

000592

**CURRAGH RESOURCES INC. FARO OPERATIONS  
MINERAL INVENTORY, OCTOBER 1, 1990**

WH90033

## 1.0 SUMMARY

Total Faro Division geological reserve in five mineral deposits on October 1, 1990 is 84.3 million tonnes grading 9.72 % combined lead and zinc.

From this geological reserve base there are detailed or preliminary mine plans for each deposit. In addition, there are existing low and high grade stockpiles which are partially consumed in current plans. These plans contain a total mining and stockpile reserve of 50.2 million tonnes grading 3.61% lead, 5.13% zinc and approximately 55 grams per tonne silver.

Faro, Vangorda, and Grum mineral inventories have changed significantly since January 1, 1989. Changes are due in part to; (1) waste stripping and mining depletion, (2) additional diamond drilling, (3) new geological interpretations, (4) new approaches to grade calculations, (5) New ultimate pit designs for Faro and Vangorda were completed in 1989. Changes to the mineral inventories of each deposit are detailed in section 2.

There has been no change to the mineral inventories of Dy and Swim deposits during this period.

## 1:1 DEFINITION OF TERMS

### *Geological Reserve:*

The term geological reserve is used to refer to the total in-situ material in a mineral deposit. Normally this is quoted above a specific cut-off grade, however the practicality of mining the material has not been established. The geological reserves will include both material inside and outside of potential mining volumes.

Geological reserves are classified as proven, probable, or possible following the Ontario Professional Engineers and Ontario Securities Commission guidelines (see appendix B and C). In the case of these deposits, reserves are classified as proven if the mineralization is within 150 feet of a drillhole intersection.

### *Mining Reserve:*

The term mining reserve is used to refer to quantities of ore in a mineral deposit for which a detailed or conceptual mine plan exists. In all cases the mining reserves are a subset of the geological reserves and are calculated from the same base of information. A specific cut-off grade relevant to the economics of the mining method is applied. In most cases mining dilution and mining recovery adjustments are made. The economic feasibility of mining the reserve has not necessarily been established nor are the deposits necessarily committed to production.

Mining Reserves are classified as proven and probable based on Ontario Securities Commission definitions (see appendix B and C).

**TABLE 1**  
**CURRAGH RESOURCES INC. - FARO DIVISION**  
**GEOLOGICAL RESERVES AS OF OCTOBER 1, 1990**

<u>DEPOSIT</u>	<u>CLASS</u>	<u>CUT-OFF%</u>	<u>ORE TONNES</u>	<u>LEAD ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt SILVER</u>	<u>g/mt GOLD</u>	<u>SOURCE</u>
<b>FARO</b>									
Zone 3 Only	Proven	+6%	3,352,000	8.36	2.99	5.37	27	0.11	90-2b
Zone 3 Only	Proven	+5%	4,832,000	7.46	2.66	4.80	25	0.12	90-2b
Zone 3 Only	Proven	+4%	6,760,000	6.62	2.36	4.26	23	0.13	90-2b
Zone 3 Only	Proven	+3%	8,611,000	5.95	2.11	3.84	22	0.13	90-2b
SW Underground	Probable	+9%	<u>2,246,000</u>	<u>12.80</u>	<u>5.04</u>	<u>7.76</u>	<u>68</u>	<u>NA</u>	90-6
Total Deposit	All	4 or 9	9,006,000	8.16	3.03	5.13	34	NA	
	All	3 or 9	10,857,000	7.37	2.72	4.65	32	NA	
<b>GRUM</b>									
Main Zone (61W-87W)	Proven	+6%	23,963,000	10.36	3.90	6.46	66	1.00	89-8
Main Zone (61W-87W)	Proven	+5%	27,855,000	9.68	3.66	6.02	61	0.98	89-8
Main Zone (61W-87W)	Proven	+4%	32,181,000	8.98	3.40	5.58	57	0.95	89-8
Main Zone (61W-87W)	Proven	+3%	35,723,000	8.45	3.22	5.23	54	0.93	89-8
Champ Zone (51W-61W)	Probable	+4%	1,700,000	7.80	3.50	4.30	46	NA	89-16
NW Zone (87W-100W)	Possible	NA	<u>8,000,000</u>	<u>10.00</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	89-17
Total Deposit	Prov.+ Prob.	+4%	33,881,000	8.92	3.41	5.52	56	NA	
		+3%	37,423,000	8.42	3.23	5.19	54	NA	
<b>VANGORDA</b>									
Total Deposit	Proven	+6%	5,927,000	9.81	4.36	5.45	55	0.83	90-15
Total Deposit	Proven	+5%	6,557,000	9.39	4.16	5.23	52	0.81	90-15
Total Deposit	Proven	+4%	7,244,000	8.93	3.95	4.98	49	0.78	90-15
Total Deposit	Proven	+3%	8,115,000	8.34	3.68	4.66	46	0.77	90-15
<b>DY</b>									
Total Deposit	Probable	+9%	21,060,000	12.28	5.54	6.74	84	0.95	89-12
<b>SWIM</b>									
Total Deposit	Probable	+4%	<u>5,130,000</u>	<u>7.90</u>	<u>3.50</u>	<u>4.40</u>	<u>47</u>	<u>NA</u>	89-15
<b>TOTAL FARO DIVISION*</b>									
	Proven		46,185,000	8.63	3.33	5.29	51	0.80	
	Probable		30,136,000	11.32	5.04	6.28	74	NA	
	Possible		<u>8,000,000</u>	<u>10.00</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	
<b>ALL CATAGORIES</b>									
			84,321,000	9.72	NA	NA	NA	NA	

