICB	04/23/07 9:45				U	mg/L		-0.3	0.3			
WG223457LFB1	LFB	04/23/07 9:52	WC070213-5	5		5.49	mg/L	109.8	90	110			
WG223457LFB2	LFB	04/23/07 13:21	WC070213-5	5		5.28	mg/L	105.6	90	110			
L62040-04AS	AS	04/23/07 15:37	WC070213-5	5	.3	5.13	mg/L	96.6	85	115			
L62040-04DUP	DUP	04/23/07 15:44			.3	.27	mg/L				10.5	20	RA

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Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.955	mg/L	97.8	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.06	0.06			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	1		1.02	mg/L	102	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	1	.05	1.055	mg/L	100.5	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	1	.05	1.047	mg/L	99.7	85	115	0.76	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.05		.05232	mg/L	104.6	90	110			
WG223236ICB	ICB	04/18/07 5:01				U	mg/L		-0.0003	0.0003			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.05		.04949	mg/L	99	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.05	.0029	.05554	mg/L	105.3	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.05	.0029	.05557	mg/L	105.3	70	130	0.05	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	100		96.27	mg/L	96.3	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.6	0.6			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	54.9596		55.96	mg/L	101.8	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	54.9596	76.4	129.07	mg/L	95.8	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	54.9596	76.4	128.28	mg/L	94.4	85	115	0.61	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.9261	mg/L	96.3	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.015	0.015			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	.5		.5204	mg/L	104.1	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	.5	.048	.566	mg/L	103.6	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	.5	.048	.555	mg/L	101.4	85	115	1.96	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223227													
WG223227ICV	ICV	04/19/07 9:54	II070406-1	.00498		.00517	mg/L	103.8	95	105			
WG223227ICB	ICB	04/19/07 9:56				U	mg/L		-0.0002	0.0002			
WG223228													
WG223228LRB	LRB	04/19/07 12:27				U	mg/L		-0.00044	0.00044			
WG223228LFB	LFB	04/19/07 12:30	II070411-6	.002		.0019	mg/L	95	85	115			
L62026-02LFM	LFM	04/19/07 13:03	II070411-6	.002	U	.00192	mg/L	96	85	115			
L62026-02LFMD	LFMD	04/19/07 13:05	II070411-6	.002	U	.00195	mg/L	97.5	85	115	1.55	20	

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Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.973	mg/L	98.7	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.03	0.03			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	.5		.503	mg/L	100.6	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	.5	U	.512	mg/L	102.4	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	.5	U	.491	mg/L	98.2	85	115	4.19	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	2		1.912	mg/L	95.6	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.03	0.03			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	.5		.482	mg/L	96.4	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	.5	U	.487	mg/L	97.4	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	.5	U	.475	mg/L	95	85	115	2.49	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223756													
WG223756ICV	ICV	04/26/07 17:46	WI070308-3	2.416		2.315	mg/L	95.8	90	110			
WG223756ICB	ICB	04/26/07 17:47				U	mg/L		-0.06	0.06			
WG223756LFB1	LFB	04/26/07 17:51	WI070307-9	2		1.967	mg/L	98.4	90	110			
L61975-01AS	AS	04/26/07 17:54	WI070307-9	2	U	1.928	mg/L	96.4	90	110			
L61975-02DUP	DUP	04/26/07 17:56			.03	U	mg/L				200	20	RA
L62083-01DUP	DUP	04/26/07 18:14			U	U	mg/L				0	20	RA
WG223756LFB2	LFB	04/26/07 18:29	WI070307-9	2		1.996	mg/L	99.8	90	110			
L62040-07AS	AS	04/26/07 18:53	WI070307-9	4	2.26	6.328	mg/L	101.7	90	110			

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223455													
WG223455LCSW3	LCSW	04/21/07 9:54	PCN25442	6		6.13	units	102.2	90	110			
L62040-03DUP	DUP	04/21/07 13:19			7.7	7.71	units				0.1	20	
WG223455LCSW6	LCSW	04/21/07 13:36	PCN25442	6		6.13	units	102.2	90	110			
L62049-02DUP	DUP	04/21/07 14:33			5.9	5.88	units				0.3	20	
WG223455LCSW9	LCSW	04/21/07 15:54	PCN25442	6		6.12	units	102	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	20		19.89	mg/L	99.5	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.9	0.9			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	99.61502		103.94	mg/L	104.3	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	99.61502	2.5	112.17	mg/L	110.1	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	99.61502	2.5	109.99	mg/L	107.9	85	115	1.96	20	

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62040

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223301													
WG223301PBW	PBW	04/18/07 16:00				U	mg/L		-20	20			
WG223301LCSW	LCSW	04/18/07 16:01	PCN26761	260		286	mg/L	110	80	120			
L62057-01DUP	DUP	04/18/07 16:23			410	404	mg/L				1.5	20	
WG223302													
WG223302PBW	PBW	04/18/07 16:35				U	mg/L		-20	20			
WG223302LCSW	LCSW	04/18/07 16:37	PCN26761	260		278	mg/L	106.9	80	120			
L62078-05DUP	DUP	04/18/07 17:20			6480	6334	mg/L				2.3	20	
WG223332													
WG223332PBW	PBW	04/19/07 10:40				U	mg/L		-20	20			
WG223332LCSW	LCSW	04/19/07 10:41	PCN26761	260		280	mg/L	107.7	80	120			
L62046-01DUP	DUP	04/19/07 10:55			20	18	mg/L				10.5	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.05		.05396	mg/L	107.9	90	110			
WG223236ICB	ICB	04/18/07 5:01				U	mg/L		-0.0003	0.0003			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.05		.0512	mg/L	102.4	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.05	.0013	.05443	mg/L	106.3	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.05	.0013	.05349	mg/L	104.4	70	130	1.74	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	II070403-5	100		99.58	mg/L	99.6	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.9	0.9			
WG223342LFB	LFB	04/20/07 18:49	II070418-2	99.92361		103.5	mg/L	103.6	85	115			
L62036-04AS	AS	04/20/07 19:56	II070418-2	99.92361	15.4	121.09	mg/L	105.8	85	115			
L62036-04ASD	ASD	04/20/07 20:00	II070418-2	99.92361	15.4	119.25	mg/L	103.9	85	115	1.53	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223262													
WG223262PBW	PBW	04/18/07 10:30				U	mg/L		-30	30			
WG223262LCSW	LCSW	04/18/07 10:34	WC061207-2	100		96	mg/L	96	80	120			
L62040-03DUP	DUP	04/18/07 11:22			1790	1786	mg/L				0.2	20	
L62050-02DUP	DUP	04/18/07 12:10			250	249	mg/L				0.4	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223236													
WG223236ICV	ICV	04/18/07 4:56	MS070308-2	.056		.0568	mg/L	101.4	90	110			
WG223236ICB	ICB	04/18/07 5:01				U	mg/L		-0.0003	0.0003			
WG223236LFB	LFB	04/18/07 5:07	MS070227-3	.05		.05072	mg/L	101.4	85	115			
L62039-01AS	AS	04/18/07 5:19	MS070227-3	.05	U	.0552	mg/L	110.4	70	130			
L62039-01ASD	ASD	04/18/07 5:25	MS070227-3	.05	U	.05545	mg/L	110.9	70	130	0.45	20	

Phelps Dodge Sierrita
 Project ID: OJ03DL

ACZ Project ID: **L62040**

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223342													
WG223342ICV	ICV	04/20/07 18:28	11070403-5	2		1.903	mg/L	95.2	95	105			
WG223342ICB	ICB	04/20/07 18:32				U	mg/L		-0.03	0.03			
WG223342LFB	LFB	04/20/07 18:49	11070418-2	.5		.508	mg/L	101.6	85	115			
L62036-04AS	AS	04/20/07 19:56	11070418-2	.5	U	.527	mg/L	105.4	85	115			
L62036-04ASD	ASD	04/20/07 20:00	11070418-2	.5	U	.535	mg/L	107	85	115	1.51	20	

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ACZ Project ID: **L62040**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L62040-01	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L62040-02	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L62040-03	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L62040-04	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG223455	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	

