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F A R O   R E S E R V E  
R E C O N C I L I A T I O N  
A N D  
N E W   V A N G O R D A   R E S E R V E S

SUBMITTED TO  
K. MARITAN  
BANK OF NOVA SCOTIA  
Sept. 13, 1988  
Site Visitation

G. Jilson  
Sept/88  
GJ/dlb

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## FARO MINE PRODUCTION TO RESERVE RECONCILIATION

The following two tables compare starting reserves at the time of purchase of the Mine to FI model starting reserves. A reconciliation of FI model starting reserves (adjusted to include extra ore mined but not included in the reserves) with production and stockpile changes is also included. The reconciled remaining reserves do not compare well to the calculated remaining reserves. This is due to the fact that the density of ore in the model is lower by 10 percent than the density of ore used for production calculations (3 tonnes/cu. yd. or approximately 4 tonnes/cu. m.). The reconciliation by volume is far better. The second table repeats the reconciliation on the basis of tonnages calculated by using the average density of 3 tonnes/cu. yard and the model volumes. The reconciliation is much better and the implication is that the remaining reserves are closer to 17.4 million tonnes than 15.6 million tonnes simply because the density of the ore in the reserve calculation was too low.

CURBAGH RESOURCES INC.  
RECONCILIATION OF RESERVES FOR THE FARD PIT  
FROM JANUARY 1, 1986 TO MAY 31, 1988

11-Jul-88  
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	tonnes ore	tonnes lead	tonnes zinc	kilograms silver	tonnes waste	waste to ore ratio
<b>STARTING RESERVES</b>						
Starting reserves in Kilborn report of August 1985, high grade and low grade, i.e. plus 4 % Pb+Zn	23,763,000	698,632	1,038,443	860,221	87,498,000	3.68
In late 1985 new reserves were calculated from a new mine model. Based on the new model a new pit design was created in 1986 and further refined during early 1988 giving the current ultimate pit within which new starting reserves and reserves remaining at May 31, 1988 were calculated						
Starting reserves within new ultimate pit as of Jan 1, 1986, high grade and low grade, i.e. plus 4 % Pb+Zn	23,267,134	649,365	1,006,832	813,102	79,330,654	3.41
Change, gain or (loss), relative to original Kilborn reserves	(495,866)	(49,268)	(31,611)	(47,119)	(8,167,344)	
<b>RECONCILIATION</b>						
New ultimate pit starting reserves, as above:	23,267,134	649,365	1,006,832	813,102	79,330,654	3.41
PLUS extra ore mined around the pit and not included in the pit reserves, and oxides +	977,711	33,196	48,700	38,471		
LESS Millfeed from Jan. 1, 1986 to May 31, 1988 and waste mined in same period	- 8,363,000	280,749	403,256	365,121	56,350,595	
LESS Additions to stockpiles in same period	- 1,112,300	29,105	40,496	43,719		
EQUALS what should be the reserves remaining within the ultimate pit high grade and low grade, +4% Pb+Zn	14,769,545	372,707	611,780	442,733	22,980,061	1.56
By independent calculation from the model the reserves remaining at May 31, 1988 are:	15,635,833	421,457	670,777	507,425	25,521,350	1.63
For a difference in the remaining reserves of: gain/(loss)	866,288	48,750	58,997	64,692	2,541,289	

**EXPLANATION**

Most of this "additional ore" is due to the fact that the average density used in the mine models is approximately 7% to 10% lower than the average used for all other reporting at the mine (3.0 tonnes/cu yd. or 3.92 tonnes/cu m).

The following page gives the same reconciliation but it is in terms of volumes of ore times an average density equal to that used for blasthole and stockpile tonnages.

The difference in waste tonnage is apparently due to problems in the area of the DZ phase mining particularly where the mining has been done outside the ultimate pit design. The problem is above the level of any ore in the pit.

