KING ISLAND SCHEELITE LTD.

BOLD HEAD MINING RESERVES

1ST AUGUST 1981

Eastlight Eastlight Eastlight Eastlight Eastlight Eastlight Eastlight Eastlight Eastlight Eastlight Eastlight

Cobra

FOOLSCAP

31112, Blue 31113, Green 31114, Orange 31116, Pink 31117. Made in England.

16 091
93-3470

KING ISLAND SCHEELITE Pty. Ltd.

UNDERGROUND TECHNICAL SERVICES

ORE RESOURCE AND MINING RESERVE TABLE - BOLD HEAD OREBODY

31-07-81

LENS	SUBDIVISION	PROVEN		PROBABLE		POSSIBLE	TOTAL PROVEN PLUS PROBABLE		
		RESOURCE	RESERVE	RESOURCE	RESERVE	RESOURCE	RESOURCE	RESERVE	
A LENS	A LENS NORTH	75 000 0·92	50 500 0·80	NIL	NIL	NIL	75 000 0·92	50 500 0·80	
	A LENS WEST	MINED OUT	NIL	NIL	NIL	NIL	NIL	NIL	
	A LENS SOUTH	NIL	NIL	173 900 0·67	76 700 0·48	31 000	173 900 0·67	76 700 0·48	
	SUB-TOTAL:	75 000 0·92	50 500 0·80	173 900 0·67	76 700 0·48	31 000	248 900 0·75	127 200 0·61	A
B LENS MAIN	10 725 - 10 800 N	10 800 1·21	7 100 1·10	11 500 1·28	4 500 1·07	NIL	22 300 1·25	11,600 1·09	
	10 625 - 10 725 N	47 500 0·74	31 100 0·67	NIL	NIL	NIL	47 500 0·74	31 100 0·67	
	10 525 - 10 625 N	35 000 0·64	21 900 0·58	NIL	NIL	NIL	35 000 0·64	21 900 0·58	
	10 425 - 10 525 N	55 700 1·07	31 200 0·97	NIL	NIL	NIL	55 700 1·07	31 200 0·97	
	10 325 - 10 425 N	30 700 1·36	20 600 0·97	14 200 1·11	8 500 0·79	7 000	44 900 1·28	29 100 0·92	
	10 200 - 10 325 N	NIL	NIL	NIL	NIL	17 000	NIL	NIL	
	SUB-TOTAL:	179 700 0·96	111,900 0·82	25 700 1·19	13 000 0·89	24 000	205 400 0·98	124 900 0·83	B
B LENS WEST		6 200 0·71	NIL	55 500 0·82	26 400 0·68	NIL	61 700 0·81	26 400 0·68	B,
B LENS WEST LOWER		NIL	NIL	8 100 0·78	NIL	NIL	8 100 0·78	NIL	
B LENS EAST		13 100 1·06	NIL	1 900 1·17	NIL	NIL	15 000 1·07	NIL	
BOUNDARY ORE		5 100 0·92	4 000 0·84	10 200 0·83	7 300 0·75	NIL	15 300 0·86	11 300 0·78	C
FAULT BLOCK	B FAULT I	253 100 0·98	222 700 0·85	52 600 0·92	20 500 0·77	3 000	305 700 0·97	243,200 0·84	
	B FAULT II	168 400 0·82	141 700 0·75	10 600 0·74	3 400 0·62	NIL	179 000 0·81	145 100 0·75	
	SUB-TOTAL:	421 500 0·92	364 400 0·81	63 200 0·89	23 900 0·75	3 000	484 700 0·92	388,300 0·81	D
C_1 LENS	10 425 - 10 700 N	188 200 0·74	194 400 0·63	NIL	NIL	205 700	188 200 0·74	194 400 0·63	
	10 200 - 10 425 N	47 600 0·78	41 900 0·68	2 600 1·22	2 100 1·06	32 900	50 200 0·80	44 000 0·70	
	SUB-TOTAL:	235 800 0·75	236 300 0·64	2 600 1·22	2 100 1·06	238 600	238 400 0·75	238 400 0·64	E
C_2 LENS	10 525 - 10 700 N	106 700 1·08	88 700 0·94	NIL	NIL	NIL	106 700 1·08	88 700 0·94	
	10 200 - 10 525 N	20 000 1·00	16 300 0·83	184 200 0·84	125 300 0·70	78 900	204 200 0·86	141 600 0·71	
	SUB-TOTAL:	126 700 1·07	105 000 0·92	184 200 0·84	125 300 0·70	78 900	310 900 0·93	230 300 0·80	f
C LENS WEST		102 200 0·66	79 900 0·57	11 500 1·15	8 100 1·00	NIL	113 700 0·71	88 000 0·61	G
D LENS	D NORTH	36 100 0·93	33 900 0·72	5 200 0·99	3 200 0·76	NIL	41 300 0·94	37 100 0·72	
	D SOUTH	NIL	NIL	11 800 1·20	7 200 0·92	8 000	11 800 1·20	7 200 0·92	
	SUB-TOTAL:	36 100 0·93	33 900 0·72	17 000 1·14	10 400 0·87	8 000	53 100 1·00	44 300 0·76	H
BOLD HEAD TOTAL		1 201 400 0·89	985 900 0·76	553 800 0·82	293 200 0·67	383 500	1 755 200 0·87	1 279 100 0·74	

METHOD OF GRADE CALCULATION:

Polygonal method of weighted arithmetic means from plans - B Lens Main B Lens West, C_1 Lens, C_2 Lens and C West.
Modified polygonal method of weighted arithmetic means from sections for the remainder.

METHOD OF TONNES CALCULATION

Truncated cone formula using 1:250 sections for BF_1, BF_2 and B Lens East.
Truncated cone formula using 1:500 sections for the remainder.

COMPILED BY: S.G.B. / P.B.
DRAWN BY: R.F.
CHECKED BY: W.G. / S.G.B.
DATE: SEPT., 1981

162002

Bold Head Mining Reserves

1st August, 1981.

NOTES ON C. LENS RESERVE GRADE CALCULATION.
('PROVEN).

Dilution	Resource	Grade		M.T.U.
	188,200	0.74	=	139,268
5%	188,200	0.00	=	0
30%	188,200	0.35	=	19,761
				159,029

$$+ 188,200$$
$$+ 5\% \times 188,200$$
$$+ 30\% \times 188,200$$
$$254,070$$

$$\text{Reserve grade} = \frac{159,029}{254,070}$$
$$= 0.63$$

162003

162004

GOLD HEAD MINE PRODUCTION FROM FEBRUARY TO JULY, 1981.

Orebody	February			March			April			May			June			July.			Σ T	Ave %	Σ M.T.
	T	%	MTU	T	%	MTU	T	%	MTU	T	%	MTU	T	%	MTU	T	%	MTU			
A-LENS (H 50)	637	0.65	416	1036	0.78	808	881	0.82	717	717	1.21	871				96	0.40	38	3367	0.85	285
B LENS MAIN NORTH										1283	1.17	1502	967	0.92	889	987	0.83	821	3237	0.99	321
B LENS MAIN SOUTH													1899	0.62	1176	173	0.41	71	2072	0.60	124
FAULT BLOCK NORTH	5187	0.75	3822	5525	0.78	4324	762	0.86	652	4	2.00	8	2374	0.84	1983	2839	0.84	2380	16,591	0.79	13166
FAULT BLOCK SOUTH	268	0.31	82	787	0.57	451	2514	0.88	2223	3359	0.84	2838	794	0.71	564	30	0.37	11	7752	0.79	6161
BOUNDARY ORE	711	0.98	699	1370	0.88	1203	1148	0.93	1063	19	0.63	12							3,248	0.92	2977
C_1-LENS	1098	0.33	359	3747	0.43	1594	2536	1.99	5039	2805	0.56	1585	3620	0.50	1822	2746	0.52	1424	16,554	0.71	11,821
C_2-LENS	2604	0.75	1944	2076	0.70	1460	5264	0.76	4003	4663	0.80	3738	4668	0.79	3694	2388	0.92	2195	21,663	0.79	17103
C-LENS WEST																					
D LENS NORTH	1739	0.49	849	521	0.48	249	705	1.05	740	7	1.29	9	992	0.75	740	3843	0.61	2358	7807	0.63	4945
	12,144	0.67	8171	15062	0.67	10086	13810	1.05	14459	12859	0.82	10555	15314	0.71	10868	13102	0.71	9295	82,291	0.77	63,4

MINE BOLD HEAD

Type of Resource / Reserve PROVEN

Sheet 1 of 4

162005

Date 1-8-81

OREBODY	MINING METHOD	FACTORS				OVERALL RESERVE FACTOR	GEOLOGICAL RESOURCE		RESOURCE IN MAJOR PILLARS		RESOURCE		RESERVE		RESERVE M.T.U.	REMARKS
		PILLAR %	MINEABILITY %	RECOVER %	DILUTION %		TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3		
A LENS																
NORTH	Cavo C/F		65	90	15	0.6728					75,000	0.92	50,500	0.80	40,400	All factors as in Feb. 1981
WEST	Cavo C/F										Mined out					
SOUTH	?										Nill					
SUB-TOTAL											75,000	0.92	50,500	0.80	40,400	
B LENS MAIN																
10 725 – 10 800N	Cavo C/F		70	85	10	0.6545	✓				10,800	1.21	7,100	1.10	7,800	All factors as in Feb. 1981.
10 625 – 10 725N	Pillar Recovery		70	85	10	0.6545	✓				47,500	0.74	31,100	0.67	20,800	
10 525 – 10 625N	" "		60	95	10	0.6270					35,000	0.64	21,900	0.58	12,700	No change in resource since Feb. 1981
10 425 – 10 525N	" "		60	85	10	0.5610					55,700	1.07	31,200	0.97	30,300	
10 325 – 10 425N	Pillar Recov. + Slot.		60	80	40	0.6720					30,700	1.36	20,600	0.97	20,000	- Resource grade down by 0.1
10 200 – 10 325N											NIL	NIL	NIL	NIL	NIL	
SUB-TOTAL											179,700	0.96	111,900	0.83	91,600	
B LENS WEST											6,200	0.71	NIL	NIL		Written off, October, 1978.
B LENS WEST LOWER											NIL	NIL	NIL	NIL		No reserve
B LENS EAST											13,100	1.06	NIL	NIL		Written off, October, 1978
BOUNDARY ORE	Cavo C/F		80	90	10	0.7920					5,100	0.92	4,000	0.84	3,400	
FAULT BLOCKS																
FAULT I	Mech C/F	15	85	90	15	0.8798					253,100	0.98	222,700	0.85	189,300	Resource grade down 0.02
FAULT II	" "	15	85	90	10	0.8415					168,400	0.82	141,700	0.75	106,300	Resource grade up 0.01
SUB TOTAL											421,500	0.92	364,400	0.81	295,600	
C LENS																
10 425 – 10 700N	Mech C/F	15	85	90	35	1.0328					188,200	0.74	194,400	0.63	122,500	Dilution of 35% consist of dil. of 5% at zero gr. and 30% at 0.35% grade
10 200 – 10 425N	Mech C/F +	15	85	90	15	0.8798					47,600	0.78	41,900	0.68	28,500	
SUB-TOTAL											235,800	0.75	236,300	0.64	151,000	

REF. PLAN	GEOLOGY		
	SURVEY		
	PLANNING		
	ROCK MEC.		
	GRADE CON.		
	DRAFTING		
	TSS		

SCALE 1:

KING ISLAND SCHEELITE GRASSY KING ISLAND

6,796
25 547

1870

DRAWING NUMBER

MINE BOLD HEAD

Type of Resource / Reserve PROVEN

162006

Sheet 2 of 4

Date 1-8-81

OREBODY	MINING METHOD	FACTORS				OVERALL RESERVE FACTOR	GEOLOGICAL RESOURCE		RESOURCE IN MAJOR PILLARS		RESOURCE		RESERVE		RESERVE M.T.U.	REMARKS
		PILLAR %	MINEABILITY %	RECOVER %	DILUTION %		TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3		
C LENS																
10 525 — 10 700N	Mech C/F	15	85	85	15	0.8309					106,700	1.08	88,700	0.94	83,300	Resource grade down 0.04
10 200 — 10 525N	SLOT	15	85	80	20	0.8160					20,000	1.00	16,300	0.83	13,500	
SUB — TOTAL											126,700	1.07	105,000	0.92	96,800	
C LENS WEST	Slot ?	20	80	85	15	0.7820					102,200	0.66	79,900	0.57	45,600	No change in resource & factors as in Feb. 1981.
D LENS												(grade 0.05)				
NORTH	C/F	15	85	85	30	0.9393					36,100	0.93	33,900	0.72	24,400	Dilution is high due to nature of orebody which consists of thin bands.
SOUTH											NIL	NIL	NIL			
SUB — TOTAL											36,100	0.93	33,900	0.72	24,400	
PROVEN TOTAL											1,201,400	0.89	985,900	0.76	748,800	

REF. PLAN	GEOLOGY		SCALE 1:
	SURVEY		KING ISLAND SCHEELITE GRASSY KING ISLAND
	PLANNING		
	ROCK MEC.		
	GRADE CON		
	DRAFTING		DRAWING NUMBER
	T.S.S		

MINE BOLD HEAD

Type of Resource / Reserve PROBABLE

162007

Sheet 3 of 4

Date 1-8-81.

OREBODY	MINING METHOD	FACTORS				OVERALL RESERVE FACTOR	GEOLOGICAL RESOURCE		RESOURCE IN MAJOR PILLARS		RESOURCE		RESERVE		RESERVE M.T.U.	REMARKS
		PILLAR %	MINEABILITY %	RECOVER %	DILUTION %		TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3		
A LENS																
NORTH											NIL	NIL	NIL	NIL		
WEST											NIL	NIL	NIL	NIL		
SOUTH	Slot + C/F?		50	70	40	0.4410					173,900	0.67	76,700	0.48	36,800	No change in both resource in factors from Feb. 1981.
SUB-TOTAL											173,900	0.67	76,700	0.48	36,800	
B LENS MAIN												(down 0.46)				
10 625 – 10 800N	Cavo C/F		40	90	20	0.3888					11,500	1.28	4,500	1.07	4,800	Resource up (2,500). Why?
10 025 – 10 725N	Pillar Recn.										NIL	NIL	NIL	NIL		
10 525 – 10 625N	〃 〃										NIL	NIL	NIL	NIL		
10 425 – 10 525N	〃 〃										NIL	NIL	NIL	NIL		
10 325 – 10 425N	(Pill. Recovery + Slot.)		50	95	40	0.5985					14,200	1.11	8,500	0.79	6,700	No change in resource & factors from Feb-1981.
10 200 – 10 325N											NIL	NIL	NIL	NIL		
SUB-TOTAL											25,700	1.19	13,000	0.88	11,500	
B LENS WEST	Slot		55	80	20	0.4752					55,500	0.82	26,400	0.68	17,900	No change in resource & factors from Feb-1981.
B LENS WEST LOWER											8,100	0.78	NIL	NIL		No reserve in B Lens West Lower Rd.
B LENS EAST											1,900	1.17	NIL	NIL		Written off in 1978.
BOUNDARY ORE	Cavo		80	90	10	0.7128					10,200	0.83	7,300	0.75	5,500	Resource grade down 0.04
FAULT BLOCK																
B FAULT I	Mech C/F		60	60	20	0.3888					52,600	0.92	20,500	0.77	15,700	Resource up 18,500. Why? Re Interpret
B FAULT II	Mech C/F		60	50	20	0.3240					10,600	0.74	3,400	0.62	2,100	
SUB-TOTAL											63,200	0.89	23,900	0.74	17,800	
C LENS																
10 425 – 10 700N	Mech C/F										NIL	NIL	NIL	NIL		
10 200 – 10 425N	Slot + C/F										2,600	1.22	2,100	1.06	2,200	No change in resource & Factors from Feb-1981.
SUB-TOTAL											2,600	1.22	2,100	1.06	2,200	

NOTE: PROBABILITY FACTOR OF 90% HAS BEEN APPLIED TO EACH CALCULATION.

REF PLAN

GEOLOGY		
SURVEY		
PLANNING		
ROCK MEC.		
GRADE CON.		
DRAFTING		
T.SS		

SCALE 1:

KIS KING ISLAND SCHEELITE GRASSY KING ISLAND

DRAWING NUMBER

MINE BOLD HEAD

Type of Resource / Reserve PROBABLE

162008

Sheet 4 of 4

Date 1-8-81.

OREBODY	MINING METHOD	FACTORS				OVERALL RESERVE FACTOR	GEOLOGICAL RESOURCE		RESOURCE IN MAJOR PILLARS		RESOURCE		RESERVE		RESERVE M.T.U.	REMARKS
		PILLAR %	MINEABILITY %	RECOVER %	DILUTION %		TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3	TONNES	GRADE % WO_3		
C-LENS																
10 525 – 10 700N											NIL	NIL	NIL	NIL		
10 200 – 10 525N	slot + C/F		70	90	20	0.6804					184,200	0.84	125,300	0.70	87,700	) why ? MINING
SUB-TOTAL											184,200	0.84	125,300	0.70	87,700	
C-LENS WEST	slot ?		80	85	15	0.7038					11,500	1.15	8,100	1.00	8,100	No change in resource and factors from Feb. 1981
D-LENS												(up 0.16)				
NORTH	C/F		70	75	30	0.6143					5,200	0.99	3,200	0.76	2,400	Resource up 2,700
SOUTH	C/F ?		70	75	30	0.6143					11,800	1.20	7,200	0.92	6,700	No change in resource & factors from Feb 1981.
SUB-TOTAL											17,000	1.14	10,400	0.88	9,100	CALC Change in Resource
PROBABLE TOTAL											553,800	0.82	293,200	0.67	196,600	
BOLD HEAD TOTAL											1,755,200	0.87	1,279,100	0.74	945,400	

NOTE: PROBABILITY FACTOR OF 90% HAS BEEN APPLIED ON EACH CALCULATION.

