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SAMATOSUM DEPOSIT

Kamloops Mining Division
British Columbia

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LIST OF ACCOMPANYING SECTIONS

1 set Vertical Sections with Au, Ag assays;	1:500 scale
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SUMMARY

This report presents ore reserve calculations for the recently discovered Samatosum deposit in the Kamloops area of British Columbia. It outlines the parameters used and the three calculation methods employed. The results obtained range narrowly from 578,302 tonnes of 1.18% Cu, 1.73% Pb, 3.31% Zn, 1028.7 g/tonne Ag and 1.70 g/tonne Au using a section method and the standard frustum of a cone formula, to 630,653 tonnes of 1.28% Cu, 1.76% Pb, 3.51% Zn, 1085.6 g/tonne Ag and 1.81 g/tonne Au using a polygonal/longitudinal section method. The results are considered to be a fair representation of the undiluted in-ground reserves.

INTRODUCTION

Location and Access

The Samatosum Deposit lies on the northwest flank of Samatosum Mountain, some 100km by road north of Kamloops, British Columbia (Figure 1). Access is available from the Yellowhead highway at Louis Creek via the Skwaam Bay and Johnson Creek roads (35km) or at Barriere via the East Lake and South Barriere Lake roads (37km). From the south, access is available from the Tran-Canada highway at Squilax Junction via the Adams Lake, Adams West and Samatosum Mountain roads (60km) (see Figure 2). Louis Creek, Barriere and Squilax are all on main rail links.

History

The deposit lies on a property held under option from Rea Gold Corporation. This property was optioned in late 1983 and initial exploration outlined a small tonnage of high grade gold mineralization associated with arsenopyrite. This proved to be metallurgically refractory and was returned to Rea in September 1985 in return for an increased interest in the rest of the property.

Continued exploration led to the first intersection of a silver rich sulphide zone, now known as the Samatosum Deposit, in July 1986. Since then a total of 70 drillholes have been completed to delineate the zone.

Geology

The property is underlain by mafic to felsic volcanics, sediments, cherts and limestones of Devonian to Carboniferous age, collectively termed the Eagle Bay Formation. Mineralization is closely associated with cherty