CURRAGH RESOURCES INC.  
 RECONCILIATION OF RESERVES FOR THE FARG PIT  
 FROM JANUARY 1, 1986 TO MAY 31, 1988

RECONCILIATION BY VOLUME AT AN AVERAGE DENSITY OF 3.0 TONNES/CUBIC YARD FOR SULPHIDES

	tonnes ore	tonnes lead	tonnes zinc	kilograms silver	tonnes waste	waste to ore ratio
1988 ultimate pit starting reserves USING VOLUMES AND AVERAGE DENSITY=3.0 TN/BCY:	25,699,453	717,248	1,112,319	898,102	80,856,139	3.15
PLUS extra ore mined around the pit and not included in the pit reserves	+ 977,711	33,196	48,700	38,471		
LESS Millfeed from Jan.1,1986 to May 31,1988 and waste mined in same period	- 8,363,000	280,749	403,256	365,121	56,350,595	6.74
LESS Additions to stockpiles in same period	- 1,112,300	29,105	40,496	43,719		
EQUALS what should be the reserves remaining within the ultimate pit high grade and low grade, +4% Pb+Zn	17,201,864	440,591	717,267	527,733	24,505,544	1.42
By independent calculation from the model USING VOLUMES AND AVERAGE DENSITY=3.0 TN/BCY the reserves remaining at May 31,1988 are:	17,395,767	469,211	746,595	564,935	32,100,935	1.85
For a difference in the remaining reserves of: gain/(loss)	193,903	28,621	29,328	37,202	7,595,391	

FARO MINE  
DETAILED PRODUCTION TO PREDICTED RESERVE COMPARISON

The following five tables compare the predicted reserves from the FI model to the ore blocked out in the pit by blastholes. The millfeed as predicted by Geology from blastholes and stockpile accounting is also compared to the millfeed as reported by the Mill on its metallurgical balance. The first four tables are four historic periods since Curragh's reopening of the mine and the last of the five tables is the cumulative table showing total production by Curragh. Note that period one silver has been estimated for pit blastholes since silver was not analysed at that time. The comparison shows that the FI model is consistently lower in both tonnage and grade than the blastholes. Much of the tonnage short fall is explained by the fact that the density used for the ore was approximately 7 percent too low. The diluted grade problems are related to compositing practice. The following section shows the same comparison for a new model which revises these practices.

**START-UP AUG 1986 to SEPT 31 1986**

	Tonnes	ZPb	ZZn	ZPb+Zn	Ag (g/t)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
<b><u>Ore blocked out in pit by blastholes and mined:</u></b> less ramp zone ore (44,000 tonnes sent to waste dump from 3890 bench JB)									
low grade	193,640	1.85	2.92	4.77	27 est as per 2	3,393	5,364	8,756	4,958
Above 4% Pb+Zn cutoff	1,146,800	2.88	4.33	7.21	33 est as per 2	33,029	49,666	82,695	37,844
high grade	963,160	3.07	4.59	7.66	34 est as per 2	29,576	44,202	73,778	32,747

**Crusher Feed reconciliation:** includes all feed regardless of origin

From Geology records	984,000	3.18	4.52	7.70	33 est as per 2	31,291	44,477	75,768	32,472
From Mill records	910,000	3.03	4.73	7.76	42	27,573	43,043	70,616	38,220

**Predicted reserves:**

**Model Undiluted:**

<b>WASTE</b>									
FI Waste	17,872,980	0.00				0	0	0	
FI 0.1-4Z	113,910	1.20	2.23	3.42	26.00	1,365	2,540	3,896	2,962
FI total -4Z	17,986,890								
<b>ORE</b>									
FI +4Z Pb+Zn	742,290	3.52	5.79	9.31	49	26,136	42,971	69,107	36,058
FI 4-5Z	64,620	1.34	3.08	4.43	27	868	1,992	2,860	1,775
FI +5Z	677,670	3.73	6.05	9.78	51	25,270	40,979	66,249	34,283
FI 5-6Z	47,810	2.04	3.39	5.44	43	977	1,622	2,599	2,046
FI +6Z	629,860	3.86	6.25	10.11	51	24,294	39,354	63,647	32,237
<b>Model Diluted (10% at 0 grade, 95% mining recovery):</b>									
FI +4Z Pb+Zn	775,693	3.20	5.26	8.46	44	24,829	40,823	65,652	34,255
FI 4-5Z	67,528	1.22	2.80	4.02	25	825	1,892	2,717	1,686
FI +5Z	708,165	3.39	5.50	8.89	46	24,007	38,930	62,937	32,569
FI 4-6Z	49,961	1.86	3.08	4.94	39	928	1,541	2,469	1,943
FI +6Z	658,204	3.51	5.68	9.19	47	23,079	37,386	60,465	30,626

