Table 1. Chemistry and descriptions of rock, pulp, and tailings samples from the Pea Ridge mine.

[gm/cm^3, gram per cubic centimeter; ppm, parts per million; %, percent; ICPAES-MS-55, SGS Laboratories inductively coupled plasma atomic-emission mass spectrometry; ICP16, SGS Laboratories inductively coupled plasma mass spectrometry; ICP-MS, USGS inductively coupled plasma mass spectrometry; INAA, USGS instrumental neutron activation analysis (long count); INAA-SH, USGS instrumental neutron activation utilizing a short irradiation; WDXRF, USGS wavelength dispersive X-ray fluorescence; nd, not determined; LOI, loss on ignition at 925 °C]

[Green shading and gray shading (in print version) indicates preferred method for this element; except when WDXRF is done, it is the preferred method]

Analyte					Density (dry)	Ag	Al	Al	Al	Al	As	As	Au	Ba	Ba	Ba	Be	Bi	Ca	Ca	Ca	Ca	Cd	Ce	Ce	Co	Co	Cr	Cr	Cr	Cs	Cs	Cu	Dy	Er	Eu	Eu	Fe	Fe	Fe	Fe	Ga	Gd	Gd	Ge	Hf	Hf	Ho	Ho	In	K	K	K	K
Unit					g/cm^3	ppm	%	%	%	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
Analytical method						ICPAES-MS-55	ICP16	ICPAES-MS-55	INAA-SH	WDXRF	ICPAES-MS-55	INAA	INAA	ICP16	ICPAES-MS-55	INAA	ICPAES-MS-55	ICPAES-MS-55	ICP16	ICPAES-MS-55	INAA-SH	WDXRF	ICPAES-MS-55	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICPAES-MS-55	ICPAES-MS-55	ICPAES-MS-55	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	INAA	WDXRF	ICPAES-MS-55	ICPAES-MS-55	INAA	ICPAES-MS-55	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICPAES-MS-55	ICP16	ICPAES-MS-55	INAA-SH	WDXRF
Sample number	Mine level and drill hole number	Distance from drill collar (feet)	Sample length (inches)	Sample description																																																	
08-MO-PR-1	Level 2275, DDH 14	11	6.0	full core, fine-grained foliated breccia, foliation defined by ribbons of quartz and translucent red crystals layered with bands of diffuse light tan colored layers, all are cut by veins of light green material		2.57	<1	7.3	6.72	7.27	<30	2.83	0.84	1390	1,330	1,400	<5	<0.1	0.29	0.33	0.32		<0.2	150	162	6.6	6.26	<10	10	5.26	1.5	1.45	<5	13.2	8.51	2.43	2.54	3.34	3.33	3.14		18	15.8	14.1	1	9	8.52	2.75	3.12	<0.2	5.2	4.43	4.880	
08-MO-PR-2	Level 2275, DDH 14	20	4.0	half core, massive medium-grained specular hematite with disseminated fine grained quartz		4.70	<1	0.35	0.25	0.36	<30	4.21	2.34	30	28.6	33.5	<5	<0.1	1.17	1.15	1.11		<0.2	364	409	2.9	2.68	<10	<10	13.50	<0.1	0.09	<5	19.4	12.6	2.11	2.25	57.4	>30	59.40		9	23.3	21.5	1	<1	0.33	4.08	4.67	<0.2	0.03	0.03	0.054	
