

007272

MINING RESERVE EVALUATION

DESCRIPTION : Vangorda Remaining Baritic Ore No Cut Off as of Jan 1, 1991

TOP SURFACE GRID RECORD : 20 JAN/91 Month End Surface MERGED - Dec/90 Corrected Surface
 BOTTOM SURFACE GRID RECORD : 21 "W" Ult. Pit MERGED to JAN/91 corrected Surface

BLOCKS USED : COLUMNS 1 TO 100 ROWS 1 TO 128
 CATEGORY : 1 : Baritic Ore Low Grade

CUT-OFF GRADES FOR THIS CATEGORY

LABEL FROM TO
 %Pb+Zn .000 4.000

ROCK-TYPES IN THIS CATEGORY : 60

INCREMENTAL BENCH TOTALS

BENCH	CREST		TOE	VOLUME [bcm x1000]	DENSITY [tn/bcm]	TONNAGE [TONS x1000]	AVERAGE GRADES					ECONOMIC FACTOR [\$Cdn x1000]	
	[m]					[m]	[bcm x1000]	[%Pb+Zn]	[%Pb]
19	1176.00		1173.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
20	1173.00		1170.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
21	1170.00		1167.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
22	1167.00		1164.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
23	1164.00		1161.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
24	1161.00		1158.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
25	1158.00		1155.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
26	1155.00		1152.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
27	1152.00		1149.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
28	1149.00		1146.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
29	1146.00		1143.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
30	1143.00		1140.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
31	1140.00		1137.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
32	1137.00		1134.00	.23	4.159	.95	.000	.000	.000	.00	.000	.000	.00
33	1134.00		1131.00	.43	4.217	1.79	1.297	.556	.741	9.80	.390	.000	.00
34	1131.00		1128.00	.27	3.823	1.05	3.673	1.620	2.053	23.61	.691	.000	.00
35	1128.00		1125.00	.00	.000	.00	.000	.000	.000	.00	.000	.000	.00
36	1125.00		1122.00	.27	4.210	1.15	3.486	1.576	1.909	32.98	1.144	.000	.00
37	1122.00		1119.00	.14	4.159	.57	.000	.000	.000	.00	.000	.000	.00
38	1119.00		1116.00	.27	4.147	1.14	1.726	.958	.768	16.81	.175	.000	.00
39	1116.00		1113.00	.55	4.159	2.28	.000	.000	.000	.00	.000	.000	.00
40	1113.00		1110.00	.55	4.031	2.21	.537	.341	.195	5.54	.179	.000	.00
41	1110.00		1107.00	.69	4.159	2.85	.000	.000	.000	.00	.000	.000	.00
42	1107.00		1104.00	1.23	4.159	5.13	.000	.000	.000	.00	.000	.000	.00
43	1104.00		1101.00	2.19	4.159	9.13	.000	.000	.000	.00	.000	.000	.00
44	1101.00		1098.00	2.74	3.987	10.94	.831	.388	.443	5.69	.126	.000	.00
45	1098.00		1095.00	.96	3.559	3.42	2.806	1.237	1.569	19.94	.479	.000	.00
46	1095.00		1092.00	.82	3.346	2.75	2.862	1.094	1.767	19.26	.565	.000	.00

47	1092.00	1089.00	.96	3.424	3.29	2.559	.983	1.576	17.57	.478	.00
48	1089.00	1086.00	1.19	3.484	4.14	2.630	1.075	1.556	19.74	.500	.00
49	1086.00	1083.00	.37	3.479	1.27	2.947	1.315	1.632	23.33	.487	.00
50	1083.00	1080.00	.82	4.159	3.42	.000	.000	.000	.00	.000	.00
51	1080.00	1077.00	.37	4.159	1.52	.000	.000	.000	.00	.000	.00
52	1077.00	1074.00	.14	3.537	.49	3.327	1.432	1.895	18.32	.492	.00
53	1074.00	1071.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
54	1071.00	1068.00	.14	3.595	.49	3.842	1.822	2.020	24.59	.231	.00
55	1068.00	1065.00	.41	3.695	1.52	2.153	.962	1.191	12.84	.195	.00
56	1065.00	1062.00	.27	3.877	1.06	3.946	2.161	1.785	24.53	.869	.00
57	1062.00	1059.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
58	1059.00	1056.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
59	1056.00	1053.00	.14	3.672	.50	3.968	2.078	1.890	24.77	.271	.00
60	1053.00	1050.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
61	1050.00	1047.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
62	1047.00	1044.00	.23	4.159	.95	.000	.000	.000	.00	.000	.00
63	1044.00	1041.00	.14	4.159	.57	.000	.000	.000	.00	.000	.00
64	1041.00	1038.00	.05	4.159	.19	.000	.000	.000	.00	.000	.00
65	1038.00	1035.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
66	1035.00	1032.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
67	1032.00	1029.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
68	1029.00	1026.00	.00	.000	.00	.000	.000	.000	.00	.000	.00