REF PLAN

GEOLOGY		
SURVEY		
PLANNING		
ROCK MEC.		
GRADE CON		
DRAFTING		
T S S		

SCALE 1:

KING ISLAND SCHEELITE
GRASSY KING ISLAND

DRAWING NUMBER

162009

Bold Head Mining Reserves

15 March, 1981.

where g' is grade of mining reserve, %.
g is grade of ore resource, %.
d is dilution, %.
x is the grade of the same ore resource at dilution "d".

N.B. x is variable.

162010

King Island Scheelite

Date : 12-3-81.

Ore Resources and Mining Reserves.

I. Ore Resource.

A. Method of Tonnes Calculation:

The tonnes of ore resources in Bold Head Mine are supplied by the mine geologist - Their method of calculation is based on the truncated cone formula, using geological sections and the specific gravity (S.G.) of the ore.

B. Method of grade calculation:

The grades of ore resources supplied are calculated using the modified polygonal method of weighted arithmetic means.

II. Mining Reserve.

A. Method of Tonnes Calculation:

When various factors, such as pillar factor, mineability factor, recovery factor, dilution factor, etc., are known, the tonnes of mining reserves can be calculated by applying these factors on their corresponding ore resources. However, for probable mining reserves, a probability factor is also taken into consideration.

B. Method of Grade Calculation:

The grade of each mining reserve is calculated using the following formula:

$$g' = \frac{g + dx}{1 + d}$$

KING ISLAND SCHEELITE Pty. Ltd.
UNDERGROUND TECHNICAL SERVICES

ORE RESOURCE AND MINING RESERVE TABLE - BOLD HEAD OREBODY

AS AT 1-2-81.

162012

LENS	SUBDIVISION	PROVEN		PROBABLE		POSSIBLE	TOTAL PROVEN PLUS PROBABLE	
		RESOURCE	RESERVE	RESOURCE	RESERVE	RESOURCE	RESOURCE	RESERVE
A LENS	A LENS NORTH	78,300 0.92	52,600 0.80	NIL	NIL	NIL	78,300 0.92	52,600 0.80
	A LENS WEST	MINED OUT	NIL	NIL	NIL	NIL	NIL	NIL
	A LENS SOUTH	NIL	NIL	173,900 0.67	76,600 0.48	31,000	173,900 0.67	76,600 0.48
	SUB-TOTAL:	78,300 0.92	52,600 0.80	173,900 0.67	76,600 0.48	31,000	252,200 0.75	129,200 0.61
B LENS MAIN	10 750 - 10 800 N	NIL	NIL	9,000 1.74	3,500 1.45	NIL	9,000 1.74	3,500 1.45
	10 625 - 10 750 N	43,300 0.81	27,300 0.74	NIL	NIL	NIL	43,300 0.81	27,300 0.74
	10 525 - 10 625 N	35,000 0.64	21,900 0.58	NIL	NIL	NIL	35,000 0.64	21,900 0.58
	10 425 - 10 525 N	55,700 1.07	31,200 0.97	NIL	NIL	NIL	55,700 1.07	31,200 0.97
	10 325 - 10 425 N	32,600 1.37	21,900 0.89	14,200 1.11	8,500 0.79	7,000	46,800 1.29	30,400 0.86
	10 200 - 10 325 N	NIL	NIL	NIL	NIL	17,000	NIL	NIL
	SUB-TOTAL:	166,600 0.97	102,300 0.81	23,200 1.36	12,000 0.98	24,000	189,800 1.02	114,300 0.85
B LENS WEST		6,200 0.71	NIL	55,500 0.82	26,300 0.68	NIL	61,700 0.81	26,300 0.68
B LENS WEST LOWER		NIL	NIL	8,100 0.78	NIL	NIL	8,100 0.78	NIL
B LENS EAST		13,100 1.06	NIL	1,900 1.17	NIL	NIL	15,000 1.07	NIL
BOUNDARY ORE		7,500 0.83	5,900 0.75	15,800 0.87	11,200 0.79	NIL	23,300 0.86	17,100 0.78
FAULT BLOCK	B FAULT I	294,300 1.00	258,900 0.87	33,800 1.03	13,100 0.86	3,000	328,100 1.00	272,000 0.87
	B FAULT II	182,800 0.81	153,800 0.74	12,400 0.74	4,000 0.62	NIL	195,200 0.81	157,800 0.74
	SUB-TOTAL:	477,100 0.93	412,700 0.82	46,200 0.95	17,100 0.80	3,000	523,300 0.93	429,800 0.82
C_1 LENS	10 425 - 10 700 N	204,500 0.74	227,600 0.60	NIL	NIL	105,100	204,500 0.74	227,600 0.60
	10 200 - 10 425 N	47,700 0.78	41,900 0.68	2,600 1.22	2,000 1.06	136,800	50,300 0.80	43,900 0.70
	SUB-TOTAL:	252,200 0.75	269,500 0.61	2,600 1.22	2,000 1.06	241,900	254,800 0.75	313,400 0.61
C_2 LENS	10 525 - 10 700 N	122,900 1.12	102,100 0.97	192,400 0.84	111,400 0.65	NIL	315,300 0.95	213,500 0.80
	10 200 - 10 525 N	21,700 1.00	17,700 0.83	NIL	NIL	67,600	21,700 1.00	17,700 0.83
	SUB-TOTAL:	144,600 1.10	119,800 0.95	192,400 0.84	111,400 0.65	67,600	337,000 0.95	231,200 0.81
C LENS WEST		102,200 0.66	79,900 0.57	11,500 1.15	8,000 1.00	NIL	113,700 0.71	87,900 0.61
D LENS	D NORTH	43,200 0.88	35,900 0.77	2,500 0.83	1,500 0.64	NIL	45,700 0.88	37,400 0.76
	D SOUTH	NIL	NIL	11,800 1.20	7,200 0.92	8,000	11,800 1.20	7,200 0.92
	SUB-TOTAL:	43,200 0.88	35,900 0.77	14,300 1.14	8,700 0.87	8,000	57,500 0.94	44,600 0.79
BOLD HEAD TOTAL		1,291,000 0.90 ✓	1,078,600 0.76	545,400 0.83	273,300 0.65	~~375,500~~	1,836,400 0.88	1,351,900 0.74

METHOD OF GRADE CALCULATION:
Polygonal method of weighted arithmetic means from plans - B Lens Main B Lens West, C_1 Lens, C_2 LENS AND C WEST.
Modified polygonal method of weighted arithmetic means from sections for the remainder.

METHOD OF TONNES CALCULATION
Truncated cone formula using 1:250 sections for BF_1, BF_2 and B Lens East.
Truncated cone formula using 1:500 sections for the remainder.

COMPILED BY:
DRAWN BY:
CHECKED BY:
DATE:

BOLD HEAD MINE

162013

17-3-81

PROVEN

AREA	MINING METHOD	RESOURCE AT 1-2-81	% WO_3	RESERVE AT 1-2-81	% WO_3	RESERVE M.T.U.	CALCULATION REMARKS	FACTORS: Pillar factor %	Mineable %	Recovery %	Dilution %	Overall Ore Reserve Factor	VARIATION IN RESERVES (from Last Au
A-LENS													
NORTH		78,300	0.92	52,600	0.80	42,000	As in August, 1980.		65	90	15	0.6728	-800
WEST		Mined Out		NIL									
SOUTH		NIL		NIL									
SUB TOTAL		78,300	0.92	52,600	0.80	42,000							-800
B-LENS MAIN													
10 750 – 10 800 N		NIL		NIL									
10 625 – 10 750 N		43,300	0.81	27,300	0.74	20,200	Factors as in August, 1980.		67.5	85	10	0.6314	
10 525 – 10 625 N		35,000	0.64	21,900	0.58	12,700	-"-		60	95	10	0.6270	0
10 425 – 10 525 N		55,700	1.07	31,200	0.97	30,200	-"-		60	85	10	0.5610	0
10 325 – 10 425 N		32,600	1.37	21,900	0.98	21,400	-"-		60	80	40	0.6720	0
10 200 – 10 325 N		NIL		NIL									
SUB TOTAL		166,600	0.97	102,300	0.83	84,500							-2,200
B-LENS WEST		6,200	0.71	NIL			written off in October, 1978.						
B-LENS WEST LOWER		NIL		NIL			No reserve.						
B-LENS EAST		13,100	1.06	NIL			written off in October, 1978.						
BOUNDARY ORE		7,500	0.83	5,900	0.75	4,400			80	90	10	0.7910	-800
FAULT BLOCK													
B FAULT I		294,300	1.00	~~158,900~~ 238,400	0.87	~~225,100~~ 237,700		15	~~80~~ 85	~~90~~ 85	15	~~0.8798~~ 0.8798	~~+13,900~~ +38,600
B FAULT II		182,800	0.81	~~153,800~~ 153,800	0.74	~~112,480~~ 112,200		15	~~80~~ 85	90	10	~~0.8465~~ 0.8465	-16,400
SUB TOTAL		477,100	0.93	~~312,700~~ 392,200	0.82	~~337,580~~ 349,900							~~+17,500~~ +22,200
				~~224,700~~	0.82	~~184,300~~ 183,600							~~+16,300~~
C1 LENS													
10 550 – 10 700N	Mech C/F	~~85,500~~ 30,700 increase in +15,000t	~~0.69~~	~~77,300~~ 77,300	~~0.59~~	~~42,200~~ 42,200	5% @ 0% WO3. 30% @ 0.35% WO3. 5% of (a) @ grade 30% of (a) @ 0.35% WO3.	15	85	90	5% of (a) @ 30% grade 30% of (a) @ 0.35% WO3	1.0328	~~+35,400~~ +47,400
10 425 – 10 550N		42,800 ~~133,800~~	~~0.78~~	~~138,200~~ 138,200	~~0.66~~	~~91,200~~ 91,200		15	85	90	5% of (a) @ 30% grade 30% of (a) @ 0.35% WO3	1.0328	~~+7,500~~ +17,500
10 200 – 10 425N		47,700 +7,100	0.78	41,900	0.68	28,500		15	85	90	15	0.8798	-9,500
SUB TOTAL		~~252,300~~	~~0.75~~	~~253,100~~ 260,600	0.84	~~169,600~~ 162,700							~~+14,400~~ +21,600
C2 LENS													
10 525 – 10 700N	Mech C/F	122,900	1.12	~~101,100~~ 108,100	0.97	~~99,000~~ 104,800		15	85	85	15	0.8394	-3,700
10 200 – 10 525 N		~~91,700~~ up 3,200	1.00	17,700	0.83	14,700		15	85	80	20	0.8160	+1,200
SUB TOTAL		122,900	1.12	125,800	0.95	~~119,500~~							-2,500
				119,800	0.98	118,700							

N.B. 1). Increase in reserves in B Fault I and B Fault II are due mainly to pillar factors which have been re-calculated and found to be lower than in August, 1980. (e.g. 15% in August). Also, dilution of B Fault I is up by 5.

1). Increase in reserve in C1 Lens (10 550 – 10 700N) is a result of increase in reserve & change in mining method of L60 stope = 2 Reactor = 10% using C/F. In August, P.F = 15%.

REF PLAN

GEOLOGY			
SURVEY			
PLANNING			
ROCK MEC.			
DRAGE/CON			
DRAFTING			
T.S.S			

SCALE 1:

KING ISLAND SCHEELITE GRASSY KING ISLAND

min. recov. / 0.30 + 0.05

$0.85 \times 0.90 \times 1.35 = 1.0328.$

DRAWING NUMBER

BOLD HEAD MINE

162014 18-3-81.

PROVEN

AREA	MINING METHOD	RESOURCE AT 1-2-81	% WO_3	RESERVE AT 1-2-81	% WO_3	RESERVE M.T.U.	CALCULATION REMARKS	FACTORS Pillar factor %	Mineable %	Recovery %	Dilution %	Overall Ore Reserve Factor	VARIATION IN RESERVE
C LENS WEST	✓	102,200	0.66	79,900	0.57	45,500	Dilution down 5. due to internal dilution being put into resource g & t.		80	85	15	0.7820	+29,000
	up 39,800												
D LENS				37,400	0.73								
NORTH		43,200	0.88	~~35,900~~	~~0.77~~	27,400	Dil. down 5		85	85	~~15~~ 20	~~0.8309~~ 0.8670	-3,100
SOUTH	✓	NIL		NIL									
SUB TOTAL		43,200	0.88	35,900	0.77	27,400							-3,100
				1,063,700	0.77								
~~BOLD HEAD TOTAL~~		1,291,000	0.90	~~1,116,500~~	~~0.77~~	856,800							+90,500

N.B. Reserve of C Lens West increases as a result of increase of resource.

REF PLAN

1,063,700 0.77

GEOLOGY		
SURVEY		
PLANNING		
ROCK MEC.		
GRADE CON.		
DRAFTING		
T.S.S.		

SCALE 1:

KING ISLAND SCHEELITE GRASSY KING ISLAND

DRAWING NUMBER

162015 17-3-81

BOLD HEAD MINE

PROBABLE

AREA	MINING METHOD	RESOURCE AT 1-2-81	% WO_3	RESERVE AT 1-2-81.	% WO_3	RESERVE M.T.U.	CALCULATION REMARKS	FACTORS: Pillar factor %	FACTORS: Mineable %	FACTORS: Recovery %	FACTORS: Dilution %	Overall Ore Reserve Factor	VARIATION IN RESERVES (from August 98)
A-LENS													
NORTH		NIL		NIL									
WEST		NIL		NIL									
SOUTH	slot/cut & Fill	173,900	0.67	76,600	0.48	36,600	No change from August, 1980.		50	70	40	0.4410	0
SUB TOTAL		173,900	0.67	76,600	0.48	36,600							
B-LENS MAIN													
10 750 – 10 800N	CAVO	9,000	1.74	3,500	1.45	5,000	As in August, 1980.		40	90	20	0.3888	0
10 625 – 10 750N		—		—									
1[illegible]25 – 10 625N		—		—									
10 425 – 10 525N		—		—									
10 325 – 10 425N	slot	14,200	1.11	8,500	0.79	6,700	No change from August, 1980.		50	95	40	0.5985	0
10 200 – 10 325N		—		—									
SUB TOTAL		23,200	1.36	12,000	0.98	11,700							0
B-LENS WEST	slot	55,500	0.82	26,300	0.68	17,900	- As in August, 1980						0
B-LENS WEST LOWER		8,100	0.78	—	—	—	- No reserve in B-Lens West Lower Pod.						
B-LENS EAST		1,900	1.17	—	—	—	- Written off.						
BOUNDARY ORE	CAVO	15,800	0.87	11,200	0.79	8,800	- Dilution is 10% as compared to 15% in August, 1980.		80	90	10	0.7128	-1,400
FAULT BLOCK													
B FAULT I	Mech. C/F	33,800	1.03	13,100	0.86	11,200	- As in August, 1980		60	60	20	0.3888	0
B FAULT II	-"- -"-	12,400	0.74	4,000	0.62	2,400	No change from August, 1980		60	50	20	0.3240	0
SUB TOTAL		46,200	0.95	17,100	0.80	13,600							0
C_1-LENS													
10 525 – 10 700N		NIL (down 7,300)		NIL									
10 200 – 10 525N	down 15,300 →	2,600	1.22	2,000	1.06	2,100	Factors as in "Proven" reserve		85	90	15	0.7918	-12,200
SUB TOTAL		2,600	1.22	2,000	1.06	2,100							
C_2-LENS													
10 525 – 10 700N		up 188,600 192,400	0.84	(111,400) ~~143,800~~	(0.65) ~~0.73~~	~~104,900~~	- These factors as for August, 1980, calc.n ~~Factors as for "Proven" reserve.~~		(55) ~~85~~	(90) ~~85~~	(30) ~~15~~	0.5792 ~~0.7478~~	~~+[illegible]~~ +[illegible]
10 200 – 10 525N	down 177,000 →	NIL		NIL									~~-120,400~~
SUB TOTAL		192,400 (net increase of 11,600t)	0.84	~~143,800~~ (111,400)	~~0.73~~ (0.65)	~~104,900~~							~~+[illegible]~~

~~result of pillar factor and increase in resource.~~

N.B. TO EACH RESERVE CALCULATION, A PROBABILITY FACTOR OF 90% IS APPLIED.

REF. PLAN

GEOLOGY	
SURVEY	
PLANNING	
ROCK MEC.	
GRADE CON.	
DRAFTING	
T.S.S.	

SCALE 1:

KING ISLAND SCHEELITE GRASSY KING ISLAND

DRAWING NUMBER

162016 17-3-81.

