

High Grade Ore - +5% Pb+Zn Cutoff - As blocked out in pit by blastholes compared to reserves calculated for actual volume mined

16-Jan-90

019951

New reserve calculation using bench composites to replace that used for 1989 budget, used for the 1990 budget

bench	Actual (By Blasthole)			NEW F8908 RESERVES Undiluted but with a 95% Mining Recovery			NEW F8908 RESERVES Undiluted			%Variance Actual-F8908/Actual *100		
	tonnes	%Pb+Zn	metal	tonnes	%Pb+Zn	metal	tonnes	%Pb+Zn	metal	tonnes	%Pb+Zn	metal
Year: 1988												
3590 bz	23,906	9.53	2,278	12,968	6.90	894	13,650	6.90	941	45.8	27.6	68.7
3570 bz	298,464	8.65	25,824	236,968	8.90	21,083	249,440	8.90	22,193	20.6	-2.8	18.4
3550 bz	417,182	8.87	37,020	366,301	8.20	30,018	385,580	8.20	31,598	12.2	7.7	18.9
3530 bz	435,745	9.38	40,863	492,499	8.42	41,488	518,420	8.42	43,672	-13.0	10.2	-1.5
3510 bz	609,134	9.08	55,322	500,422	9.09	45,503	526,760	9.09	47,898	17.8	-0.1	17.7
3490 bz	811,842	9.85	79,867	648,423	9.66	62,644	682,550	9.66	65,941	20.1	1.9	21.6
3470 bz	795,795	9.80	77,954	884,517	9.96	88,124	931,870	9.96	92,763	-11.1	-1.7	-13.0
3450 bz	782,975	8.73	61,389	636,888	9.91	63,121	678,400	9.91	66,443	9.4	-13.5	-2.8
3430	0		0	42,465	8.65	3,673	44,700	8.65	3,866			
3410 ay	133,245	6.67	8,885	126,664	6.55	8,299	133,330	6.55	8,736	4.9	1.7	6.6
3390 ay	56,670	7.28	4,126	59,670	6.77	4,040	62,810	6.77	4,252	-5.3	7.0	2.1
1988 Total:	4,284,158	9.19	393,528	4,007,775	9.20	368,888	4,218,710	9.20	388,384	6.5	-0.2	6.3
AVERAGE DENSITY=			.111 tns/bcf	AVERAGE DENSITY=			.114 tns/bcf					
Year 1989												
3810	0	0.00	0	5,007	6.18	309	5,270	6.18	326			
3790	12,444	9.72	1,210	9,234	5.90	545	9,720	5.90	574	25.8	39.3	55.0
3770	11,756	9.32	1,096	523	6.88	36	550	6.88	38	95.6	26.2	96.7
3710	34,117	9.93	3,387	54,855	6.48	3,504	56,900	6.48	3,688	-58.4	34.7	-3.4
3690	85,923	7.48	6,427	113,582	8.97	10,186	119,560	8.97	10,722	-32.2	-19.9	-58.5
3670	142,548	8.28	11,800	114,817	8.03	9,222	120,860	8.03	9,707	19.5	3.0	21.8
3650	183,867	8.33	15,322	124,783	7.73	9,641	131,350	7.73	10,148	32.1	7.3	37.1
3630	242,894	8.19	19,898	240,827	7.43	17,829	252,660	7.43	18,768	1.2	9.3	10.4
3610	370,618	8.57	31,760	385,985	8.49	32,755	406,300	8.49	34,479	-4.1	1.0	-3.1
3590	367,829	8.44	31,059	294,586	9.72	28,640	318,890	9.72	30,147	19.9	-15.1	7.8
3570	251,201	8.49	21,322	256,890	9.20	23,631	270,410	9.20	24,875	-2.3	-8.4	-10.8
3550	162,958	8.26	13,468	219,108	8.12	17,785	230,640	8.12	18,721	-34.5	1.8	-32.1
3530	157,856	7.62	12,036	126,255	7.91	9,983	132,900	7.91	10,588	20.0	-3.7	17.1
3510	39,980	7.28	2,912	18,345	8.57	1,571	19,310	8.57	1,654	54.1	-17.6	46.0
3450	50,668	5.94	3,010	66,738	7.39	4,931	70,250	7.39	5,191	-31.7	-24.4	-63.8
3430	572,832	7.61	43,619	784,938	8.32	58,672	742,840	8.32	61,768	-23.1	-9.3	-34.5
3410	612,521	7.55	46,264	626,497	7.57	47,420	659,470	7.57	49,915	-2.3	-0.2	-2.5
3390	395,517	7.41	29,383	472,853	6.66	31,473	497,740	6.66	33,130	-19.6	10.2	-7.4
3370	398,804	7.56	30,151	302,233	7.47	22,580	318,140	7.47	23,768	24.2	1.2	25.1
3350	173,417	7.46	12,946	224,780	7.63	17,153	236,610	7.63	18,056	-29.6	-2.2	-32.5
3330	40,835	7.85	3,206	53,913	6.44	3,469	56,750	6.44	3,652	-32.0	18.0	-8.2
Year Total:	4,388,585	7.90	348,193	4,415,144	7.96	351,335	4,647,520	7.96	369,826	-2.5	-0.8	-3.3