Phelps Dodge Sierrita

ACZ Project ID: L62040

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L62040-05	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG223455	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).	
L62040-06	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223332	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223455	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L62040-07	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223457	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223756	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223332	Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223455	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L62040-08	WG223547	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

helps Dodge Sierrita

ACZ Project ID: **L62040**

No certification qualifiers associated with this analysis

Phelps Dodge Sierrita
OJ03DL

ACZ Project ID: L62040
Date Received: 4/17/2007
Received By:
Date Printed: 4/17/2007

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?	X		
12) Are samples requiring no headspace, headspace free?	X		
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1399	3.0	17

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

Phelps Dodge Sierrita
OJ03DL

ACZ Project ID: L62040
Date Received: 4/17/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L62040-01	MH-25C		Y		Y							<input type="checkbox"/>
L62040-02	IW-13		Y		Y							<input type="checkbox"/>
L62040-03	IW-14		Y		Y							<input type="checkbox"/>
L62040-04	IW-16		Y		Y							<input type="checkbox"/>
L62040-05	IW-17		Y		Y							<input type="checkbox"/>
L62040-06	IW-18		Y		Y							<input type="checkbox"/>
L62040-07	DUP041607A		Y		Y							<input type="checkbox"/>
L62040-08	TB040607-01									X		<input type="checkbox"/>
L62040-09	TB040607-08									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

L62040

CHAIN of CUSTODY

Report to:

Name: *Billy Dorris*
 Company: *Phelps Dodge Sierrita*
 E-mail: *Billy-Dorris@FMI.com*

Address: *6200 W Duval Mine Rd*
Green Valley AZ 85614
 Telephone: *520-648-8873*

Copy of Report to:

Name: *Jim Norris*
 Company: *Hydro Geo Chem*

E-mail: *jimn@hginc.com*
 Telephone: *520-293-1500 Ext 112*

Invoice to:

Name:
 Company:
 E-mail:

Address:
 Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES
 NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO"

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:	Project/PO #:	Reporting state for compliance testing:	Sampler's Name:	Are any samples NRC licensable material?	SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers										
	<i>OJ03 DL</i>				<i>MH-25C</i>	<i>4-13-07 / 8:55</i>	<i>GW</i>	<i>9</i>										
					<i>IW-13</i>	<i>4-16-07 / 14:10</i>	<i>GW</i>	<i>9</i>										
					<i>IW-14</i>	<i>4-16-07 / 14:00</i>	<i>GW</i>	<i>9</i>										
					<i>IW-16</i>	<i>4-16-07 / 13:50</i>	<i>GW</i>	<i>9</i>										
					<i>IW-17</i>	<i>4-16-07 / 13:40</i>	<i>GW</i>	<i>9</i>										
					<i>IW-18</i>	<i>4-16-07 / 13:25</i>	<i>GW</i>	<i>9</i>										
					<i>DUP041607A</i>	<i>4-16-07</i>	<i>GW</i>	<i>9</i>										

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>Billy F. Dorris</i>	<i>4-16-07/15:30</i>	<i>KU</i>	<i>4/17/07 9:04</i>

April 25, 2007

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

Cc: Jim Norris

Project ID: OJ03DL
ACZ Project ID: L62004

Bill Dorris:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 13, 2007 and reported on April 25, 2007. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L62004. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L62004. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

This report should be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.

26/Apr/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

Project ID: OJ03DL

Sample ID: MH-11

ACZ Sample ID: **L62004-01**

Date Sampled: 04/10/07 14:30

Date Received: 04/13/07

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	%Q	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	493			mg/L	0.4	2	04/19/07 1:28	msh
Magnesium, dissolved	M200.7 ICP	109			mg/L	0.4	2	04/19/07 1:28	msh
Potassium, dissolved	M200.7 ICP	14.0			mg/L	0.6	3	04/19/07 20:52	djt
Sodium, dissolved	M200.7 ICP	104			mg/L	0.6	3	04/19/07 1:28	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	%Q	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		107			mg/L	2	20	04/16/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Total Alkalinity		107			mg/L	2	20	04/16/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.1			%			04/25/07 0:00	calc
Sum of Anions		38.4			meq/L	0.1	0.5	04/25/07 0:00	calc
Sum of Cations		38.5			meq/L	0.1	0.5	04/25/07 0:00	calc
Chloride	M325.2 - Colorimetric	110		*	mg/L	10	50	04/19/07 10:24	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/20/07 20:21	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.43		*	mg/L	0.02	0.1	04/21/07 20:25	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2700			mg/L	10	20	04/16/07 8:52	lcp
Sulfate	SM4500 SO4-D	1580			mg/L	10	50	04/16/07 11:49	aeh/wpa
TDS (calculated)	Calculation	2470			mg/L	10	50	04/25/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.09						04/25/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: IW-4

ACZ Sample ID: **L62004-02**
 Date Sampled: 04/11/07 13:15
 Date Received: 04/13/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	510			mg/L	0.4	2	04/19/07 1:32	msh
Magnesium, dissolved	M200.7 ICP	86.6			mg/L	0.4	2	04/19/07 1:32	msh
Potassium, dissolved	M200.7 ICP	9.6			mg/L	0.6	3	04/19/07 20:56	djt
Sodium, dissolved	M200.7 ICP	160			mg/L	0.6	3	04/19/07 1:32	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		148			mg/L	2	20	04/16/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Total Alkalinity		148			mg/L	2	20	04/16/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.7			%			04/25/07 0:00	calc
Sum of Anions		40.5			meq/L	0.1	0.5	04/25/07 0:00	calc
Sum of Cations		39.9			meq/L	0.1	0.5	04/25/07 0:00	calc
Chloride	M325.2 - Colorimetric	140		*	mg/L	10	50	04/19/07 10:24	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/20/07 20:27	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.83		*	mg/L	0.02	0.1	04/21/07 20:27	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2770			mg/L	10	20	04/16/07 8:53	lcp
Sulfate	SM4500 SO4-D	1600			mg/L	10	50	04/16/07 11:53	aeh/wpa
TDS (calculated)	Calculation	2600			mg/L	10	50	04/25/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						04/25/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: IW-6A

ACZ Sample ID: **L62004-03**
 Date Sampled: 04/11/07 14:30
 Date Received: 04/13/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XG	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	509			mg/L	0.4	2	04/19/07 1:36	msh
Magnesium, dissolved	M200.7 ICP	87.2			mg/L	0.4	2	04/19/07 1:36	msh
Potassium, dissolved	M200.7 ICP	7.3			mg/L	0.6	3	04/19/07 21:00	djt
Sodium, dissolved	M200.7 ICP	224			mg/L	0.6	3	04/19/07 1:36	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XG	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		108			mg/L	2	20	04/16/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Total Alkalinity		108			mg/L	2	20	04/16/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.3			%			04/25/07 0:00	calc
Sum of Anions		43.7			meq/L	0.1	0.5	04/25/07 0:00	calc
Sum of Cations		42.6			meq/L	0.1	0.5	04/25/07 0:00	calc
Chloride	M325.2 - Colorimetric	110		*	mg/L	10	50	04/19/07 10:29	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/20/07 20:34	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.82		*	mg/L	0.02	0.1	04/21/07 20:28	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	3020			mg/L	10	20	04/16/07 8:55	lcp
Sulfate	SM4500 SO4-D	1830			mg/L	10	50	04/16/07 11:58	aeh/wpa
TDS (calculated)	Calculation	2830			mg/L	10	50	04/25/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						04/25/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
Sample ID: IW-10

ACZ Sample ID: **L62004-04**
Date Sampled: 04/11/07 14:00
Date Received: 04/13/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	536			mg/L	0.4	2	04/19/07 1:40	msh
Magnesium, dissolved	M200.7 ICP	95.1			mg/L	0.4	2	04/19/07 1:40	msh
Potassium, dissolved	M200.7 ICP	11.2			mg/L	0.6	3	04/19/07 21:12	djt
Sodium, dissolved	M200.7 ICP	163			mg/L	0.6	3	04/19/07 1:40	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		152			mg/L	2	20	04/16/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Total Alkalinity		152			mg/L	2	20	04/16/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.2			%			04/25/07 0:00	calc
Sum of Anions		44.0			meq/L	0.1	0.5	04/25/07 0:00	calc
Sum of Cations		42.1			meq/L	0.1	0.5	04/25/07 0:00	calc
Chloride	M325.2 - Colorimetric	150		*	mg/L	10	50	04/19/07 10:29	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/20/07 20:41	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.01			mg/L	0.02	0.1	04/21/07 20:29	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2920			mg/L	10	20	04/16/07 8:56	lcp
Sulfate	SM4500 SO4-D	1750			mg/L	10	50	04/16/07 12:02	aeh/wpa
TDS (calculated)	Calculation	2800			mg/L	10	50	04/25/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.04						04/25/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: IW-23