\* Reserve cutoff is 4% Pb+Zn for reserves which may possibly be mined by open pit methods.  
Reserve cutoff is 9% Pb+Zn for reserves which may possibly be mined by underground methods.  
Faro 3-4% Pb+Zn material is stockpiled in the low grade stockpile.

#### TABLE OF SOURCES

90-2b C.R.I. (Sept 1990); F9005 in-situ reserve calculation below Sept 30/90 survey surface (no adjustments), in-house report.  
90-6 C.R.I. (Sept 1989); S89 Alpha II Mine Plan. 364,000 tonnes ore mined start-up Jan 1990 to Sept 30/90 subtracted from original Alpha II geological reserve.  
89-8 C.R.I. (June 1986); G8606 in-situ (5% SG reduction removed) reserve calculation, in-house report.  
89-16 Kerr Addison Mines (1978); Sectional Calc. by A.Y. Po in Sirola (1977) Grum Joint Venture Mineral Inventory  
89-17 C.R.I. (1984); Estimate of reserve based on extrapolation of sections NW of Main Zone  
90-15 C.R.I. (Sept 1990); Y9009 in-situ (no adjustments) reserve calculation, in-house report.  
89-12 C.A.M.C. (1982); R.W. Rollings polygonal reserve calculation in Dy Reserve Summary, C.A.M.C. in-house report.  
89-15 Vintila I. (March 1988); Preliminary Open pit Reserve Evaluation For The Swim Deposit, page 5.