TOTAL FOR ALL BENCHES			16.56	3.912	64.79	1.172	.519	.654	8.39	.214	.00
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PC-MINE VERSION 1.20
 SERIAL NO : 20000
 11/ 2/1991

GEMCOM SERVICES INC.
 Vangorda Deposit - V9009 Interpretation

SOFTWARE BY GEMCOM SERVICES INC
 MODULE 4.12
 PAGE 2

MINING RESERVE EVALUATION

DESCRIPTION : Vangorda Remaining Baritic Ore No Cut Off as of Jan 1, 1991

TOP SURFACE GRID RECORD : 20 JAN/91 Month End Surface MERGED - Dec/90 Corrected Surface
 BOTTOM SURFACE GRID RECORD : 21 "W" Ult. Pit MERGED to JAN/91 corrected Surface

BLOCKS USED : COLUMNS 1 TO 100 ROWS 1 TO 128
 CATEGORY : 2 : Medium Grade Baritic Ore

CUT-OFF GRADES FOR THIS CATEGORY

LABEL FROM TO
 %Pb+Zn 4.000 5.000

ROCK-TYPES IN THIS CATEGORY : 60

INCREMENTAL BENCH TOTALS

BENCH	CREST		TOE	VOLUME [bcm x1000]	DENSITY [tn/bcm]	TONNAGE [TONS x1000]	AVERAGE GRADES					ECONOMIC FACTOR [#Cdn x1000]	
	[m]					[m]	[%Pb+Zn]	[%Pb]		[%Zn
19	1176.00		1173.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
20	1173.00		1170.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
21	1170.00		1167.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
22	1167.00		1164.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
23	1164.00		1161.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
24	1161.00		1158.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
25	1158.00		1155.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
26	1155.00		1152.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
27	1152.00		1149.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
28	1149.00		1146.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
29	1146.00		1143.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
30	1143.00		1140.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
31	1140.00		1137.00	.00	.000	.00	.000	.000	.000	.000	.00	.000	.00
32	1137.00		1134.00	.20	3.887	.78	4.359	1.754	2.605	26.59	.528	.00	.00
33	1134.00		1131.00	.69	3.937	2.70	4.225	1.847	2.377	26.97	.712	.00	.00
34	1131.00		1128.00	1.10	3.946	4.33	4.493	2.008	2.485	27.17	.642	.00	.00
35	1128.00		1125.00	.82	3.842	3.16	4.226	1.895	2.331	29.74	.616	.00	.00
36	1125.00		1122.00	.41	4.192	1.72	4.646	2.068	2.579	36.94	.838	.00	.00
37	1122.00		1119.00	.27	3.465	.95	4.683	1.780	2.902	38.12	.548	.00	.00
38	1119.00		1116.00	.41	3.949	1.62	4.964	2.095	2.868	24.75	.638	.00	.00
39	1116.00		1113.00	.14	4.089	.56	4.578	2.409	2.169	25.17	.461	.00	.00
40	1113.00		1110.00	.14	3.817	.52	4.855	2.213	2.642	27.99	.422	.00	.00
41	1110.00		1107.00	.69	3.839	2.63	4.599	2.126	2.473	26.79	.402	.00	.00
42	1107.00		1104.00	.64	4.056	2.60	4.828	2.168	2.660	28.72	.481	.00	.00
43	1104.00		1101.00	.55	3.568	1.96	4.491	2.175	2.316	29.35	.579	.00	.00
44	1101.00		1098.00	.69	3.523	2.42	4.524	2.247	2.277	30.75	.642	.00	.00
45	1098.00		1095.00	.41	3.461	1.42	4.514	2.235	2.279	30.61	.659	.00	.00
46	1095.00		1092.00	.27	3.606	.99	4.188	2.008	2.180	29.69	.512	.00	.00