08-MO-PR-3	Level 2275, DDH 14	20.5	4.5	half core, brecciated medium-grained specular hematite clasts supported by deformed masses of quartz, green crystals and translucent red crystals. cut by a laminated layer of quartz layers, quartz plus green layers, and green layers (total thickness of about 0.1 in)		3.95	<1	1.2	1.03	1.23	<30	2.47	2.10	340	311	324	<5	<0.1	0.88	0.96	0.89		<0.2	183	205	2.2	1.89	<10	10	13.70	<0.1	0.13	<5	8.24	6.16	1.09	1.07	50.8	>30	53.00		8	10.4	9.1	2	1	1.17	1.86	2.12	<0.2	0.6	0.57	0.670	
08-MO-PR-4	Level 2275, DDH 14	60	4.8	half core, massive fine-grained specular hematite with fine white grains disseminated in it, very fine breccia, may have trace of sulfide associated with some of the smeared white grains		4.53	<1	0.37	0.28	0.41	<30	4.78	4.95	20	23.1	35.4	<5	<0.1	2.69	2.71	2.83		<0.2	614	687	2.4	2.38	<10	<10	8.80	<0.1	0.03	<5	32.5	23.2	3.64	3.73	54.8	>30	58.20		11	38	33.2	2	<1	0.10	7.15	7.77	<0.2	<0.01	0.01	0.014	
08-MO-PR-5	Level 2275, DDH 14	73	5.0	half core, breccia, mottled red (dominant) with patches of disseminated dark green fine-grained crystals) and rare light colored (quartz-rich zones), red areas seem to be a mixture of quartz and translucent red crystals		3.83	<1	1.1	1.01	1.09	150	498	480	<10	14.2	1,660	21	2.4	2.01	2	2.01		<0.2	>10,000	140,165	17	16.40	<10	<10	1.00	0.1	0.13	42	>1,000	>1,000	633	611	3.31	3.33	2.66		601	>1,000	4,090	78	23	2.52	826	1070	<0.2	0.03	0.03	0.265	
08-MO-PR-6	Level 2275, DDH 14	85	4.0	several fragments of half core, massive fine-grained dark silver magnetite ore with disseminated coarse (up to 0.25 inch red translucent crystals, also has disseminated fine-grained geen crystals (chlorite or actinolite)		4.39	2	0.77	0.71	0.59	<30	8.56	10.40	30	30	74.2	<5	0.3	1.66	1.69	1.15		<0.2	1350	1,350	25.9	28.50	<10	10	9.59	<0.1	0.07	<5	42.8	26.3	7.02	7.23	58	>30	60.50		56	64.6	55.3	2	<1	0.11	8.43	9.49	<0.2	<0.01	<0.01	0.017	
08-MO-PR-7	Level 2275, DDH 14	123	4.0	half core, massive fine-grained dark silver magnetite ore, with irregular zones of quartz, green crystals, and very fine reddish crystals.		4.42	<1	1.03	0.94	0.73	<30	2.55	2.53	30	30	44.4	<5	<0.1	1.73	1.73	1.21		<0.2	617	692	58.6	60.60	<10	10	8.57	<0.1	0.02	<5	31.4	20.9	4.54	4.63	55.2	>30	55.80		63	41.6	35.5	2	<1	0.14	6.49	7.30	<0.2	<0.01	0.01	0.006	
08-MO-PR-8	Level 2275, DDH 14	163	3.5	half core, massive fine-grained dark silver magnetite ore, a few shear surfaces in the magnetite, cut by white veinlets (that have branches), a veinlet of fine grained green (chlorite or actinolite) crystals, veinlet also has an irregular mass of reddish crystals		4.91	<1	0.23	0.22	0.19	<30	1.57	3.58	20	26.5	14.0	<5	<0.1	0.41	0.46	0.28		<0.2	252	260	62.6	86.30	<10	<10	11.30	<0.1	0.13	<5	7.52	4.7	1.06	1.03	61	>30	67.60		28	11.6	8.67	1	<1	0.20	1.64	1.70	<0.2	<0.01	0.02	0.016	