**TABLE 2  
CURRAGH RESOURCES INC. - FARO DIVISION  
MINING RESERVES AS OF OCTOBER 1, 1990**

<u>DEPOSIT</u>	<u>CLASS</u>	<u>CUT-OFF%</u>	<u>WASTE TONNES</u>	<u>ORE TONNES</u>	<u>LEAD+ ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt SILVER</u>	<u>g/mt GOLD</u>	<u>STRIP RATIO</u>	<u>SOURCE</u>
<b>FARO</b>											
Zone 3 Pit	Proven	+6%		2,073,000	8.12	2.81	5.31	22	0.12		90-4
Zone 3 Pit	Proven	+5%		3,017,000	7.30	2.53	4.77	21	0.13		90-4
Zone 3 Pit	Proven	+4%	4,917,000	4,118,000	6.58	2.29	4.29	20	0.14	1.19	90-4
Zone 3 Pit	Proven	+3%	3,928,000	5,107,000	5.99	2.08	3.91	18	0.14	0.77	90-4
SW Underground	Probable	+9%		<u>814,000</u>	<u>10.38</u>	<u>4.11</u>	<u>6.27</u>	<u>60</u>	<u>NA</u>	<u>NA</u>	90-6
Total Deposit	All	4 or 9		4,932,000	7.21	2.59	4.62	27	NA	NA	
	All	3 or 9		5,921,000	6.59	2.36	4.23	24	NA	NA	
<b>FARO STOCKPILES</b>											
Low Grade	Proven	3-5%	NA	1,800,000	4.51	1.80	2.71	NA	NA	NA	90-11
High Grade	Proven	+5%	NA	<u>912,000</u>	<u>6.22</u>	<u>2.36</u>	<u>3.86</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	90-11
Total Stockpiles				2,712,000	5.09	1.99	3.10	NA	NA		
<b>GRUM PIT</b>											
Total GIV88 pit	Proven	+6%		14,512,000	9.49	3.56	5.93	57	0.91		90-13
Total GIV88 pit	Proven	+5%		17,938,000	8.72	3.25	5.47	52	0.84		90-13
Total GIV88 pit	Proven	+4%	169,907,000	21,245,000	8.07	3.00	5.07	48	0.80	8.00	90-13
Total GIV88 pit	Proven	+3%	171,839,000	23,177,000	7.69	2.87	4.82	49	0.78	7.41	90-13
<b>VANGORDA PIT **</b>											
Total VIV89 pit	Proven	+6%		5,212,000	8.31	3.70	4.61	46	0.67		90-17
Total VIV89 pit	Proven	+5%		5,612,000	8.04	3.58	4.47	44	0.66		90-17
Total VIV89 pit	Proven	+4%	13,989,920	6,022,000	7.75	3.43	4.32	43	0.64	2.32	90-17
Total VIV89 pit	Proven	+3%	13,571,960	6,440,000	7.43	3.29	4.14	41	0.64	2.11	90-17
VANGORDA STOCKPILE		+5%		164,000	8.19	4.11	4.08	NA	NA		90-6
<b>DY UNDERGROUND</b>											
Stope + Pillar	Probable	+9%	NA	11,300,000	12.66	5.82	6.84	83	0.94	NA	89-3
<b>SWIM PIT</b>											
Total Pit	Probable	+4%	24,265,000	<u>3,910,000</u>	<u>7.13</u>	<u>3.22</u>	<u>3.91</u>	<u>42</u>	<u>NA</u>	6.21	89-15
<b>TOTAL FARO DIVISION*</b>											
SP's, Faro, Grum and Vangorda Pit	Proven			34,261,000	7.60	2.92	4.68	NA	NA		
Faro and Dy Underground, Swim Pit	Probable			<u>16,024,000</u>	<u>11.19</u>	<u>5.10</u>	<u>6.10</u>	<u>72</u>	<u>NA</u>		
<b>ALL CATAGORIES</b>			<b>Total</b>	50,285,000	8.74	3.61	5.13	NA	NA		

\* Ore cutoff is 4% Pb+Zn for open pits, 9% Pb+Zn for underground reserves.

Faro 3-4% Pb+Zn material is stockpiled in the low grade stockpile.

\*\* up to 15% of the Vangorda mining reserve may be refractory

#### TABLE OF SOURCES

- 90-4 C.R.I. (Sept 1990); F9009 mining reserve calculation, remaining reserve below Sept 30/90 survey surface within FIV89 Ultimate Pit. 95% mining recovery.
- 90-6 C.R.I. (Sept 1990); Sept 1990 Month End General Manager's Report. 364,000 tonnes ore mined start-up Jan. 1990 to Sept 30/90 subtracted from original Alpha II mining reserve.
- 90-13 C.R.I. (Sept 1990); G9009 3D computer block model, 95% mining recovery. 7,210,000 tonnes waste mined Jan 88 to Sept 30, 1990 (Sept 1990 Month End General Manager's Report.)
- 90-17 C.R.I. (Sept 1990); Y9009 calculation, geology composites, 20% dilution at "0" grade. 90% mining recovery, remaining reserves below Sept 30/90 survey surface within VIV89 Ultimate Pit, in-house report.
- 89-3 C.R.I (Sept 1990); PROSPECTUS (Based on S89 Alpha 2 mine plan).
- 89-15 Vintila I. (March 1988); Preliminary Open pit Reserve Evaluation For The Swim Deposit, page 5.