BOLD HEAD MINE

PROBABLE

AREA	MINING METHOD	RESOURCE AT 1-2-81	% WO_3	RESERVE AT 1-2-81	% WO_3	RESERVE M.T.U.	CALCULATION REMARKS	FACTORS: Pillar factor %	FACTORS: Mineable %	FACTORS: Recovery %	FACTORS: Dilution %	Overall Ore Reserve Factor	VARIATION IN RESERVES.
C LENS WEST	down 28,500	11,500	1.15	8,000	1.00	8,000	Factors as in "Proven" reserve		80	85	15	0.7083	-21,300
D-LENS													
NORTH		2,500	0.83	1,500	0.64	900	Factors as in August, 1980		70	75	30	0.6143	0
SOUTH		11,800	1.20	7,200	0.92	6,600	No change from August, 1980.		70	75	30	0.6143	0
SUB TOTAL		14,300	1.14	8,700	0.86	7,500							0
BABLE BOLD HEAD TOTAL		545,400	0.83	314,200	0.69	217,300							-5,200
BOLD HEAD TOTAL		1,836,400	0.88	1,425,700	0.79	1,074,100							+85,300
				1,399,900									+85,300

Bold Head total 1,335,900

If C-Lens (probable) was calculated using old factors.

1,367,900

up 27,500

1,312,400

(1,335,500)

down 4,900.

This time, Total resource = 1,836,400

(This time resource is down by 16,100).

N.B. A PROBABILITY FACTOR OF 90% IS APPLIED TO EACH RESERVE CALCULATION.

REF. PLAN

GEOLOGY		
SURVEY		
PLANNING		
ROCK MEC.		
GRADE CON.		
DRAFTING		
T.S.S.		

SCALE 1:

KING ISLAND SCHEELITE GRASSY KING ISLAND

DRAWING NUMBER

162017

Bold Head Mining Reserves.

31 August, 1980.

162018

D

King Island Scheelite

Date : 25-9-80.

Ore Resources and Mining Reserves.

I. Ore Resources.

A. Method of Tonnes Calculation:

The tonnes of ore resources in both Bold Head and Dolphin Mines are supplied by the mine geologists. Their method of calculation is based on the truncated cone formula, using geological floor plans and the specific gravity (S.G.) of the ore.

B. Method of Grade Calculation:

The grades of ore resources supplied by the geologists are calculated using the modified polygonal method of weighted arithmetic means.

II. Mining Reserves.

A. Method of Tonnes Calculation:

When various factors, such as pillar factor, mineable factor, recovery factor and dilution factor, etc., are known the tonnes of mining reserves can be calculated by applying these factors on their corresponding ore resources. However, for probable mining reserves, a probability factor is also taken into consideration.

B. Method of Grade Calculation:

The grade of each mining reserve is calculated using the following formula:

$$g' = \frac{g + dx}{1 + d}$$

where: g' is grade of mining reserve, in %.
g is grade of ore resource, in %.
d is dilution, in %.
x is the grade of the same ore resource at dilution "d".

N.B. x is variable.

The approximation method of mining reserve grade calculation:

$$g' = (1 - d)g$$

Where g' = mining reserve grade, %.
g = ore resource grade, %.
d = dilution, %.

In the past, this method of mining reserve grade calculation was used. However, it is suggested that from the "31-8-80" reserves calculation, such a formula should be abandoned because it gives a high inaccuracy in reserve grade, especially in the areas where dilution of ore is high. It is also misleading in mining decision making.

162020

Bald Head Mine.

Explanations of and comments on mining reserves.

I. PROVEN RESERVES.

(1). A-Lens:

a). A-Lens North: All the factors are as for February reserves calculation.

b). A-Lens West: All ore resource has been mined out

c). A-Lens South: More diamond drilling is required to confirm the size of the orebody.

The drop in reserve for the overall area of A-Lens ~~reserve~~ is due to mining.

(2). B-Lens:

10 750 – 10 800N : More drilling is required to determine the size and grade of the orebody.

10 675 – 10 750N : Factors as for Feb. 1980 reserves calculation.

10 625 – 10 675N : The mining activity in this area is pillar recovery. Because of the irregularity of pillar sizes, and their locations, and the access to them, 65% of mineable factor is reasonable from mining performance, a recovery of 80% is likely. Dilution is quite low because the ground condition is reasonably good. Some dilution is from fill, therefore 10% dilution is realistic.

10 325 – 10 625N : All the factors are as in Feb. 1980 calculation. However, the reserve grade in the areas between 10 325N and 10 425N increases significantly due to the method of reserve grade calculation.

10 200 – 10 325N : The area is under study. Diamond drilling is required.

The drop in reserve for the overall B-Lens area is due mainly to mining in (10 325 – 10 425N) and (10 625 – 10 750N) areas.

(3). B-Lens West: Written off, October, 1978.

(4). B-Lens West Lower: No reserve.

(5). B-Lens East: Written off, October, 1978.

(6). Boundary Orebody: Factors are as for Feb., 1980 calculation. But the reserve drops due to mining in P57 stope.

(7). Fault Block:

a). B Fault I: Taking into consideration the rib pillar below Q42 Drive and anticipating leaving, possibly, two more pillars of 8m × 8m size in the area between 955 R.L. and 975 R.L. where the orebody widens up to, approximately, 30 m, the pillar factor is estimated to be about 15%. Hence, mineability is only 85%. From daily mining performance, a recovery of 85% is practicable. Also, from daily mining performance, the dilution is approximately 10% since the ground conditions are reasonably good.

b). B Fault I: Considering that a couple of pillars of 6m × 6m size will have to be left between 960 R.L. and 975 R.L., pillar factor estimate is 13%, hence 87% of mineable factor. From daily mining performance and ground conditions, a recovery factor of 90% is realistic. Dilution is estimated at 10%.

Mining between 10 390N and 10 490N has resulted in a drop of the reserve.

9. S. Lens :

10 550 – 10 700N : Taking into consideration the slot and Cut/Fill mining methods used in the area, the pillar factor is found to be 15% as a result of calculation. Hence, mineability is 85%. From daily mining performance, 90% of recovery is achievable and more realistic than 85% estimated in the last Feb, 1980 calculation. Dilution is 5% for pgh (o) at 0% grade.

10 425 – 10 550N : As a result of stope layout and cut/fill mining method for the area, the pillar factor works out to be approximately 13%. Hence, mineability is 87%. From daily performance, 90% recovery is achievable, and dilution works out to be 5% for pgh (o) at 0% grade and another 40% for pgh (m) at 0.35% WO_3.

10 200 – 10 425N : In this area, mining method anticipated is very much the same as that used in 10 550 – 10 700N area. It has the same sort of ground conditions. Therefore, as a result of the factors mentioned above, pillar factor = 15%, mineability = 85%, recovery = 90% and dilution = 5% (pgh (o)).

The increase in reserve is a direct result of the new mining methods used in the area and the layout of the stope which enable higher mineability and recovery.

162023

(9). C₂ Lens:

10 525 — 10 700 N: Mining methods used in this area are cut/fill and slot stoping. From the stope layout and pillar sizes, pillar factor is approximately 15%; hence, mineability is 85%. From daily mining performance and from the consideration of ground conditions, about 85% of mineable ore can be recovered, and dilution is 15%.

10 200 — 10 525 N: As a result of stope layout (slot stope) and the size of pillars which will be finally left in the area, pillar factor is 17%, ⇒ mineability is 83%. Due to this different mining method and ground condition, recovery of 90% is achievable. But since the orebody is quite flat (10° to 27° in dip) and thin, dilution is estimated at 20%.

The increase of reserve is a result of different mining method.

(6). C-Lens West: The mining method which is likely to be used for C-Lens West is a combination of slot and cut/fill stopings. Also a skin of ore in the form of a rib pillar, 5m wide, would have to be left along Western Fault, hence, pillar factor is about 20%. ⇒ mineability is 80%. In practice only 85% recovery could be achieved since the ground condition is fair. Dilution could be as high as 20% because the orebody is thin and flat in most parts.

As a result of the mining method considered for the orebody, and the stope arrangement, the reserve increases substantially.

(11). D-Lens:

North: The mining method for this orebody will be mechanized cut/fill. However, a rib pillar will have to be left along western Fault and will be 5m wide. Also a small part of orebody directly below the main decline will be untouched. Therefore, pillar factor works out to 15% ⇒ minability 85%. Recovery is estimately at 85% due to the location of the orebody. Dilution of 20% is more realistic when taking the ground conditions into consideration.

South: More drilling is required to determine the size, shape and grade of the orebody.

The overall increase in mining reserve is a direct result of new mining methods being used for C_1 and C_2 Lenses.

II. PROBABLE RESERSES. (Probability factor is 90%)

①. A- Lens:

a)- North : No reserve?

b)- West : No reserve?

c)- South : Mining method used is a combination of slot and cut/fill. Due to stope arrangement, mineability is estimated at 50%. From mining performance, recovery of 70% is possible. Taking into consideration the nature of the orebody and ground conditions, dilution can be as high as 40%.

②. B- Lens:

10 750 - 10 800N : Mining method for this area is still under consideration. However, due to the nature and type of the orebody and its location, mineability is expected to be only 40%. In practice, recovery of 90% is realistic. Due to fair ground conditions, dilution is 20%.

10 425 - 10 750N: No resource is provided by geologist.

10 325 - 10 425N: Mining method to be used here is slot stoping. From stope layout, mineability is only 50% and of this a recovery of 95% is possible, as from mining performance. Due to bad ground conditions, dilution is estimated at 40%.

③. B- Lens West: Mineability and dilution are as for Feb. 1980 calculations. However, recovery of 80% is more realistic than 75% estimated in Feb. since from daily mining performance, a recovery of slightly more than 80% is achievable and it does not go down to 75% very often.

162026

(4). B- Lens West Lower: No reserve in B- Lens west Lower Pod.

(5). B- Lens East. Written off.

(6). Boundary Ore: Mining method used here is Cavo + cut/fill. From daily mining performance, mineability, recovery and dilution are 80%, 90% and 15% respectively due to mining method for the area, nature and type of ore body and ground conditions.

(7). Fault Block:

a). B- Fault I: Mechanize cut/fill and/or Cavo stoping is being used here. From daily mining performance, mineability of 60%, recovery of 60% and dilution of 20% are realistic.

b). B Fault II: Mining method used is cut/fill. From daily mining of the area, 60% mineability is achievable. Recovery is as high as 60%. Since above 950 m R.L-, the orebody narrows down some waste would have to be mined with ore, therefore dilution is estimated at 20%.

(8). C, Lens: For both areas (10 200 – 10 525 N) and (10 525 – 10 700 N), slot + cut/fill method of mining is used, resulting in 75% mineability, 70% recovery and 20% dilution. These factors are also the result of the type of ore body, its nature, its location and its ground conditions.

162027

(9) C₂ Lens:

10 525 – 10 700N : Mechanized cut/fill method is used here. As a result of this method and the stope layout, mineability and recovery increase significantly. However, because of the shallow dip of the orebody and its small thickness, dilution is estimated at 30%. (mineability = 55%, recovery = 90%).

10 200 – 10 525N : The same method of mining, and stope layout and ground conditions applied in this area as in (10 525 – 10 700N) area.

∴ mineability = 70%,
recovery = 90%
Dilution = 20%

(10) C-Lens West: A combination of slot and mechanized cut/fill will be used to mine the area. Reasons and comments on stope and ground conditions are as for the proven reserve.

(11) D-Lens:

a). North: Mechanized cut/fill will be used.

b). South: Mechanized cut/fill will be used. Reasons for and comments on factors are as for proven reserve calculation.

I.

PROVEN.

162028

BOLD HEAD MINE

	AREA	MINING METHOD	RESOURCE AT 31-8-80	% WO_3 (g)	RESERVE AT 31-8-80	% WO_3 (g')	RESERVE M.T.U. 31-8-80	CALCULATION REMARKS	FACTORS: Pillar factor %	Mineable %	Recovery %	Dilution % (d)	Overall Ore Reserve Factor	VA
1-	A-LENS:													
	North	Cavo + C/F	79,400	0.92	53,400	0.80	42,700	Factors as for (Feb. 1980) calculations	35	65	90	15	0.6728	
	West	-"-	Mined Out	—	—	—	—							
	South	?	—	—	—	—	—							
	Sub-Total		79,400	0.92	53,400	0.80	42,700							
2-	B-LENS:													
	10 750 – 10 800N	?	—	—	—	—	—							
	10 675 – 10 750N	Cavo + C/F	29,000	0.80	20,000	0.73	14,500	Factors as for Feb. 1980 Calcn		70	90	10	0.6930	
	10 625 – 10 675N	Pill. Rec.	16,700	0.84	9,500	0.76	7,200			65	80	10	0.5720	
	10 525 – 10 625N	-"- -"-	35,000	0.64	21,900	0.58	12,700	Factors as for Feb. 1980 Calcn		60	95	10	0.6270	
	10 425 – 10 525N	Slot, Pill rec.	55,700	1.07	31,200	0.97	30,300	-"- -"- -"- -"-		60	85	10	0.5610	
	10 325 – 10 425N	-"-	32,600	1.37	21,900	0.98	21,400	(Reserve grade increases due to different method of calculation), but factors as in Feb.		60	80	40	0.6720	
	10 200 – 10 325N	?	—	—	—	—	—							
	Sub-Total		169,000	0.97	104,500	0.83	86,100							
3-	B-LENS WEST		6,200	0.71	—	—	—	Written off, October, 1978						
	B-LENS WEST LOWER		—	—	—	—	—							
5-	B-LENS EAST		13,100	1.06	—	—	—	Written off, October, 1978						
6-	BOUNDARY OREBODY	Cavo + C/F	8,100	0.83	6,700	0.72	4,800	Factors as for Feb. 1980	20	80	90	15	0.8280	
7-	FAULT BLOCK:													
	a)- B FAULT I	Mech. C/F	295,800	1.00	235,000	0.91	213,600	(Reserve grades are high because of low dil. now i.e. 10% vs 15% in Feb.)	15	85	85	10	0.7948	
	b)- B FAULT II	-"-	197,600	0.81	170,200	0.74	125,300		13	87	90	10	0.8613	
	Sub-Total		493,400	0.92	405,200	0.84	338,900							

REF PLAN

GEOLOGY		
SURVEY		
PLANNING		
ROCK MEC.		
GRADE CON		
DRAFTING		

SCALE 1:

KING ISLAND S GRASSY KING

DRAWING NUMBER

V.

PROVEN

BOLD HEAD MINE

162029

	AREA	MINING METHOD	RESOURCE AT 31-8-80	% WO_3	RESERVE AT 31-8-80	% WO_3	RESERVE M.T.U. 31-8-80	CALCULATION REMARKS	FACTORS: Pillar factor %	Mineable %	Recovery %	Dilution %	Overall Ore Reserve Factor
8-	C LENS:												
	10 550 – 10 700N	slot + C/F	55,000	0.7	44,100	0.67	29,400	0 grade ←	15	85	90	5 ppgh(o)	0.8033
	10 425 – 10 550N	C/F.	124,700	0.99	143,500	0.78	111,000	(Dil. 5% for ppgh(o) at 0 grade 40% for ppgh(m) at 0.35% grade)	13	87	90	5 ppgh(o) 40 ppgh(m)	1.1510
	10 200 – 10 425N	slot + C/F	64,000	0.99	51,400	0.94	48,400		15	85	90	5 ppgh(o)	0.8033
	Sub-total		243,700	0.92	239,000	0.79	188,800						
9-	C_2 – LENS:												
	10 525 – 10 700N	C/F + slot	127,400	1.06	105,800	0.92	97,500	(Now, high min. & recovery because of diff. mining method.	15	85	85	15	0.8309
	10 200 – 10 525N	slot	18,500	1.04	16,500	0.87	14,300		17	83	90	20	0.8964
	Sub-total		145,900	1.06	122,300	0.91	111,800						
10-	C LENS WEST	slot + C/F	62,400	0.85	50,900	0.71	36,000		20	80	85	20	0.8160
11-	D LENS:												
	North	Mech. C/F	45,000	0.88	39,000	0.73	28,600	Now, low dil. as comp. to fcb. fig.	15	85	85	20	0.8670
	South	—	—	—	—	—	—						
	Sub-total		45,000	0.88	39,000	0.73	28,600						
	BOLD HEAD TOTAL		1,266,400	0.94	1,021,000	0.82	837,700	WEIGHTED AVERAGE		82	88	13	

REF PLAN

GEOLOGY
SURVEY
PLANNING
ROCK MEC.
GRADE CON
DRAFTING

SCALE 1:

KING ISLAND S(
GRASSY KING

DRAWING NUMBER

I

PROBABLE

N.B. PROB. FACTOR OF 90% IS APPLIED TO EACH MINING RESERVE CALCULATION.