UNDILUTED FI Model Stripping Ratio (Total Waste <4Z / +4Z) : 24.23  
 DILUTED FI Model Stripping Ratio (Total Waste <4Z / +4Z) : 23.15

**Crusher feed variances:**

	Tonnes	ZPb	ZZn	ZPb+Zn	Ag (g/t)				
Variance (geology-mill)	74,000	0.15	-0.21	-0.06	-9	3,718	1,434	5,152	(5,748)
Percent variance ((g-m)/g)*100	7.5Z	4.7Z	-4.6Z	-0.8Z	0	11.9Z	3.2Z	6.8Z	-17.7Z

**Ore reserve variances:**

Variance in +4Z Pb+Zn ore (blastholes-diluted model)	371,107	-0.32	-0.93	-1.25	-11.16	8,200	8,843	17,043	3,589
Percent variance +4Z Pb+Zn ((bh-m)/m)	47.8Z	-10.0Z	-17.7Z	-14.8Z	-25.3Z	33.0Z	21.7Z	26.0Z	10.5Z
Variance in high grade ore * (blastholes-diluted model)	304,956	-0.44	-1.09	-1.53	-12.53	6,497	6,816	13,313	2,122
Percent var high grade to +6Z ((bh-m)/m)	46.3Z	-12.4Z	-19.2Z	-16.6Z	-26.9Z	28.1Z	18.2Z	22.0Z	6.9Z

\* high grade ore was +6Z Pb+Zn at start of period and changed to +5Z near end.

**OCT 1 1986 to APRIL 30 1987**

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/t)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
<b>Ore blocked out in pit by blastholes and mined</b>									
less zone 1 and ramp zone ore									
4-5 % Pb + Zn	425,240	1.80	2.94	4.74	27	7,671	12,506	20,176	12,069
Above 4% Pb+Zn cutoff	2,266,235	2.69	4.36	7.05	33	60,909	98,891	159,800	77,550
Above 5% Pb+Zn cutoff	1,840,995	2.90	4.69	7.59	34	53,301	86,419	139,720	64,702

**Cruiser Feed reconciliation** includes all feed regardless of origin

From Geology records	2,502,000	2.98	4.77	7.75	35	74,560	119,345	193,905	87,576
From Mill records	2,489,000	2.98	4.7	7.68	37	74,172	116,983	191,155	92,693

**Predicted reserves:**

Model Undiluted:

**WASTE**

FI Waste	10,819,130	0	0	0.00	0	0	0	0	0
FI 0.1-4%	695,470	1.012	1.954	2.97	15.805	7,038	13,589	20,628	10,992
FI total -4%	11,514,600								

**DRE**

FI +4% Pb+Zn	2,121,500	2.73	4.52	7.26	35	57,959	95,977	153,936	74,176
FI 4-5%	316,960	1.75	2.76	4.51	26	5,544	8,735	14,279	8,196
FI +5%	1,804,530	2.90	4.83	7.74	37	52,404	87,231	139,635	65,981
FI 5-6%	443,640	1.83	3.64	5.48	23	8,127	16,166	24,294	10,299
FI +6%	1,360,890	3.25	5.22	8.48	41	44,283	71,066	115,349	55,682

Model Diluted (10% at 0 grade, 95% mining recovery):

FI +4% Pb+Zn	2,216,968	2.48	4.11	6.60	32	55,061	91,178	146,239	70,467
FI 4-5%	331,223	1.59	2.51	4.10	24	5,266	8,299	13,565	7,786
FI +5%	1,885,734	2.64	4.39	7.03	33	49,783	82,869	132,653	62,682
FI 4-6%	463,604	1.67	3.31	4.98	21	7,721	15,358	23,079	9,784
FI +6%	1,422,130	2.96	4.75	7.71	37	42,069	67,512	109,582	52,898