## 2.1 FARO ZONE 3 DEPOSIT

**TABLE 3**  
**FARO DEPOSIT: HISTORICAL GEOLOGICAL AND MINING RESERVES**  
**(1989 - 1990)**

### GEOLOGICAL RESERVES - EXCLUDING UNDERGROUND (PROVEN)

(no mining loss or adjustments)

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNN</u>	<u>SOURCE</u>	<u>INTERPRETATION</u>
1989 Jan 1	4.0	16,339,000	8.26	3.08	5.18	35	0.13	1,349,000	89-1	F8805
May 1990; Completion of 117 additional diamond drillholes. Geological rock model edited to respect additional drilling information. New reserve calculation (F9005) replacing the earlier (F8805 May 1988) calculation. Jan 1, 1989 to Jul 1, 1990; Mining of approximately 8.0 million tonnes of ore.										
1990 Jul 1	4.0	8,173,000	6.69	2.40	4.29	24	0.14	546,000	90-2a	F9005
Jul 1, 1989 to Oct 1, 1990; Mining of approximately 1.3 million tonnes of ore.										
1990 Oct 1	4.0	6,760,000	6.62	2.36	4.26	23	0.13	447,000	90-2b	F9005
<b><u>MINING RESERVES - EXCLUDING UNDERGROUND (PROVEN)</u></b>										
1989 Jan 1	4.0	14,051,000	7.75	2.96	4.79	33	0.11	1,088,000	89-2	F8805
1989 Jul 1	4.0	12,011,000	7.43	2.75	4.68	31	0.21	892,000	89-3	F8908
September 1989; New Faro Ultimate Pit design (FIV89) replacing Cloutier's revised BZ Pit.										
1990 Jan 1	4.0	10,342,000	7.33	2.65	4.68	29	0.10	758,000	90-1	F8908
1990 Jul 1	4.0	5,818,000	6.70	2.39	4.31	22	0.16	389,000	90-3	F9005
August 1990; new cross, long, and plan section geology interpretation. September 1990; New mining reserve calculation (F9009). 113,000 tonnes removed from remaining reserves due to NE wall failure										
1990 Oct 1	4.0	4,118,000	6.58	2.29	4.29	20	0.14	270,000	90-4	F9009

### NOTES

- Key changes to modelling assumptions and parameters are explained in appendix E

### SOURCES

- 89-1 C.R.I. (Jan 89); F8805 interpretation, in-situ reserve calculation, no adjustments.  
 90-2a C.R.I. (Jul 90); F9005 interpretation in-situ reserve calculation, no adjustments.  
 90-2b C.R.I. (Sep 90); F9005 interpretation, in-situ reserve calculation, no adjustments.  
 89-2 C.R.I. (Jan 89); MAXIPLAN calculation of 1989 starting mining reserve, based on F8805 interpretation, geology composites, diluted 10%, mining recovery = 95%  
 89-3 C.R.I. (May 90); PROSPECTUS (Alpha 2 mine plan based on F8908 reserves)  
 90-1 C.R.I. (Jan 90); F8908 3D computer block model, bench composites, 95% mining recovery.  
 90-3 C.R.I. (Jul 90); F9005 3D computer block model, bench composites, 95% mining recovery.  
 90-4 C.R.I. (Sep 90); F9009 3D computer block model, bench composites, 95% mining recovery.

## 2.2 FARO UNDERGROUND

**TABLE 4**  
**FARO UNDERGROUND: HISTORICAL GEOLOGICAL AND MINING RESERVES**  
**(1989 - 1990)**

**GEOLOGICAL RESERVES - FARO UNDERGROUND (PROBABLE)**

(no mining loss or adjustments)

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD+ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNS</u>	<u>SOURCE</u>
1989 Jan 1	9.0	2,610,000	12.80	5.04	7.76	67	NA	334,000	89-4
January 1, 1989 to July 1, 1990; mining of 156,000 tonnes.									
1990 Jul 1	9.0	2,454,000	12.80	5.04	7.76	67	NA	314,000	90-5
July 1, 1990 to October 1, 1990; mining of 208,000 tonnes.									
1990 Oct 1	9.0	2,246,000	12.80	5.04	7.76	67	NA	287,000	90-6