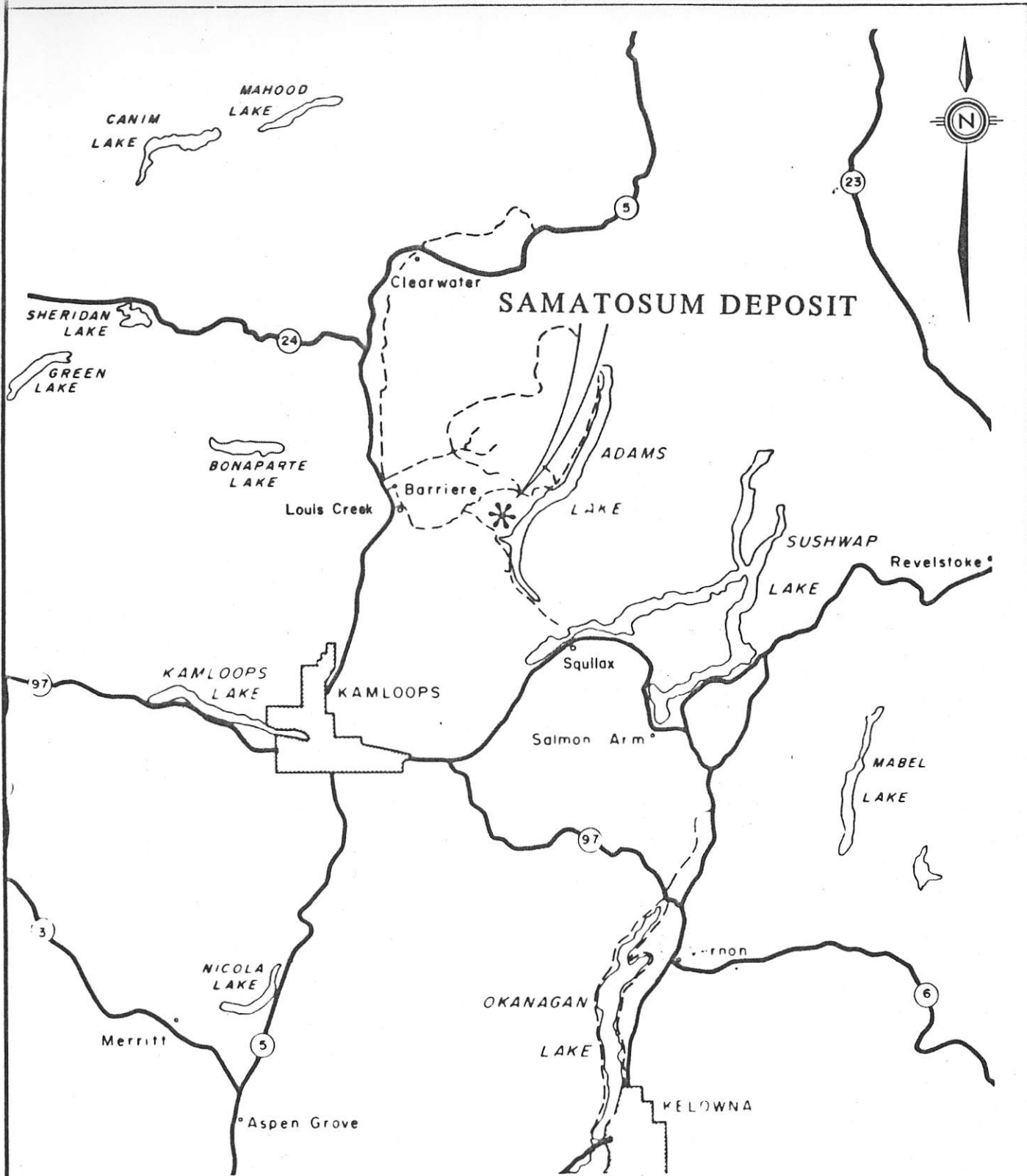
SAMATOSUM DEPOSIT

BRITISH COLUMBIA

**SAMATOSUM DEPOSIT
LOCATION MAP**

FIGURE 1

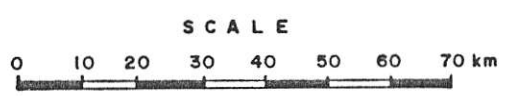




MINNOVA Inc.

SAMATOSUM DEPOSIT

LOCATION MAP



DRAWN BY: IP/sg

DATE: 11/08/87

FIGURE:

2

horizons occurring at the transition from mafic volcanics to clastic sediments.

All rock units in the area have been extensively folded and faulted. In the immediate deposit area they are also strongly pyritic and altered, primarily to sericite.

The scenario currently favoured for ore genesis involves the enrichment and subsequent remobilization of primary syngenetic, dominantly pyritic, sulphides. Consequently ore consists of sphalerite, tetrahedrite, galena and chalcopyrite hosted by both quartz veins and pyritic, sericitic mud.

ORE RESERVE CALCULATIONS

Parameters

The following parameters have been used in this report.

A. Grade

- cut off - 250 g/tonne Ag* over 2m minimum width
- dilution to 2m mining width, where necessary, at actual grade of adjacent samples
- zero allowance for base metal values or for gold.
- one hole (RG-108) cut from 13958 g/tonne Ag to 3248 g/tonne Ag (100 opt)
- analysis done by wet assay (Ag) and fire assay (Au).

B. Specific Gravity

- all specific gravities for holes 89-137 are laboratory measured values. For holes prior to 89 specific gravities have been assigned depending on sulphide content and relating them to similar intersections with measured values.

* Two drillholes (RG84, 110) with grades of less than 250 g/T Ag were included as they are within the overall ore outlines. In addition, individual holes may contain sections of less than 250 g/T Ag where they are surrounded by higher grade assays.

C. Ore Outlines

- Two ore blocks, A and B, separated by a fault are defined. The lower boundary for block A and upper boundary for block B are determined by geological interpretation of the fault separating them.

Other boundaries are determined using the halfway point between adjacent ore and non-ore holes unless geology indicates a more rapid pinching out of sulphides. Where no bounding non-ore hole is available a maximum extrapolation of 20m is allowed.