ACZ Sample ID: **L62004-05**
 Date Sampled: 04/11/07 13:45
 Date Received: 04/13/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XO	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	526			mg/L	0.4	2	04/19/07 1:45	msh
Magnesium, dissolved	M200.7 ICP	97.7			mg/L	0.4	2	04/19/07 1:45	msh
Potassium, dissolved	M200.7 ICP	9.5			mg/L	0.6	3	04/19/07 21:16	djt
Sodium, dissolved	M200.7 ICP	167			mg/L	0.6	3	04/19/07 1:45	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XO	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		153			mg/L	2	20	04/16/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/16/07 0:00	cas
Total Alkalinity		153			mg/L	2	20	04/16/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.5			%			04/25/07 0:00	calc
Sum of Anions		42.3			meq/L	0.1	0.5	04/25/07 0:00	calc
Sum of Cations		41.9			meq/L	0.1	0.5	04/25/07 0:00	calc
Chloride	M325.2 - Colorimetric	150		*	mg/L	10	50	04/19/07 10:29	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/20/07 20:48	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.10			mg/L	0.02	0.1	04/21/07 20:32	pjb
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2920			mg/L	10	20	04/16/07 8:57	icp
Sulfate	SM4500 SO4-D	1670			mg/L	10	50	04/16/07 12:06	aeh/wpa
TDS (calculated)	Calculation	2710			mg/L	10	50	04/25/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						04/25/07 0:00	calc

Arizona license number: AZ0102



Report Header Explanations

Table with 2 columns: Term and Definition. Terms include Batch, Found, Limit, Lower, MDL, PCN/SCN, PQL, QC, Rec, RPD, Upper, and Sample.

QC Sample Types

Table with 4 columns: Code, Description, Code, Description. Lists various QC sample types like AS, ASD, CCB, etc.

QC Sample Type Explanations

Table with 2 columns: Sample Type and Explanation. Explains Blanks, Control Samples, Duplicates, Spikes/Fortified Matrix, and Standard.

ACZ Qualifiers (Qual)

Table with 2 columns: Qualifier and Description. Qualifiers B, H, and U.

Method References

- List of 6 method references including EPA 600/4-83-020, EPA 600/R-93-100, EPA 600/R-94-111, EPA SW-846, and Standard Methods for the Examination of Water and Wastewater.

Comments

- 3 comments regarding QC results, matrix reporting (dry weight vs as received), and animal matrices.

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62004

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223162													
WG223162LCSW2	LCSW	04/16/07 17:12	WC070404-1	820		808.4	mg/L	98.6	80	120			
WG223162LCSW5	LCSW	04/16/07 20:47	WC070404-1	820		811.9	mg/L	99	80	120			
L62004-02DUP	DUP	04/16/07 22:57			148	147.3	mg/L				0.5	20	
L62016-03DUP	DUP	04/17/07 0:16			124	123.5	mg/L				0.4	20	
WG223162LCSW8	LCSW	04/17/07 0:29	WC070404-1	820		812.8	mg/L	99.1	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.96	mg/L	98	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.09	0.09			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	1		1.009	mg/L	100.9	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	1	U	1.044	mg/L	104.4	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	1	U	1.037	mg/L	103.7	85	115	0.67	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223146													
WG223146ICV	ICV	04/18/07 1:05	MS070308-2	.02		.01935	mg/L	96.8	90	110			
WG223146ICB	ICB	04/18/07 1:11				.00045	mg/L		-0.0012	0.0012			
WG223146LFB	LFB	04/18/07 1:16	MS070227-3	.00625		.00714	mg/L	114.2	85	115			
L61985-02AS	AS	04/18/07 1:28	MS070227-3	.00625	U	.00653	mg/L	104.5	70	130			
L61985-02ASD	ASD	04/18/07 1:34	MS070227-3	.00625	U	.00663	mg/L	106.1	70	130	1.52	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223282													
WG223282ICV	ICV	04/18/07 17:36	MS070308-2	.05		.05209	mg/L	104.2	90	110			
WG223282ICB	ICB	04/18/07 17:42				U	mg/L		-0.0015	0.0015			
WG223282LFB	LFB	04/18/07 17:48	MS070227-3	.05		.05393	mg/L	107.9	85	115			
L61985-02AS	AS	04/18/07 18:00	MS070227-3	.05	U	.05851	mg/L	117	70	130			
L61985-02ASD	ASD	04/18/07 18:06	MS070227-3	.05	U	.05881	mg/L	117.6	70	130	0.51	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223337													
WG223337ICV1	ICV	04/19/07 19:29	II070403-5	2		2.0402	mg/L	102	95	105			
WG223337ICB	ICB	04/19/07 19:33				U	mg/L		-0.009	0.009			
WG223337LFB	LFB	04/19/07 19:49	II070418-2	.5		.4935	mg/L	98.7	85	115			
L62015-01AS	AS	04/19/07 21:24	II070418-2	.5	.009	.4793	mg/L	94.1	85	115			
L62015-01ASD	ASD	04/19/07 21:28	II070418-2	.5	.009	.4804	mg/L	94.3	85	115	0.23	20	

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62004

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223282													
WG223282ICV	ICV	04/18/07 17:36	MS070308-2	.05		.05111	mg/L	102.2	90	110			
WG223282ICB	ICB	04/18/07 17:42				U	mg/L		-0.0003	0.0003			
WG223282LFB	LFB	04/18/07 17:48	MS070227-3	.05		.05029	mg/L	100.6	85	115			
L61985-02AS	AS	04/18/07 18:00	MS070227-3	.05	U	.05341	mg/L	106.8	70	130			
L61985-02ASD	ASD	04/18/07 18:06	MS070227-3	.05	U	.05399	mg/L	108	70	130	1.08	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223282													
WG223282ICV	ICV	04/18/07 17:36	MS070308-2	.05		.05157	mg/L	103.1	90	110			
WG223282ICB	ICB	04/18/07 17:42				U	mg/L		-0.0003	0.0003			
WG223282LFB	LFB	04/18/07 17:48	MS070227-3	.05		.0523	mg/L	104.6	85	115			
L61985-02AS	AS	04/18/07 18:00	MS070227-3	.05	U	.05383	mg/L	107.7	70	130			
L61985-02ASD	ASD	04/18/07 18:06	MS070227-3	.05	U	.05347	mg/L	106.9	70	130	0.67	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	11070403-5	100		99.05	mg/L	99.1	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.6	0.6			
WG223292LFB	LFB	04/19/07 0:00	11070328-2	67.97554		67.2	mg/L	98.9	85	115			
L61996-01AS	AS	04/19/07 1:07	11070328-2	67.97554	86.7	154.78	mg/L	100.2	85	115			
L61996-01ASD	ASD	04/19/07 1:11	11070328-2	67.97554	86.7	154.07	mg/L	99.1	85	115	0.46	20	

Chloride

M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223331													
WG223331ICB	ICB	04/19/07 9:54				U	mg/L		-3	3			
WG223331ICV	ICV	04/19/07 9:54	WI070314-1	55		56.1	mg/L	102	90	110			
L61844-02DUP	DUP	04/19/07 10:12			56	55.6	mg/L				0.7	20	
WG223331LFB2	LFB	04/19/07 10:13	WI070205-1	30		30.7	mg/L	102.3	90	110			
L62016-02AS	AS	04/19/07 10:21	WI070205-1	30	3	34.9	mg/L	106.3	90	110			
L62004-01DUP	DUP	04/19/07 10:24			110	109	mg/L				0.9	20	
L62005-05AS	AS	04/19/07 10:29	10XCL	30	86	107	mg/L	70	90	110			M2
WG223331LFB3	LFB	04/19/07 13:05	WI070205-1	30		30.9	mg/L	103	90	110			
WG223331LFB1	LFB	04/19/07 13:34	WI070205-1	30		30.3	mg/L	101	90	110			