**MINING RESERVES - FARO UNDERGROUND (PROBABLE)**

1989 Jan 1	9.0	2,014,000	11.59	4.59	7.00	61	NA	233,000	89-5
February 1989; New mine plan; S89 Alpha II. Carbonaceous ore types removed from the Alpha II mining reserve.									
1989 Jul 1	9.0	1,178,000	10.38	4.11	6.27	60	NA	122,000	89-6
1990 Jul 1	9.0	1,022,000	10.38	4.11	6.27	60	NA	106,000	90-5
1990 Oct 1	9.0	814,000	10.38	4.11	6.27	60	NA	84,000	90-6

### SOURCES

- 89-4 Kilborn Limited (Feb 87); Faro Underground Mining, page 6-3  
 90-5 C.R.I. (June 1990); General Manager's Report. Mined reserves subtracted from 1989 starting geological or mining reserve.  
 90-6 C.R.I. (Sept 1990); General Manager's Report. Mined reserves subtracted from 1989 starting geological or mining reserve.  
 89-5 C.R.I. (May 1990); PROSPECTUS, based on S89 Alpha II Mine Plan.  
 89-6 C.R.I. (Feb 1989); S89 Alpha II Mine Plan.

## 2.3 FARO STOCKPILES

**TABLE 5**  
**FARO STOCKPILE INVENTORY**  
**(1989 - 1990)**

### HIGH GRADE +5% LEAD+ZINC

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD+ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNS</u>	<u>SOURCE</u>
1989 Jan 1	5.0	177,900	8.54	3.58	4.96	46	NA	15,000	89-7
1990 Jan 1	5.0	160,500	6.38	2.45	3.93	33	NA	10,000	90-9
1990 Jul 1	5.0	744,000	7.92	3.07	4.85	NA	NA	58,000	90-10
1990 Oct 1	5.0	912,000	6.22	2.36	3.86	NA	NA	56,000	90-11

### LOW GRADE 3-5% LEAD+ZINC

1989 Jan 1	3.0	721,200	4.66	1.92	2.74	27	NA	33,000	89-7
1990 Jan 1	3.0	1,434,800	4.58	1.85	2.73	28	NA	65,000	90-9
1990 Jul 1	3.0	1,601,000	4.53	1.84	2.69	NA	NA	72,000	90-5
September 1, 1990 Faro low grade cutoff lowered to 3%									
1990 Oct 1	3.0	1,800,000	4.51	1.80	2.71	NA	NA	81,000	90-6

### NOTES

- 3-4% material stockpiled in the low grade stockpile.

### SOURCES

89-7 C.R.I. (Dec 1988) Faro Geology Department December 1988 Month End Report.  
 90-9 C.R.I. (Dec 1989) General Manager's December 1989 Month End Report  
 90-5 C.R.I. (June 1990) General Manager's June 1990 Month End Report  
 90-6 C.R.I. (Sept 1990) General Manager's September 1990 Month End Report

## 2.4 GRUM DEPOSIT

<b>TABLE 6</b> <b>GRUM DEPOSIT: HISTORICAL GEOLOGICAL AND MINING RESERVES</b> <b>(1989 - 1990)</b>										
<b>GEOLOGICAL RESERVES MAIN ZONE (PROVEN)</b>										
(no mining loss or adjustments)										
PERIOD	CUT OFF	ORE TONNES	LEAD+ZINC	% LEAD	% ZINC	g/mt Ag	g/mt Au	LEAD+ZINC METAL TNNS	SOURCE	INTERPRETATION
1989 Jan 1	4.0	32,182,000	8.98	3.40	5.58	57	0.95	2,889,000	89-8	G8606
1990 Oct 1	4.0	-----	-----	NO CHANGE		-----	-----	-----		
<b>GEOLOGICAL RESERVES CHAMP ZONE (PROBABLE)</b>										
(no mining loss or adjustments)										
1989 Jan 1	4.0	1,700,000	7.80	3.50	4.30	57	0.95	132,000	89-16	
1990 Oct 1	4.0	-----	-----	NO CHANGE		-----	-----	-----		
<b>GEOLOGICAL RESERVES NW UNDERGROUND (POSSIBLE)</b>										
(no mining loss or adjustments)										
1989 Jan 1	9.0	8,000,000	10.00	NA	NA	NA	NA	800,000	89-17	
1990 Oct 1	9.0	-----	-----	NO CHANGE		-----	-----	-----		
<b>MINING RESERVES (PROVEN)</b>										
1989 Jan 1	4.0	25,161,000	7.97	2.96	5.01	50	0.81	2,005,000	89-9	G8705
Additional diamond drilling of 56 drillholes in three separate programs completed in 1987, 1988, and 1989. August 1990; Simpson, Adamson (C.A.M.C.) geological interpretation edited to respect additional drilling. September 1990; Completion of 6m bench composited mining reserve calculation (G9009).										
1990 Oct 1	4.0	21,245,000	8.07	3.00	5.07	48	0.80	1,714,000	90-13	G9009