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Original reserve calculation used for 1989 budget in a preliminary form, errors in that calculation were corrected for this comparison

bench	Actual (By Blasthole)			ORIGINAL F8805 RESERVES Diluted 10% by 0% Pb+Zn grade 95% Mining Recovery			ORIGINAL F8805 RESERVES Undiluted			%Variance Actual-dil F8805/Actual *100		
	tonnes	%Pb+Zn	metal	tonnes	%Pb+Zn	metal	tonnes	%Pb+Zn	metal	tonnes	%Pb+Zn	metal
Year: 1988												
3590 bz	23,906	9.53	2,270	39,156	10.27	4,021	37,470	11.30	4,233	-63.8	-7.8	-76.5
3570 bz	298,464	8.65	25,824	239,754	10.44	25,039	229,430	11.49	26,357	19.7	-20.7	3.0
3550 bz	417,182	8.87	37,020	360,170	9.66	34,802	344,660	10.63	36,634	13.7	-8.9	6.0
3530 bz	435,745	9.38	40,863	512,834	8.78	45,022	490,750	9.66	47,392	-17.7	6.4	-10.2
3510 bz	609,134	9.08	55,322	619,027	8.64	53,484	592,370	9.50	56,299	-1.6	4.9	3.3
3490 bz	811,042	9.85	79,867	785,265	9.50	74,593	751,450	10.45	78,519	3.2	3.5	6.6
3470 bz	795,795	9.80	77,954	841,507	9.74	81,986	805,270	10.72	86,381	-5.7	0.5	-5.2
3450 bz	702,975	8.73	61,389	701,260	8.83	61,890	671,070	9.71	65,147	0.2	-1.1	-0.8
3430	0		0	50,808	8.39	4,260	48,620	9.22	4,485			
3410 ay	133,245	6.67	8,885	146,770	6.89	10,108	140,450	7.58	10,640	-10.2	-3.3	-13.8
3390 ay	56,670	7.28	4,126	54,403	5.97	3,248	52,060	6.57	3,419	4.0	18.0	21.3
1988 Total:	4,284,158	9.19	393,528	4,350,962	9.16	398,454	4,163,600	10.07	419,425	-1.6	0.3	-1.3
AVERAGE DENSITY=			.111 tns/bcf	AVERAGE DENSITY=			.114 tns/bcf					
Year 1989												
3810	0	0.00	0	2,195	6.02	132	2,100	6.63	139			
3790	12,444	9.72	1,210	4,723	6.32	299	4,520	6.96	314	62.0	35.0	75.3
3770	11,756	9.32	1,096	314	7.51	24	300	8.26	25	97.3	19.5	97.9
3710	34,117	9.93	3,387	73,275	6.95	5,092	70,120	7.64	5,360	-114.8	30.0	-50.3
3690	85,923	7.48	6,427	139,037	9.91	13,777	133,050	10.90	14,502	-61.8	-32.5	-114.4
3670	142,548	8.28	11,800	144,252	8.70	12,545	138,040	9.57	13,205	-1.2	-5.1	-6.3
3650	183,867	8.33	15,322	167,493	7.17	12,002	160,280	7.88	12,633	8.9	14.0	21.7
3630	242,894	8.19	19,898	308,338	8.64	26,640	295,060	9.50	28,043	-26.9	-5.5	-33.9
3610	370,618	8.57	31,760	436,946	9.15	39,992	418,130	10.07	42,097	-17.9	-6.8	-25.9
3590	367,829	8.44	31,059	338,037	10.48	35,411	323,480	11.52	37,275	8.1	-24.1	-14.0
3570	251,201	8.49	21,322	292,161	9.57	27,955	279,580	10.53	29,426	-16.3	-12.7	-31.1
3550	162,958	8.26	13,468	243,694	8.26	20,118	233,200	9.08	21,177	-49.5	0.1	-49.4
3530	157,856	7.62	12,036	152,466	7.17	10,939	145,900	7.89	11,514	3.4	5.9	9.1
3510	39,980	7.28	2,912	19,792	7.95	1,574	18,940	8.75	1,656	50.5	-9.2	46.0
3450	50,668	5.94	3,010	89,745	6.51	5,846	85,880	7.17	6,154	-77.1	-9.7	-94.3
3430	572,832	7.61	43,619	822,112	8.26	67,929	786,710	9.09	71,504	-43.5	-8.5	-55.7
3410	612,521	7.55	46,264	597,479	7.49	44,724	571,750	8.23	47,078	2.5	0.9	3.3
3390	395,517	7.41	29,383	480,867	6.81	32,738	460,160	7.49	34,461	-21.6	8.1	-11.7
3370	398,004	7.56	30,151	368,467	7.60	28,000	352,600	8.36	29,474	7.6	-0.5	7.1
3350	173,417	7.46	12,946	217,412	7.31	15,903	208,050	8.05	16,740	-25.4	2.0	-22.8
3330	40,835	7.85	3,206	50,536	6.82	3,449	48,360	7.51	3,630	-23.8	13.1	-7.6
1989 Total:	4,308,585	7.90	340,193	4,949,339	8.18	405,088	4,736,210	9.08	426,408	-14.9	-3.7	-19.1