

MINING RESERVE EVALUATION

DESCRIPTION : Vangorda Remaining 20 & 80 Rock Type 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 : Low Grade 20 & 80

CUT-OFF GRADES FOR THIS CATEGORY

LABEL FROM TO
 %Pb+Zn .000 4.000

ROCK-TYPES IN THIS CATEGORY : 20 80

INCREMENTAL BENCH TOTALS

BENCH	CREST [m]	TOE [m]	VOLUME [bcm x1000]	DENSITY [tn/bcm]	TONNAGE [TONS x1000]	AVERAGE GRADES					ECONOMIC FACTOR [\$Cdn x1000]
						[%Pb+Zn]	[%Pb]	[%Zn]	[Ag g/t]	[Au g/t]	
19	1176.00	1173.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
20	1173.00	1170.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
21	1170.00	1167.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
22	1167.00	1164.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
23	1164.00	1161.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
24	1161.00	1158.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
25	1158.00	1155.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
26	1155.00	1152.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
27	1152.00	1149.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
28	1149.00	1146.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
29	1146.00	1143.00	.53	2.710	1.45	.372	.308	.064	10.73	.000	.00
30	1143.00	1140.00	1.15	2.822	3.25	.122	.101	.021	3.53	.000	.00
31	1140.00	1137.00	.14	2.880	.40	.000	.000	.000	.00	.000	.00
32	1137.00	1134.00	.27	2.913	.79	.676	.359	.317	4.07	.083	.00
33	1134.00	1131.00	2.10	2.943	6.18	1.568	.552	1.016	8.59	.182	.00
34	1131.00	1128.00	2.88	2.927	8.43	1.181	.454	.726	7.47	.234	.00
35	1128.00	1125.00	7.50	2.935	22.01	1.501	.465	1.036	8.87	.309	.00
36	1125.00	1122.00	8.32	2.868	23.87	2.570	.912	1.658	14.87	.319	.00
37	1122.00	1119.00	8.92	2.903	25.89	2.585	.929	1.656	15.74	.346	.00
38	1119.00	1116.00	8.23	2.863	23.56	2.240	.790	1.450	13.82	.328	.00
39	1116.00	1113.00	5.62	2.825	15.88	2.711	1.056	1.656	16.67	.382	.00
40	1113.00	1110.00	13.44	2.798	37.61	2.109	.906	1.203	12.01	.298	.00
41	1110.00	1107.00	14.68	2.818	41.35	2.124	.873	1.250	11.98	.300	.00
42	1107.00	1104.00	16.46	2.828	46.54	2.038	.827	1.211	12.07	.315	.00
43	1104.00	1101.00	14.77	2.817	41.59	2.500	.989	1.511	15.42	.398	.00
44	1101.00	1098.00	10.56	2.798	29.55	2.266	.907	1.359	15.06	.453	.00
45	1098.00	1095.00	10.52	2.782	29.25	2.476	.952	1.524	15.94	.461	.00
46	1095.00	1092.00	11.38	2.777	31.62	2.611	1.036	1.574	15.79	.453	.00

47	1092.00	1089.00	8.64	2.751	23.77	2.879	1.149	1.730	16.67	.442	.00
48	1089.00	1086.00	6.63	2.719	18.03	2.859	1.086	1.772	16.52	.412	.00
49	1086.00	1083.00	5.62	2.693	15.15	2.731	1.015	1.716	15.48	.407	.00
50	1083.00	1080.00	5.21	2.677	13.95	2.522	.939	1.583	14.91	.411	.00
51	1080.00	1077.00	1.65	2.681	4.41	2.365	.818	1.547	15.37	.430	.00
52	1077.00	1074.00	.55	2.866	1.57	3.587	1.257	2.331	16.94	.304	.00
53	1074.00	1071.00	1.83	2.991	5.47	3.678	1.433	2.245	18.53	.491	.00
54	1071.00	1068.00	1.46	3.233	4.73	3.376	1.464	1.912	17.40	.694	.00
55	1068.00	1065.00	.87	3.435	2.98	3.552	1.443	2.109	17.05	.952	.00
56	1065.00	1062.00	.91	3.386	3.10	2.544	1.080	1.464	11.66	.776	.00
57	1062.00	1059.00	.96	3.544	3.40	3.258	1.447	1.811	14.93	.937	.00
58	1059.00	1056.00	.14	3.596	.49	3.359	1.240	2.119	14.19	1.013	.00
59	1056.00	1053.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
60	1053.00	1050.00	.14	3.960	.54	.000	.000	.000	.00	.000	.00
61	1050.00	1047.00	.14	3.279	.45	3.990	1.786	2.204	14.97	.715	.00
62	1047.00	1044.00	.09	3.248	.30	2.515	1.227	1.288	11.73	.631	.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	172.31	2.830	487.55	2.356	.917	1.439	14.00	.377	.00
-----------------------	--------	-------	--------	-------	------	-------	-------	------	-----