Calculation Methods

Grade and tonnage has been calculated by two section methods and a longitudinal section method as follows:-

1. SECTION METHODS

Ore outlines are drawn on NW facing (grid W) vertical sections and the areas of the resultant blocks measured by planimeter. Where two or more drillholes define a block on a single section the areas are added and the grades for that section determined by weighted average based on the areas times the specific gravities.

Drillholes, and thus the ore blocks, are assumed to lie precisely on section. The tonnage between adjacent sections is then calculated using

a) the standard frustum of a cone formula:

$$\frac{[(A+B) + \sqrt{AB}] \times \text{s.g.} \times D}{3}$$

where - A and B are areas of adjacent sections,
 - s.g. is the weighted average of the specific gravities of two adjacent sections,
 - D is the distance between the sections

or b)
$$D \frac{[(A \times \text{s.g.}A) + (B \times \text{s.g.}B)]}{2}$$

where - A and B are areas of adjacent sections
 - s.g.A and s.g.B are the weighted averages of the specific gravities for A and B respectively,
 - D is the distance between sections.

Grades are calculated by weighted average.

2. POLYGONAL (LONG. SECTION) METHOD

Points of intercept of the drillholes on an imaginary plane parallel to and coincident with the upper surface of the orebody are plotted with reference to a fixed datum line (the trace of the 1500m elevation line in that plane). The ore block outlines in the plane, with respect to that datum line, are measured from sections and also plotted.

The area of influence of each drillhole is then calculated by drawing polygons around them utilizing the perpendiculars at mid-points between adjacent holes and measuring the area of each polygon using a planimeter. The volume for each block is obtained by multiplying the measured area by the true thickness of the ore intersections.

The tonnage for each polygon is obtained by multiplying the resultant volume by the specific gravity for that hole. Total tonnage for each ore block is the sum of the tonnes for each polygon. Grades are calculated by weighted average based on the tonnage of each block.

Results

Grade and tonnages calculated by the above described methods are summarized in Table 1. More detailed spreadsheets are presented in Appendix 1. No dilution other than that necessary to obtain a 2m minimum mining width has been factored in.

General Comments

The tonnages shown are conservative in as much as they ignore significant intersections in which base metals and/or gold are dominant over silver. A more detailed economic appraisal involving recoveries and netbacks may consider these intersections to be ore.

In addition, the ore outlines shown on the section are interpreted conservatively. For example, the fault separating blocks A and B is likely fold related with excellent potential for thicker and richer ore zones in close proximity to it. Also a number of ore or near ore intercepts which may indicate additional small ore blocks (e.g. in RG-131) or mineable splays off of the main ore body, have been ignored. Finally, although all these calculation methods inherently factor in some allowance for distortion in the dip direction of the sulphides, no allowance has been made for the local variations in strike which occur.

However, the results presented are considered to be a fair representation of the in-ground reserves. There is general consistency between adjacent holes and "fillers" tend to be well distributed among several holes and are usually modified by other values within the specific intersection. Hole RG-108 was an exception to this, hence the decision to cut the silver values for calculation purposes. A glance at the calculation spreadsheets will confirm that no one hole unduly influences the overall picture.

The variability in the calculated grade and tonnages is considered acceptable with a maximum difference in the silver grade of 5% and in the

TABLE 1. Grade and tonnage summary for the methods used.

TOTAL TONNAGE - FRUSTUM FORMULA						
	TONNES	CUX	PBZ	ZNZ	AGg/T	AUg/T
BLOCK A	201930	1.53	2.20	5.01	1146.30	1.88
BLOCK B	376372	0.99	1.47	2.40	965.60	1.60
TOTAL	578302	1.18	1.73	3.31	1028.70	1.70

TOTAL TONNAGE - AVERAGE ADJACENT SECTION METHOD						
	TONNES	CUX	PBZ	ZNZ	AGg/T	AUg/T
BLOCK A	211197	1.67	2.48	5.56	1242.80	2.07
BLOCK B	396485	1.00	1.37	2.34	960.50	1.63
TOTAL	607682	1.23	1.76	3.46	1058.61	1.78

TOTAL TONNAGE POLYGONAL METHOD						
	TONNES	CUX	PBZ	ZNZ	AGg/T	AUg/T
BLOCK A	224580	1.79	2.36	5.49	1321.80	2.22
BLOCK B	406073	1.00	1.42	2.42	955.00	1.59
TOTAL	630653	1.28	1.76	3.51	1085.62	1.81

tonnage of 13% between the frustum of a cone method and the polygonal method.