UNDILUTED FI Model Stripping Ratio (Total Waste <4% / +4%) : 5.43

DILUTED FI Model Stripping Ratio (Total Waste <4% / +4%) : 5.15

**Cruiser feed variances**

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/t)				
Actual (geology-mill)	13,000	0.00	0.07	0.07	-2.00	387	2,362	2,750	(4,523)
Percent ((g-m)/g)	0.5%	0.0%	1.5%	0.9%	-5.7%	0.5%	2.0%	1.4%	-5.2%

**Ore reserve variances**

Variance in +4% Pb+Zn ore (blastholes-diluted model)	49,268	0.20	0.25	0.45	1.21	5,848	7,713	13,561	7,083
Percent variance +4% Pb+Zn ((bh-m)/m)*100	2.2%	8.2%	6.1%	6.9%	3.8%	10.6%	8.5%	9.3%	10.1%
Variance in +5% Pb+Zn ore (blastholes-diluted model)	(44,739)	0.26	0.30	0.55	0.76	3,518	3,549	7,067	2,020
Percent variance +5% Pb+Zn ((bh-m)/m)*100	-2.4%	9.7%	6.8%	7.9%	2.3%	7.1%	4.3%	5.3%	3.2%

MAY 1 1987 to DEC 31 1987

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/t)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
<u>Ore blocked out in pit by blastholes and mined:</u> less Zone 1 ore									
4-5 % Pb + Zn	137,000	2.17	2.39	4.56	32	2,973	3,274	6,247	4,384
Above 4% Pb+Zn cutoff	2,743,578	3.61	5.11	8.73	42	99,149	140,257	239,405	114,795
Above 5% Pb+Zn cutoff	2,606,578	3.69	5.25	8.94	43	96,067	136,970	233,036	111,723

Crusher Feed reconciliations includes all feed regardless of origin

From Geology records	2,978,000	3.62	5.18	8.80	43	107,804	154,260	262,064	128,054
From Mill records	3,084,000	3.5	5.04	8.54	42	107,940	155,434	263,374	129,528

Predicted reserves:

Model Undiluted:

WASTE

FI Waste	16,608,400	0	0	0.00	0	0	0	0	
FI 0.1-4%	420,700	1.045	1.692	2.74	22.301	4,396	7,118	11,515	9,382
FI total -4%	17,029,100								

ORE

FI +4% Pb+Zn	2,747,220	3.492	4.978	8.47	45.091	95,933	136,757	232,690	123,875
FI 4-5%	297,010	1.892	2.656	4.55	31.554	5,619	7,889	13,508	9,372
FI +5%	2,450,210	3.686	5.26	8.95	46.73	90,315	128,881	219,196	114,503
FI 4-6%	336,330	2.321	3.102	5.42	36.303	7,806	10,433	18,239	12,210
FI +6%	2,113,880	3.903	5.603	9.51	48.391	82,505	118,441	200,945	102,293

Model Diluted (10% at 0 grade, 95% mining recovery):

FI +4% Pb+Zn	2,870,845	3.17	4.53	7.70	41	91,136	129,919	221,055	117,681
FI 4-5%	310,375	1.72	2.41	4.13	29	5,338	7,494	12,833	8,903
FI +5%	2,560,469	3.35	4.78	8.13	42	85,799	122,437	208,236	108,778
FI 4-6%	351,465	2.11	2.82	4.93	33	7,416	9,911	17,327	11,599
FI +6%	2,209,005	3.55	5.09	8.64	44	78,379	112,519	190,898	97,178

UNDILUTED FI Model Stripping Ratio (Total Waste <4% / +4%) : 6.20

DILUTED FI Model Stripping Ratio (Total Waste <4% / +4%) : 5.89

Crusher feed variances

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/tnn)				
Actual (geology-mill)	(106,000)	0.12	0.14	0.26	1.00	(136)	(1,173)	(1,310)	(1,474)
Percent ((g-m)/g)	-3.6%	3.3%	2.7%	3.0%	2.3%	-0.1%	-0.8%	-0.5%	-1.2%

Ore reserve variances

Variance in +4% Pb+Zn ore (blastholes-diluted model)	(127,267)	0.44	0.59	1.03	0.85	8,013	10,338	18,350	(2,886)
Percent variance +4% Pb+Zn ((bh-m)/m)*100	-4.4%	13.8%	13.0%	13.3%	2.1%	8.8%	8.0%	8.3%	-2.5%
Variance in +5% Pb+Zn ore (blastholes-diluted model)	46,109	0.33	0.47	0.81	0.38	10,268	14,533	24,800	2,945
Percent variance +5% Pb+Zn ((bh-m)/m)*100	1.8%	10.0%	9.9%	9.9%	0.9%	12.0%	11.9%	11.9%	2.7%

