

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

17-Jan-90

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	2,278	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	86,301	-5.7	0.5	-5.2
3450 bz	702,975	8.73	61,389	701,268	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	29,303	480,867	6.81	32,738	460,160	7.49	34,461	-21.6	8.1	-11.7
3370	398,804	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
Year Total:	4,308,585	7.90	340,193	4,949,339	8.18	405,088	4,736,210	9.00	426,408	-14.9	-3.7	-19.1

AVERAGE DENSITY= .111 tns/bcf

AVERAGE DENSITY= .118 tns/bcf

4865 e116
4655 e111

new model
for mill for
1989

4361 e116

88 mill feed

actual 3.62 Pb 4.87Zn
budget 3.41 Pb 4.68Zn

tonnes
x106
4.1 8.49
4.8 8.09
pit one .4331

87 mill feed (8mo)

actual 3.5 5.04
budget 3.34 4.86

3.1 8.54
3.1 8.20
0.4073

89 mill feed

actual 2.9 4.68
budget 3.24 4.92

4.4 7.58
4.8 8.16
pit one 0.3873

1989 projected mill 0.3971
actual pit 0.3873
actual mill 0.3826
1988 projected mill 0.4215
actual pit 0.4331
actual mill 0.4264
0.0067

Jan 27