APPENDIX 1
Spreadsheet Summaries

SAMATOSUM DEPOSIT
block A

Grade and tonnage calculation using a section method.

SECTION	DDH	AREA	WEIGHTED AVERAGE GRADE FOR SECTION												FRUSTUM FORMULA							
			CUZ	PBZ	ZNZ	AGg/T	AUg/T	SG	CUZ	PBZ	ZNZ	AGg/T	AUg/T	SG	TOTAL AREA	SG*AREA	TONNES	TONNES * GRADE				
																		CUZ	PBZ	ZNZ	AGg/T	AUg/T
96+00	-								0	0	0	0	0	0	0	0	7385.625	0	0	0	0	0
96+25	130	292.5	0.71	0.95	2.03	456	1.25	3.03	0.71	0.95	2.03	456	1.25	3.03	292.5	886.275	20428.66	14504.35	19407.23	41470.18	9315471	25535.83
96+50	74	258.3	0.44	1.07	1.95	462.6	1.17	2.9	0.44	1.07	1.95	462.6	1.17	2.9	258.3	749.07	12555.41	5524.384	13434.29	24483.06	5808137	14689.84
96+75	123	101.7	0.29	0.54	1.16	278	0.5	2.85	0.29	0.54	1.16	278	0.5	2.85	101.7	289.845	12732.04	3692.292	6875.302	14769.16	3539507	6366.021
97+25	64	72.5	3.736	2.78	3.128	1081.2	1.5	3.06	3.736	2.78	3.128	1081.2	1.5	3.06	72.5	221.85	6620.285	24763.27	18426.63	20733.27	7166502	9942.428
97+50	109	46.6	0.34	3.82	3.04	386	0.66	2.92	0.259973	1.804956	1.609096	311.327	0.678597	2.903092	107.4	311.7921	11964.33	3110.404	21595.1	19251.76	3724819	8118.968
	126	60.8	0.198	0.2445	0.501	253.5	0.693	2.89								0		0	0	0	0	0
98+00	128	60	0.54	0.8	1.14	395	0.56	2.89	0.54	0.8	1.14	395	0.56	2.89	60	173.4	9518.438	5129.956	7614.75	10851.01	3759783	5330.325
98+50	84	37.5	0.0963	0.003	0.7515	114	0.1725	2.8	0.652097	0.004981	0.972243	574.6621	0.579549	2.775	75	208.125	22528.73	14690.92	112.2377	21903.41	12946412	13056.51
	96	37.5	1.218	0.007	1.197	1043.7	0.994	2.75								0		0	0	0	0	0
98+75	73	68.3	1.84	17.8	3.3	2855	4.46	3.5	2.555949	3.56181	9.102174	1673.71	2.620576	3.239695	567.4	1838.203	39177.98	100136.9	139544.5	356604.8	65572612	102668.9
	97	140.8	4.61	0.83	25.5	1192	1.25	3.66								0		0	0	0	0	0
	98	150	2.63	1.65	1.96	2740	4.944	3.09								0		0	0	0	0	0
	100	152.5	1.34	1.87	3.36	979	1.29	2.97								0		0	0	0	0	0
	65	55.8	0.34	1.51	2.22	397	1.38	3								0		0	0	0	0	0
99+00	74	30	1.79	10.6	0.58	3719	4.7	3.5	2.405901	2.856499	11.27557	2517.061	2.646674	3.201945	409.1	1309.916	27874.05	67062.21	79622.19	314295.9	70160698	73773.55
	107	100.8	3.6575	3.605	32.725	2275	2.51125	3.79								0		0	0	0	0	0
	102	215	2.3	1.2	2.21	3094	3	2.95								0		0	0	0	0	0
	104	63.3	0.57	2.6	4.27	398.4	0.59	2.98								0		0	0	0	0	0
99+25	75	83.75	1.75	8.65	0.82	2734	1.64	3	3.349537	6.544917	9.011517	2273.546	5.705708	3.285786	283.75	932.342	19878.95	66585.3	130106.1	179139.5	45195730	113423.5
	110	93.3	0.499	0.52	1.245	205.5	0.815	3								0		0	0	0	0	0
	108	106.7	6.34	9.43	19.56	3428	11.664	3.76								0		0	0	0	0	0
99+50	83	235.8	0.39	0.69	0.5	393	0.63	2.8	0.39	0.69	0.5	393	0.63	2.8	235.8	660.24	9778.343	3813.554	5747.057	4889.171	3842889	6160.356
99+75	114	59.2	0.22	1.04	2.85	298	0.2	3	0.22	1.04	2.85	298	0.2	3	59.2	177.6	1480	325.6	1539.2	4218	441040	296
																TONNES	201930.8	309349.2	445024.6	1012609	2.31E+08	379362.2
																GRADE		1.531956	2.203846	5.014633	1146.301	1.878673