JAN 1 1988 to MAY 31 1988

	Tonnes	ZPb	ZZn	ZPb+Zn	Ag (g/t)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
<b>Ore blocked out in pit by blastholes and mined:</b>									
4-5 % Pb + Zn	135,000	2.11	2.85	4.96	32	2,849	3,848	6,696	4,326
Above 4% Pb+Zn cutoff	2,337,000	3.87	4.87	8.74	55	90,442	113,812	204,254	128,538
Above 5% Pb+Zn cutoff	2,203,000	3.98	4.99	8.97	56	87,679	109,930	197,609	123,368

**Crusher Feed reconciliations:** includes all feed regardless of origin

From Geology records	1,984,000	3.90	4.86	8.76	55	73,476	91,562	165,038	103,620
From Mill records	1,880,000	3.78	4.67	8.45	56	71,064	87,796	158,860	105,280

**Predicted reserves:**

**Model Undiluted:**

<b>WASTE</b>									
FI Waste	7,359,100	0.00	0.00	0.00	0	0	0	0	
FI 0.1-4%	454,080	1.15	1.41	2.55	20.347	5,199	6,393	11,593	9,239
FI total -4%	7,813,180								
<b>DRE</b>									
FI +4% Pb+Zn	1,721,790	3.52	4.62	8.14	51.598	60,538	79,616	140,154	88,841
FI 4-5%	267,890	1.78	2.70	4.49	27.658	4,776	7,244	12,020	7,409
FI +5%	1,453,900	3.84	4.98	8.81	56.008	55,757	72,375	128,132	81,430
FI 5-6%	193,820	2.06	3.46	5.52	30.271	3,993	6,700	10,693	5,867
FI +6%	1,260,080	4.11	5.21	9.32	59.967	51,764	65,675	117,439	75,563
<b>Model Diluted (10% at 0 grade, 95% mining recovery):</b>									
FI +4% Pb+Zn	1,799,271	3.20	4.20	7.40	47	57,511	75,635	133,146	84,390
FI 4-5%	279,945	1.62	2.46	4.08	25	4,538	6,882	11,419	7,039
FI +5%	1,519,326	3.49	4.53	8.01	51	52,969	68,756	121,726	77,359
FI 4-6%	202,542	1.87	3.14	5.02	28	3,793	6,365	10,158	5,574
FI +6%	1,316,784	3.73	4.74	8.47	55	49,176	62,392	111,567	71,785

UNDILUTED FI Model Stripping Ratio (Total Waste (4% / +4%)) : 4.54  
 DILUTED FI Model Stripping Ratio (Total Waste (4% / +4%)) : 4.30

**Crusher feed variances:**

	Tonnes	ZPB	ZZn	ZPb+Zn	Ag (g/tnn)				
Actual (geology-mill)	4,000	0.12	0.19	0.31	-1.00	2,412	3,766	6,178	(1,660)
Percent ((g-m)/g)	0.2%	3.1%	3.9%	3.5%	-1.8%	3.3%	4.1%	3.7%	-1.6%

**Ore reserve variances:**

Variance in +4% Pb+Zn ore (blastholes-diluted model)	537,729	0.67	0.67	1.34	8.09	32,931	38,177	71,108	44,136
Percent variance +4% Pb+Zn ((bh-m)/m)*100	29.9%	21.1%	15.9%	18.1%	17.3%	57.3%	50.5%	53.4%	52.3%
Variance in +5% Pb+Zn ore (blastholes-diluted model)	683,675	0.49	0.46	0.96	5.08	34,710	41,173	75,884	46,009
Percent variance +5% Pb+Zn ((bh-m)/m)*100	45.0%	14.2%	10.3%	12.0%	10.0%	65.5%	59.9%	62.3%	59.5%