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	11070403-5	2		1.937	mg/L	96.9	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.03	0.03			
WG223292LFB	LFB	04/19/07 0:00	11070328-2	.5		.48	mg/L	96	85	115			
L61996-01AS	AS	04/19/07 1:07	11070328-2	.5	U	.486	mg/L	97.2	85	115			
L61996-01ASD	ASD	04/19/07 1:11	11070328-2	.5	U	.492	mg/L	98.4	85	115	1.23	20	

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62004

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.908	mg/L	95.4	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.03	0.03			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	.5		.464	mg/L	92.8	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	.5	U	.48	mg/L	96	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	.5	U	.488	mg/L	97.6	85	115	1.65	20	

Conductivity @25C

M120.1 - Meter

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223162													
WG223162PBW1	PBW	04/16/07 16:59				U	umhos/cm		-10	10			
WG223162LCSW1	LCSW	04/16/07 17:01	PCN26780	1408.8		1689	umhos/cm	119.9	80	120			
WG223162PBW2	PBW	04/16/07 20:35				U	umhos/cm		-10	10			
WG223162LCSW4	LCSW	04/16/07 20:37	PCN26780	1408.8		1640	umhos/cm	116.4	80	120			
L62004-02DUP	DUP	04/16/07 22:57			3470	3460	umhos/cm				0.3	20	
L62016-03DUP	DUP	04/17/07 0:16			1060	1050	umhos/cm				0.9	20	
WG223162LCSW7	LCSW	04/17/07 0:18	PCN26780	1408.8		1658	umhos/cm	117.7	80	120			

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.939	mg/L	97	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.03	0.03			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	.5		.485	mg/L	97	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	.5	U	.495	mg/L	99	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	.5	U	.499	mg/L	99.8	85	115	0.8	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223367													
WG223367ICV	ICV	04/19/07 14:50	WI070412-6	.3		.3003	mg/L	100.1	90	110			
WG223367ICB	ICB	04/19/07 14:51				U	mg/L		-0.015	0.015			
WG223371													
WG223371ICV	ICV	04/19/07 15:42	WI070412-6	.3		.3011	mg/L	100.4	90	110			
WG223371ICB	ICB	04/19/07 15:42				U	mg/L		-0.015	0.015			
WG223246LRB	LRB	04/19/07 15:43				U	mg/L		-0.015	0.015			
WG223246LFB	LFB	04/19/07 15:44	WI070412-2	.2		.1971	mg/L	98.6	90	110			
L61994-03DUP	DUP	04/19/07 15:46			U	U	mg/L				0	20	RA
L61994-04LFM	LFM	04/19/07 15:48	WI070412-2	.2	U	.1825	mg/L	91.3	90	110			
L62016-02DUP	DUP	04/19/07 15:59			U	U	mg/L				0	20	RA
L62016-03LFM	LFM	04/19/07 16:01	WI070412-2	.2	.007	.2232	mg/L	108.1	90	110			

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62004

Fluoride													SM4500F-C		
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual		
WG223351															
WG223351ICV	ICV	04/20/07 16:09	WC070407-2	1.992		2	mg/L	100.4	95	105					
WG223351ICB	ICB	04/20/07 16:16				U	mg/L		-0.3	0.3					
WG223351LFB1	LFB	04/20/07 16:22	WC070213-5	5		5.02	mg/L	100.4	90	110					
WG223351LFB2	LFB	04/20/07 19:25	WC070213-5	5		5	mg/L	100	90	110					
L61998-01AS	AS	04/20/07 20:00	WC070213-5	5	.2	5.2	mg/L	100	85	115					
L61998-01DUP	DUP	04/20/07 20:07			.2	.21	mg/L				4.9	20		RA	

Iron, dissolved													M200.7 ICP		
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual		
WG223292															
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.989	mg/L	99.5	95	105					
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.06	0.06					
WG223292LFB	LFB	04/19/07 0:00	II070328-2	1		1.014	mg/L	101.4	85	115					
L61996-01AS	AS	04/19/07 1:07	II070328-2	1	.29	1.293	mg/L	100.3	85	115					
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	1	.29	1.304	mg/L	101.4	85	115	0.85	20			

Lead, dissolved													M200.8 ICP-MS		
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual		
WG223282															
WG223282ICV	ICV	04/18/07 17:36	MS070308-2	.05		.05421	mg/L	108.4	90	110					
WG223282ICB	ICB	04/18/07 17:42				U	mg/L		-0.0003	0.0003					
WG223282LFB	LFB	04/18/07 17:48	MS070227-3	.05		.05351	mg/L	107	85	115					
L61985-02AS	AS	04/18/07 18:00	MS070227-3	.05	U	.05079	mg/L	101.6	70	130					
L61985-02ASD	ASD	04/18/07 18:06	MS070227-3	.05	U	.05082	mg/L	101.6	70	130	0.06	20			

Magnesium, dissolved													M200.7 ICP		
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual		
WG223292															
WG223292ICV	ICV	04/18/07 23:39	II070403-5	100		97.25	mg/L	97.3	95	105					
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.6	0.6					
WG223292LFB	LFB	04/19/07 0:00	II070328-2	54.9596		53.59	mg/L	97.5	85	115					
L61996-01AS	AS	04/19/07 1:07	II070328-2	54.9596	58.4	113.52	mg/L	100.3	85	115					
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	54.9596	58.4	112.92	mg/L	99.2	85	115	0.53	20			

Manganese, dissolved													M200.7 ICP		
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual		
WG223292															
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.936	mg/L	96.8	95	105					
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.015	0.015					
WG223292LFB	LFB	04/19/07 0:00	II070328-2	.5		.5103	mg/L	102.1	85	115					
L61996-01AS	AS	04/19/07 1:07	II070328-2	.5	.036	.5474	mg/L	102.3	85	115					
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	.5	.036	.5533	mg/L	103.5	85	115	1.07	20			

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Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223227													
WG223227ICV	ICV	04/19/07 9:54	II070406-1	.00498		.00517	mg/L	103.8	95	105			
WG223227ICB	ICB	04/19/07 9:56				U	mg/L		-0.0002	0.0002			
WG223227LRB	LRB	04/19/07 9:58				U	mg/L		-0.00044	0.00044			
WG223227LFB	LFB	04/19/07 10:00	II070411-6	.002		.002	mg/L	100	85	115			
L61993-01LFM	LFM	04/19/07 10:04	II070411-6	.002	U	.00195	mg/L	97.5	85	115			
L61993-01LFMD	LFMD	04/19/07 10:06	II070411-6	.002	U	.00193	mg/L	96.5	85	115	1.03	20	
L62004-05LFM	LFM	04/19/07 10:33	II070411-6	.002	.0003	.00209	mg/L	89.5	85	115			
L62004-05LFMD	LFMD	04/19/07 10:35	II070411-6	.002	.0003	.00219	mg/L	94.5	85	115	4.67	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.976	mg/L	98.8	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.03	0.03			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	.5		.479	mg/L	95.8	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	.5	.45	.932	mg/L	96.4	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	.5	.45	.933	mg/L	96.6	85	115	0.11	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.916	mg/L	95.8	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.03	0.03			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	.5		.481	mg/L	96.2	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	.5	.01	.489	mg/L	95.8	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	.5	.01	.487	mg/L	95.4	85	115	0.41	20	

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223463													
WG223463ICV	ICV	04/21/07 16:11	WI070308-3	2.416		2.307	mg/L	95.5	90	110			
WG223463ICB	ICB	04/21/07 16:12				U	mg/L		-0.06	0.06			
WG223467													
WG223467ICV	ICV	04/21/07 20:07	WI070308-3	2.416		2.352	mg/L	97.4	90	110			
WG223467ICB	ICB	04/21/07 20:08				U	mg/L		-0.06	0.06			
WG223467LFB1	LFB	04/21/07 20:09	WI070307-9	2		2.008	mg/L	100.4	90	110			
L61970-05AS	AS	04/21/07 20:12	WI070307-9	2	.02	2.201	mg/L	109.1	90	110			
L61970-06DUP	DUP	04/21/07 20:14			.09	.096	mg/L				6.5	20	RA
L62004-04AS	AS	04/21/07 20:30	WI070307-9	2	1.01	3.102	mg/L	104.6	90	110			
L62004-05DUP	DUP	04/21/07 20:33			1.1	1.1	mg/L				0	20	
WG223467LFB2	LFB	04/21/07 20:48	WI070307-9	2		1.933	mg/L	96.7	90	110			