BOLD HEAD MINE

162030

	AREA	MINING METHOD	RESOURCE AT 31-8-80	% WO_3	RESERVE AT 31-8-80	% WO_3	RESERVE M.T.U. 31-8-80	CALCULATION REMARKS	FACTORS				Overall Ore Reserve Factor	V.
									Pillar factor %	Mineable %	Recovery %	Dilution %		
1.	A-LENS:													
	North	—	—	—	—	—	—							
	West	—	—	—	—	—	—							
	South	slot + C/F	173,900	0.67	76,600	0.48	36,600			50	70	40	0.4410	
	Sub-Total		173,900	0.67	76,600	0.48	36,600							
2.	B-LENS:													
	10 750 — 10 800N		9,000	1.74	3,500	1.45	5,000	Low reserve, because only 40% mineable as compared to 50% in Feb.		40	90	20	0.3888	
	10 625 — 10 750N		—	—	—	—	—							
	10 525 — 10 625N		—	—	—	—	—							
	10 425 — 10 525N		—	—	—	—	—							
	10 325 — 10 425N	slot	14,200	1.11	8,500	0.79	6,700			50	95	40	0.5985	
	Sub-Total		23,200	1.35	12,000	0.98	11,700							
3.	B-LENS WEST	slot	55,500	0.82	26,300	0.68	17,900			55	80	20	0.4752	
4.	B-LENS WEST-LOWER		8,100	0.78	—	—	—	No reserve in B-Lens West Lower Pod.						
5.	B-LENS EAST		1,900	1.17	—	—	—	Written off.						
6.	BOUNDARY ORE	Cand + C/F	17,000	0.87	13,600	0.76	9,500			80	90	15	0.7452	
7.	FAULT BLOCK:													
	B FAULT I	Mech. or Cand C/F.	33,800	1.03	13,100	0.86	11,200			60	60	20	0.3888	
	B FAULT II	-11- -11-	12,400	0.74	4,000	0.62	2,400			60	50	20	0.3240	
	Sub-Total		46,200	0.95	17,100	0.80	13,600							

REF PLAN

GEOLOGY
SURVEY
PLANNING
ROCK MEC.
GRADE CON.
DRAFTING
T.S.S.

SCALE 1:

KING ISLAND GRASSY KING

DRAWING NUMBER

II.

PROBABLE

N.B. PROB. FACTOR OF 90% IS APPLIED TO EACH C. LATION.

BOLD HEAD. MINE

162031

AREA	MINING METHOD	RESOURCE AT 31-8-80	% WO_3	RESERVE AT 31-8-80	% WO_3	RESERVE M.T.U. 31-8-80	CALCULATION REMARKS	FACTORS				Overall Ore Reserve Factor
								Pillar factor %	Mineable %	Recovery %	Dilution %	
8- C₁ LENS:												
10 525 — 10 700N	slot + C/F	7,300	0.73	4,100	0.61	2,500			75	70	20	0.567
10 200 — 10 525N	-11- -11-	17,900	0.98	10,100	0.62	8,200			75	70	20	0.567
Sub-Total		25,200	0.91	14,200	0.75	10,700						
9- C_2 LENS												
10 525 — 10 700N	Mech. C/F + slot.	3,800	0.83	2,200	0.64	1,400	(High reserve due to diff. mining method. 80% rec. vs dump. with 55% in Feb.).		55	90	30	0.5792
10 200 — 10 525N	-11- -11-	177,000	1.01	120,400	0.84	101,300			70	90	20	0.6804
Sub-Total		180,800	1.01	122,600	0.84	102,700						
10- C LENS WEST	slot & Mech. C/F.	40,000	0.83	29,300	0.69	20,200		20	80	85	20	0.7344
11- D LENS:												
North	Mech. C/F	2,500	0.83	1,500	0.64	900			70	75	30	0.6143
South	-11-	11,800	1.20	7,200	0.92	6,600			70	75	30	0.6143
Sub-Totals		14,300	1.14	8,700	0.86	7,500						
BOLD HEAD TOTAL:		586,100	0.88	319,400	0.72	230,400						

REF PLAN

GEOLOGY		
SURVEY		
PLANNING		
ROCK MEC.		
GRADE CON		
DRAFTING		

SCALE 1:

KING ISLAND GRASSY K

DRAWING NUMBER

102032

see geologist for this.

29-9-80.

G-Lens Reserve Calculation.

1). (10 425N — 10 525N) ⇒ 109,900 x 1.151 = 126,500 at 0.78% WO_3 (sum of resource & overall reserve factor) between 10 425N & 10 525N.

∴ 10 200 — 10 525N ⇒ [(10 200 — 10 425N) + (10 425 — 10 525N)]

⇒ 51,400 at 0.94% WO_2 + 126,500 at 0.78% WO_3

= 177,900 at 0.83% WO_3.

2). (10 525 — 10 550N) ⇒ 14,800 x 1.151 = 17,100 at 0.67% WO_3

∴ 10 525 — 10 700N ⇒ [(10 525 — 10 550N) + (10 550 — 10 700N)]

⇒ 17,000 at 0.67% WO_3 + 44,100 at 0.7% WO_3

= 61,100 at 0.69% WO_3.

∴ Sub-total = { 177,900 at 0.83% WO_3
+ 61,100 at 0.69% WO_3

Σ = 239,000 at 0.79% WO_3.

Rsc Mined since Feb '80

54 600
1500
52,800

A lens.	10575 - 600	300 tonnes.	
	10550 - 575	1480 tonnes	1780

B lens	10725 - 10750	1248 tonnes	
	10400 - 10425	1106 tonnes.	2400

B. Ore	10550 - 575	615
	10575 - 600	2153
	10600 - 625	1470

F.B.	BF_1	10375 - 400	2417
		10400 - 425	2960
	BF_2	10425 - 10450	571
		10450 - 475	4060

1620341

C_1 Lens.	R60	10550 - 575	438
		10575 - 600	1212
	Decl	10375 - 400	565
		10400 - 425	700
	T47	10450 - 475	3969
		10475 - 500	6102
		10500 - 525	565

162035

C_2 LENS

10625 - 650	R60	4104.
10600 - 625		B425
10575 - 600	T53	516
10550 - 575		6620
10525 - 550		2433
10500 - 10525		3643

C WEST.	10575 - 600	1000	C_2
	10550 -575	2022	

COMBINED ORE RESOURCE TABLE

OREBODY	PROVEN TONNES	PROVEN %WO_3	CHANGE 1000T.	CHANGE %WO_3	PROBABLE TONNES	PROBABLE %WO_3	CHANGE 1000T.	CHANGE %WO_3	POSSIBLE TONNES	CHANGE 1000 TONNES	TOTAL PROVEN + PROBABLE TONNES	TOTAL PROVEN + PROBABLE %WO_3	CHANGE 1000T.	CHANGE %WO_3
No. 1 OREBODY:														
"C" LENS, (219840E - DRILL SECTION 15)														
WEDGEBLOCK														
WESTERN EXTENSION, (DRILL SECTION 15-22)														
"B" LENS														
SUB TOTAL:														
DOLPHIN OREBODY:														
"B" LENS														
"C" LENS WEDGE														
CENTRAL														
PIT														
SOUTHERN														
SUB TOTAL:														
BOLD HEAD OREBODY:														
"A" LENS	79,400	0.92	-1.8	NIL	173,900	0.67	NIL	NIL	31,000	NIL	253,300	0.75	-1.8	NIL
"B" LENS MAIN	169,200	0.97	-2.3	NIL	23,200	1.35	NIL	NIL	24,000	NIL	192,400	1.02	-2.3	NIL
WEST + WEST LOWER	6,200	0.71	NIL	NIL	63,600	0.81	NIL	NIL	NIL	NIL	69,800	0.80	NIL	NIL
EAST	13,100	1.06	NIL	NIL	1,900	1.17	NIL	NIL	NIL	NIL	15,000	1.07	NIL	NIL
[redacted] FAULT BLOCK	493,400	0.92	-10.0	NIL	46,200	0.95	NIL	NIL	3,000	NIL	539,600	0.92	-10.0	NIL
BOUNDARY ORE	8,100	0.83	-1.2	NIL	17,000	0.87	-3.0	NIL	NIL	NIL	25,100	0.86	-4.2	NIL
"C_1" LENS	243,700	0.91	-13.6	NIL	25,200	0.91	NIL	NIL	177,000	+161,000	268,900	0.91	-13.6	NIL
"C_2" LENS	145,900	1.06	-21.1	+0.04	180,800	1.01	-2.8	NIL	37,000	NIL	326,700	1.03	-23.9	-0.02
"C" LENS WEST	62,400	0.85	-0.6	-0.01	40,000	0.83	-15.4	NIL	NIL	NIL	102,400	0.84	-16.2	-0.01
"D" LENS	45,000	0.88	NIL	NIL	14,300	1.14	NIL	NIL	8,000	NIL	59,300	0.94	NIL	NIL
SUB TOTAL:	1,266,400	0.94	-50.6	NIL	586,100	0.88	-21.2	NIL	280,000	+161,000	1,852,500	0.92	-71.8	NIL
TOTAL:														

16203

Bold Head Mining Reserves
10 April, 1979.

[illegible] RESOURCE TONNAGE ESTIMATIONS FOR BOLD HEAD 1980/81

STOPE	Resource available to stope @ 28.2.79	Tonnes mined P3-7 1979/80	Revised budget tonnes P8-13 1980	Resource available to stope @ 30.6.80
H50	253,100	1,800	3,000	248,300
R70	196,600	441	3,000	188,700
B SLOTS		2,080	2,400	
[illegible] ORE	20,000	3,500	2,500	14,000
[illegible] BLOCK	401,200	8,900	12,000	380,000
L60	35,000	—	—	35,000
T47	70,000	—	—	70,000
R60	64,500	1,330	9,000	48,500
T53	82,850	8,000	12,000	62,850
WEST	Say 40,000	7,860	9,000	Say 23,000
LENS	46,500	1,610	—	44,890

BOLD HEAD ; ORE MINED

13/2/79 to 28/8/79

28/3

AREA	P9	P 10	P 11	P 12	P 13	P 1	P 2	TOTAL	factor			
	13/2 73-79					79/80		REDUCTION IN MINING RESERVE		REDUCTION IN RESOURCE		
A LENS	638	1153	481	879	58			3209	0.6728	4770		
B LENS MAIN MAIN SOUTH (329 – 525)	430	658	76	811	771	1447	659	4852	0.65	7465		
(675 ~~750~~) MAIN NORTH (P70)				684	1555	661	253	13153	0.7920	39811		
BOUNDARY ORE (P57)	1477	1332	533			719	1558	5200 PROVEN 419 PROBABLE	0.8280 0.7245	6309 PROVEN 578 PROBABLE		
B. FAULT 350 + 525	1296	575	1905	1760	8035	777	3272	12620	0.8304	15188		
C LENS C I 525 – 700	2458	3705	1648	4623	4110	5001	2760	24305	0.7948	30580		
C II 525 – 700	1273	3664	2510	168	270	2610	3398	13893	0.7252	19157 87441	PROVEN	87400
PROBABLE C WEST	485	567	1141	1497	1237		3082	8009	0.4140	19345		
D LENS	238			102	618			958	0.7800	1228		
TOTAL	8296	11651	8289	10523	11653	11216	14982	76610		21150 105592	PROBABLE TOTAL	21200

SAME TITLE AS DOL.

LENS	SUBDIVISION	PROVEN RESOURCE		PROVEN RESERVE		PROBABLE RESOURCE		PROBABLE RESERVE		POSSIBLE RESOURCE	TOTAL (PROVEN + PROBABLE) RESOURCE		TOTAL (PROVEN + PROBABLE) RESERVE	
	A LENS NORTH	83,670	0.92	56,300	0.78						83,700	0.92	56,300 ✓	0.78
A LENS	A LENS WEST	7,800	0.83	5,900	0.76						7,800	0.83	5,900 ✓	0.76
	A LENS SOUTH					164,900	0.68	69,300	0.41	20,000	164,900	0.68	69,300 ✓	0.41
		91,500	0.91	62,200 ✓	0.78	164,900	0.68	69,300 ✓	0.41	20,000	256,400	0.76	131,500 ✓	0.58
	10750 - 10800N					9,010	1.74	6,800	1.39		9,000	1.74	6,800 ✓	1.39
B LENS MAIN	10625 - 10750N	50,180	0.83	36,500	0.76						50,200	0.83	36,500 ✓	0.76
	10525 - 10625N	35,040	0.64	20,900	0.60						35,000	0.64	20,900 ✓	0.60
	10425 - 10525N	58,100	1.06	34,000	0.90						58,100	1.06	34,000 ✓	0.90
	10325 - 10425N	38,850	1.33	26,100	0.80	15,230	1.21	8,500	0.73		54,100	1.30	34,600 ✓	0.78
	10200 - 10325N									20,000				
		182,200	0.97	117,500 ✓	0.78	24,200	1.41	15,300 ✓	1.02	20,000	206,400	1.02	132,800 ✓	081
B LENS WEST		6,200	0.71	—	—	55,500	0.82	27,800 ✓	0.66		61,700	0.81	27,800 ✓	0.66
B LENS WEST LOWER				—	—	8,100	0.78	—	—		8,100	0.78	—	—
B LENS EAST		13,100	1.06	—	—	1,900	1.17	—	—		15,000	1.07	—	—
BOUNDARY ORE		6,300	0.97	5,200 ✓	0.82	14,700	1.00	10,700 ✓	0.85		21,000	0.99	15,900 ✓	0.84
FAULT BLOCK	B FAULT I	272,380	0.99	217,140	0.85	55,840	0.63	20,100	0.50	10,000	328,200	0.93	237,200 ✓ -40	0.82
	B FAULT II	206,840	0.75	184,580	0.64	47,900	0.75	14,370	0.60	5,000	254,700	0.75	199,000 ✓ +50	0.64
		479,200	0.89	401,700 ↓ 20	0.75	103,700	0.69	34,500 ✓	0.54	15,000	582,900	0.85	436,200 ✓	0.74
	10525 - 10700N	103,650	0.73	82,380	0.66						103,600	0.73	82,400 ✓	0.66
C_1 LENS	10200 - 10525N	126,170	0.94	72,920	0.79	19,050	1.20	9,600	0.96	40,000	145,200	0.97	82,500 ✓	0.81
	C_1 WEST					60,850	0.86	25,200	0.73		60,900	0.86	25,200 ✓	0.73
		229,800	0.84	155,300 ✓	0.72	79,900	0.94	34,800 ✓	0.79	40,000	309,700	0.87	190,100 ✓	0.73
	10525 - 10700N	136,980	1.13	99,340	0.81	12,290	0.98	7,000	0.69		149,300	1.12	106,300 ✓ -40	0.80
C_2 LENS	10200 - 10525N	65,620	1.06	36,200	0.85	73,520	0.72	38,800	0.58		139,100	0.88	75,000 ✓	0.71
	C_2 WEST					33,510	0.86	13,870	0.74	40,000	33,500	0.86	13,900 ✓	0.74
		202,600	1.11	135,500 ✓ 40	0.82	119,300	0.79	59,700 ↓	0.63	40,000	321,900	0.99	195,200 ✓	0.76
D LENS						45,200	0.95	35,300 ✓	0.67		45,200	0.95	35,300	0.67
BOLD HEAD TOTAL		1,210,900	0.93	877,400	0.76	617,400	0.81	287,400 ✓✓	0.62	135,000	1,828,300	0.89	1,164,800	0.73

RESOURCE

RESOURCE OCT '78			ORE RESOURCE APRIL '79		VARIANCE TONNES	
"A" LENS	260 100	0.76	256, 400	0.76	− 3700	N
"B" LENS MAIN	211 200	1.02	206 400	1.02	− 4800	N
WEST	61 700	0.81	61 700	0.81	NO	NO
WEST LOWER	8 100	0.78	8 100	0.78	NO	N
EAST	15, 000	1.07	15 000	1.07	NO	N
"B" LENS FAULT BLOCK	526 200	0.89	582, 900	0.85	+ 56700	YES
BOUNDARY ORE	21 600	0.99	21 000	0.99	NO	N
"C1" LENS	332, 000	0.87	309 700	0.87	− 22 300	N
"C2" LENS	340, 300	1.00	321 900	0.99	− 18 400	YES
"D" LENS	46 500	0.95	45 200	0.95	− 1800	N
	1,822,700	0.91	1,828,300		− 49 200 + 56 700	
			5600		+ 7,500 ?	

Dlen

ORE RESERVE OCT '78			ORE RESERVE APRIL '79		VARIANCE	
"A" LENS	134 000	0.59	131 500	0.58	− 2500	YES
"B" LENS MAIN	139 600	0.80	132 800	0.81	− 6800	YES
WEST	27 800	0.66	27 800	0.66	NO	NO
WEST LOWER	—	—	—	—		
EAST	—	—	—	—		
"B" LENS FAULT BLOCK	455 200	0.79	436 200	0.74	− 19000	YES
BOUNDARY ORE	16 200	0.84	15,900	0.84	− 300	NO
"C1" LENS	222 300	0.73	190 100	0.73	− 32 200	N
"C2" LENS	219, 900	0.78	195 200	0.76	− 24 700	YES
"D" LENS.	30, 700	0.86	35 300	0.67	+ 4,600	
	~~1,245,700~~		1,164,800		− 85 500 + 4 600	
					− 80 900	

1237,100
1164 800
72,300

−80,900

162040

13 FEB 1979

AREA		OCT. 1978		APRIL 1979		TOTAL CHANGE	MINING CHANGE	RESOURCE CHANGE
LENS	PROV	95,200	0.91	91500	0.91	-3.7	NIL -3.7	NIL
	PROB	164,900	0.68	164,900	0.68	-		
LENS	PROV	186,900	0.97	182,200	0.97	-4.7	NIL -4.7	NIL
	PROB	24,300	1.41	24,300	1.41	-		
F	PROV	278,500	1.00	272 400	0.99	-6.1	-0.01 -0.9	+4.8
	PROB	9900	1.03	55,800	0.63	+45.9	-0.40 -0.7	+46.6
F_2	PROV	209 700	0.75	206 800	0.75	-2.9	-2.9	
	PROB	29,100	0.87	47,900	0.75	+19.8	-0.12 NIL	+19.8
vicinity	PROV	6,300	0.97	6800	0.97	-	-1.9	+1.9
	PROB	15,300	1	14700	1	-0.6		-0.6
LENS	PROV	252,070	0.85	229,520	0.84	-22.3	-0.01 -22.3	NIL
	PROB	19,050	1.20	19,050	1.20	-		
LENS	PROV	217,910	1.12	202,600	1.11	-15.3	-0.01 -15.3	NIL
	PROB	85,800	0.75	85,800	0.75	-		
WEST		60,860	0.86	60,860	0.86			
WEST	PROB	36,570	0.87	33510	0.86	-3.1	-0.01 -3.1	NIL

-65.5 +72.5

162042

Actual Production p3 - p8 = 73,869 tonnes

EXPLANATION OF RESERVE CALCULATIONS

10 APR 1979

COMMENTS ON RESERVE CALCULATIONS

A-LENS:	% MINEABLE	0.65	{ CROWN PILLAR { IRREGULAR ORE BOUNDARY
NORTH	% RECOVERY	0.90	(CAN NEVER BE 100%)
10550 NORTH	% DILUTION	0.15	{ 0.05% based on last 22 Periods { 0.15% " " " 9 Periods
A-LENS	% MINEABLE	0.69	GEOLOGY USE 0.05% DILUTION FOR A-WEST
WEST	% RECOVERY		
SHADED AREA ALONG N°2 FAULT	% DILUTION	0.10	

NO CHANGE ON APRIL FACTORS :— ONLY DIFFERENCE IS IN DROP IN TONNES DUE TO MINING CARRIED OUT.