**ALL PERIODS - STARTUP (JAN 1 1986) to MAY 31 1988**

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/t)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
<b>Ore blocked out in pit by blastholes and mined:</b>	not including 211,200 tonnes (hg+lg) from ramp zone and 127,187 tonnes (hg) from zone I								
4-5 % Pb + Zn	880,880	1.92	2.84	4.75	29	16,885	24,991	41,876	25,711
Above 4% Pb+Zn cutoff	8,493,613	3.34	4.74	8.08	42	283,529	402,625	686,154	358,724
Above 5% Pb+Zn cutoff	7,613,733	3.50	4.96	8.46	44	266,623	377,520	644,143	332,541

**Crusher Feed reconciliation:** includes all feed regardless of origin

From Geology records	8,348,000	3.44	4.91	8.35	42	287,130	409,645	696,775	351,711
From Mill records	8,363,000	3.36	4.82	8.18	44	280,749	403,256	684,005	365,121

**Predicted reserves:**

Model Undiluted:

WASTE

FI Waste	52,659,810	0.00	0.00	0.00	0	0	0	0	0
FI 0.1-4%	1,684,160	1.07	1.76	2.83	19	17,998	29,641	47,631	32,575
FI total -4%	54,343,770								

ORE

FI +4% Pb+Zn	7,332,800	3.28	4.85	8.13	44	240,566	355,320	595,886	322,950
FI 4-5%	946,480	1.78	2.73	4.51	28	16,808	25,859	42,667	26,751
FI +5%	6,386,310	3.50	5.16	8.66	46	223,746	329,466	553,212	296,197
FI 4-6%	1,021,600	2.05	3.42	5.46	30	20,903	34,922	55,825	30,422
FI +6%	5,364,710	3.78	5.49	9.27	50	202,846	294,535	497,381	265,771

Model Diluted (10% at 0 grade, 95% mining recovery):

FI +4% Pb+Zn	7,662,776	2.98	4.41	7.39	40	228,538	337,554	566,092	306,803
FI 4-5%	989,072	1.61	2.48	4.10	26	15,968	24,566	40,534	25,414
FI +5%	6,673,694	3.19	4.69	7.87	42	212,558	312,993	525,551	281,385
FI 4-6%	1,067,572	1.86	3.11	4.97	27	19,858	33,176	53,034	28,901
FI +6%	5,606,122	3.44	4.99	8.43	45	192,704	279,809	472,512	252,487

UNDILUTED FI Model Stripping Ratio (Total Waste <4% / +4%): 7.41

DILUTED FI Model Stripping Ratio (Total Waste <4% / +4%): 7.05

**Crusher feed variance:**

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/tnn)				
Actual (geology-mill)	(15,000)	0.08	0.09	0.17	-1.53	6,381	6,389	12,771	(13,405)
Percent ((g-m)/g)	-0.2%	2.4%	1.7%	2.0%	-3.6%	2.2%	1.6%	1.8%	-3.8%

**Ore reserve variance:**

Variance in +4% Pb+Zn ore (blastholes-diluted model)	830,837	0.36	0.34	0.69	2.20	54,991	65,071	120,062	51,922
Percent Variance +4% Pb+Zn ((bh-m)/m)*100	10.8%	11.9%	7.6%	9.4%	5.5%	24.1%	19.3%	21.2%	16.9%
Variance in +5% Pb+Zn ore (blastholes-diluted model)	940,039	0.32	0.27	0.59	1.51	54,064	64,528	118,592	51,153
Percent Variance +5% Pb+Zn ((bh-m)/m)*100	14.1%	9.9%	5.7%	7.4%	3.6%	25.4%	20.6%	22.6%	18.2%

## FARO MINE

### NEW MODEL PRELIMINARY RESERVE TO PRODUCTION COMPARISON

The following table compares preliminary reserves for the new F8805 model to the total production. The comparison in volume tonnage density and grade is far better than previous models. Note that the comparison includes a 5 percent mining loss in order to be consistent with previous tables, however continuing this mining loss adjustment is not recommended.

The model was calculated using assays composited by geologic intervals rather than by benches and in compositing the assays are weighted by SG. This appears to be the major cause of the grade increase. The pulp density has not been adjusted to correct for porosity since this correction appears unnecessary. The average density calculated by the model is very close to that expected.