08-MO-PR-9	Level 2475, DDH 6	231	8.5	quarter core, mottled pale to dark red with irregular zones that are dark green to black		3.40	<1	1.55	1.4	1.34	80	352	204.00	<10	12	1,180	11	0.4	2.84	2.77	2.50		<0.2	>10,000	91,800	15.9	13.20	<10	10	1.99	0.2	0.17	30	>1,000	>1,000	359	419	3.94	3.85	3.61		330	>1,000	2,780	44	13	3.61	384	597	<0.2	0.58	0.5	0.411	
08-MO-PR-10	Block 962, DDH 26	311	2.2	full core, intergrown actinolite crystals (up to approx 0.5 in long) and magnetite, white veinlet cuts core longitudinally, pale to dark green with black magnetite interstitial		3.25	<1	0.15	0.14	0.16	<30	1.70	6.93	<10	13.8	25.60	31	<0.1	4.43	4.35	4.35		<0.2	457	482	32.5	36.90	<10	10	4.08	<0.1	0.24	9	35.9	29.6	3.4	3.67	25.2	20.2	24.30		6	33.9	34.4	4	3	2.87	8.27	9.52	0.9	0.04	0.05	0.051	
08-MO-PR-11	Level 2475			jack-hammer pulps		nd	6	2.66	2.36	2.49	110	118	1550	1230	1,110	1,970	<5	1.9	0.77	0.76	0.85		<0.2	>10,000	10,800	87.8	84.80	30	30	19.30	0.4	0.61	192	340	242	71	70.6	2.11	2	2.00		87	441	610	9	9	7.12	70.6	93.5	<0.2	2.66	2.65	2.640	
01A-PR08	tailings			0.5 to 1-inch long pieces of tailings material. Composed of magnetite, Fe-oxides, sulfides (pyrite), and quartz		nd	<1		0.55		0.64	<30			83.4		<5	0.3		3.45		3.66	<0.2	446		60.8			300		0.5		48	37.2	24.3	2.68			21.7		>19.6	9	34.8		2	<1		7.9		<0.2		0.36		0.32
01B-PR08	tailings			0.25 to 3-inch long pieces of tailings material. Composed of magnetite, Fe-oxides, sulfides (pyrite), and quartz		nd	<1		0.49		0.32	<30			1,270		7	0.8		2.7		2.27	<0.2	725		278			10		0.2		324	43.4	26.8	3.71			29		>19.6	9	46.9		2	1		9.09		<0.2		0.42		0.27
01C-PR08	tailings			Sandy sediment from tailings lake		nd	<1		1.68		1.71	<30			1,100		6	0.4		4.44		4.48	<0.2	1,140		32.9			10		0.6		155	67.9	41	5.86			23.4		>19.6	10	77.7		2	3		14		0.3		1.98		1.85

Table 1. Chemistry and descriptions of rock, pulp, and tailings samples from the Pea Ridge mine.—Continued

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Analyte	La	La	Li	Lu	Lu	Mg	Mg	Mg	Mg	Mn	Mn	Mn	Mn	Mo	Na	Na	Na	Nb	Nb	Nd	Nd	Ni	Ni	P	P	P	Pb	Pr	Rb	Rb	Re	Sb	Sb	Sc	Sc	Si	Si	Sm	Sm	Sn	Sn	Sr	Sr	Sr	Ta	Ta	Tb	Tb	Te	Th	Th	Ti	Ti	Ti	Ti	Tl	Tm	Tm	U	U	V	V	W	W	Y
