

GEOLOGY DEPARTMENT MONTH END REPORT  
DECEMBER 1984

Total mined reserves for December were not accurately predicted by the FI computer model. Losses of predicted +5% reserves were experienced on each bench mined in December.

Model inaccuracies in the JB pit have been discussed in the November month end and this month resulted in a shortfall of 65,000 undiluted model tonnes. This loss was projected from the geology of the previous benches and resulted in planning contingencies to minimize waste stripping on 3690 JB and lower benches.

3670 AY bench showed a loss of 30,000 tonnes undiluted +5% reserves. Low grade ore gained approximately the same tonnage which may indicate significant dilution of high grade with barren or low grade material. The spacial distribution of ore on 3670 AY is accurately predicted by the FI and 8608 models. The loss is not believed to be a result of inherent errors in the geologic interpretation used in the models, since the previous benches and 3630 bench show close correspondence to model predictions.

Head grades reported by the metallurgical balance were slightly higher than predicted by blast hole assay. This is likely due to a overstatement of lower grade non oxide ore sent to the crusher from the crusher stockpile. Truck count tonnages of non oxide ore are significantly higher than reported by the metallurgical balance. This resulted in lower predicted heads for December.

Additional work included test drilling and sampling the JB ramp to delineate potential mineable reserves. Assay and logged information is at present being processed in coordination with pit mapping to define these reserves.





CURRAGH RESOURCES  
GEOLOGY DEPARTMENT SUMMARY REPORT  
DECEMBER 1986 MONTH END  
(HIGH GRADE)

AY, JB Phases	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
MODEL (FI)	246,680	2.74	4.74	34	6,759	11,693	8,387
MODEL (DILUTED)	271,348	2.49	4.31	31	6,759	11,693	8,387
BLAST HOLE	152,318	2.89	4.48	38	4,402	6,824	5,788
TRUCK COUNT	133,694						

VARIANCE

	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
Blast Hole vs Model (FI)	-38.3%	5.5%	-5.5%	11.8%	-34.9%	-41.6%	-31.0%
Model (Diluted)	-43.9%	16.0%	4.0%	22.9%	-34.9%	-41.6%	-31.0%
Truck Count vs Mine Model (FI)	-50.7%						
Truck Count vs Blast Hole	-12.2%						

INVENTORY

	<u>TONNES</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>Change</u>
BROKEN IN PIT:					
Phase A; 3630 CCX	10,178	2.62	6.65	14	
JB Zone; 3690 BB	39,111	2.95	4.84	37	
STOCKPILE A:					
Ramp Zone Ore	10,032	4.57	4.46	n/a	
CRUSHER STOCKPILE:					
JB, AY Ore	26,365	3.20	4.56	40	(15,841)
STOCKPILE B:					
=====					
Total Inventory:		=====	=====	=====	
Broken	49,289	2.88	5.21	32	
Stockpile	36,397	3.58	4.53	n/a	

CURRAGH RESOURCES  
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(LOW GRADE)

AY, JB Phases	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
MODEL (FI)	14,250	1.72	2.67	25	245	380	356
MODEL (DILUTED)	15,675	1.56	2.43	23	245	380	356
BLAST HOLE	70,503	1.68	3.03	28	1,184	2,136	1,974
TRUCK COUNT	83,775						

VARIANCE

	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
Blast Hole vs Model (FI)	394.8%	-2.3%	13.5%	12.0%	383.3%	461.5%	454.1%
Model (Diluted)	349.8%	7.4%	24.8%	23.2%	383.3%	461.5%	454.1%
Truck Count vs Mine Model (FI)	434.4%						
Truck Count vs Blast Hole	18.8%						

INVENTORY

	<u>TONNES</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>Change</u>
BROKEN IN PIT:					
Phase A; 3630 CCX	0				
JB Zone; 3690 BB	10,045	1.77	3.17	31	
STOCKPILE C:					
*Graphitic	189,359				31,264
STOCKPILE A:					
*Non Graphitic	209,430				55,535
	=====	=====	=====	=====	
Total Inventory:					
Broken	10,045	1.77	3.17	31	
*Stockpile	398,789				

\* Grades not available at this time

Curragh Resources Geology Department  
 Primary Crusher Feed By Blast Hole Assay  
 December 1986