MINING RESERVE EVALUATION

DESCRIPTION : Vangorda Remaining 20 & 80 Rock Type 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 20 & 40

CUT-OFF GRADES FOR THIS CATEGORY

LABEL FROM TO
 %Pb+Zn 4.000 5.000

ROCK-TYPES IN THIS CATEGORY : 20 80

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]	[Ag g/t]	[Au g/t]		
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	.14	3.469	.48	4.852	2.881	1.971	22.86	.411	.00	.00
32	1137.00	1134.00	.43	3.470	1.49	4.807	2.783	2.024	23.41	.419	.00	.00
33	1134.00	1131.00	.40	2.923	1.18	4.351	1.817	2.534	22.29	.369	.00	.00
34	1131.00	1128.00	.96	3.031	2.91	4.637	1.944	2.692	24.99	.584	.00	.00
35	1128.00	1125.00	2.74	2.870	7.87	4.492	1.607	2.884	23.53	.449	.00	.00
36	1125.00	1122.00	3.43	2.855	9.79	4.463	1.661	2.802	23.09	.439	.00	.00
37	1122.00	1119.00	3.29	2.835	9.33	4.487	1.628	2.859	22.06	.443	.00	.00
38	1119.00	1116.00	3.57	2.850	10.16	4.568	1.679	2.889	23.06	.443	.00	.00
39	1116.00	1113.00	5.35	2.854	15.27	4.538	1.695	2.843	24.08	.433	.00	.00
40	1113.00	1110.00	9.05	2.819	25.52	4.531	1.806	2.725	23.89	.392	.00	.00
41	1110.00	1107.00	9.10	2.862	26.04	4.547	1.758	2.789	26.00	.397	.00	.00
42	1107.00	1104.00	10.15	2.864	29.07	4.467	1.720	2.747	26.97	.409	.00	.00
43	1104.00	1101.00	10.65	2.824	30.09	4.488	1.766	2.721	25.64	.422	.00	.00
44	1101.00	1098.00	8.37	2.789	23.33	4.496	1.786	2.710	24.07	.443	.00	.00
45	1098.00	1095.00	6.86	2.763	18.95	4.492	1.774	2.718	22.68	.456	.00	.00
46	1095.00	1092.00	4.11	2.797	11.51	4.458	1.802	2.657	22.99	.521	.00	.00

47	1092.00	1089.00	3.70	2.707	10.03	4.541	1.856	2.685	24.07	.513	.00
48	1089.00	1086.00	4.53	2.810	12.72	4.456	1.701	2.755	23.36	.433	.00
49	1086.00	1083.00	3.57	2.862	10.21	4.520	1.700	2.820	23.00	.453	.00
50	1083.00	1080.00	2.79	2.839	7.92	4.539	1.606	2.933	23.25	.422	.00
51	1080.00	1077.00	1.78	2.769	4.94	4.631	1.679	2.951	25.34	.411	.00
52	1077.00	1074.00	2.19	2.821	6.19	4.476	1.612	2.864	23.44	.441	.00
53	1074.00	1071.00	2.19	3.055	6.71	4.485	1.794	2.691	23.27	.591	.00
54	1071.00	1068.00	.82	3.146	2.59	4.529	2.001	2.528	24.44	.735	.00
55	1068.00	1065.00	.27	3.350	.92	4.359	1.821	2.537	22.37	.947	.00
56	1065.00	1062.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
57	1062.00	1059.00	.23	3.522	.81	4.441	2.864	1.577	23.37	.873	.00
58	1059.00	1056.00	.00	.000	.00	.000	.000	.000	.00	.000	.00
59	1056.00	1053.00	.14	3.510	.48	4.756	1.732	3.024	19.71	.600	.00
60	1053.00	1050.00	.14	3.508	.48	4.635	1.685	2.950	19.25	.609	.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			100.96	2.842	286.96	4.508	1.752	2.756	24.28	.444	.00
-----------------------	--	--	--------	-------	--------	-------	-------	-------	-------	------	-----