Unit	ppm	ppm	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Analytical method	ICPAES-MS-55	INAA	ICPAES-MS-55	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	INAA-SH	WDXRF	ICP16	ICPAES-MS-55	INAA-SH	WDXRF	ICPAES-MS-55	ICP16	INAA-SH	WDXRF	ICP16	ICPAES-MS-55	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	WDXRF	ICPAES-MS-55	ICPAES-MS-55	ICPAES-MS-55	INAA	ICP-MS	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICP16	WDXRF	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICP-MS	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	INAA-SH	WDXRF	ICPAES-MS-55	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA-SH	ICPAES-MS-55	INAA	ICP16
Sample number																																																																		
08-MO-PR-1	73.2	79	<10	1.21	1.22	0.62	0.6	0.66		100	0.01	112		<2	2.39	2.080		10	10	75.7	82.4	18	1.12	0.03	0.04		<5	19	198	182	0.0008	0.3	0.38	5	7.18	31.4		16.5	16.9	3	15.2	90	82.4	77.3	0.9	0.95	2.35	2.29	0.15	5	7.74	0.15	0.14	0.188		<0.5	1.16	1.32	1.86	2.10	12	12.9	2	2.05	80
08-MO-PR-2	215	241	<10	1.78	1.95	0.08	0.07	0.24		100	0.01	141		8	0.03	0.015		<10	4	122	131	54	12.1	0.51	0.51		<5	35	1.5	14.9	0.0008	8.5	14.8	<5	6.73	4.32		20.4	21.6	11	50.9	10	11.5	42.7	<0.5	0.47	3.41	3.51	0.51	8.7	14.1	0.05	0.03	0.054		<0.5	1.61	1.97	5.43	6.01	205	288	7	11.80	140
08-MO-PR-3	110	120	<10	1.03	1.07	0.39	0.36	0.45		300	0.03	333		9	0.02	0.017		<10	7	59.1	64.4	58	44.3	0.28	0.26		<5	17.8	28.9	39.3	0.0003	9.2	13.0	<5	7.17	7.43		9.4	10.2	12	51.4	20	17.6	41.2	<0.5	0.57	1.52	1.45	0.37	6	9.15	0.07	0.06	0.077		<0.5	0.82	1.01	3.4	3.59	224	290	5	6.68	60
08-MO-PR-4	361	399	<10	3.23	3.28	0.13	0.11	0.35		200	0.02	270		11	0.04	0.016		<10	3	200	202	44	54.9	1.3	1.19		<5	58.9	<0.2	14.1	0.0016	7.7	14.4	<5	10.4	2.55		33.8	33.7	9	7.1	20	18.8	84.8	<0.5	0.39	5.86	5.85	0.6	15.6	23.2	0.04	0.03	0.050		<0.5	2.99	3.26	3.83	4.32	247	400	4	6.84	220
08-MO-PR-5	>1,0000	85,900	20	521	531	1.18	1.05	1.84		<100	<0.01	86		<2	<0.01	0.026		30	39	>1,0000	42,400	<5	717	7.48	6.9		433	14,100	3.7	41.9	0.0044	6.1	8.41	121	104	6.22		>1,000	5,240	>1,0000	10,942.1	740	652	1,050	9	2.24	727	678	23	>1,000	12,100	0.45	0.42	0.310		<0.5	456	443	504	618	314	307	55	1.00	12,907
08-MO-PR-6	780	876	<10	3.54	3.59	0.45	0.4	0.64		700	0.06	548		<2	0.02	0.010		<10	2	406	427	80	75	0.91	0.82		70	123	<0.2	11.1	0.0007	0.7	0.88	6	10.8	2.38		61.3	63.6	22	36.0	50	45.9	82.8	<0.5	0.32	8.78	8.23	16.4	27.5	27.7	0.06	0.05	0.045		<0.5	3.32	3.59	12	12.9	406	352	4	4.04	240
08-MO-PR-7	368	401	<10	3	3.17	0.56	0.49	0.73		1,100	0.1	738		2	0.02	0.011		<10	7	209	222	85	56.1	0.92	0.81		<5	60.3	0.2	13.9	0.001	0.2	0.23	7	10.9	5.44		38	40.1	17	89.7	30	28.1	87.2	<0.5	0.48	6.01	5.90	0.97	22.8	33.4	0.05	0.05	0.046		<0.5	2.75	2.98	8.98	9.52	403	280	2	1.23	210