B-MAIN LENS

10 675 NORTH ⇒ P70

50180	0.83	41649
16 740	0.84	14 062
33 440	0.82	27,578

% MINEABLE	0.80
% RECOVERY	0.90
% DILUTION	0.10

ES GRADE IN	OCTOBER '78	0.83	RESERVE GRADE 0.75
" " "	APRIL '79	0.82	" " 0.74

Hence drop in both of 0.01%

REASON FOR DROP OF 0.01%

	AUG 78		FEB 79		VARIANCE
10675 – 10750N	14,060	0.84	14060	0 84	
10700 – 10725N	11,320	0.57	10 390	0 57	– 930
10725 – 10 750N	11, 220	1.09	8990	1 09	– 2230
					– 3160

162042

B - LENS CONTINUED

10 APR ...
162043

625 - 675 NO CHANGE IN TONNES

SOURCE 16 740 @ 0.84 % RESERVE 10,000 @ 0.80

RECOVERABLE BY PILLAR RECOVERY

% MINEABLE 0.60 (Some ore in floor included not recovered)

% RECOVERY 0.95

% DILUTION 0.05

525 - 625

	AUG '78	FEB '79
RESOURCE	36 250 @ 0.64	35,040 @ 0.64 %
RESERVE	24,300 @ 0.56	20 900 @ 0.60 %

Reserve dropped by 4.900 tonnes

Reason :— Primary stoping in the area is now complete - Pillar Recovery ore left :—

% mineability 0.60

% Recovery 0.95

% Dilution 0.05

425 - 525

Primary Slot stoping now complete

Pillar Recovery left and considered to be

60% minable (25% dilution recorded in last 22 periods)

95% recovery

0.15% dilution

425 - SOUTH

Primary stoping still to be started, slot reise to be cut and rooms to be stopped out (last 22 periods 38% dil)

60% minable

80% recovery

40% dilution → experience to-date suggests poor ground condition (wet & broken) with excessive dilution resulting -

102044

10 APR 1979 13 FEB 1979

B LENS MEAN (TOTALS)

Section	Proved Ore	Probable Ore	Total	Grade
10325 - 10350N	1,890	8,470	10,360	1.24
10350 - 10375N	5,740	6,760	12,500	1.18
10375 - 10400N	16,430		16,430	1.42
10400 - 10425N	14,790		14,790	1.29
10425 - 10450N	15,890		15,890	1.36
10450 - 10475N	10,120		10,120	1.21
10475 - 10500N	15,980		15,980	0.88
10500 - 10525N	16,110	-300	16,110	0.85
10525 - 10550N	11,950		11,950	0.63
10550 - 10575N	8,470		8,470	0.63
10575 - 10600N	8,910		8,910	0.63
10600 - 10625N	5,710		5,710	0.71
10625 - 10650N	6,770	16 740	6,770	0.73
10650 - 10675N	9,970		9,970	0.92
10675 - 10700N	14,060	P70	14,060	0.84 x
10700 - 10725N	10,390	33 440	10,390	0.57 x
10725 - 10750N	8,990		8,990	1.09
10750 - 10775N		8,130	8,130	1.74
10775 - 10800N		880	880	1.74
	182,170	24,240	206,410	1.02
	(0.97)	(1.4)		[illegible]

162045 NO AF...

B-EAST — comment in October was that :—
No B east this year. Budget Loans constituted
4% of Tonnes and 5% of MTU's
Hence written off October 1978

B-WEST — written off October 1978.

BOUNDARY :

OCT 78 RESOURCE 0.96% OCT 78 RESERVE 0.82%
↳ This was reduced due to dilution of 15%

latest fig's indicate dilution is about 16%
Hence leave dilution as 15%
mineable 80% } TYPICAL CAVO OUT & FILL
Recovery 90% } FIGURES

NO CHANGE IN TONNES SINCE OCT 78
BECAUSE ALTHOUGH WE HAVE MINED 1.9%
RESOURCE HAS BEEN INCREASED BY 1.9%

110 APR

102040

BF1

OCT 1978 FIG'S		RESOURCE		RESERVE	
BF1	(350 – 525)	235,500	1.00	209 200	0.9
	(525 – 625)	43,060	1.00	26 600	0.9

APRIL 1979					
BF1	(350 – 525)	229,320	1.00	203,700	0.90
	(525 – 625)	43,060	0.91	26,600	0.8

FACTORS BF1 (350 – 525)
85% MINEABLE
95% RECOVERY
10% DILUTION (ORE 'PATCHY')

Production figures from last year not much help as no BF1 has been mined in its own right.

BF1 (525 – 625)
75% MINEABLE
75% RECOVERY
10% DILUTION
} ORE BOUNDARYS IRREGULAR.

① 6190 tonnes dropped from Section 350 – 375 since Oct 78
② Error in Octobers resource grade for section 525 – 625 should be 43,060 @ 0.91% not 43,060 @ 1.0%
hence reserve grade dropped from 0.90 to 0.82%

10 APR 1979
13 FEB 1979
162047

B. FAULT I

10300N (342 m² at 0.5%
10275N (50 m²)

Tonnes = $\frac{25 \times 357}{2}$ (342 + 50 + √)

= 15,550 tonnes at 0.5%

10275N } possible ore : say 10,000 tonnes..
10350N }

Section	Tonnage	Mined (20% Dilution)	Remainder
10325N - 10350N	15,537	712	14,825
10350N - 10375N	24,168	17,788	6,380
10375N - 10400N	47,015	6,607	40,408

TOTALS B.F.	Blown Ore	Probable Ore	Total		Grade
10275 - 10300N		15,550	5,550		0.5
10300 - 10325N		25,460	25,460		0.6
10325 - 10350N		14,830	14,830		0.8
10350 - 10375N	6,380	← Loss of cf Oct 78 -6190	6,380	MTU	1.02
10375 - 10400N	40,410		40,410	231564	0.93
10400 - 10425N	36,200	229,320 1.01	36,200		0.80
10425 - 10450N	31,340		31,340		1.01
10450 - 10475N	42,040		42,040		1.06
10475 - 10500N	38,710		38,710		1.10
10500 - 10525N	34,240		34,240		1.16
10525 - 10550N	25,530		25,530	MTU	0.99
10550 - 10575N	10,690	43060 0.91	10,690	39359	0.91
10575 - 10600N	6,410		6,410		0.64
10600 - 10625N	430		430		0.59
	272,380 (0.99)	55,840 (0.10)	328,220		0.98

10 APR 1979

162048

BF_2

Note: incorrectly reported in Oct 1978.

Resource tonnes reported in (350 → 525) section were actualy the total tonnes from (350 → 550) section inclusive

Hence the tonnes reported were inflated by the addition of (525 → 550) section tonnes.

Also grade reported for section 550 to 625 was in error and should have been 0 67 not 0.75

BF_2 (350 → 525)

% mineable	0 85
% recovery	0.95
% dilution	0.15

dilution fig Oct '78 10% however performance to date suggests it should be 15% (record of last 22 period)

	REPORTED RESOURCE ACTUAL (350 → 550)		CORRECT RESOURCE (350 → 525)		REPORTED RESERVE ACTUAL (350 → 550)		CORRECT RESERVE (350 → 525)	
Oct '78	202050	0.75	185,470	0.75	179,590	0.67	164750	0.68
	7630	0.75	24,215	0.77	4,700	0.67	14980	0.6[illegible]
	209 680	0.75	209,680	0.75	184 200	0.67	179, 730	0.68

	(350 → 525)		(350 → 525)	
April '79	182, 620	0.75	169, 600	0.64
	24 220	0.77	14. 980	0.69
	206 840	0.75	184 580	0.64

VB

[illegible] in Dilution of 15% means increase in reserve tonnes compared with Oct '7[illegible]

BF_2 (extraction)

ITO APR 13 FEB 1979

162[illegible]

10500 - 10525N	R52	p3	14	0.72
10425 - 10450N	C37	p8	3173	0.59

TOTAL EXTRACTION

10500 - 10525N	6024 + 14 =	6038 tonnes	24,353 - 5434 = 18919	10%
10425 - 10450N	7554 + 3173 =	10,727 tonnes	40,357 - 9654 = 30703	

TOTALS BF_2	Hawk Ore	Probable Ore	Total	Grade
10275 - 10300N		6900	6900	0.7
10300 - 10325N		15,080	15,080	0.7
10325 - 10350N		25,920	25,920	0.8
10350 - 10375N	✓ 32,230	182,620 0.75%	32,230	0.74
10375 - 10400N	✓ 25,160		25,160	0.60
10400 - 10425N	✓ 17,970	3173 @ 0.59 EXTRACTION	17,970	0.68
10425 - 10450N	30,700		30,700	0.78
10450 - 10475N	✓ 32,130		32,130	0.83
10475 - 10500N	✓ 25,510		25,510	0.78
10500 - 10525N	✓ 18,920	182,620 0.75	136624 18,920	0.79
10525 - 10550N	✓ 16,580	24,220 0.77%	16,580	0.82
10550 - 10575N	6,630		6,630	0.69
10575 - 10600N	150		150	0.46
10600 - 10625N	860	increased by 5 ton 24220 0.77 18678	860	0.51
	206,840	47,900	254,740	0.75
	(0.75)	(0.75)		

206,840 0.75 155,302

10 APR 1979
162050

C-LENS CI

(525 → 700) – MINING METHOD – { TRANSVERSE PILLAR + MECHANISED CUT & FILL ALL READY IN OPERATION ABOVE 525N.

MINEABLE – 85% (gradational ore boundaries)
RECOVERY – 85% – Transverse pillars
DILUTION – 10% mining to date in CI lens suggests low dilution (5%) – but use 10% for the moment

CI (200 → 525) – MINING METHOD – { MECHANIZED ROOM AND PILLAR + SOME SLOT STOPING

MECH C&F – IRREGULAR ORE BOUNDARY WITH POOR CORRELATION BETWEEN SECTIONS (400 → 525)

SLOT. – BELOW 400 SECTION ORE ONLY 1 OR 2 METRES WIDE.

MINEABLE – 60% (poor correlation between sections irregular ore boundaries)
RECOVERY – 80% some random pillars required
DILUTION – 20%

SEE NEXT PAGE FOR A BRAKEDOWN SECTION BY SECTION

CI LENS (200 – 525)

110 AF...

162051

SECTION	COMMENTS		RESOURCE TONNES	RESERVE TONNES	m'bb	Rec	Dil	FACTOR
325 – 350		P	3,454					
350 – 375		P	5,434					
375 – 400		P	10,159					
			19 000					
400 – 425	SLOT STOPING - STRINGY, QUESTIONABLE CONTINUITY.		11,949		0.50	0.60	1.20	0 3600
425 – 450	MECH R&P – BANDS OF WASTE IN ORE. POOR CONTINUITY.		18,217		0.85	0.85	1.15	0.7820
450 – 475	MECH R&P CAVO C&F ADJ TO N°2 FAULT		31,302		0.60	0.80	1.15	0.5520
475 – 500	CAVO C&F		36 480		0.60	0 80	1.15	0.5520
500 – 525	MECH R&P 525 (15m wide x 10m High)	500 (25m wide x 8m HIGH)	28, 223		0.80	0.70	1.15	0.6440
			126,171	AVE =	0.66	0 75	1.16	0.578

145, 171

10 APR 1979 13 FEB 1979

LENS - TOTALS.

	Proven Ore	Probable Ore	Total	Grade
10325 - 10350N		3,454	3,454	1.25
10350 - 10375N		5,434	5,434	1.22
10375 - 10400N		10,159	10,159	1.17
10400 - 10425N	11,949		11,949	0.87
10425 - 10450N	18,217		18,217	0.92
10450 - 10475N	31,302		31,302	1.02
10475 - 10500N	36,480		36,480	0.97
10500 - 10525N	28,223		28,223	0.88
10525 - 10550N	16,032		16,032	0.82
10550 - 10575N	20,165		20,165	0.87
10575 - 10600N	31,309		31,309	0.71
10600 - 10625N	19,668		19,668	0.55
10625 - 10680N	14,007		14,007	0.69
10650 - 1067SN	2,471		2,471	0.73
	229,823	19,047	248,870	0.87
	(0.84)	(1.20)		

126,171 @ 0.95% = MTM 119,305 ✓

103,652 @ 0.73 = MTM 75,205

229 823 ✓

0.4463 · 1.084 · 0.85 · 194,510

Proven Ore	10400 - 10525N	126,171	0.94
	10525 - 1067SN	103,652	0.73

CII LENS (PROVEN)

10 APR ...79

162053

SECTION	COMMENTS	RESOURCE TONNES		M'ble	Rec	Dil	Factor
525 - 550	MECH C & F - SOME ORE LOST IN SILL PILLAR	29,639		0.80	0.80	1.25	0.8000
550 - 575	SOME SLOT MINING OF THIN LENSES	19,268		0.65	0.75	1.30	0.6338
575 - 600	CAVO FOR MAIN POD SLOT FOR LENSES.	30,800		0.70	0.85	1.30	0.7735
600 - 625	MECH C & F SOME PILLAR SUPPORT REQ'D	21,987		0.80	0.75	1.25	0.7500
625 - 650		16,813		0.70	0.75	1.25	0.6563
650 - 675	CAVO C & F PATCHY ORE	16,785		0.75	0.75	1.30	0.7313
675 - 700		1,686		0.75	0.75	1.30	0.7313
		136,978		0.74	0.77	1.28	0.7252

(525 → 700)

Note: high dilution in Mining of CII lens to date. (37%)

SECTION	COMMENTS	RES TONNES		M'ble	Rec	Dil	Factor
400 - 425	Pod adj to granite	19396		0.80	0.90	1.20	0.8640
	CAVO C & F				LENS USE	OUT TWO	OF FACTORS BELOW
425 - 450	Pod adj to granite						
	C/F as above but thinner & lower grade	6974		0.50	0.90	1.20	0.5400
450 - 475	NO MINING TO THIN	4721		—	—	—	—
475 - 500	" " " "	7336		—	—	—	—
500 - 525	MECH ROOM & PILLAR	27,193		0.60	0.80	1.20	0.5760
		65,620		0.55	0.85	1.20	0.5580

10 APR 1979

13 FEB 1979

C_2 LENS (TOTAL EXTRACTION)

60% Dilution for Dec
10% for C_2 sign

10525 - 10550N	222 tonnes at	0.30%	[illegible] - 115	37078
10550 - 10575N	287 tonnes at	0.30%	24,229 - 115	24114
10575 - 10600N	2844 tonnes at	0.85%	33,360 - 2560	30800
10600 - 10625N	4256 tonnes at	0.85%		
	7874	0.69		
	12130	0.75	32,974 - 10917	21987
10625 - 10650N	1783 tonnes at	0.54%	1848 - 1605	16813

C_2 LENS TOTALS		Proven Ore	Probable Ore	Total		Grade
10325 - 10350N			22,655	22,655		0.50
10350 - 10375N			26,490	26,490		0.55
10375 - 10400N			24,371	24,371		1.10
10400 - 10425N		19,396		19,396		1.20
10425 - 10450N		6,974		6,974	MTU	0.85
10450 - 10475N	65,620	4,721		4,721	69,815	1.08
10475 - 10500N	1.06	7,336		7,336		1.06
10500 - 10525N		27,193		27,193		1.02
10525 - 10550N		29,639	7439	37078		0.94
10550 - 10575N		19,268	4846	24114		1.04
10575 - 10600N		30800		30800		1.34
10600 - 10625N	136,978	21987		21987		1.28
10625 - 10650N	1.1362	16813		16813		1.16
10650 - 10675N		16785		16785		1.04
10675 - 10700N		1686		1686		0.83
		202,598	85,801	288,399		1.01
		(1.11)	(0.76)			

EXPLANATION OF

RESERVE CALCULATIONS

10 APR 1979

162055

PROBABLE ORE:

A. LENS : SOUTH — NO CHANGE

B. LENS : 750 — 800) NO CHANGE FROM OCT '78 FIG

(325 - 425) " " " " "

WEST " " " " "

WEST/LOWER AS OF APRIL '78 NO RESERVE IN LOWER POD.