### NOTES

- Champ and NW zones are not included in current mine plans.

### SOURCES

89-8 C.R.I. (Jun 86); G8606 in-situ reserve calculation, 5% pulp SG reduction removed..  
 89-9 C.R.I. (Jan 89); Alpha Mine Plan Reserves based on G8705 calculation, 15% dilution, 95% mining recovery.  
 90-13 C.R.I. (Sep 90); G9009 mining reserve calculation. Bench composites, 95% mining recovery.  
 89-16 Kerr Addison Mines (1978); A.Y. Po in Sirola (1977) Grum Joint Venture Mineral Inventory.  
 89-17 C.A.M.C. (1984) Estimate of reserve based on extrapolation of reserves NW of main zone.

## 2.5 VANGORDA DEPOSIT

**TABLE 7**  
**VANGORDA DEPOSIT: HISTORICAL GEOLOGICAL AND MINING RESERVES**  
**(1989 - 1990)**

### **GEOLOGICAL RESERVES (PROVEN)**

(no mining loss or adjustments)

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD+ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNS</u>	<u>SOURCE</u>	<u>INTERPRETATION</u>
1989 Jan 1	4.0	8,161,000	8.67	3.79	4.88	54	0.76	707,000	89-10	V8803
August 1988; completion of 63 additional diamond drill holes. March 1988; New geological interpretation of the Vangorda orebody. December 1988; New reserve calculation (V8912) replacing the earlier V8803 calculation.										
1990 Jul 1	4.0	8,471,000	8.14	3.57	4.57	52	0.77	689,000	90-14	V8912
August 1990; completion of 120 additional diamond drillholes. Drillhole grid is 15.24m NE-SW by 30.48m NW-SE. August 1990; total dataset = 445 drillholes (rotary and diamond) of which 319 diamond drillholes (6700 assay intervals) were selected for grade compositing. All rotary holes and selected 1951-55 ODH's with questionable recoveries and drill logs were excluded. September 1990; New cross section, long section, and bench geology plans were interpreted. October 1990; New computer reserve calculation (V9009) replacing the V8912 calculation.										
1990 Oct 1	4.0	7,244,000	8.93	3.95	4.98	49	0.78	646,000	90-15	V9009
<b><u>MINING RESERVES (PROVEN)</u></b>										
1989 Jan 1	4.0	6,935,000	8.00	3.49	4.51	48	0.65	554,000	89-11	V8803
December 1989; New Vangorda Ultimate Pit design (VIV89).										
1990 Jul 1	4.0	5,669,000	8.96	3.94	5.02	56	0.79	507,000	90-16	V8912
Mining loss increased to 10%, Dilution increased to 20% at "0" grade.										
1990 Oct 1	4.0	6,022,080	7.75	3.43	4.32	43	0.64	466,000	90-17	V9009

### **NOTES**

- Important changes in modelling parameters and assumptions are explained in appendix E:

### **SOURCES**

89-10 C.R.I. (Mar 88); V8803 3D computer block model in-situ reserve calculation.  
 90-14 C.R.I. (Dec 89); V8912 3D computer block model in-situ reserve calculation.  
 90-15 C.R.I. (Sep 90); V9009 3D computer block model in-situ reserve calculation.  
 89-11 C.R.I. (Jan 89); Alpha Mine Plan Reserves based on V8803 model, 15% dilution, 95% mining recovery.  
 90-16 C.R.I. (Sep 90); V8912 3D computer block model mining reserve calculation. Bench composites, 95% mining recovery.  
 90-17 C.R.I. (Sep 90); V9009 3D computer block model mining reserve calculation. Geology composites, 20% dilution, 90% mining recovery.