SAMATOSUM DEPOSIT
block A

Grade and tonnage calculation using a polygonal method.

SECTION	DDH	POLYGON AREA	TRUE THICKNESS	CUZ	PBZ	ZNZ	AGg/T	AUG/T	SG	TONNES	-----TONNES * GRADE-----					
											CUZ	PBZ	ZNZ	AGg/T	AUG/T	
96+25	130	1304	4.6	0.71	0.95	2.03	456	1.25	3.03	18175.15	12904.35	17266.39	36895.55	8287869	22718.94	
96+50	74	1770	4	0.44	1.07	1.95	462.6	1.17	2.9	20532	9034.08	21969.24	40037.4	9498103	24022.44	
96+75	123	1731	2	0.29	0.54	1.16	278	0.5	2.85	9866.7	2861.343	5328.018	11445.37	2742942	4933.35	
97+25	64	1661	2	3.736	2.78	3.128	1081.2	1.5	3.06	10165.32	37977.63	28259.58	31797.12	10990743	15247.98	
97+50	109	984	2	0.34	3.82	3.04	386	0.66	2.92	5746.56	1953.83	21951.85	17469.54	2218172	3792.729	
	126	1826	2	0.198	0.2445	0.501	253.5	0.693	2.89	10554.28	2089.747	2580.521	5287.694	2675509	7314.116	
98+00	128	1844	2	0.54	0.8	1.14	395	0.56	2.89	10658.32	5755.492	8526.656	12150.48	4210036	5968.659	
98+50	84	704	2	0.0963	0.003	0.7515	114	0.1725	2.8	3942.4	379.6531	11.8272	2962.713	449433.6	680.064	
	96	593	2	1.218	0.007	1.197	1043.7	0.994	2.75	3261.5	3972.507	22.8305	3904.015	3404027	3241.931	
98+75	73	294	3.1	1.84	17.8	3.3	2955	4.46	3.5	3189.9	5869.416	56780.22	10526.67	9107164	14226.95	
	97	1058	3.95	4.61	0.83	25.5	1192	1.25	3.66	15295.5	70512.28	12695.26	390035.4	18232243	19119.38	
	98	975	5.4	2.63	1.65	1.96	2740	4.944	3.09	16268.85	42787.07	26843.6	31886.94	44576649	80433.19	
	100	938	5.6	1.34	1.87	3.36	979	1.29	2.97	15600.81	20905.09	29173.52	52418.74	15273198	20125.05	
	65	635	2	0.34	1.51	2.22	397	1.38	3	3810	1295.4	5753.1	8458.2	1512570	5257.8	
99+00	74	444	2	1.79	10.6	0.58	3719	4.7	3.5	3108	5563.32	32944.8	1802.64	11558652	14607.6	
	107	880	2	3.6575	3.605	32.725	2275	2.51125	3.79	6670.4	24396.98	24046.79	218288.8	15175160	16751.04	
	102	964	7.5	2.3	1.2	2.21	3094	3	2.95	21328.5	49055.55	25594.2	47135.98	65990379	63985.5	
	104	781	2.9	0.57	2.6	4.27	398.4	0.59	2.98	6749.402	3847.159	17548.44	29819.94	2688961	3982.147	
99+25	75	456	4.8	1.75	8.65	0.82	2734	1.64	3	6566.4	11491.2	56799.36	5384.448	17952537	10768.89	
	110	775	2.1	0.499	0.52	1.245	205.5	0.815	3	4882.5	2436.367	2538.9	6078.712	1003353	3979.237	
	108	1095	3.1	6.34	9.43	19.56	3428	11.664	3.76	12763.32	80919.44	120358.1	249650.5	43752660	148871.3	
99+50	83	1000	3.6	0.39	0.69	0.5	393	0.63	2.8	10080	3931.2	6955.2	5040	3961440	6350.4	
99+75	114	894	2	0.22	1.04	2.85	298	0.2	3	5364	1180.08	5578.56	15287.4	1598472	1072.8	
										TONNES	224579.8	401119.2	529527	1232764	2.97E+08	497451.5
										GRADE		1.786087	2.357856	5.489203	1321.847	2.215032