EAST WRITTEN OFF AROUND OLD NSY STOPE

BOUNDARY ORE —

CHANGE IN RESOURCE TONNES (GEOLOGICAL REASONS)

NO CHANGE IN FACTORS

BF I — (a) INCREASE TO 55,840 TONNES BASED ON ONE D.D. HOLE ON 300 SECT'N

(b) EXTENSION OF ORE TO 325 AND 275 SECTIONS IS SUPOSITON (BF I ON 300 SECT'N 10m WIDE & DIPS UP AT 45°)

(c) CORE INDICATES VERY POOR GROUND CONDITIONS ASSOCIATED WITH N°2 FAULT

HENCE FACTORS ARE AS FOLLOWS :—

MINEABLE ORE	50 %	(POOR GROUND ONLY 50% EXTRACTION)
RECOVERY	60 %	(PILLARS & ORE LEFT AS SUPPORT)
DILUTION	20 %	(POOR GROUND TO ADD. TO DILUTION)

BF II — (a) INCREASE TO 47,900 TONNES BASED ON THE ABOVE DRILL HOLES

(b) EXTENSION IS VERY DOUBTFUL

(c) GROUND CONDITIONS VERY POOR

10m OF BROKEN MATERIAL WITHIN 4m OF HANGING WALL.

10 APR 19[illegible] 2

162056

CI : PROBABLE

		m/ble	Rec	Dil	Factor
(325 – 350)	Upper lens slot stoping but thin	0.60	0.60	1.20	0.4320
(350 – 375)	Thin but possible slotting	0.50	0.60	1.20	0.3600
(375 – 400)	Slot stoping upper lens only	0.70	0.80	1.15	0.6440
		0.60	0.67	1.18	0.4733

use 0.60 0.70 1.2 = 0.5040.

CI - WEST PROBABLE

SECTION	COMMENTS	FACTORS m/ble	Rec	Dil	
375 - 425	Nil				
425 - 450	Nil				
450 – 475	Practically No ore				
475 – 500	Thin ore on 500 but not 475				
500 - 525	Thick section - possible cavo stope but very close to W Fault - skin of ore might have to be left.	0.80	0.60	1.15	
525 – 550	Reasonable section - again close to W-Fault, could affect total mining of block - only one D.D. hole	0.70	0.60	1.15	
550 – 575	only one hole, but otherwise a good section	0.60	0.60	1.15	
575 – 600	one hole only – but shown as good intersection	0.60	0.60	1.15	
600 – 625	poorly defined section, but away from W.Fault	0.55	0.60	1.15	
625 – 650	poor section - most of geology is interpretation	0.50	0.60	1.15	
650 – 675	No hole - no reserve				
		0.63	0.60	1.15	0.4347
		0.60	0.60	1.15	0.4140

INDEXED

10 APR 1979
16205?

CII (525 – 700) (MAIN)

SECTION	COMMENTS	% MBLE	% REC	% DIL			
350 – 375	Western pod isolated do not include						
	Reef – possibly slots	0.50	0.80	1.15	1850	0.62	1147
375 – 400	AS ABOVE	0.50	0.80	1.15	3603	0.73	2633
400 – 425	only one useful hole – assume						
	continuity of slot stopes	0.50	0.80	1.15	2160	0.97	2093
425 – 450	No ore on section – exclude					—	
450 – 475	V. Thin section against N° 2 fault						
	only. Two pods upper & lower						
	Discard lower lens – assume						
	slot stoping of upper	0.60	0.20	1.15	3578	0.77	2768
475 – 500	Two V-Thin stringers. Discard						
	lower – too thin. Only 50 % of						
	top one OK.	0.40	0.70	1.20	3841	0.82	3134
500 – 525	Ignore lower pod = 10 %.						
	Difficult to mine mechanically, often	0.70	0.80	1.20	5216	0.81	4215
	use =>	0.55	0.80	1.20			
525 – 550	Thick section at Western Fault						
	but localised in thin section	0.80	0.95	1.15	11895	0.80	9504
550 – 575	Thin centre section – low grade	0.80	0.85	1.15	3772	0.90	3398
575 – 600	—						
600 – 625	—						
625 – 650	Good intersection Cavo C & F ?	0.60	0.85	1.10	4216	1.04	4364

Total probable C_2 : 525 – 700 = 19883 0.87 17266

525 – 350 = 20,248 0.79 15,990

350 → 525 30 % dilution
55 % mineable
80 % recovery

~~500~~ → 525 20 % dilution
55 % Mineable
80 % recovery

Note: error in resource table (Aug '78) CII (525 → 700) 12,290 → 0.72

CII (700 → 525) 73,520 → 0.98

C2 WEST PROBABLE

162058 10 APR 1979

10 APR

SECTION	COMMENTS	FACTORS % mble	% rec	% dil	
425 - 450	Nil ore.	—	—	—	—
450 - 475	section against W Fault localized - not on sections N or South	0.50	0.60	1.15	
475 - 500	Nil - ore	—	—	—	—
500 - 525	3 dd. holes - substantial sect'n, against granite. Lower stringer too thin.	0.75	0.70	1.15	
525 - 550	poor section - mainly interpretation	0.50	0.60	1.15	
550 - 575	Good section - only one dd hole cavo - cut & fill?	0.70	0.70	1.10	
575 - 600	Nil - ore	—	—	—	—
600 - 625	banded - thin & stringy	0.40	0.60	1.20	
625 - 650	only one hole close to granite	0.40	0.70	1.15	
650 - 675	Good next to granite - doubtfull toward W. Fault.	0.80	0.60	1.15	
675 →	No holes - interpretation only	—	—	—	—
		0.58	0.64	1.15	0.4288
	use ⟹	0.60	0.60	1.15	0.4140

BOLD HEAD MINING RESERVES @ 6/4/1979 (FOR APRIL '79 MEETING)

102659

10 APR 1979

PROVEN

AREA		MINING METHOD	RESOURCE @ 6-4-79	% WO_3	RESERVE @ 6-4-79	% WO_3	RESERVE M.T.U	CALCULATION REMARKS.	RESERVE VARIANCE ON OCT. TONNE	FACTORS % MABLE	FACTORS % REC	FACTORS % DIL	OVERALL FACTOR	RESERVE VAR. ON OCT. GRADE	MINING CHANGE	RESOURCE CHANGE
A. LENS:	NORTH	CAVO C&F	83,670	0.92	56,300	0.78	43,900	AS FOR OCTOBER	-4%	0.65	0.90	1.15	0.6728	NO		
	WEST	"	7,800	0.83	5,900	0.76	4,480	" " "	-5%	— 0.60 —		1.10	0.7590	NO		
					62,200 ✓										-3.7%	NIL
B. LENS: MAIN	675 NORTH – 750 (P70)	CAVO C&F	33,440	0.82	26,500	0.74	19,610	do of 0.01% due to mining of 2200 @ 1.09%	-9%	0.80	0.90	1.10	0.7920	YES		
	625 – 675	PILL REC.	16,740	0.84	10,000	0.80	8,000	AS FOR OCTOBER	0%	0.60	0.95	1.05	0.5985	NO		
	525 – 625	PILL REC.	35,040	0.64	20,900	0.60	12,540	primary stoping completed – pill rec. left.	-14%	0.60	0.95	1.05	0.5985	YES.		
SOUTH	425 – 525	SLOT R&P PILL REC	58,100	1.06	34,000	0.90	30,600	AS FOR OCTOBER	-2%	0.60	0.85	1.15	0.5865	NO		
SOUTH	325 – 425	SLOT R&P	38,850	1.33	26,100	0.80	20,800	AS FOR OCTOBER.	0%	0.60	0.80	1.40	0.6720	NO		
			182,200	0.97	117,500 ✓	0.78	91,550 ✓		-8.3%						-4.7%	NIL
	WEST		6,200	0.71	—	—	—	WRITTEN OFF OCTOBER '78								
	EAST		13,100	1.06	—	—	—	WRITTEN OFF (AROUND N54) OCT. '78								
BOUNDARY	ORE (P57)	CAVO C&F	6,300	0.97	5,200 ✓	0.82	4260 ✓	AS FOR OCTOBER	0%	0.80	0.90	1.15	0.8280	NO	-1.9%	+1.9%
B FAULT BLOCK	BF I															
	350 – 525	MECH C&F	229,320	1.00	190,540 ✓	0.85	161960 ✓	6190 tonnes dropped from south 350/75	-3%	0.85	0.85	1.15	0.8309			
	525 – 625	MECH C&F	43,080	0.91	26,600 ✓	0.82	21810 ✓	Re grade dropped from 1.00% to 0.91%	0%	0.75	0.75	1.10	0.6188	YES		
			272,400	0.99	217,140 ✓	0.85	183,770 ✓								-10.9%	+4.8%
	BF II															
	350 – 525	MECH C&F	182,620	0.75	169,600	0.64	108,540	Experience to date suggests dilution of 15%	-6%	0.85	0.95	1.15	0.9286	YES.		
	525 – 625	MECH C&F	24,220	0.77	14,980	0.69	10,330	le note about mix up in split (550→550)	+38%	0.75	0.75	1.10	0.6188	YES		
			206,800	0.75	184,580 ✓	0.64	118,870 ✓								-2.9%	NIL
			~~401,720~~			0.75	302,640									
C-LENS	CI	MECH C&F														
	525 – 700	TRANS. R&P	103,650	0.73	82,380	0.66	54,370	A ore detailed assesment done this time	-15%	0.85	0.85	1.10	0.7948	YES		
	200 – 525	MECH C&F + SLOT STOPE	126,170	0.94	72,920	0.79	57,600	Por correlation between sections, thin irregular ore bodies suggest a factor of 0.69% imposed with 0.75%	-19%	0.66	0.75	1.16	0.578	YES		
			229,820	0.84	155,300 ✓	0.72	111,970 ✓		-17%				0.69		-22.3%	NIL
	CII															
	525 – 700		136,980	1.13	99,340	0.81	80,460	A ore detailed assesment done this time	-18%	0.74	0.77	1.28	0.7252	NO		
	200 – 525		65,620	1.06	36,200	0.85	30,770	Por correlation between sections, ore patches show dilution in mining CII to date.	0%	0.55	0.85	1.20	0.5500	NO		
			202,600	1.11	135,540	0.82	111,230 ✓		-18%						-15.3%	NIL
TOTAL BOLD HEAD			1,210,900	0.93	877,460 ✓	0.76	670,030		-9.5%			16%				

BOLD HEAD MINING RESERVES @ 6/4/1979 (FOR APRIL '79 MEETING)

[10 APR 1979]
[10 APR 1979]

162060

PROBABLE

AREA.	MINING METHOD	RESOURCE @ 6-4-79	% WO_3	RESERVE @ 6.4.79	% WO_3	RESERVE MTU	CALCULATION REMARKS	RESERVE % TONNES VAR c.f. OCT '79	FACTORS % M'BLE	% REC.	% DIL.	OVERALL FACTOR	RESERVE VAR. ON OCT. GRADE		MINING CHANGE	RESOURCE CHANGE
A LENS : SOUTH	SLOT	164,900	0.68	69,300	0.41	28,400	NO CHANGE FROM OCT '78 FIGURE	0 %	0.50	0.60	1.4	0.4200	NO			
B LENS : (750 - 800)	?	9,010	1.74	6,800	1.39	9,460	NO CHANGE FROM OCT '78 FIGURE	0 %	0.70	0.90	1.20	0.7560	NO			
(325 - 425)	SLOT	15,230	1.21	8,500	0.73	6,200	NO CHANGE FROM OCT '78 FIGURE	0 %	0.50	0.80	1.40	0.5600	NO			
		24,300		15,300	1.02	15,660										
WEST	SLOT	55,500	0.82	27,800	0.66	18,200	NO CHANGE FROM OCT '78 FIGURE	0%	0.55	0.75	1.20	0.5000	NO			
WEST/LOWER	—	8,100	0.78	—	—	—	AS OF APRIL '78 NO RESERVE IN LOWER POD.	—	—	—	—	—	—			
EAST	—	1,900	1.17	—	—	—	WRITTEN OFF: AROUND OLD N54 STOPE	—	—	—	—	—	—			
BOUNDARY ORE	CAVO CUT & FILL	14,700	1.00	10,650	0.85	9050	CHANGE IN TONNES SINCE OCT '78 BUT NO CHANGE IN FACTORS.	-3%	0.70	0.90	1.15	0.7245	NO			-0.6%
B FAULT BLOCK BF I (275 - 350)	MECH OR CAVO C&F	55,840	0.63	20,100	0.50	10,050	INCREASE IN RESOURCE OF 56,000 DUE TO AD	+66%	0.50	0.60	1.20	0.3600	YES		-0.7%	+46.6%
BF II (275 - 350)	"	47,900	0.75	14,370	0.60	8,620	INCREASE TO 47,900 - EXTENSION DOUBTFUL	+27%	0.50	0.50	1.20	0.3000	YES		NIL	+19.8%
		103,700		34,500	0.54	18,700	GROUND CONDITIONS VERY POOR									
C-LENS CI (200 - 525)		19,050	1.20	9,600	0.96	9,216	SEE NOTES	-4%	0.60	0.70	1.20	0.5040	NO			
CI WEST		60,860	0.86	25,200	0.73	18,420	AS OF APRIL 78	0%	0.60	0.60	1.15	0.4140	NO			
		79,900		34,800	0.79	27,600										
CII (525 - 700)		12,290	0.98	7,000	0.69	4,830	ERROR IN AUG '78 RESOURCE TABLE	-10%	0.55	0.80	1.30	0.5720	YES			
(200 - 525)		73,520	0.72	38,800	0.58	22,504	CII 12,290 0.72% (525 - 700) CII 73,520 0.98% (200 - 525)	0%	0.55	0.80	1.20	0.5280	YES			
CII WEST		33,510	0.86	13,870	0.74	10,264		-8%	0.60	0.60	1.15	0.4140	NO		-3.1%	NIL
		119,300		59,700	0.55	32,800										
		—				37,598										
D-LENS		45,200	0.95	35,250	0.67	23,600	MINING TO DATE SUGGESTS DILUTION HIGH HENCE INCREASE IN TONNES DEC IN GRADE	+15%	0.80	0.75	1.30	0.7800	YES			
						179,648										
PROBABLE TOTAL		617,400	0.81	287,300	0.61	173,900					25%					
PROVEN TOTAL		1,210,900	0.93	890,600	0.78	691,400										
PROB + PROVEN TOTAL		1,828,300	0.89	1,177,900	0.73	865,300										

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10 APR 1979

ORE PRODUCTION 1977/78

BOLD HEAD

4.4.1979

AREA	1977-78 PROD'N TONNES	%	1978-79, P/U to F9 TONNES	%	COMBINED TONNES	%	PERCENTAGE DILUTION IN RESOURCE GRADE APRIL 79	PRESENT RESERVE GRADE
A-LENS								
H50	4657	0.99	5474	0.77	10,131	0.87	-5%	
B-LENS								
P70	8159	0.76	3868	0.82	12,027	0.78	-6%	
525 to 625								
L54	1545	0.73	–	–	1545	0.73		
L55	547	0.88	1053	0.70	1600	0.76		
K54	422	0.66	–	–	422	0.66		
K56	347	0.61	–	–	347	0.61		
I52	–	–	788	0.61	788	0.61		
J52	–	–	487	0.50	487	0.50		
SUB TOTAL	2861	0.73	2328	0.63	5189	0.69	+8%	
425 - 525								
L52	4446	0.66	–	–	4446	0.66		
L50	6777	0.79	–	–	6777	0.79		
I45	1309	1.35	–	–	1309	1.35		
F50	420	0.39	–	–	420	0.39		
I49	–	–	347	1.04	347	1.04		
L49	–	–	430	0.8	430	0.8		
SUB TOTAL	12,952	0.79	777	0.91	13,729	0.80	-25%	
425 SOUTH								
L41	4899	0.83	–	–	4899	0.83		
R40	7168	0.89	–	–	7168	0.89		
I41/L41	–	–	1608	0.49	1608	0.49		
SUB TOTAL	12067	0.87	1608	0.49	13675	0.82	-40%	

AREA	1977-78 PRODN TONNES	%	1978-79 P1 to P9 TONNES	%	COMBINED TONNES	%	% DILUTION IN RESOURCE GRADE FOR 79	PRESENT RESERVE GRADE
FAULT BLOCK BF_I								
R40	1137	0.53	—	—	1137	0.53		
Q42	517	0.23	—	—	517	0.23		
SUB TOTAL	1654	0.44	—	—	1654	0.44	-56%	
FAULT BLOCK BF_{II}								
(350→525) R40	760	0.72	—	—	760	0.72		
R47	2074	0.90	—	—	2074	0.90		
043	13,121	0.63	—	—	13,121	0.63		
046	16863	0.66	24979	0.59	41,842	0.62		
048	1525	0.80			1525	0.80		
R52	566	0.50	570	0.58	1136	0.54		
SUB TOTAL	34909	0.67	25,549	0.59	60,458	0.64	-15%	
BOUNDARY ORE								
P57	9790	0.80	5746	0.83	15,536	0.81	-16%	
"CJ" LENS								
52 o 700								
R55	7952	0.76	1678	0.50	9630	0.71		
Q55	6539	0.62	—	—	6539	062		
K55	1881	0.25	197	0.40	2078	0.26		
M54	1322	0.53	2190	0.71	3512	0.64		
L53E	—	—	5979	0.84	5979	0.84		
L53W	—	—	7036	0.65	7036	0.65		
L52	—	—	10,075	0.71	10,075	0.71		
L57	—	—	3483	0.88	3493	0.88		
SUB TOTAL	17,694	0.64	30,638	0.73	48,332	0.70	-4%	

