

000920

MEMORANDUM

*Engineering File 10*

TO: W. Krats  
FROM: J. McLachlan  
DATE: October 23, 1972  
SUBJECT: ULTIMATE PIT DESIGN AND REVISION OF GRADES AND TONNAGES - ZONE 1 & 3  
SEPTEMBER, 1970

Jaharwalal Gond'i compiled a set of revised bench plans for both Zones 1 and 3 during the summer of 1970. This was the first whole scale revision of any bench plans and ore reserves since the initial pre-production bench plans were compiled. The revisions at this time were based upon new information obtained from a "fill-in" diamond drilling program plus past history of what previous mining from September, 1969 had established.

With the help of two summer students, Grant Macdonald and Jim McMillan, ore reserves for each bench, weighted according to the area of influence of each hole, were planimetered. Grade for each hole on the bench appears to have been assigned under the idea that any continuous 15' intersection of material averaging 5% or better could be regarded as ore. But in the published figure on ore reserves it would appear that this 15' intersection could in turn be averaged over the full bench height. This has produced the case where the reserves on some benches may average less than 5%.

These revised bench plans then became the basis for the design of an ultimate pit which was to mine out all the known ore reserves in Zones 1 and 3 without regard to an economic cut-off grade. On this ultimate pit thoughts were at the time to leave every second bench on a wider spacing (54' toe-to-toe on 35' benches) and the pit was drawn up in this way. On all benches, that were at least partially started at that time, quantities measured were from the existing status at September 1, 1970 to the final designed position. Quantities measured were the total yardage to be mined on a bench. Total ore yardage (in both Zones 1 and 3 if applicable) was then subtracted from the total measured yardage to arrive at waste quantities.

These quantities were then tabulated on the accompanying sheet.

*J. McLachlan*  
J. McLachlan  
Planning Engineer

JM/mm

Attach.

ULTIMATE PIT DESIGN

FARO NO. 1 & NO. 3 ZONES

COMPLETED REVISION OF SEPTEMBER 11, 1970

BENCH	TOTAL YARDAGE CONTAINED ON BENCH	ZONE NO. 1			ZONE NO. 3			BENCH TOTAL ORE TONNAGE	BENCH TOTAL ORE YARDAGE	WASTE	
		TONS OF ORE	GRADE	YD. OF ORE	TONS OF ORE	GRADE	YD. OF ORE				
42.	990,000										
4240	1,829,700										
4205	2,901,600										
4170	3,498,700										
4135	4,983,600										
4100	6,195,500										
4065	6,557,200										
4030	7,294,100										
3990	10,564,000	1,542,112	10.57	11.49	484,941			1,542,112	484,941	10,079,059	
3950	11,239,100	2,613,880	10.70	10.89	821,975			2,613,880	821,975	10,417,125	
3910	10,711,900	3,139,012	11.65	12.10	987,110			3,139,012	987,110	9,724,790	
3870	10,251,400	3,473,477	11.20	11.46	1,092,288	80,809	8.81	25,411	3,554,286	1,117,699	9,133,701
3830	9,090,800	4,122,308	10.30	11.35	1,296,323	425,745	8.82	133,882	4,548,053	1,430,205	7,660,595
3790	8,624,400	3,575,901	7.81	9.16	1,124,497	534,240	7.28	168,000	4,110,141	1,292,497	7,331,903
3750	7,401,200	3,265,451	9.27	10.81	1,026,871	543,219	6.35	170,823	3,808,670	1,197,694	6,203,506
3710	6,799,600	3,854,840	9.47	10.65	1,212,214	1,007,873	5.40	316,941	4,862,713	1,529,155	5,270,445
3670	6,228,400	3,129,411	10.82	10.81	984,091	715,312	4.16	224,941	3,844,723	1,209,032	5,019,368
3630	5,152,500	2,426,080	9.28	10.01	762,918	791,633	6.16	248,941	3,217,713	1,011,859	4,140,641
3590	4,257,700	1,555,955	7.67	9.41	489,294	657,698	8.35	206,823	2,213,653	696,117	3,561,583
3550	4,028,700	870,567	7.02	9.77	273,763	690,622	7.33	217,177	1,561,189	490,940	3,537,760
3510	3,243,100					4,378,672	9.07	1,376,940	4,378,672	1,376,940	1,866,160
3470	2,514,000					4,363,531	8.74	1,372,179	4,363,531	1,372,179	1,141,821
3430	1,919,000					4,791,699	9.20	1,506,823	4,791,699	1,506,823	1,007,177
3390	989,100					2,990,697	7.23	940,471	2,990,697	940,471	978,529
3350						300,042	8.52	94,353	300,042	94,353	894,747
	137,265,300	33,568,994			10,556,285						
	17,550,000 ore										
	119,715,300										
						22,271,792	8.16		55,812,786 T		

NOTES: 1. Bench 3350 not counted in ultimate pit  
 2. Benches 4275 - 4030 are 35'; 4030 - 3390 are 40'.