47	1092.00	1089.00	.23	4.147	.95	4.735	2.385	2.350	35.63	.573	.00
48	1089.00	1086.00	.64	3.911	2.50	4.518	2.205	2.313	34.33	.562	.00
49	1086.00	1083.00	.18	3.833	.70	4.640	2.248	2.391	35.55	.610	.00
50	1083.00	1080.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
51	1080.00	1077.00	.14	3.832	.53	4.496	2.058	2.438	19.69	.531	.00
52	1077.00	1074.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
53	1074.00	1071.00	.27	3.864	1.06	4.498	2.463	2.036	26.45	1.382	.00
54	1071.00	1068.00	.14	3.993	.55	4.625	2.140	2.485	26.97	.722	.00
55	1068.00	1065.00	.14	4.186	.57	4.957	2.601	2.356	28.14	1.626	.00
56	1065.00	1062.00	.69	4.059	2.78	4.641	2.647	1.994	25.31	1.356	.00
57	1062.00	1059.00	.27	3.981	1.09	4.652	2.759	1.893	25.60	.886	.00
58	1059.00	1056.00	1.37	3.879	5.32	4.673	2.579	2.094	28.25	.645	.00
59	1056.00	1053.00	1.78	3.722	6.64	4.550	2.257	2.293	28.73	.496	.00
60	1053.00	1050.00	.82	3.669	3.02	4.680	2.252	2.428	29.54	.690	.00
61	1050.00	1047.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
62	1047.00	1044.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
63	1044.00	1041.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
64	1041.00	1038.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
65	1038.00	1035.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
66	1035.00	1032.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
67	1032.00	1029.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
68	1029.00	1026.00	.00	.000	.00	.000	.000	.000	.00	.000	.00

TOTAL FOR ALL BENCHES			14.10	3.836	54.09	4.566	2.217	2.349	28.97	.665	.00
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MINING RESERVE EVALUATION

DESCRIPTION : Vangorda Remaining Baritic Ore No Cut Off as of Jan 1, 1991

TOP SURFACE GRID RECORD : 20 JAN/91 Month End Surface MERGED - Dec/90 Corrected Surface
 BOTTOM SURFACE GRID RECORD : 21 "W" Ult. Pit MERGED to JAN/91 corrected Surface

BLOCKS USED : COLUMNS 1 TO 100 ROWS 1 TO 128
 CATEGORY : 3 : High Grade Baritic Reserves