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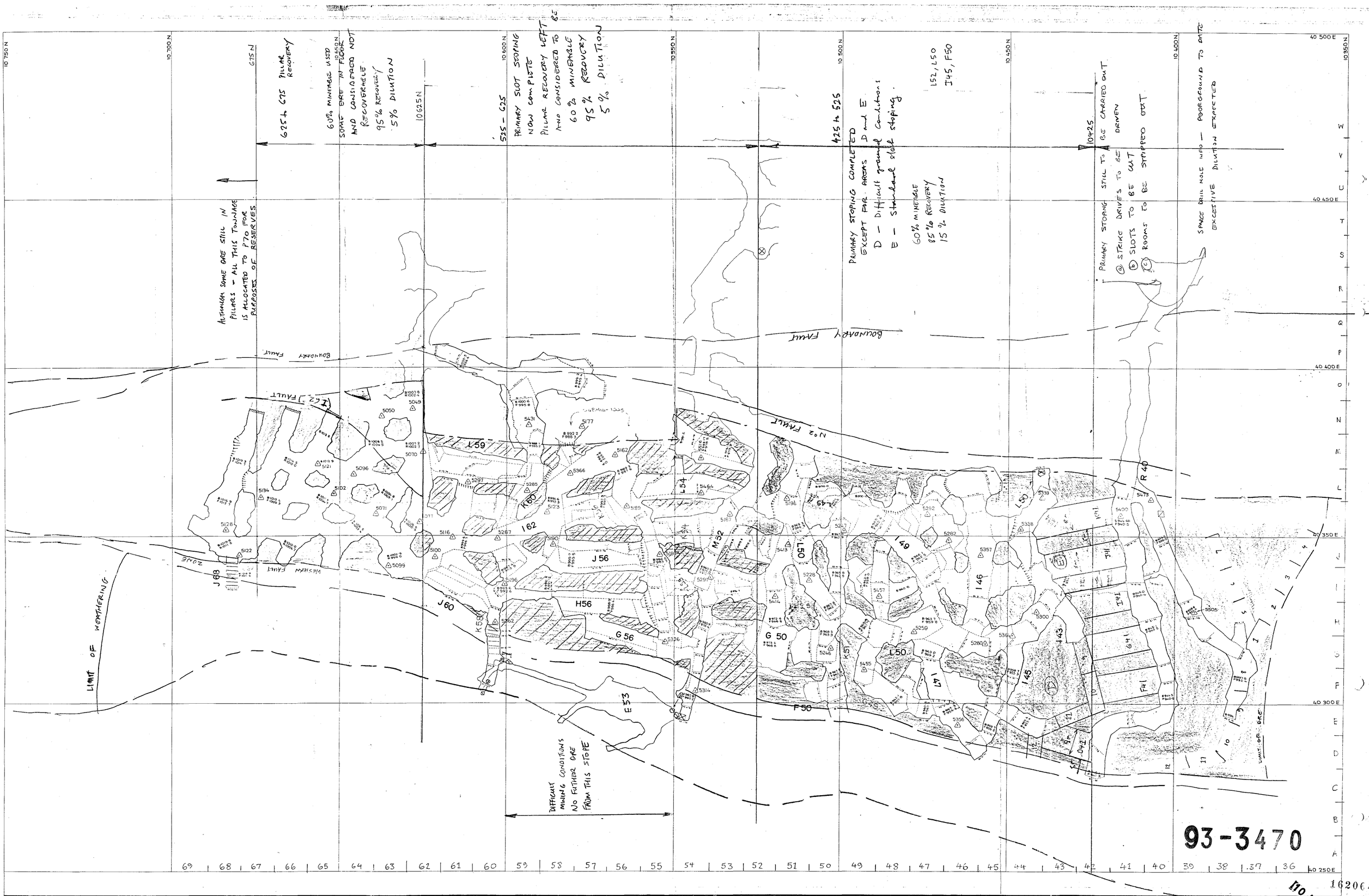
AREA	1977-78 TONNES	1977-78 PROP'N %	1978-79 P1 to P9 TONNES	1978-79 P1 to P9 %	COMBINED TONNES	COMBINED %	% DILUTION IN RES GRADE FEB 79	PRESENT RESERV GRADE
"C2" LENS								
525 - 700								
R60	923	0.84	10,936	0.74	11,859	0.75		
R59	—	—	5098	0.74	5098	0.74		
K57	—	—	1174	0.39	1174	0.39		
DEC	—	—	575	0.30	575	0.30		
SUB TOTAL	923	0.84	17783	0.70	18706	0.71	-37%	
C WEST								
C_{II} WEST								
H59	—	—	3285	0.69	3285	0.69		
R55	—	—	366	0.13	366	0.13		
SUB TOTAL	—	—	3651	0.63	3651	0.63	-41%	
C_I WEST								
H59	—	—	2574	0.40	2574	0.40		
K65	—	—	1055	0.33	1055	0.33		
SUB TOTAL	—	—	3629	0.39	3629	0.39	-59%	
$C_I + C_{II}$			7280	0.51	7280	0.51		
"D" LENS								
DEC	—	—	3293	0.34	3293	0.34		
P64	—	—	2607	0.47	2607	0.47		
SUB TOTAL			5900	0.40	5900	0.40	-47%	



162064

10 APR 1979

SCALE 1:500		LOCATION: BOLD HEAD MINE	KING ISLAND SCHEELITE — A DIVISION OF WARMAN INTERNATIONAL
ISG REFER REPORT 70-0676	north	SUBJECT: B LENS MAIN STOPES	GRASSY: B-MAIN ORE RESERVE CALCULATIONS
5 cm			PLAN NUMBER: 04BH15-1004

		5/7 → 1/8			2/8 → 29/8			30/8 → 26/9			27/9 → 24/10			25/10 → 21/11			22/11 → 19/12			20/12 → 16/1			17/1 → 13/2			14/2 → 13/3			TOTAL		
		1			2			3			4			5			6			7			8			9						
		TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH	TONNES	%	MTH
"B" LENS NORTH 10625-NTH	P70	149	-7	105	—		—	337	-7	236	74	-7	52	1363	-85	1155	737	-97	716	790	-77	607	418	-75	314	—		—	3868	-82	3185
"B" LENS SOUTH 10525-10625	S L55	509	-7	354	395	-72	283	149	-7	105	—		—	—		—	—		—	—		—	—		—	—		—	1053	-7	742
	S I52	—		—	—		—	55	-79	43	571	-63	357	124	-52	64	38	-47	18	-		—	—		—	—		—	788	-61	482
	J52	—		—	—		—	—		—	—		—	186	-52	96	301	-5	149	-		—	-		-	-		—	487	-5	245
																													2328	-63	1469
	10425-10525 I49	—		—	—		—	—		—	—		—	-		—	98	-99	97	249	1.06	263	—		—	—		—	347	1.04	360
	L49	—		—	—		—	—		—	—		—	—		—	—		—	—		—	—		—	430	-8	344	430	-8	344
																													777	-91	704
	10425 - STH. I41/L41	804	-34	276	697	-62	432	107	-78	83	—		—	—		—	—		—	—		—	—		—	—		—	1608	-49	791
SUB TOTAL																													4713	-63	2964
FAMILY BLOCK	BF I																														
	BF II 046	2021	-69	1382	2079	-63	1408	1362	-55	753	4829	-69	3355	2711	-54	1475	5339	-54	2866	2179	-46	992	3173	-59	1965	1256	-48	619	24,979	-59	14,715
	R52	169	-5	85	387	-61	236	14	-72	10	—		—	—		—	—		—	—		—	—		—	—		—	570	-58	331
SUB TOTAL																													25549	-59	15046
BOUNDARY ORE	P57	1097	-71	774	1185	1.04	1228	106	1.2	128	539	-85	457	469	-56	262	306	-6	184	—		—	567	-9	512	1477	-83	1221	5746	-83	4766
"C1" LENS NORTH 10525-700	M54	2178	-71	1553	—		—	—		—	12	-96	12	—		—	—		—	—		—	—		—	—		—	2190	-71	1565
	L53E	—		—	2089	-69	1440	449	-67	299	498	-45	224	1092	1.13	1233	1054	-9	951	797	1.09	870	—		—	—		—	5979	-84	5017
	L53W	—		—	1669	-46	746	2347	-74	1743	129	-98	127	—		—	519	-57	298	2372	-7	1665	—		—	—		—	7036	-65	4579
	K55	—		—	—		—	180	-4	72	—		—	—		—	—		—	—		—	17	-37	6	—		—	197	-4	78
	L52	—		—	—		—	1522	-8	1213	2188	-61	1340	2182	83	1804	1275	-68	862	807	-66	529	1978	-62	1230	128		154	10075	-71	7132
	R55	—		—	—		—	—		—	—		—	1002	-61	616	625	-32	198	47	-37	17	—		—	—		—	1678	-5	831
	L57	—		—	—		—	—		—	—		—	—		—	—		—	—		—	1151	-82	945	2337	-9	2103	3483	-88	3048
SUB TOTAL																													30,638	-73	22,250
"C2" LENS NORTH 525-700	R60	2169	-91	1976	1265	-71	895	1085	-4	432	36	-66	24	833	-76	630	3286	-69	2283	1744	-26	1333	419	-99	413	99	-81	80	10,936	-74	8066
	R59	—		—	—		—	—		—	918	1.22	1119	1259	-76	951	1334	-53	708	1217	-55	722	370	-68	253	—		—	5098	-74	3753
	K57 DEC																						575	-3	171	1174	-39	456	1174	-39	456
																													575	-3	171
SUB TOTAL		C1			C1			C II			C II			C I									C1			C2			17,783	-70	12446
"C" WEST	H59	600	-26	158	1378	-48	663	1946	-73	1427	1263	-65	826	71	-41	29	—		—	—		—	111	-15	20	402	-4	193	5859	-57	3316
	R55	C II 366	-13	47	-		—	—		—	—		—	—		—	—		—	—		—	—		—	—		—	366	-13	47
	K65	-		-	-		—	—		—	—		—	937	-32	347	—		—	—		—	18	-16	3	—		—	1055	-33	350
SUB TOTAL																													7280	-51	3713
"D" LENS	DEC	465	-31	143	1379	-39	538	154	-25	38	1111	-24	271	4	-54	2	—		—	—		—	180	-74	133	—		—	3293	-34	1125
	P64	—		—	793	-38	300	—		—	—		—	—		—	—		—	—		—	1576	-51	810	238	-5	120	2607	-47	1230
SUB TOTAL																													5900	-40	2355
"A" LENS	H50	492	-79	390	442	-75	332	1136	-82	927	802	-54	431	—		—	131	-68	88	700	-92	643	1133	-82	933	638	-71	490	5474	-77	4234

10 APR 1979

Head Mining Reserves.

29-8-78.

KING ISLAND SCHEELITE Pty. Ltd.

UNDERGROUND TECHNICAL SERVICES

ORE RESOURCE AND MINING RESERVE TABLE - BOLD HEAD OREBODY

13 · 2 · 79

LENS	SUBDIVISION	PROVEN				PROBABLE				POSSIBLE	TOTAL PROVEN PLUS PROBABLE			
		RESOURCE		RESERVE		RESOURCE		RESERVE		RESOURCE	RESOURCE		RESERVE	
A LENS	A LENS NORTH	83,670	0·92	56,300	0·78	—		—		—	83,700	0·92	56,300	0·78
	A LENS WEST	7,800	0·83	5,900	0·76	—		—		—	7,800	0·83	5,900	0·76
	A LENS SOUTH	—		—		164,900	0·68	69,300	0·41	20,000	164,900	0·68	69,300	0·41
	SUB-TOTAL:	91,500	0·91	62,200	0·78	164,900	0·68	69,300	0·41	20,000	256,400	0·76	131,500	0·58
B LENS MAIN	10 750 - 10 800 N	—		—		9,010	1·74	6,800	1·39	—	9,000	1·74	6,800	1·39
	10 625 - 10 750 N	50,180	0·83	36,500	0·76	—		—		—	50,200	0·83	36,500	0·76
	10 525 - 10 625 N	35,040	0·64	20,900	0·60	—		—		—	35,000	0·64	20,900	0·60
	10 425 - 10 525 N	58,100	1·06	34,000	0·90	—		—		—	58,100	1·06	34,000	0·90
	10 325 - 10 425 N	38,850	1·33	26,100	0·80	15,230	1·21	8,500	0·73	—	54,100	1·30	34,600	0·78
	10 200 - 10 325 N	—		—		—		—		20,000	—		—	
	SUB-TOTAL:	182,200	0·97	117,500	0·78	24,200	1·41	15,300	1·02	20,000	206,400	1·02	132,800	0·81
B LENS WEST		6,200	0·71	—		55,500	0·82	27,800	0·66	—	61,700	0·81	27,800	0·66
B LENS WEST LOWER		—		—		8,100	0·78	—		—	8,100	0·78	—	
B LENS EAST		13,100	1·06	—		1,900	1·17	—		—	15,000	1·07	—	
BOUNDARY ORE		6,300	0·97	5,200	0·82	14,700	1	10,700	0·85	—	21,000	0·99	15,900	0·84
FAULT BLOCK	B FAULT I	272,380	0·99	217,140	0·85	55,840	0·63	20,100	0·50	10,000	328,200	0·93	237,200	0·82
	B FAULT II	206,840	0·75	184,580	0·64	47,900	0·75	14,370	0·60	5,000	254,700	0·75	199,000	0·64
	SUB-TOTAL:	479,200	0·89	401,700	0·75	103,700	0·69	34,500	0·54	15,000	582,900	0·85	436,200	0·74
C_1 LENS	10 525 - 10 700 N	103,650	0·73	82,380	0·66	—		—		—	103,600	0·73	82,400	0·66
	10 200 - 10 525 N	126,170	0·94	72,920	0·79	19,050	1·20	9,600	0·96	40,000	145,200	0·97	82,500	0·81
	C_1 WEST	—		—		60,860	0·86	25,200	0·73	—	60,900	0·86	25,200	0·73
	SUB-TOTAL:	229,800	0·84	155,300	0·72	79,900	0·94	34,800	0·79	40,000	309,700	0·87	190,100	0·73
C_2 LENS	10 525 - 10 700 N	136,980	1·13	99,340	0·81	12,290	0·98	7,000	0·69	—	149,300	1·12	106,300	0·80
	10 200 - 10 525 N	65,620	1·06	36,200	0·85	73,520	0·72	38,800	0·58	40,000	139,100	0·88	75,000	0·71
	C_2 WEST	—		—		33,510	0·86	13,870	0·74	—	33,500	0·86	13,900	0·74
	SUB-TOTAL:	202,600	1·11	135,500	0·82	119,300	0·79	59,700	0·63	40,000	321,900	0·99	195,200	0·76
D LENS		—		—		45,200	0·95	35,300	0·67	—	45,200	0·95	35,300	0·67
BOLD HEAD TOTAL		1,210,900	0·93	877,400	0·76	617,400	0·81	287,400	0·62	135,000	1,828,300	0·89	1,164,800	0·73

METHOD OF GRADE CALCULATION:

Polygonal method of weighted arithmetic means from plans - B Lens Main and B Lens West.
Modified polygonal method of weighted arithmetic means from sections for the remainder.

METHOD OF TONNES CALCULATION:

Truncated cone formula using 1:250 sections for BF_1, BF_2, B Lens East and Boundary Ore.
Truncated cone formula using 1:500 sections for the remainder.