Phelps Dodge Sierrita
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pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223162													
WG223162LCSW3	LCSW	04/16/07 17:15	PCN25442	6		6.07	units	101.2	90	110			
WG223162LCSW6	LCSW	04/16/07 20:51	PCN25442	6		6.07	units	101.2	90	110			
L62004-02DUP	DUP	04/16/07 22:57			7.9	7.87	units				0.4	20	
L62016-03DUP	DUP	04/17/07 0:16			7.9	7.93	units				0.4	20	
WG223162LCSW9	LCSW	04/17/07 0:32	PCN25442	6		6.08	units	101.3	90	110			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223337													
WG223337ICV1	ICV	04/19/07 19:29	II070403-5	20		20.45	mg/L	102.3	95	105			
WG223337ICB	ICB	04/19/07 19:33				U	mg/L		-0.9	0.9			
WG223337LFB	LFB	04/19/07 19:49	II070418-2	99.61502		102.84	mg/L	103.2	85	115			
L62015-01AS	AS	04/19/07 21:24	II070418-2	99.61502	.9	95.74	mg/L	95.2	85	115			
L62015-01ASD	ASD	04/19/07 21:28	II070418-2	99.61502	.9	96.62	mg/L	96.1	85	115	0.91	20	

Residue, Filterable (TDS) @180C M160.1 - Gravimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223142													
WG223142PBW	PBW	04/16/07 8:50				U	mg/L		-20	20			
WG223142LCSW	LCSW	04/16/07 8:51	PCN26761	260		296	mg/L	113.8	80	120			
L62009-01DUP	DUP	04/16/07 9:05			230	236	mg/L				2.6	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223282													
WG223282ICV	ICV	04/18/07 17:36	MS070308-2	.05		.05482	mg/L	109.6	90	110			
WG223282ICB	ICB	04/18/07 17:42				U	mg/L		-0.0003	0.0003			
WG223282LFB	LFB	04/18/07 17:48	MS070227-3	.05		.05497	mg/L	109.9	85	115			
L61985-02AS	AS	04/18/07 18:00	MS070227-3	.05	.0002	.06102	mg/L	121.6	70	130			
L61985-02ASD	ASD	04/18/07 18:06	MS070227-3	.05	.0002	.06649	mg/L	132.6	70	130	8.58	20	MA

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	100		100.57	mg/L	100.6	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.9	0.9			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	99.92361		98.41	mg/L	98.5	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	99.92361	70.4	172.4	mg/L	102.1	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	99.92361	70.4	170.41	mg/L	100.1	85	115	1.16	20	

Sulfate SM4500 SO4-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223161													
WG223161PBW	PBW	04/16/07 10:53				U	mg/L		-30	30			
WG223161LCSW	LCSW	04/16/07 10:57	WC061207-2	100		106	mg/L	106	80	120			
L62013-01DUP	DUP	04/16/07 12:33			1110	1124	mg/L				1.3	20	

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L62004

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223282													
WG223282ICV	ICV	04/18/07 17:36	MS070308-2	.056		.05909	mg/L	105.5	90	110			
WG223282ICB	ICB	04/18/07 17:42				U	mg/L		-0.0003	0.0003			
WG223282LFB	LFB	04/18/07 17:48	MS070227-3	.05		.05541	mg/L	110.8	85	115			
L61985-02AS	AS	04/18/07 18:00	MS070227-3	.05	U	.05275	mg/L	105.5	70	130			
L61985-02ASD	ASD	04/18/07 18:06	MS070227-3	.05	U	.05274	mg/L	105.5	70	130	0.02	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223292													
WG223292ICV	ICV	04/18/07 23:39	II070403-5	2		1.909	mg/L	95.5	95	105			
WG223292ICB	ICB	04/18/07 23:43				U	mg/L		-0.03	0.03			
WG223292LFB	LFB	04/19/07 0:00	II070328-2	.5		.479	mg/L	95.8	85	115			
L61996-01AS	AS	04/19/07 1:07	II070328-2	.5	.27	.762	mg/L	98.4	85	115			
L61996-01ASD	ASD	04/19/07 1:11	II070328-2	.5	.27	.758	mg/L	97.6	85	115	0.53	20	

helps Dodge Sierrita

ACZ Project ID: **L62004**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L62004-01	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223351	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223467	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L62004-02	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223351	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223467	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L62004-03	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223351	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG223467	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L62004-04	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223351	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L62004-05	WG223331	Chloride	M325.2 - Colorimetric	M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
	WG223351	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Phelps Dodge Sierrita

ACZ Project ID: L62004

GC/MS

The following parameters are not offered for certification or are not covered by NELAP certificate #ACZ

Volatile Organics by GC/MS

M8260B GC/MS

Yehls Dodge Sierrita
OJ03DL

ACZ Project ID: L62004
Date Received: 4/13/2007
Received By:
Date Printed: 4/13/2007

Receipt Verification

- 1) Does this project require special handling procedures such as CLP protocol?
- 2) Are the custody seals on the cooler intact?
- 3) Are the custody seals on the sample containers intact?
- 4) Is there a Chain of Custody or other directive shipping papers present?
- 5) Is the Chain of Custody complete?
- 6) Is the Chain of Custody in agreement with the samples received?
- 7) Is there enough sample for all requested analyses?
- 8) Are all samples within holding times for requested analyses?
- 9) Were all sample containers received intact?
- 10) Are the temperature blanks present?
- 11) Are the trip blanks (VOA and/or Cyanide) present?
- 12) Are samples requiring no headspace, headspace free?
- 13) Do the samples that require a Foreign Soils Permit have one?

YES	NO	NA
		X
X		
		X
X		
X		
X		
X		
X		
		X
X		
X		
		X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
1405	4.6	16

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

Phelps Dodge Sierrita
OJ03DL

ACZ Project ID: L62004
Date Received: 4/13/2007
Received By:

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L62004-01	MH-11		Y		Y							<input type="checkbox"/>
L62004-02	IW-4		Y		Y							<input type="checkbox"/>
L62004-03	IW-6A		Y		Y							<input type="checkbox"/>
L62004-04	IW-10		Y		Y							<input type="checkbox"/>
L62004-05	IW-23		Y		Y							<input type="checkbox"/>
L62004-06	CNTB040607-03									X		<input type="checkbox"/>
L62004-07	VLP TB040607-07									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L1100004

ACZ Laboratories, Inc.

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Billy Dorris
 Company: Phelps Dodge Sierrita
 E-mail: Billy_Dorris@FmI.com

Address: 6200 West Duval Mine Rd
Green Valley, AZ 85614
 Telephone: 520 648 8873

Copy of Report to:

Name: Jim Norris
 Company: Hydro Geo Chem

E-mail: jimn@hgcinc.com
 Telephone: 520-293-1500 Ext 112

Invoice to:

Name:
 Company:
 E-mail:

Address:
 Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES NO
 If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:
 Project/PO #: OJ03 DL
 Reporting state for compliance testing:
 Sampler's Name:
 Are any samples NRC licensable material?

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers								
<u>MH-11</u>	<u>4-10-07 / 14:30</u>	<u>GW</u>	<u>9</u>								
<u>IW-4</u>	<u>4-11-07 / 13:15</u>	<u>GW</u>	<u>9</u>	}	<u>AMBIENT</u>	<u>SUITE</u>					
<u>IW-6A</u>	<u>4-11-07 / 14:30</u>	<u>GW</u>	<u>9</u>								
<u>IW-10</u>	<u>4-11-07 / 14:00</u>	<u>GW</u>	<u>9</u>								
<u>IW-23</u>	<u>4-11-07 / 13:45</u>	<u>GW</u>	<u>9</u>								

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<u>Billy F. Dorris</u>	<u>4-12-07 / 15:00</u>	<u>[Signature]</u>	<u>4-13-07 10:45</u>

Bill Dorris
Phelps Dodge Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

April 24, 2007

Cc: Jim Norris

Project ID: OJ03DL
ACZ Project ID: L61914

Bill Dorris:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 09, 2007 and reported on April 24, 2007. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L61914. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan, version 11.0. The enclosed results relate only to the samples received under L61914. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute. Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

This report should be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.