SAMATOSUM DEPOSIT
block B

Grade and tonnage calculation using a polygonal method.

SECTION	DDH	POLYGON AREA	TRUE THICKNESS	CUZ	PBZ	ZNZ	AGg/T	AUg/T	SG	TONNES	-----TONNES * GRADE-----					
											CUZ	PBZ	ZNZ	AGg/T	AUg/T	
96+00	75	1078	2	1.21	2.47	3.86	514	0.46	3.4	7330.4	8869.784	18106.08	28295.34	3767825	3371.984	
	133	983	2	0.48	0.53	0.46	513	1.81	2.9	5701.4	2736.672	3021.742	2622.644	2924818	10319.53	
96+25	130	1004	2	1.0845	5.67	0.567	360	0.4995	3.03	6084.24	6598.358	34497.64	3449.764	2190326	3039.077	
	132	1065	4.6	0.43	0.64	1.2	454	0.7	2.85	13962.15	6003.724	8935.776	16754.58	6338816	9773.505	
96+75	122	1650	10.2	1.26	1.28	2.31	1048	2.03	3.05	51331.5	64677.69	65704.32	118575.7	53795412	104202.9	
97+25	112	2151	6	1.19	0.96	2.06	1276	1.65	2.77	35749.62	42542.04	34319.63	73644.21	45616515	58986.87	
97+50	106	1710	2.4	1.44	0.34	1.51	1781	2.55	2.92	11983.68	17256.49	4074.451	18095.35	21342934	30558.38	
	109	1106	2.4	2.38	1.5	4.23	2460	2.55	2.92	7750.848	18447.01	11626.27	32786.08	19067086	19764.66	
98+00	71	1444	8.72	0.63	2.1	2.94	548	1.27	3	37775.04	23798.27	79327.58	111058.6	20700721	47974.3	
	99	1484	6.7	1.73	2.23	3.46	1264	2.14	3.06	30424.96	52635.19	67847.67	105270.3	38457159	65109.43	
98+25	89	704	10.1	1.1	1.33	2.85	1427	2.24	3.02	21473.4	23620.74	28559.63	61199.21	30642553	48100.43	
98+50	90	1259	3.01	2.1	0.93	2.6	2350	3.63	2.91	11027.7	23158.18	10255.76	28672.03	25915111	40030.57	
	136	538	9.4394	0.66	1.59	1.51	631	1.41	2.82	14321.08	9451.912	22770.51	21624.83	9036601	20192.72	
	137	709	11.3	1.53	1.69	3.55	1798	2.78	3.14	25156.73	38489.8	42514.88	89306.41	45231814	69935.73	
98+75	65	891	2	0.62	0.04	0.43	694	1.1	2.75	4900.5	3038.31	196.02	2107.215	3400947	5390.55	
99+00	104	426	2.4	0.3	0.39	0.82	296	2.18	2.94	3005.856	901.7568	1172.283	2464.801	889733.3	6552.766	
	105	1688	10.4	0.43	2.23	3.63	366	0.82	3.03	53192.25	22872.67	118618.7	193087.8	19468365	43617.64	
99+50	111	2131	10.8	0.64	0.39	1.11	599	0.89	2.82	64901.73	41537.11	25311.67	72040.92	38876139	57762.54	
										TONNES	406073.1	406635.7	576860.7	981056	3.88E+08	644683.6
										GRADE		1.001385	1.420583	2.415959	954.6627	1.587604