The close fit of model volumes in this area is partly because pit data was used to assist in the modeling, however only diamond drill core assays were used to calculate grade. Future mining will be in areas where ore volumes are defined only by drillholes thus more variance may occur. Drillhole density in part of this volume is higher than the remainder of the deposit however the remainder is sufficiently well drilled to be considered proven reserves.

The close fit is significant for Vangorda as well as Faro since the new F8805 model follows the same calculation procedures as the new Vangorda (V8803) model.

ALL PERIODS - STARTUP (JAN 1 1986) to MAY 31 1988

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/t)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
<u>Ore blocked out in pit by blastholes and mined:</u>	not including 211,200 tonnes (hg+lg) from ramp zone and 127,187 tonnes (hg) from zone 1								
4-5 % Pb + Zn	980,880	1.92	2.84	4.75	29	16,885	24,991	41,876	25,731
Above 4% Pb+Zn cutoff	8,493,613	3.34	4.74	8.08	42	283,529	402,625	686,154	358,724
Above 5% Pb+Zn cutoff	7,613,733	3.50	4.96	8.46	44	266,623	377,520	644,143	332,540

Crusher Feed reconciliation: includes all feed regardless of origin

From Geology records	8,348,000	3.44	4.91	8.35	42	287,130	409,645	696,775	351,716
From Mill records	8,353,000	3.36	4.82	8.18	44	280,749	403,256	684,005	365,120

Predicted reserves:

Model Undiluted:

WASTE

FBB05 Waste	NA	0.00	0.00	0.00	0	0	0	0	0
FBB05 0.1-4%	NA	NA	NA	NA	NA	NA	NA	NA	NA

FBB05 total -4%

NA

DRE

FBB05 +4% Pb+Zn	7,796,600	3.65	5.24	8.89	46	284,576	408,542	693,118	362,376
FBB05 4-5%	479,500	1.60	2.92	4.52	27	7,682	14,001	21,683	12,707
FBB05 +5%	7,317,100	3.79	5.39	9.18	48	277,025	394,538	671,563	349,662
FBB05 4-6%	NA	NA	NA	NA	NA	NA	NA	NA	NA
FBB05 +6%	NA	NA	NA	NA	NA	NA	NA	NA	NA

Model Diluted (10% at 0 grade, 95% mining recovery):

FBB05 +4% Pb+Zn	8,147,447	3.32	4.76	8.08	42	270,347	388,115	658,462	344,252
FBB05 4-5%	501,078	1.46	2.65	4.11	24	7,298	13,301	20,599	12,071
FBB05 +5%	7,646,370	3.44	4.90	8.34	43	263,174	374,811	637,985	332,176
FBB05 4-6%	NA	NA	NA	NA	NA	NA	NA	NA	NA
FBB05 +6%	NA	NA	NA	NA	NA	NA	NA	NA	NA

UNDILUTED FI Model Stripping Ratio (Total Waste <4% / +4%) :

NA

DILUTED FI Model Stripping Ratio (Total Waste <4% / +4%) :

NA

Crusher feed variance:

	Tonnes	%Pb	%Zn	%Pb+Zn	Ag (g/tnn)	tonnes lead	tonnes zinc	tonnes combined	kilograms silver
Actual (geology-mill)	(15,000)	0.08	0.09	0.17	-1.53	6,381	6,389	12,771	(13,405)
Percent ((g-a)/g)	-0.2%	2.4%	1.7%	2.0%	-3.6%	2.2%	1.6%	1.8%	-3.8%

Ore reserve variance:

Variance in +4% Pb+Zn ore (blastholes-diluted model)	346,166	0.02	-0.02	0.00	-0.02	13,182	14,511	27,692	14,473
Percent Variance +4% Pb+Zn ((bh-a)/a)*100	4.2%	0.6%	-0.5%	0.0%	0.0%	4.9%	3.7%	4.2%	4.2%
Variance in +5% Pb+Zn ore (blastholes-diluted model)	(32,637)	0.06	0.06	0.12	0.23	3,449	2,709	6,158	361
Percent Variance +5% Pb+Zn ((bh-a)/a)*100	-0.4%	1.7%	1.2%	1.4%	0.5%	1.3%	0.7%	1.0%	0.1%

## NEW PRELIMINARY REMAINING PIT RESERVES FOR FARO

Using the new Faro model, the preliminary remaining pit reserves below the May 31, 1988 month end surface would be 16.85 million tonnes averaging:

3.03 % Pb  
4.80 % Zn  
7.83 % Pb + Zn  
34.1 g/t Ag  
0.11 g/t Au

The above is diluted by 10 percent of zero grade waste but with no allowance for mining loss.