24/Apr/07

Sue Webber, Project Manager, has reviewed and approved this report in its entirety.



Phelps Dodge Sierrita

April 24, 2007

Project ID: OJ03DL

ACZ Project ID: L61914

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 11 ground water samples from Phelps Dodge Sierrita on April 9, 2007. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L61914. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomaly required further explanation not provided by the Extended Qualifier Report:

1. The samples were received outside of the acceptable temperature range of 0 to 6 degrees C.

Phelps Dodge Sierrita

Project ID: OJ03DL
Sample ID: IW-1

ACZ Sample ID: **L61914-01**
Date Sampled: 04/03/07 08:25
Date Received: 04/09/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XG	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	194			mg/L	0.2	1	04/16/07 19:08	djt
Magnesium, dissolved	M200.7 ICP	43.8			mg/L	0.2	1	04/16/07 19:08	djt
Potassium, dissolved	M200.7 ICP	8.5		*	mg/L	0.3	2	04/16/07 19:08	djt
Sodium, dissolved	M200.7 ICP	69.7			mg/L	0.3	2	04/16/07 19:08	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XG	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		128			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		128			mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		7.4			%			04/24/07 0:00	calc
Sum of Anions		14.3			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		16.6			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	57			mg/L	1	5	04/17/07 9:31	jag
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	04/13/07 14:18	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.89			mg/L	0.04	0.2	04/20/07 18:46	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	1040			mg/L	10	20	04/10/07 10:51	lcp
Sulfate	SM4500 SO4-D	480			mg/L	10	50	04/11/07 11:02	seb
TDS (calculated)	Calculation	930			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.12						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL

Sample ID: IW-2

ACZ Sample ID: **L61914-02**

Date Sampled: 04/03/07 08:35

Date Received: 04/09/07

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	55.7			mg/L	0.2	1	04/16/07 19:20	djt
Magnesium, dissolved	M200.7 ICP	12.1			mg/L	0.2	1	04/16/07 19:20	djt
Potassium, dissolved	M200.7 ICP	5.4		*	mg/L	0.3	2	04/16/07 19:20	djt
Sodium, dissolved	M200.7 ICP	39.6			mg/L	0.3	2	04/16/07 19:20	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		147			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		147			mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.8			%			04/24/07 0:00	calc
Sum of Anions		5.3			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		5.6			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	16			mg/L	1	5	04/17/07 9:32	jag
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	04/13/07 14:20	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.48			mg/L	0.02	0.1	04/20/07 17:49	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	350			mg/L	10	20	04/10/07 10:53	lcp
Sulfate	SM4500 SO4-D	90			mg/L	10	50	04/11/07 11:05	seb
TDS (calculated)	Calculation	307			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.14						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL

Sample ID: IW-3A

ACZ Sample ID: **L61914-03**

Date Sampled: 04/03/07 08:45

Date Received: 04/09/07

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	454			mg/L	0.4	2	04/16/07 19:33	djt
Magnesium, dissolved	M200.7 ICP	101			mg/L	0.4	2	04/16/07 19:33	djt
Potassium, dissolved	M200.7 ICP	13.6		*	mg/L	0.6	3	04/16/07 19:33	djt
Sodium, dissolved	M200.7 ICP	117			mg/L	0.6	3	04/16/07 19:33	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		114			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		114		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-1.6			%			04/24/07 0:00	calc
Sum of Anions		37.7			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		36.5			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	110			mg/L	10	50	04/17/07 9:57	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/13/07 14:41	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.93			mg/L	0.02	0.1	04/20/07 17:52	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2600			mg/L	10	20	04/10/07 10:54	lcp
Sulfate	SM4500 SO4-D	1540			mg/L	10	50	04/11/07 11:08	seb
TDS (calculated)	Calculation	2400			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.08						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
Sample ID: IW-8

ACZ Sample ID: **L61914-04**
Date Sampled: 04/03/07 09:00
Date Received: 04/09/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	505			mg/L	0.4	2	04/16/07 19:37	djt
Magnesium, dissolved	M200.7 ICP	113			mg/L	0.4	2	04/16/07 19:37	djt
Potassium, dissolved	M200.7 ICP	12.6		*	mg/L	0.6	3	04/16/07 19:37	djt
Sodium, dissolved	M200.7 ICP	171			mg/L	0.6	3	04/16/07 19:37	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		119			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		119		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-0.7			%			04/24/07 0:00	calc
Sum of Anions		43.0			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		42.4			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	130			mg/L	10	50	04/17/07 9:41	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/13/07 14:48	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	4.94			mg/L	0.04	0.2	04/20/07 18:49	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	3060			mg/L	10	20	04/10/07 10:56	lcp
Sulfate	SM4500 SO4-D	1760			mg/L	10	50	04/11/07 11:10	seb
TDS (calculated)	Calculation	2760			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.11						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
Sample ID: MH-10

ACZ Sample ID: **L61914-05**
Date Sampled: 04/03/07 12:20
Date Received: 04/09/07
Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	455			mg/L	0.4	2	04/16/07 19:41	djt
Magnesium, dissolved	M200.7 ICP	74.4			mg/L	0.4	2	04/16/07 19:41	djt
Potassium, dissolved	M200.7 ICP	5.6		*	mg/L	0.6	3	04/16/07 19:41	djt
Sodium, dissolved	M200.7 ICP	66.8			mg/L	0.6	3	04/16/07 19:41	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		133			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		133		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-3.6			%			04/24/07 0:00	calc
Sum of Anions		34.3			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		31.9			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	110			mg/L	10	50	04/17/07 9:42	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/13/07 14:55	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.99			mg/L	0.02	0.1	04/20/07 17:58	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2390			mg/L	10	20	04/10/07 10:58	lcp
Sulfate	SM4500 SO4-D	1360			mg/L	10	50	04/11/07 11:13	seb
TDS (calculated)	Calculation	2150			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.11						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: MH-12

ACZ Sample ID: **L61914-06**
 Date Sampled: 04/04/07 13:45
 Date Received: 04/09/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	362			mg/L	0.4	2	04/16/07 19:46	djt
Magnesium, dissolved	M200.7 ICP	72.5			mg/L	0.4	2	04/16/07 19:46	djt
Potassium, dissolved	M200.7 ICP	9.3		*	mg/L	0.6	3	04/16/07 19:46	djt
Sodium, dissolved	M200.7 ICP	73.3			mg/L	0.6	3	04/16/07 19:46	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		102			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		102		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		-2.8			%			04/24/07 0:00	calc
Sum of Anions		29.1			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		27.5			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	120			mg/L	10	50	04/17/07 9:57	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/13/07 15:10	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	3.45			mg/L	0.02	0.1	04/20/07 17:59	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2010			mg/L	10	20	04/10/07 10:59	lcp
Sulfate	SM4500 SO4-D	1130			mg/L	10	50	04/11/07 11:18	seb
TDS (calculated)	Calculation	1830			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.10						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: MH-25A

ACZ Sample ID: **L61914-07**
 Date Sampled: 04/04/07 12:40
 Date Received: 04/09/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	29.9			mg/L	0.2	1	04/16/07 19:50	djt
Magnesium, dissolved	M200.7 ICP	7.9			mg/L	0.2	1	04/16/07 19:50	djt
Potassium, dissolved	M200.7 ICP	2.7		*	mg/L	0.3	2	04/16/07 19:50	djt
Sodium, dissolved	M200.7 ICP	34.0			mg/L	0.3	2	04/16/07 19:50	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		158			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		158		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		4.2			%			04/24/07 0:00	calc
Sum of Anions		3.4			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		3.7			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	9			mg/L	1	5	04/17/07 9:38	jag
Fluoride	SM4500F-C	0.5	B	*	mg/L	0.1	0.5	04/13/07 15:17	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.07			mg/L	0.02	0.1	04/20/07 18:00	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	220			mg/L	10	20	04/10/07 11:00	lcp
Sulfate	SM4500 SO4-D		U		mg/L	10	50	04/11/07 11:20	seb
TDS (calculated)	Calculation	179			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.23						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: MH-25B

