

mixed with 20% sodium nitrate and 10% sodium carbonate and roasted in a reverberatory furnace. This converted the arsenic to sodium arsenic which was leached out with hot water. The dried residue was sold to refineries in Germany as "Crude Cobalt Material", the sampling and weighing being done by Ledoux and Co. of New York City.

The composition of a few lots shipped in 1912 is shown in Table No. 5.

Power for operating the smelter was supplied from the company's power plant at High Falls, Ontario, 14 miles distant from Copper Cliff. 200-300 horse power was required and 60 to 100 men were employed, working in 12 hour shifts.

A complete statement of the ore treated and the products of the cobalt plant while in operation is given in Table No. 6.

TABLE I.

Lot	Dry Weight	Co. %	Assay Ni. %	As. %	Ag. oz.	METALLIC CONTENT			
						lbs. Cobalt	lbs. Nickel	lbs. Arsenic	Ounces Silver
Buffalo Ore.									
399	48275	7.47	3.65	32.24	2135.38	3606	1762	15564	51542.73
403	45602	8.52	3.87	33.24	2169.77	3885	1765	15158	49472.93
408	45789	7.57	3.02	31.31	1823.34	3466	1383	14337	41744.46
416	44305	7.11	2.61	29.33	1680.11	3150	1156	13004	37218.64
Nipissing Ore.									
407	63795	9.22	5.49	38.02	3535.99	5882	3502	24255	112789.24
422	64652	9.01	6.40	38.72	3022.60	5825	4138	25033	97708.37
426	62304	8.03	5.18	32.90	3852.70	5003	3227	20498	120193.31
437	64703	8.85	5.49	40.82	2209.53	5726	3552	26412	71481.61
La Rose Ore.									
394	61839	8.79	7.94	37.33	1934.32	5436	4910	23084	59808.21
409	73040	9.04	6.69	39.65	1017.91	6603	4886	28960	37174.07
410	64967	9.16	8.16	40.30	1167.36	5951	5301	26182	37919.94
411	64680	9.30	6.69	39.12	1177.12	6015	4327	25303	38068.06
Kerr Lake Ore.									
400	61379	10.74	3.85	44.56	3639.12	6592	2363	27350	111682.77
406	61487	6.87	3.08	24.51	4565.81	4224	1894	15070	140368.98
420	61560	10.65	3.56	40.00	4121.77	6556	2191	24624	126868.08
427	60876	7.33	2.30	29.77	3794.77	4440	1393	18033	114935.99
Trethewey Ore.									
431	60878	10.00	1.77	48.58	1296.79	6088	1078	29575	39422.99
476	56387	10.26	2.30	41.54	3348.35	5785	1297	23423	94431.71
494	59843	9.67	2.31	49.75	1904.84	5787	1382	29772	56995.67
522	47520	9.86	1.91	46.60	1375.05	4685	908	22144	32671.19
Temiskaming Ore.									
567	59262	5.89	1.34	21.80	3659.93	3491	794	12919	108358.49
576	59030	4.41	1.07	22.30	2742.82	2603	632	13164	80954.33
595	57987	3.70	2.41	15.00	3838.55	2146	1397	8698	111293.00
608	52384	3.47	2.43	14.30	3371.76	1818	1273	7491	88313.14
Crown Reserve Ore—High Grade									
395	48624	6.42	4.04	21.16	5255.28	3122	1964	10287	127766.37
421	59776	8.40	5.45	28.73	4761.74	5021	3258	17174	142318.89
435	59666	8.75	5.61	32.42	4136.13	5221	3347	19344	123397.30
452	59047	5.84	4.86	19.29	4225.71	3448	2870	11390	124757.75
Crown Reserve Ore—Low Grade.									
396	55347	0.36	0.46	1.15	250.10	199	255	636	6921.14
401	58621	0.32	0.32	1.15	144.15	188	188	674	4225.11
405	59769	0.39	0.50	1.05	141.75	233	299	628	4236.13
415	58754	0.30	0.33	0.75	121.00	176	194	441	3554.62