MINING RESERVE EVALUATION

DESCRIPTION : Vangorda Remaining 20 & 80 Rock Type 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 Material 20 & 80

CUT-OFF GRADES FOR THIS CATEGORY

LABEL FROM TO
 %Pb+Zn 5.000 100.000

ROCK-TYPES IN THIS CATEGORY : 20 80

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]	[Ag g/t]	[Au g/t]	
19	1176.00	1173.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
20	1173.00	1170.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
21	1170.00	1167.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
22	1167.00	1164.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
23	1164.00	1161.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
24	1161.00	1158.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
25	1158.00	1155.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
26	1155.00	1152.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
27	1152.00	1149.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
28	1149.00	1146.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
29	1146.00	1143.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
30	1143.00	1140.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
31	1140.00	1137.00	.00	.000	.00	.000	.000	.000	.000	.000	.00
32	1137.00	1134.00	1.09	3.200	3.48	9.126	3.241	5.885	43.34	.721	.00
33	1134.00	1131.00	11.11	3.192	35.48	8.867	3.182	5.685	42.43	.698	.00
34	1131.00	1128.00	10.47	3.120	32.66	8.261	2.977	5.284	39.28	.680	.00
35	1128.00	1125.00	8.82	3.067	27.06	7.009	2.637	4.372	36.57	.611	.00
36	1125.00	1122.00	7.09	3.042	21.55	6.516	2.483	4.033	33.94	.610	.00
37	1122.00	1119.00	7.59	2.961	22.48	6.268	2.359	3.910	32.47	.530	.00
38	1119.00	1116.00	7.96	2.995	23.82	6.582	2.457	4.125	33.73	.511	.00
39	1116.00	1113.00	13.12	2.929	38.43	6.523	2.587	3.937	35.00	.516	.00
40	1113.00	1110.00	17.92	2.902	52.01	6.335	2.628	3.707	36.73	.553	.00
41	1110.00	1107.00	24.87	2.846	70.79	6.343	2.602	3.741	36.73	.545	.00
42	1107.00	1104.00	26.33	2.832	74.57	6.414	2.512	3.902	35.00	.543	.00
43	1104.00	1101.00	24.05	2.828	68.00	6.614	2.579	4.035	35.61	.578	.00
44	1101.00	1098.00	20.03	2.819	56.44	6.756	2.684	4.072	35.42	.614	.00
45	1098.00	1095.00	15.96	2.966	47.32	6.854	2.964	3.889	35.38	.649	.00
46	1095.00	1092.00	9.24	3.108	28.70	7.519	3.229	4.290	37.63	.604	.00

47	1092.00	1089.00	7.77	3.034	23.58	7.023	2.812	4.210	35.54	.535	.00
48	1089.00	1086.00	6.04	3.003	18.12	6.853	2.725	4.128	34.38	.577	.00
49	1086.00	1083.00	1.23	3.049	3.76	6.055	2.261	3.794	27.67	.525	.00
50	1083.00	1080.00	4.39	2.976	13.06	6.622	2.609	4.013	35.68	.531	.00
51	1080.00	1077.00	4.66	3.024	14.10	6.704	2.566	4.139	34.08	.461	.00
52	1077.00	1074.00	1.78	3.186	5.68	7.443	3.075	4.368	40.31	.767	.00
53	1074.00	1071.00	2.47	3.308	8.17	7.506	2.885	4.621	38.11	.615	.00
54	1071.00	1068.00	2.15	3.554	7.64	7.911	3.595	4.316	42.91	.926	.00
55	1068.00	1065.00	.55	3.823	2.10	7.742	3.484	4.258	41.85	1.409	.00
56	1065.00	1062.00	1.46	3.822	5.59	7.716	3.398	4.317	40.38	1.087	.00
57	1062.00	1059.00	.59	3.644	2.17	7.686	3.271	4.415	38.46	.855	.00
58	1059.00	1056.00	1.19	3.599	4.28	7.370	2.725	4.645	30.67	.786	.00
59	1056.00	1053.00	.96	3.629	3.48	7.511	2.635	4.876	29.97	.767	.00
60	1053.00	1050.00	.82	3.496	2.88	7.773	2.606	5.167	27.18	.599	.00
61	1050.00	1047.00	.69	3.489	2.39	8.040	2.720	5.320	28.06	.622	.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			242.40	2.969	719.81	6.885	2.718	4.167	36.11	.594	.00
-----------------------	--	--	--------	-------	--------	-------	-------	-------	-------	------	-----