<u>PHASE/S.P.</u>	<u>TONNES</u>	<u>%Pb</u>	<u>%Zn</u>	<u>%COMB</u>	<u>Ag g/t</u>
Oxide S.P.*	174,779	3.47	5.48	8.95	44
Crusher S.P#	140,003	2.89	4.48	7.37	38
	15,841	3.20	4.56	7.76	40
J.B. & AY	1,080	2.79	4.57	7.36	37
	=====	=====	=====	=====	=====
TOTAL	331,703	3.21	5.01	8.24	41
ACTUAL (met bal.)	304,641	3.28	5.29	8.57	42.44
% VARIANCE (vs.met bal)	8.88%	-2.13%	-5.27%	-3.80%	-2.80%

\* Oxide stockpile tonnage and grade from met balance

# Crusher stockpile tonnage from truck counts

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The majority of the ore came from the JB Phase where model comparisons vary by bench with the blast hole results. Actual low grade; however, was consistently higher in all phases. High grade tonnage diminished on the lower benches earlier than expected. This is a result of the basal portion of the orebody appearing in the southwest section of the JB Phase two benches higher than expected. This error in geologic interpretation is most likely due to an erroneous survey of DDH 66E-05. 3710 bench (JB) shows this tonnage loss.

Phase AY showed substantial gains in both high and low grade ore over the model. This has offset the loss of tonnage from the JB pit.

CURRAGH RESOURCES GEOLOGY DEPARTMENT YEAR END FOR 1986  
TONNAGE AND GRADE COMPARISON (MINED ORE) BY BENCH

BENCH	BLAST				HOLE				ASSAY				COMPUTER				MODEL				PREDICTION					
	HIGH GRADE (tonnes)	ZPb.	ZZn.	ZCOMB.	Ag.g/t	LOW GRADE (tonnes)	ZPb.	ZZn.	ZCOMB.	Ag.g/t	HIGH GRADE (tonnes)	ZPb.	ZZn.	ZCOMB.	Ag.g/t	LOW GRADE (tonnes)	ZPb.	ZZn.	ZCOMB.	Ag.g/t	LOW GRADE (tonnes)	ZPb.	ZZn.	ZCOMB.	Ag.g/t	
RAMP ZONE																										
3950*	66,560	5.07	4.47	9.54																						
3930*	72,960	4.11	4.45	8.56		12,800	1.69	2.88	4.57		N/A					N/A										
3910*	34,560	4.30	4.48	8.78		24,320	2.03	3.13	5.16																	
TOTAL	174,080	4.51	4.46	8.98	N/A	37,120	1.91	3.04	4.96	N/A																
JB PHASE																										
3890*	44,180	3.10	4.70	7.80							28,560	3.71	5.01	8.72	54											
3870*	20,378	3.30	5.30	8.60		8,333	1.61	3.05	4.66		10,050	3.17	4.78	7.95	46	4,500	2.37	3.18	5.55		37					
3850*	29,549	2.41	3.83	6.24		7,140	1.42	2.94	4.36		45,500	4.33	7.64	11.97	52	8,950	1.85	3.18	5.03		31					
3830*	81,920	2.79	4.51	7.30		19,627	2.12	2.45	4.57		76,000	3.98	6.55	10.53	51	8,250	2.06	2.87	4.93		32					
3810*	99,840	3.19	4.41	7.60		20,480	1.89	2.51	4.40		83,390	3.92	6.32	10.24	52	22,970	1.68	2.94	4.62		35					
3790	184,320	3.44	4.94	8.38		5,760	1.94	2.66	4.60		115,150	4.37	7.28	11.65	54	13,950	1.36	3.20	4.56		28					
3770	217,600	2.73	4.43	7.16	35	34,560	1.69	2.69	4.38	24	184,900	3.42	5.61	9.03	49	16,550	1.06	3.31	4.37		22					
3750	208,249	3.11	4.60	7.71	43	65,813	1.78	2.98	4.76	27	222,400	3.14	4.98	8.12	44	25,200	1.55	3.06	4.61		36					
3730	261,111	2.99	4.66	7.65	42	82,667	2.00	3.34	5.34	34	233,320	3.05	5.07	8.12	37	12,290	1.52	3.14	4.66		30					
3710	115,662	2.95	4.60	7.55	38	49,378	1.73	3.07	4.80	32	228,710	2.71	4.57	7.28	35	14,710	2.23	2.51	4.74		36					
TOTAL	1,262,809	3.03	4.61	7.63	N/A	293,758	1.84	2.99	4.83	N/A	1,227,980	3.36	5.52	8.88	44	127,370	1.65	3.03	4.68		32					
AY PHASE																										
3750											3,110	6.50	5.94	12.44	105											
3730#	11,520	2.04	3.89	5.93	32	1,280	1.63	2.69	4.32	34	10,680	3.85	4.72	8.57	59											
3710	123,056	2.87	4.49	7.36	40	21,875	1.46	3.14	4.60	24	80,410	3.02	4.27	7.29	46	5,020	1.64	2.72	4.36		22					
3690	116,252	2.52	4.65	7.17	30	25,513	1.75	2.97	4.72	25	73,260	3.08	4.63	7.71	42	33,750	1.86	2.52	4.38		25					
TOTAL	250,828	2.67	4.54	7.21	35	48,668	1.62	3.04	4.66	25	167,460	3.16	4.49	7.65	46	38,770	1.83	2.55	4.38		25					
YEAR	1,687,717	3.13	4.58	7.71	N/A	379,546	1.82	3.00	4.82	N/A	1,395,440	3.34	5.39	8.73	44	166,140	1.69	2.92	4.61		30					
TOTAL																										