## NEW VANGORDA RESERVES

The following table compares new geological reserves for Vangorda as calculated by the V8803 model to those calculated by the V8607 model. The comparison is very close; there is a slight reduction in grade but an increase in tonnage. The tonnage increase is partly because the previous practice of reducing the pulp SG's by 5 percent has been discontinued. The rest of the increase is due to geometric changes much of which is related to finding that overburden thickness is less than previously thought thus where ore is at the bedrock surface there is more of it.

Vangorda 8803 Geological Reserves  
no dilution  
specific gravity + length-weighted geological composites

PLUS 6 % (Pb + Zn)

rock type	vol bcm*1000	vol %	tonnes (*1000)	density (tn/bcm)	Pb+Zn %	Pb %	Zn %	Ag g/t	Au g/t
4ACD	107.40	6.8%	315.79	2.940	7.099	2.844	4.255	39.515	0.631
4C0	0.41	0.0%	1.40	3.415	6.158	2.446	3.712	11.540	0.127
4EC	11.93	0.8%	47.11	3.949	8.026	4.702	3.325	61.376	0.873
4E	0.00	0.0%	0.00	0.000	0.000	0.000	0.000	0.000	0.000
4EG	1431.95	90.8%	5956.37	4.160	9.826	4.317	5.510	61.391	0.813
4EH	7.82	0.5%	30.46	3.895	12.682	6.491	6.191	85.909	0.337
4DJ	17.28	1.1%	70.22	4.064	10.478	4.527	5.951	62.075	0.625
TOTAL	1576.79	100.0%	6421.35	4.072	9.699	4.259	5.440	60.428	0.800

PLUS 4 % (Pb + Zn)

rock type	vol bcm*1000	vol %	tonnes (*1000)	density (tn/bcm)	Pb+Zn %	Pb %	Zn %	Ag g/t	Au g/t
4ACD	501.60	23.6%	1483.28	2.957	5.38	2.07	3.31	30.96	0.57
4C0	27.57	1.3%	95.33	3.458	4.45	2.31	2.13	24.01	0.72
4EC	65.83	3.1%	255.49	3.881	5.48	2.94	2.54	41.98	0.88
4E	1.23	0.1%	5.97	4.854	4.58	3.90	0.68	0.00	0.00
4EG	1496.14	70.5%	6205.09	4.147	9.62	4.23	5.39	60.28	0.80
4EH	11.11	0.5%	42.81	3.853	10.71	5.40	5.30	71.95	0.29
4DJ	18.10	0.9%	73.27	4.048	10.24	4.44	5.80	61.01	0.60
TOTAL	2121.58	100.0%	8161.24	3.847	8.670	3.786	4.884	53.980	0.759

MODEL COMPARISON

Model	cut-off	vol bcm*1000	vol %	tonnes (*1000)	density (tn/bcm)	Pb+Zn %	Pb %	Zn %	Ag g/t	Au g/t	(Pb+Zn) tonnes (*1000)
8803	> 6%	1,576.79	100.0%	6,421.35	4.07	9.70	4.26	5.44	60.43	0.80	622.81
8607	> 6%	1,396.24	100.0%	5,417.43	3.88	10.17	4.45	5.72	62.55	0.74	550.95
Difference		180.55		1,003.92	0.19	(0.47)	(0.19)	(0.28)	(2.12)	0.06	71.85
Coef Var		13%		19%	5%	-5%	-4%	-5%	-3%	8%	13%
8803	> 4%	2,121.58	100.0%	8,161.24	3.85	8.67	3.79	4.88	53.98	0.76	707.58
8607	> 4%	2,026.34	100.0%	7,456.94	3.68	8.71	3.78	4.92	53.46	0.69	649.50
Difference		95.24		704.30	0.17	(0.04)	0.01	(0.04)	0.52	0.07	58.08
Coef Var		5%		9%	5%	-0%	0%	-1%	1%	10%	9%