## 2.6 VANGORDA STOCKPILES

**TABLE 8**  
**VANGORDA STOCKPILE INVENTORY**  
**(1989 - 1990)**

**HIGH GRADE +5% LEAD+ZINC**

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD+ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNS</u>	<u>SOURCE</u>
1990 Jul 1	5.0	Nil							
1990 Oct 1	5.0	164,000	8.19	4.11	4.08	NA	NA	13,000	90-6

**LOW GRADE 3-5% LEAD+ZINC**

1990 Jul 1	3.0	Nil							
1990 Oct 1	3.0	Nil							

### NOTES

- Approximately 30% of stockpiled material is oxidized and may be refractory.

### SOURCES

90-6 C.R.I. (Sept 1990) General Manager's September 90 Month End Report.

## 2.7 DY DEPOSIT

**TABLE 9**  
**DY DEPOSIT: HISTORICAL GEOLOGICAL AND MINING RESERVES**  
**(1989 - 1990)**

**GEOLOGICAL RESERVES (PROBABLE)**

(no mining loss or adjustments)

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD+ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNNS</u>	<u>SOURCE</u>
1989 Jan 1	9.0	21,059,000	12.28	5.54	6.74	83	0.95	2,586,000	89-12
1990 Oct 1	9.0	-----	-----	NO CHANGE	-----	-----	-----	-----	-----

**MINING RESERVES (PROBABLE)**

1989 Jan 1	9.0	11,404,000	13.94	6.47	7.47	95	1.02	1,589,000	89-13
1989 Jul 1	9.0	11,300,000	12.66	5.82	6.84	83	0.94	1,430,000	89-3
1990 Oct 1	9.0	-----	-----	NO CHANGE	-----	-----	-----	-----	-----

### NOTES

- mining reserve includes primary stoping and pillar tonnage.

### SOURCES

89-12 Rollings, R.W. (1982); Reserve Summary, Cyprus Anvil Mining Corporation in-house report  
 89-13 Canadian Mine Development (May 88); Dy Deposit Exploration and Mining Cost Estimate, page 9.  
 89-3 C.R.I. PROSPECTUS (May 90), Based on S89 Alpha 2 mine plan.

## 2.8 SWIM DEPOSIT

**TABLE 10**  
**SWIM DEPOSIT: HISTORICAL GEOLOGICAL AND MINING RESERVES**  
**(1989 - 1990)**

**GEOLOGICAL RESERVES (PROBABLE)**

(no mining loss or adjustments)

<u>PERIOD</u>	<u>CUT OFF</u>	<u>ORE TONNES</u>	<u>LEAD+ZINC</u>	<u>% LEAD</u>	<u>% ZINC</u>	<u>g/mt Ag</u>	<u>g/mt Au</u>	<u>LEAD+ZINC METAL TNS</u>	<u>SOURCE</u>
1989 Jan 1	4.0	5,130,000	7.90	3.50	4.40	47	NA	405,000	89-15
1990 Oct 1	4.0	-----	-----	NO CHANGE	-----	-----	-----	-----	-----

**MINING RESERVES (PROBABLE)**

1989 Jan 1	4.0	3,910,000	7.13	3.22	3.91	42	NA	278,000	89-15
1990 Oct 1	4.0	-----	-----	NO CHANGE	-----	-----	-----	-----	-----

**NOTES**

- Swim reserves not included in S89 Alpha 2 long range mine plan.
- Reserves calculated by the polygonal method.
- March 1988; Preliminary open pit design. (SIV88 Pit)

**SOURCES**

89-15 Vintila, I. (March 88); Preliminary Open Pit Reserve Evaluation For The Swim Deposit, page 5.