ACZ Sample ID: **L61914-08**
 Date Sampled: 04/04/07 13:24
 Date Received: 04/09/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	502			mg/L	0.4	2	04/16/07 19:54	djt
Magnesium, dissolved	M200.7 ICP	109			mg/L	0.4	2	04/16/07 19:54	djt
Potassium, dissolved	M200.7 ICP	11.1		*	mg/L	0.6	3	04/16/07 19:54	djt
Sodium, dissolved	M200.7 ICP	94.7			mg/L	0.6	3	04/16/07 19:54	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		92			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		92		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.9			%			04/24/07 0:00	calc
Sum of Anions		37.1			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		38.5			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	97			mg/L	1	5	04/17/07 9:38	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/13/07 15:25	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	2.08			mg/L	0.02	0.1	04/20/07 18:01	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2550			mg/L	10	20	04/10/07 11:02	icp
Sulfate	SM4500 SO4-D	1550			mg/L	10	50	04/11/07 11:23	seb
TDS (calculated)	Calculation	2420			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.05						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: MH-26A

ACZ Sample ID: **L61914-09**
 Date Sampled: 04/04/07 10:09
 Date Received: 04/09/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	%Q	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	54.7			mg/L	0.2	1	04/16/07 19:58	djt
Magnesium, dissolved	M200.7 ICP	12.8			mg/L	0.2	1	04/16/07 19:58	djt
Potassium, dissolved	M200.7 ICP	4.4		*	mg/L	0.3	2	04/16/07 19:58	djt
Sodium, dissolved	M200.7 ICP	40.6			mg/L	0.3	2	04/16/07 19:58	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	%Q	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		156			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		156		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		21.7			%			04/24/07 0:00	calc
Sum of Anions		3.6			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		5.6			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	9			mg/L	1	5	04/17/07 9:38	jag
Fluoride	SM4500F-C	0.5	B	*	mg/L	0.1	0.5	04/16/07 12:55	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.06			mg/L	0.02	0.1	04/20/07 18:03	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	230			mg/L	10	20	04/10/07 11:03	lcp
Sulfate	SM4500 SO4-D	10	B	*	mg/L	10	50	04/19/07 11:34	aeH/wpa
TDS (calculated)	Calculation	226			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.02						04/24/07 0:00	calc

Note: Suspected analytes were retested to verify the Cation-Anion Balance.

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL

Sample ID: MH-26B

ACZ Sample ID: **L61914-10**

Date Sampled: 04/04/07 11:56

Date Received: 04/09/07

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	495			mg/L	0.4	2	04/16/07 20:02	djt
Magnesium, dissolved	M200.7 ICP	109			mg/L	0.4	2	04/16/07 20:02	djt
Potassium, dissolved	M200.7 ICP	11.1		*	mg/L	0.6	3	04/16/07 20:02	djt
Sodium, dissolved	M200.7 ICP	91.0			mg/L	0.6	3	04/16/07 20:02	djt

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		16	B		mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		16	B	*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		0.4			%			04/24/07 0:00	calc
Sum of Anions		37.7			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		38.0			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	120			mg/L	10	50	04/17/07 9:57	jag
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	04/16/07 13:02	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	28.8			mg/L	0.5	3	04/20/07 18:50	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	2730			mg/L	10	20	04/10/07 11:04	lcp
Sulfate	SM4500 SO4-D	1620			mg/L	10	50	04/11/07 11:28	seb
TDS (calculated)	Calculation	2460			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.11						04/24/07 0:00	calc

Arizona license number: AZ0102

Phelps Dodge Sierrita

Project ID: OJ03DL
 Sample ID: MH-26C

ACZ Sample ID: **L61914-11**
 Date Sampled: 04/04/07 09:43
 Date Received: 04/09/07
 Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	KG	Units	MDL	POI	Date	Analyst
Calcium, dissolved	M200.7 ICP	223			mg/L	0.2	1	04/17/07 0:01	msh
Magnesium, dissolved	M200.7 ICP	48.6			mg/L	0.2	1	04/17/07 0:01	msh
Potassium, dissolved	M200.7 ICP	11.2			mg/L	0.3	2	04/17/07 0:01	msh
Sodium, dissolved	M200.7 ICP	97.8			mg/L	0.3	2	04/17/07 0:01	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	KG	Units	MDL	POI	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		85			mg/L	2	20	04/13/07 0:00	cas
Carbonate as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Hydroxide as CaCO3			U		mg/L	2	20	04/13/07 0:00	cas
Total Alkalinity		85		*	mg/L	2	20	04/13/07 0:00	cas
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.8			%			04/24/07 0:00	calc
Sum of Anions		19.0			meq/L	0.1	0.5	04/24/07 0:00	calc
Sum of Cations		19.7			meq/L	0.1	0.5	04/24/07 0:00	calc
Chloride	M325.2 - Colorimetric	78			mg/L	1	5	04/17/07 9:38	jag
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	04/16/07 13:09	cas
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	6.9			mg/L	0.2	1	04/20/07 18:51	nps
Residue, Filterable (TDS) @180C	M160.1 - Gravimetric	1320			mg/L	10	20	04/10/07 11:06	lcp
Sulfate	SM4500 SO4-D	720			mg/L	10	50	04/11/07 11:31	seb
TDS (calculated)	Calculation	1230			mg/L	10	50	04/24/07 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.07						04/24/07 0:00	calc

Arizona license number: AZ0102



Report Headers Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	Analyte was analyzed for but not detected at the indicated MDL

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: L61914

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223094													
WG223094LCSW2	LCSW	04/13/07 16:28	WC070404-1	820		750.8	mg/L	91.6	80	120			
L61914-02DUP	DUP	04/13/07 18:12			147	146.4	mg/L				0.4	20	
L61927-01DUP	DUP	04/13/07 19:27			U	U	mg/L				0	20	RA
WG223094LCSW5	LCSW	04/13/07 19:40	WC070404-1	820		810.9	mg/L	98.9	80	120			
WG223094LCSW8	LCSW	04/13/07 22:33	WC070404-1	820		815.8	mg/L	99.5	80	120			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223184													
WG223184ICV	ICV	04/16/07 17:44	II070403-5	2		1.931	mg/L	96.6	95	105			
WG223184ICB	ICB	04/16/07 17:48				U	mg/L		-0.09	0.09			
WG223184LFB	LFB	04/16/07 18:05	II070328-2	1		.964	mg/L	96.4	85	115			
L61914-01AS	AS	04/16/07 19:12	II070328-2	1	.11	1.132	mg/L	102.2	85	115			
L61914-01ASD	ASD	04/16/07 19:16	II070328-2	1	.11	1.077	mg/L	96.7	85	115	4.98	20	
WG223189													
WG223189ICV	ICV	04/16/07 23:36	II070403-5	2		1.931	mg/L	96.6	95	105			
WG223189ICB	ICB	04/16/07 23:40				U	mg/L		-0.09	0.09			
WG223189LFB	LFB	04/16/07 23:57	II070328-2	1		1.011	mg/L	101.1	85	115			
L61914-11AS	AS	04/17/07 0:05	II070328-2	1	U	1.05	mg/L	105	85	115			
L61914-11ASD	ASD	04/17/07 0:09	II070328-2	1	U	1.065	mg/L	106.5	85	115	1.42	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG222872													
WG222872ICV	ICV	04/09/07 22:03	MS070308-2	.02		.02055	mg/L	102.8	90	110			
WG222872ICB	ICB	04/09/07 22:09				.00045	mg/L		-0.0012	0.0012			
WG222872LFB	LFB	04/09/07 22:14	MS070227-3	.00625		.00619	mg/L	99	85	115			
L61885-01AS	AS	04/09/07 22:26	MS070227-3	.00625	.0006	.00602	mg/L	86.7	70	130			
L61885-01ASD	ASD	04/09/07 22:32	MS070227-3	.00625	.0006	.00626	mg/L	90.6	70	130	3.91	20	
L61914-02AS	AS	04/09/07 23:47	MS070227-3	.00625	U	.00556	mg/L	89	70	130			
L61914-02ASD	ASD	04/09/07 23:52	MS070227-3	.00625	U	.00581	mg/L	93	70	130	4.4	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG222872													
WG222872ICV	ICV	04/09/07 22:03	MS070308-2	.05		.05262	mg/L	105.2	90	110			
WG222872ICB	ICB	04/09/07 22:09				U	mg/L		-0.0015	0.0015			
WG222872LFB	LFB	04/09/07 22:14	MS070227-3	.05		.05166	mg/L	103.3	85	115			
L61885-01AS	AS	04/09/07 22:26	MS070227-3	.05	.0007	.05574	mg/L	110.1	70	130			
L61885-01ASD	ASD	04/09/07 22:32	MS070227-3	.05	.0007	.0541	mg/L	106.8	70	130	2.99	20	
L61914-02AS	AS	04/09/07 23:47	MS070227-3	.05	.0063	.05759	mg/L	102.6	70	130			
L61914-02ASD	ASD	04/09/07 23:52	MS070227-3	.05	.0063	.05833	mg/L	104.1	70	130	1.28	20	