08-MO-PR-8	149	149	<10	0.69	0.67	0.16	0.15	0.32		400	0.03	336		2	0.02	0.005		<10	2	79.3	77.5	103	87.2	0.21	0.19		<5	24.2	<0.2	16.9	0.0006	0.1	0.18	<5	4.52	0.97		11.7	11.1	7	24.0	<10	5	35.1	<0.5	0.29	1.55	1.31	0.12	8.9	10.7	0.03	0.03	0.024		<0.5	0.65	0.70	1.58	1.75	304	292	1	1.35	40
08-MO-PR-9	>1,0000	51,600	20	256	283	1.27	1.16	1.42		100	0.02	163		<2	<0.01	0.026		30	25	>1,0000	26,200	62	599	5.04	4.66		254	>1,000	5.6	108	0.0056	1.5	2.82	88	79.2	17		>1,000	3,560	552	1,451.7	750	652	895	4.8	2.31	373	415	241	>1,000	7,590	0.44	0.4	0.320		<0.5	221	299	308	369	321	265	51	206	8,000
08-MO-PR-10	240	247	<10	8.17	8.75	4.83	4.45	3.74		800	0.07	696		<2	0.12	0.107		<10	1	172	177	58	36.3	0.03	0.04		<5	48.9	0.3	8.2	0.0005	0.5	0.55	43	51.2	22.1		34	35.0	18	46.5	<10	8.3	40.4	<0.5	0.18	5.98	6.34	0.32	40.1	50.3	0.17	0.15	0.145		<0.5	4.55	6.43	3.64	4.15	152	164	<1	0.78	240
08-MO-PR-11	5,870	6,200	<10	42.5	44	0.18	0.16	0.33		<100	<0.01	40		23	0.07	0.057		40	29	3,020	3,300	89	148	0.93	0.8		273	>1,000	81.3	48.7	0.003	2.5	2.25	27	31.6	34		525	583	51	497.4	510	533	612	1.4	0.57	67.5	65.4	53.5	>1,000	4,510	0.26	0.24	0.230		<0.5	37.5	50.0	186	212	76	71.3	45	61.6	1,830
01A-PR08	259		10	4.17			2.42		2.84		0.05		0.07	3			<0.11		7	159		187			0.47	0.48	7	41.9	30.3			0.4		12			9.39	27.8		13		22.6		<0.5		5.43			17.7			0.09		0.11	<0.5	3.6		3.51		168		13			
01B-PR08	422		<10	4.23			0.14		0.25		0.02		0.04	33			<0.11		6	257		135			1.17	0.97	9	67	16.3			0.5		11			8.65	41.3		9		48.3		<0.5		6.89			23.6			0.06		0.07	<0.5	3.82		4.81		151		3			
01C-PR08	630		<10	6.24			0.96		1.20		0.03		0.04	12			<0.11		7	432		28			1.66	1.60	14	110	91			0.8		12			13.1	73.2		15		57.7		<0.5		11.1			42.9			0.16		0.18	<0.5	5.69		5.56		186		2			

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Analyte	Y	Yb	Yb	Zn	Zn	Zr	Zr	Zr	LOI
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Analytical method	ICPAES-MS-55	ICPAES-MS-55	INAA	ICPAES-MS-55	INAA	ICP16	ICPAES-MS-55	INAA	
Sample number									
08-MO-PR-1	77	8.1	7.72	15	19.7	250	282	285	
08-MO-PR-2	126	10.8	12.0	<5	16.5	20	11.8	107	
08-MO-PR-3	55	6.2	6.20	27	31.0	40	44.1	125	
08-MO-PR-4	214	19.6	21.70	8	32.5	20	10	94.6	
08-MO-PR-5	15,300	>1,000	3,290	13	2,250	80	92.5	3,220	
08-MO-PR-6	224	22.2	22.7	55	58.2	20	9.1	191	
08-MO-PR-7	196	18.2	19.60	87	97.4	10	10.6	115	
08-MO-PR-8	43	4.3	4.30	24	38.2	20	4.8	26.3	
08-MO-PR-9	>1,000	>1,000	1,910	15	1,910	80	91.1	2,500	
08-MO-PR-10	207	38.6	41.3	18	53.5	80	85.5	195	
08-MO-PR-11	>1,000	268	286	201	433	200	233	1,030	
01A-PR08	230	26.5		<5			14.9	2.74	
01B-PR08	267	27.3		<5			31.1	11.1	
01C-PR08	406	40.6		<5			103	3.27	