162066

COMPILED BY: J.M.C. / W.J.C.
DRAWN BY: R.F.
CHECKED BY: N.F.M.
DATE: 13·2·79

BOLD HEAD MINING RESERVES

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	A LENS		B LENS			C LENS			D LENS		TOTALS	
PROVEN	64 700	0·78	549 500	0·79		345 100	0·76				959 300	0·78
			MAIN P70	29 000	0·75	C_1 MAIN						
			625 - 675	10 000	0·80	525 - 700	97 100	0·63				
			525 - 625	24 300	0·56	200 - 525	90 000	0·80				
			425 - 525	34 800	0·90							
			325 - 425	26 200	0·80	C_{11} MAIN						
						525 - 700	121 800	0·81				
			BOUNDARY	5 200	0·82	200 - 525	36 200	0·85				
			BF 1 350 - 525	209 200	0·90							
			525 - 625	26 600	0·90	0·8						
			BF 11 350 - 525	179 500	0·67							
			525 - 625	4 700	0·67							
PROBABLE	69 300	0·41	80 700	0·81		97 100	0·72		30 700	0·86	277 800	0·68
	SOUTH 69 800	0·41	MAIN P70	6 800	1·39	C_1 MAIN						
			325 - 425	8 500	0·73	200 - 525	10 000	0·96				
			WEST	27 800	0·66	C_1 WEST	25 200	0·73				
			BOUNDARY	11 000	0·85							
						C_{11} MAIN						
			B.F.1	6 900	0·93	525 - 700	8 600	~~0·80~~ 0.69				
						200 - 525	38 200	~~0·67~~ 0.50				
			B.F.11	19 700	0·78							
						C_{11} WEST	15 100	0·74				
TOTALS	134 000	0·59	630 200	0·79		442 200	0·75		30 700	0·86	1 237 100	0·76

Prepared by DJB - 051078
Drawn by BJC - 091078
03BH02 - 3003

162067

GEOPEKO LIMITED

KING ISLAND BASE

ORE RESOURCE TABLE BOLD HEAD OREBODY

LENS	SUBDIVISION	PROVEN ORE TONNES	GRADE $\%WO_3$	PROBABLE ORE TONNES	GRADE $\%WO_3$	POSSIBLE ORE	TOTAL PROVEN +PROBABLE ORE TONNES	GRADE $\%WO_3$
A LENS	A LENS NORTH	83670	0.92				83700	092
	A LENS WEST	7800	0.83				7800	0.83
	A LENS SOUTH			164900	0.68	20,000	164,900	0.68
TOTAL A LENS		91500	0.91	164900	0.68	20,000	256400	0.76
B LENS MAIN	10 750 – 10 800 N			9010	1.74		9000	1.74
	10 625 – 10 750 N	50,180	0.83				50,200	0.83
	10 525 – 10 625 N	35,040	0.64				35,000	0.64
	10 425 – 10 525 N	58,100	1.06				58,100	1.06
	10 ~~400~~ 425 – 10 425 N	38,860	1.33	15,230	1.21		54,100	1.30
	10 ~~350~~ 375 – 10 ~~425~~ 400 N					20,000		
TOTAL B LENS MAIN		182,200	0.97	24,200	1.41	20,000	206,400	1.02
B LENS WEST		6200	0.71	55,500	0.82		61,700	0.81
B LENS WEST LOWER				8,100	0.78		8,100	0.78
B LENS EAST		13,100	1.06	1,900	1.17		15,000	1.07
BOUNDARY ORE		6,300	0.97	14,700	1		21,000	0.99
FAULT BLOCK	BF_1	272380	0.99	55,840	0.63	10,000	328,200	0.93
	BF_2	206840	0.75	47,900	0.75	5,000	254,700	0.73
TOTAL FAULT BLOCK		479,200	0.89	103,700	0.69	15,000	582,900	0.85
C_1 LENS	10 525 – 10 700 N	103,650	0.73				103,600	0.73
	10 ~~350~~ 375 – 10 525 N	126,170	0.94	19050	1.20	40,000	145,200	0.97
	C_1 WEST			60 860	0.86		60,900	0.86
TOTAL C_1 LENS		229,800	0.84	79,900	0.94	40,000	309,700	0.87
C_2 LENS	10 525 – 10 700 N	136,980	1.13	12,290	0.98	✓	149,300	1.12
	10 ~~350~~ 375 – 10 525 N	65,620	1.06	73,520	0.72	✓ 40,000	139,100	088
	C_2 WEST			33,510	0.86		33,500	0.86
TOTAL C_2 LENS		202 600	1.11	119,300	0.79	40,000	321,900	0.99
D LENS				45,200	0.95		45,200	0.95
TOTAL BOLD HEAD		1210900	0.93	517,400	0.81	135,000	1,828,300	089

METHOD OF GRADE CALCULATION:

Polygonal method of weighted arithmetic means from plans – B Lens Main and B Lens West.
Modified polygonal method of weighted arithmetic means from sections for the remainder.

METHOD OF TONNES CALCULATION:

Truncated cone formula using 1:250 sections for BF_1, BF_2, B Lens East and Boundary Ore.
Truncated cone formula using 1:500 sections for the remainder.

1620 68

feb 79

Date: ~~14 FEB 79~~
Compiled by: J.M.C.
Drawn by: R.F.
Checked by: M.C.R.

PROBABLE

prepared for Oct 78 meeting

AREA		MINING METHOD	RESOURCE @ 29·8·78	%WO$_3$	RESERVE @ 29·8·78	%WO$_3$	RESERVE MTU	CALCULATION REMARKS	% EXT MR:R	FACTORS % M'BLE	FACTORS % REC	DIL	OVERALL FACTOR	VAR. IN APR 78
A LENS :	SOUTH	SLOT	164900 ·	0·68	69300	0·41	28300	No change from Apr. Fig.		50	60	1·4	·4200	No
B LENS :	750 - 800		9070 ·	1·74	6800	1·39	9460	Dilution inc. on Apr fig - otherwise as before		70	90	1·20	·7560	yes.
	325 - 425	SLOT R/R.	15230 ·	1·21	8500	0·73	6200	Compared to Proven resource - extra 10% deducted for m'ble.		50	80	1·4	·5600	yes.
	WEST	SLOT	55500 ·	0·82	27800	0·66	18200	As Apr. 78 - No Reserve in lower part				1·2	0·500	No
	EAST		1900 ·	1·17	—	—	—	As for Proven.						
BOUNDARY		CUT & C/F	15300 ·	1·0	11000	0·85	9350	257 stope. Proven figs reduced by 10% on m/ble.		70	90	1·15	·7245	yes.
B FAULT BLOCK :	BF I	MECH C/F	9890 ·	1·03	6900	·93	6420	One south of existing ore blocking - 10% red. on proven M/ble & Rec.		75	85	1:1	·7013	yes.
	BF II	" "	28110 ·	0·87	19700	·78	15420			75	85	1·1	·7013	yes.
C LENS	C I 200 - 525		19050 ·	1·20	10000	·96	9600	See Notes on C I				1·2	·5245	yes
	C I WEST		60860 ·	0·86	25200	·73	18420	As before (i.e. April)				1·15	·4136	No.
	C II 525 - 700		12290 ·	0·72	8600	0·69 0·50	4330	Proven 50% fig. reduced to 70% with the 30% dilution to gr. applied.				30%		yes.
	200 · 525		73520 ·	0·98	38200	0·67 0·53	26220	See notes				30%	·5200	yes
	C II WEST		36570 ·	0·87	15106	0·74	11180	As for C I west this time				15%	·4136	yes
D LENS.			46500 ·	0·95	30700	0·86	26240	As for April 78.		80	75	1·1	·6600	No
			548630 (B W Lower not inc.)	0·84	277800 ·	0·68 ·	189340		50%			19%	·5064	
PROVEN + PROBABLE			1,822,700	0·91	1,237,100	0·76	938220		68%			16%		
														162070

BOLD HEAD MINING RESERVES @ 3 10·78 (i.e. for Oct 78 Meeting)

PROVEN

AREA		MINING METHOD	RESOURCE @ 29·8·78	%WO_3	RESERVE @ 29·8·78	%WO_3	RESERVE M.T.U.	CALCULATION REMARKS	% EXT. MR: R	FACTORS % M'BLE	FACTORS % REC.	FACTORS % DIL.	OVERALL FACTOR	VAR. ON APR. FIG.
A LENS:	NORTH	CAVO C&F	87010	0·92	58500	0·78	45630	As April		65	90	1·15	·6728	No
	WEST	"	8160	0·84	6200	0·76	4710	As April		— 69 —		1·1	·7591	No
B LENS:	675 - 750	CAVO C&F	36600	0·83	29,000	0·75	21750	"		80	90	1·1	·7920	No
	625 - 675	PILL. REC.	16740	0·84	10,000	0·80	8000	"		60	95	1·05	·5985	No
	525 - 625	SLOT & PILL STRIP.	36250	0·64	24300	0·56	13600	"				1·125	·6715	No
	425 - 525	SLOT: R/P.	58400	1·06	34800	0·90	31350	"				1·15	·5962	No
	325 - 425	PILL. REC. SLOT: R/P.	38940	1·33	26200	0·80	20960	Sparce drill hole info: poor ground to date excessive dilution expected. see notes on 78/79 revised budget schedule.		60	80	1·40	·6720	YES.
	WEST	SLOT	6200	0·71	—	—	—	Written off.						No.
?	EAST		13100	1·06	—	—	—	Written off: Around old N54 Hope						
BOUNDARY:		CAVO C&F	6300	0·97	5200	0·82	4280	Grade diluted to 15% - 77/78 figures show 18%.		80	90	1·15	·8280	YES.
B FAULT BLOCK:	BF I (350 - 525)	MECH C&F.	235500	1·00	209200	0·90	188270	As April		85	95	1·1	·8883	No
	(525 - 625)		43060	1·00	26600	0·90	23900	As April.		75	75	1·1	·6188	No
	BF II (350 - 525)	MECH C&F	202050	0·75	179500	0·67	120270	As April		85	95	1·1	·8883	No
	525 - 625	?	7630	0·75	4700	0·67	3170	" "		75	75	1·1	·6188	No
			488240	0·89	420,000	0·80	335,610							
C LENS	C I (525 - 700)	TRANS. R/P (SOME SLOT ?)	116910	0·74	97100	0·63	61170	Detailed assessment not made this time. Grade reduced by 15% from experience to date in CI.		85	85	1·15	·8308	YES
	(200 - 525)		135150	0·94	90,000	0·80	72000	See notes on CI Lens.					·6641	YES
	C II (525 - 700)	R/P 600-650 525-600 — CAVO C/F & SLOTS OR DRIFTING	152290	1·15	121800	0·81	99050	"				30%		
	200 - 525		65620	1·06	36200	0·85	30770	See notes on C II Lens.				20%	·5515	YES
TOTALS.			1,265,910 (1265900)	0·94	345,100 959,300	0·78	748880					17%	·7578	

162069

PEKO - WALLSEND OPERATIONS LIMITED
GEOPEKO DIVISION KING ISLAND

ORE RESOURCE TABLE BOLD HEAD OREBODY

LENS	SUBDIVISION	PROVEN ORE TONNES	GRADE %WO_3	PROBABLE ORE TONNES	GRADE %WO_3	POSSIBLE ORE	TOTAL PROVEN + PROBABLE ORE TONNES	GRADE %WO_3
A LENS	A LENS NORTH	87,010	0·92				87,000	0·92
	A LENS WEST	8,160	0·84				8,200	0·84
	A LENS SOUTH			164,900	0·68	20,000	164,900	0·68
TOTAL A LENS		95,200	0·91	164,900	0·68	20,000	260,100	0·76
B LENS MAIN	10 750 – 10 800 N			9,010	1·74		9,000	1·74
	10 625 – 10 750 N	53,340	0·84				53,300	0·84
	10 525 – 10625 N	36,250	0·64				36,300	0·64
	10 425 – 10 525 N	58,400	1·06				58,400	1·06
	10 325 – 10 425 N	38,940	1·33	15,230	1·21		54,200	1·30
	10 200 – 10 325 N					20,000		
TOTAL B LENS MAIN		186,900	0·97	24,300	1·41	20,000	211,200	1·02
B LENS WEST		6,200	0·71	55,500	0·82		61,700	0·81
B LENS WEST LOWER				8,100	0·78		8,100	0·78
B LENS EAST		13,100	1·06	1,900	1·17		15,000	1·07
BOUNDARY ORE		6,300	0·97	15,300	1		21,600	0·99
FAULT BLOCK	BF_1	278,530	1·00	9,890	1·03	3,000	288,400	1·00
	BF_2	209,690	0·75	28,110	0·87	9,000	237,800	0·76
TOTAL FAULT BLOCK		488,200	0·89	38,000	0·91	12,000	526,200	0·89
C_1 LENS	10 525 – 10 700 N	116,910	0·74				116,900	0·74
	10 200 – 10 525 N	135,150	0·94	19,050	1·20	40,000	154,200	0·97
	C_1 WEST			60,860	0·86		60,900	0·86
TOTAL C_1 LENS		252,100	0·85	79,900	0·94	40,000	332,000	0·87
C_2 LENS	10 525 – 10 700 N	152,290	1·15	12,290	0·72		139,100	0·88
	10 200 – 10 525 N	65,620	1·06	73,520	0·98	40,000	164,600	1·14
	C_2 WEST			36,570	0·87		36,600	0·87
TOTAL C_2 LENS		217,900	1·12	122,400	0·79	40,000	340,300	1·00
D LENS				46,500	0·95		46,500	0·95
TOTAL BOLD HEAD		1,265,900	0·94	556,800	0·84	132,000	1,822,700	0·91

METHOD OF GRADE CALCULATION:
Polygonal method of weighted arithmetic means from plans – B Lens Main and B Lens West.
Modified polygonal method of weighted arithmetic means from sections for the remainder.

METHOD OF TONNES CALCULATION:
Truncated cone formula using 1:250 sections for BF_1, BF_2, B Lens East and Boundary Ore.
Truncated cone formula using 1:500 sections for the remainder.

Date: 29 AUG 78
Compiled by: J.M.C.
Drawn by: R.F.
Checked by: M.C.R.

162071

BOLD HEAD MINING RESERVES

29·8·78

	A LENS	B LENS	C LENS	D LENS	TOTALS
PROVEN	64 700 0·78 (50,240)	549 500 0·79 (435550)	345,100 0·76 (262 900)		959300 0·78 (748880)
		MAIN: P70: 29000 0·75	C, MAIN:		
		625-675: 10 000 0·80	525-700: 97100 0·63		
		525-625: 24300 0·56	200-525: 90,000 0·80		
		425-525: 34800 0·90			
		325-425: 26200 0·80	C II MAIN:		
			525-700: 121800 0·81		
		BOUNDARY : 5200 0·82	200-525: 36200 0·85		
		B.F I: 350-525: 203200 0·90			
		525-625: 26 600 0·90			
		B.F II: 350-525: 179500 0·67			
		525-625: 4700 0·67			
PROBABLE	69 300 0·41 (28300)	80700 0·81 (65050)	97100 0·72 (69750)	30700 0·86 (26260)	277 800 0·68 (189360)
	SOUTH : 69300 0·41	MAIN: P70 : 6800 1·39	C, MAIN:		
		325-425: 8500 0·73	200-525 : 10000 0·96		
		WEST : 27800 0·66	C, WEST : 25200 0·73		
		BOUNDARY : 11000 0·85			
			C II MAIN		
		BF I : 6900 0·93	525-700, 8600 0·50		
			200-525, 38200 0·67		
		BF II : 19700 0·78			
			C II WEST: 15100 0·74		
TOTALS	134 000 0·59 (78 640)	630200 0·79 (500600)	442,200 0·75 (332760)	30 700 0·86	1,237,100 0·76

DATE: OCT 5th 1978
PREPARED: DJB
DRAWN:

162072

	Proven		Change		Probable		Change		Possible	Change	Total Proven + Probable		Change	
	Tonnes	% Ni	1000T	% Ni	Tonnes	% Ni	1000T	% Ni		1000T	Tonnes	% Ni	1000T	% Ni
A LENS	95200	0.91	-1.6		164,900	0.68	NIL		20000	NIL	260,100	0.76	-1.6	-0.01
E LENS MAIN	36,900	0.97	-0.9	+.06	24,300	1.41	-13.9	-0.01	20,000	+10	211,200	1.02	-14.8	+0.03
WEST	6,200	0.71	NIL		55,500	0.82	NIL		—	-5	61,700	0.81	NIL	
WEST E	NIL		NIL		8,100	0.78	NIL		—	NIL	8,100	0.78	NIL	
EAST	13,100	1.06	-20.1	-.05	1900	1.17	-7.5		—	[illegible]	15000	1.07	-27.6	-0.01
FAULT BLOCK	488,200	0.89	+33.4		38,000	0.91	-70.E	+0.01	12,000	[illegible]	526,200	0.89	-37.1	
BOUNDARY ORE	6300	0.97	+2.7	+.05	15,300	1	-5.4		—	NIL	21,600	0.99	-2.7	
C, LENS	252,100	0.85	+15.7 ✓	+.02	79,900	0.94	-60.2 ✓	+0.01	[illegible]	[illegible]	332,000	0.87	-44.5	
C_2 LENS	27,900	1.12	+56.5	-.03	122,400	0.79	-3.9	-0.14	[illegible]	[illegible]	340,300	1.00	+52.7 ✓	-0.03
D LENS	NIL		NIL		46,500	0.95	NIL		—		[illegible]	0.95	NIL	
	1,265,900	0.94	+85.7	+0.02	556,800	0.84			152000	+37.0	1,822,700	0.91	-75.6	

16,079

1.2. UNDERGROUND MINING RESERVES AT 29.8.78

(prepared by Technical Services Department - K.I.S.)

ORE BODY	ORE RESOURCE				MINING RESERVE				Change 14.2.78 To 29.8.78
	14.2.78		29.8.78		14.2.78		29.8.78		
	Tonnes	$\%WO_3$	Tonnes	$\%WO_3$	Tonnes	$\%WO_3$	Tonnes	$\%WO_3$	Tonnes
No 1 ORE BODY									
PROBABLE ORE	762 200	0.60	762 200	0.60	82,000	0.56	32,000	0.56	NIL
DOLPHIN									
PROVEN ORE	3,985,000	1.11	4,258,500	1.15	3,045,800	1.00	3289500	1.02	
PROBABLE ORE	2,026,000	1.04	1,217,000	0.92	1,366,900	0.97	791300	0.88	
REGIONAL PILLARS	-		-		191,000	0.84	191,000	0.85	
SUB TOTAL	6011000	1.09	5,475,500	1.10	4603700	0.98	4,270,800	0.99	- 332,900
GOLD HEAD									
PROVEN ORE	1,180,200	0.92	1265900	0.94	904,000	0.84	959300	0.78	
PROBABLE ORE	718 100	0.89	556800	0.84	355,000	0.74	277 800	0.68	
SUB TOTAL	1,898300	0.91	1,822,700	0.91	1259,000	0.81	1237100	0.76	- 21,900
TOTAL	9671,500	1.01	9060400	1.01	5,944700	0.94	5589900	0.93	- 354,800
MTU	8,736900		8,141,000		5,595,300		5201920		

16201