Phelps Dodge Sierrita
 Project ID: OJ03DL

ACZ Project ID: **L61914**

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SON	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223216													
WG223216ICV	ICV	04/17/07 14:00	II070403-5	2		2.0111	mg/L	100.6	95	105			
WG223216ICB	ICB	04/17/07 14:04				U	mg/L		-0.009	0.009			
WG223216LFB	LFB	04/17/07 14:20	II070328-2	.5		.4876	mg/L	97.5	85	115			
L61914-01AS	AS	04/17/07 14:40	II070328-2	.5	.032	.5561	mg/L	104.8	85	115			
L61914-01ASD	ASD	04/17/07 14:44	II070328-2	.5	.032	.5522	mg/L	104	85	115	0.7	20	
L61914-11AS	AS	04/17/07 15:44	II070328-2	.5	.063	.5503	mg/L	97.5	85	115			
L61914-11ASD	ASD	04/17/07 15:47	II070328-2	.5	.063	.5534	mg/L	98.1	85	115	0.56	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SON	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG222872													
WG222872ICV	ICV	04/09/07 22:03	MS070308-2	.05		.05101	mg/L	102	90	110			
WG222872ICB	ICB	04/09/07 22:09				U	mg/L		-0.0003	0.0003			
WG222872LFB	LFB	04/09/07 22:14	MS070227-3	.05		.05036	mg/L	100.7	85	115			
L61885-01AS	AS	04/09/07 22:26	MS070227-3	.05	U	.05136	mg/L	102.7	70	130			
L61885-01ASD	ASD	04/09/07 22:32	MS070227-3	.05	U	.05068	mg/L	101.4	70	130	1.33	20	
L61914-02AS	AS	04/09/07 23:47	MS070227-3	.05	U	.04973	mg/L	99.5	70	130			
L61914-02ASD	ASD	04/09/07 23:52	MS070227-3	.05	U	.04975	mg/L	99.5	70	130	0.04	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SON	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG222872													
WG222872ICV	ICV	04/09/07 22:03	MS070308-2	.05		.05251	mg/L	105	90	110			
WG222872ICB	ICB	04/09/07 22:09				U	mg/L		-0.0003	0.0003			
WG222872LFB	LFB	04/09/07 22:14	MS070227-3	.05		.05111	mg/L	102.2	85	115			
L61885-01AS	AS	04/09/07 22:26	MS070227-3	.05	U	.05102	mg/L	102	70	130			
L61885-01ASD	ASD	04/09/07 22:32	MS070227-3	.05	U	.05051	mg/L	101	70	130	1	20	
L61914-02AS	AS	04/09/07 23:47	MS070227-3	.05	U	.04965	mg/L	99.3	70	130			
L61914-02ASD	ASD	04/09/07 23:52	MS070227-3	.05	U	.05007	mg/L	100.1	70	130	0.84	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SON	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223184													
WG223184ICV	ICV	04/16/07 17:44	II070403-5	100		99.31	mg/L	99.3	95	105			
WG223184ICB	ICB	04/16/07 17:48				U	mg/L		-0.6	0.6			
WG223184LFB	LFB	04/16/07 18:05	II070328-2	67.97554		67.23	mg/L	98.9	85	115			
L61914-01AS	AS	04/16/07 19:12	II070328-2	67.97554	194	268.31	mg/L	109.3	85	115			
L61914-01ASD	ASD	04/16/07 19:16	II070328-2	67.97554	194	265.33	mg/L	104.9	85	115	1.12	20	
WG223189													
WG223189ICV	ICV	04/16/07 23:36	II070403-5	100		99.7	mg/L	99.7	95	105			
WG223189ICB	ICB	04/16/07 23:40				U	mg/L		-0.6	0.6			
WG223189LFB	LFB	04/16/07 23:57	II070328-2	67.97554		70.17	mg/L	103.2	85	115			
L61914-11AS	AS	04/17/07 0:05	II070328-2	67.97554	223	282.07	mg/L	86.9	85	115			
L61914-11ASD	ASD	04/17/07 0:09	II070328-2	67.97554	223	287.56	mg/L	95	85	115	1.93	20	

Phelps Dodge Sierrita
Project ID: OJ03DL

ACZ Project ID: **L61914**

Chloride M325.2 - Colorimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223222													
WG223222ICB	ICB	04/17/07 8:51				U	mg/L		-3	3			
WG223222ICV	ICV	04/17/07 8:51	WI070314-1	55		59.7	mg/L	108.5	90	110			
WG223222LFB1	LFB	04/17/07 9:23	WI070205-1	30		30.2	mg/L	100.7	90	110			
L61914-01DUP	DUP	04/17/07 9:31			57	56.6	mg/L				0.7	20	
L61914-11DUP	DUP	04/17/07 9:38			78	78.2	mg/L				0.3	20	
L61913-08AS	AS	04/17/07 9:41	10XCL	30	100	129	mg/L	96.7	90	110			
WG223222LFB2	LFB	04/17/07 9:48	WI070205-1	30		30.2	mg/L	100.7	90	110			
L61914-10AS	AS	04/17/07 9:57	10XCL	30	120	149	mg/L	96.7	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223184													
WG223184ICV	ICV	04/16/07 17:44	II070403-5	2		1.948	mg/L	97.4	95	105			
WG223184ICB	ICB	04/16/07 17:48				U	mg/L		-0.03	0.03			
WG223184LFB	LFB	04/16/07 18:05	II070328-2	.5		.496	mg/L	99.2	85	115			
L61914-01AS	AS	04/16/07 19:12	II070328-2	.5	U	.518	mg/L	103.6	85	115			
L61914-01ASD	ASD	04/16/07 19:16	II070328-2	.5	U	.52	mg/L	104	85	115	0.39	20	
WG223189													
WG223189ICV	ICV	04/16/07 23:36	II070403-5	2		1.961	mg/L	98.1	95	105			
WG223189ICB	ICB	04/16/07 23:40				U	mg/L		-0.03	0.03			
WG223189LFB	LFB	04/16/07 23:57	II070328-2	.5		.493	mg/L	98.6	85	115			
L61914-11AS	AS	04/17/07 0:05	II070328-2	.5	U	.498	mg/L	99.6	85	115			
L61914-11ASD	ASD	04/17/07 0:09	II070328-2	.5	U	.503	mg/L	100.6	85	115	1	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG223184													
WG223184ICV	ICV	04/16/07 17:44	II070403-5	2		1.924	mg/L	96.2	95	105			
WG223184ICB	ICB	04/16/07 17:48				U	mg/L		-0.03	0.03			
WG223184LFB	LFB	04/16/07 18:05	II070328-2	.5		.492	mg/L	98.4	85	115			
L61914-01AS	AS	04/16/07 19:12	II070328-2	.5	U	.514	mg/L	102.8	85	115			
L61914-01ASD	ASD	04/16/07 19:16	II070328-2	.5	U	.517	mg/L	103.4	85	115	0.58	20	
WG223189													
WG223189ICV	ICV	04/16/07 23:36	II070403-5	2		1.939	mg/L	97	95	105			
WG223189ICB	ICB	04/16/07 23:40				U	mg/L		-0.03	0.03			
WG223189LFB	LFB	04/16/07 23:57	II070328-2	.5		.498	mg/L	99.6	85	115			
L61914-11AS	AS	04/17/07 0:05	II070328-2	.5	U	.495	mg/L	99	85	115			
L61914-11ASD	ASD	04/17/07 0:09	II070328-2	.5	U	.497	mg/L	99.4	85	115	0.4	20	