\* Denotes benches mined at a 6% combined Pb Zn cut-off grade.

# Includes ore mined from 3750 since 3730 was mined on a 40 foot lift.



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MODEL	1,395,440	3.34	5.39	44	46,608	75,214	61,399
MODEL(DILUTED)	1,534,984	3.04	4.90	40	46,608	75,214	61,399
BLAST HOLE*	1,513,637	3.00	4.60	n/a	45,409	69,627	n/a

\* VARIANCE

	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
Blast Hole vs Model	8.5%	-10.2%	-14.7%	n/a	-2.6%	-7.4%	n/a
Model(Diluted)#	-1.4%	-1.2%	-6.1%	n/a	-2.6%	-7.4%	n/a

# Model Dilution Factor: 10% Dilution with dilutant of 0% grade

\* Excluding ramp zone for model comparisons

INVENTORY

	<u>TONNES</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>
BROKEN IN PIT:				
Phase A;	0			
JB Zone; 3710	48,800	3.02	4.98	34
Ramp Zone;	MINED OUT			
STOCKPILE A:				
Ramp Zone Ore	10,032	4.57	4.46	n/a
CRUSHER STOCKPILE:				
JB, AY Ore	42,206	3.20	4.56	40
STOCKPILE B:				
	=====	=====	=====	=====
Total Inventory:				
Broken	48,800	3.02	4.98	34
Stockpile	52,238	3.46	4.54	n/a

CURRAGH RESOURCES  
GEOLOGY DEPARTMENT SUMMARY REPORT  
YEAR END 1986  
(LOW GRADE)

AY, JB Phases	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
MODEL	166,140	1.69	2.92	30	2,808	4,851	4,984
MODEL(DILUTED)	182,754	1.54	2.65	27	2,808	4,851	4,984
BLAST HOLE	342,426	1.81	3.00	n/a	6,198	10,273	n/a

\* VARIANCE

	<u>OreTns</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>	<u>PbTns</u>	<u>ZnTns</u>	<u>Ag kg</u>
Blast Hole vs Model	106.1%	7.1%	2.7%	n/a	120.7%	111.8%	n/a
Model(Diluted)	87.4%	17.8%	13.0%	n/a	120.7%	111.8%	n/a

\* excluding ramp zone for model comparisons

INVENTORY

	<u>TONNES</u>	<u>%Pb</u>	<u>%Zn</u>	<u>Ag g/t</u>
BROKEN IN PIT:				
Phase A;	0			
JB Zone; 3710	15,200	1.74	3.08	33
Ramp Zone;	mined out			
LOW GRADE STOCKPILES:				
	342,426	1.81	3.00	n/a
	=====	=====	=====	=====
Total Inventory:				
Broken	15,200	1.74	3.08	33
Stockpile	342,426	1.81	3.00	N/A