CUT-OFF GRADES FOR THIS CATEGORY

LABEL FROM TO
 %Pb+Zn 5.000 100.000

ROCK-TYPES IN THIS CATEGORY : 60

INCREMENTAL BENCH TOTALS

BENCH	CREST		TOE		VOLUME [bcm x1000]	DENSITY [tn/bcm]	TONNAGE [TONS x1000]	A V E R A G E G R A D E S				ECONOMIC FACTOR [\$Cdn x1000]	
	[m]	[m]				[%Pb+Zn]	[%Pb]	[%Zn]
19	1176.00	1173.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
20	1173.00	1170.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
21	1170.00	1167.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
22	1167.00	1164.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
23	1164.00	1161.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
24	1161.00	1158.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
25	1158.00	1155.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
26	1155.00	1152.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
27	1152.00	1149.00	.00	.000	.00	.000	.00	.000	.000	.000	.00	.000	.00
28	1149.00	1146.00	.41	4.421	1.80	12.287	6.070	6.217	65.84	1.373	.00	.00	.00
29	1146.00	1143.00	2.04	4.298	8.76	10.726	5.511	5.215	64.97	1.202	.00	.00	.00
30	1143.00	1140.00	5.79	4.119	23.86	11.135	5.204	5.932	66.12	1.112	.00	.00	.00
31	1140.00	1137.00	5.24	3.924	20.58	10.920	4.979	5.941	62.83	.919	.00	.00	.00
32	1137.00	1134.00	12.79	3.969	50.76	10.554	4.809	5.746	56.04	.951	.00	.00	.00
33	1134.00	1131.00	40.40	4.004	161.77	9.556	4.281	5.275	50.63	.901	.00	.00	.00
34	1131.00	1128.00	36.51	4.027	147.00	9.980	4.433	5.547	51.44	.862	.00	.00	.00
35	1128.00	1125.00	36.96	4.102	151.57	11.070	5.061	6.010	56.52	.804	.00	.00	.00
36	1125.00	1122.00	36.07	4.091	147.56	10.637	4.813	5.624	55.71	.863	.00	.00	.00
37	1122.00	1119.00	35.39	4.088	144.66	10.125	4.538	5.587	56.33	.809	.00	.00	.00
38	1119.00	1116.00	33.33	4.118	137.24	10.288	4.497	5.791	58.12	.752	.00	.00	.00
39	1116.00	1113.00	38.59	4.113	158.72	10.585	4.601	5.984	60.30	.720	.00	.00	.00
40	1113.00	1110.00	35.80	4.124	147.63	10.626	4.679	5.946	59.28	.713	.00	.00	.00
41	1110.00	1107.00	38.27	4.114	157.44	10.476	4.617	5.859	58.96	.721	.00	.00	.00
42	1107.00	1104.00	38.45	4.114	158.17	10.248	4.537	5.711	56.39	.771	.00	.00	.00
43	1104.00	1101.00	33.60	4.097	137.68	9.970	4.429	5.541	57.83	.737	.00	.00	.00
44	1101.00	1098.00	33.88	4.074	138.03	9.847	4.437	5.410	57.73	.747	.00	.00	.00
45	1098.00	1095.00	35.52	4.069	144.55	9.966	4.478	5.488	58.30	.787	.00	.00	.00
46	1095.00	1092.00	42.93	4.120	176.88	10.133	4.529	5.604	58.27	.858	.00	.00	.00

47	1092.00	1089.00	35.66	4.135	147.45	9.963	4.463	5.500	56.09	.866	.00
48	1089.00	1086.00	33.65	4.097	137.87	9.926	4.518	5.408	53.73	.818	.00
49	1086.00	1083.00	36.62	4.091	149.81	10.293	4.647	5.645	54.82	.822	.00
50	1083.00	1080.00	36.35	4.088	148.58	10.164	4.593	5.571	53.92	.797	.00
51	1080.00	1077.00	36.07	4.132	149.06	10.187	4.596	5.591	54.78	.858	.00
52	1077.00	1074.00	41.47	4.160	172.50	10.109	4.524	5.586	56.52	.840	.00
53	1074.00	1071.00	40.33	4.154	167.50	9.856	4.439	5.417	55.89	.843	.00
54	1071.00	1068.00	41.97	4.135	173.57	9.530	4.325	5.205	56.00	.809	.00
55	1068.00	1065.00	37.54	4.106	154.14	9.373	4.251	5.122	54.62	.789	.00
56	1065.00	1062.00	34.02	4.089	139.09	9.349	4.200	5.148	53.77	.787	.00
57	1062.00	1059.00	28.80	4.097	118.01	9.190	4.130	5.060	52.93	.816	.00
58	1059.00	1056.00	20.44	4.144	84.69	9.255	4.145	5.111	54.94	.883	.00
59	1056.00	1053.00	9.19	4.204	38.64	8.810	4.005	4.805	51.03	1.371	.00
60	1053.00	1050.00	10.42	4.179	43.56	8.853	3.972	4.881	52.38	1.404	.00
61	1050.00	1047.00	10.24	4.215	43.16	8.541	3.854	4.687	50.11	1.460	.00
62	1047.00	1044.00	8.05	4.243	34.14	8.562	3.851	4.711	49.53	1.458	.00
63	1044.00	1041.00	7.41	4.244	31.43	8.750	3.901	4.849	49.28	1.419	.00
64	1041.00	1038.00	6.17	4.206	25.96	8.220	3.669	4.551	49.04	1.436	.00
65	1038.00	1035.00	4.02	4.149	16.69	8.173	3.617	4.556	51.28	1.484	.00
66	1035.00	1032.00	2.51	4.111	10.34	7.944	3.451	4.493	53.08	1.483	.00
67	1032.00	1029.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
68	1029.00	1026.00	.00	.000	.00	.000	.000	.000	.00	.000	.00

TOTAL FOR ALL BENCHES	1022.90	4.107	4200.87	9.981	4.475	5.506	55.77	.848	.00
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