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A quantitative analysis of alteration in the Carbon Leader Reef in the West Wits Line Goldfield: an application of Shortwave Infrared Reflectance Spectroscopy

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Table A5.1: Spectral mean depths of the hangingwall units of the tombstone samples (exclusive of Sample 4 that was not spectrally scanned, and Sample 16 that had no hangingwall spectral data); [a] Pyrophyllite; [b] Sericite; [c] Chlorite; [d] Chloritoid.

Tombstone Samples - Hangingwall							
Sample ID		Unit	Depth Mean				Gold grade
			Prl [a]	*Ser* [b]	*Chl* [c]	*Ctd* [d]	*g/t*
8	120-55 W4	Hangingwall	22.426	0.132	0.014	6.403	0.2
17	120-55 W5	Hangingwall	20.425	1.686	1.365	5.354	0.1
18	120-55 W7	Hangingwall	0.325	4.184	9.505	6.205	1.1
19	120-70 W1	Hangingwall	0.088	3.485	3.160	1.702	8.0
9	120-77 S1	Hangingwall	16.304	3.017	0.734	3.154	3.9
7	114-78 E1	Hangingwall	26.167	1.838	7.976	4.175	0.6
5	112-83 W3	Hangingwall	28.430	0.096	0.035	6.734	0.6
6	112-83 W4	Hangingwall	21.893	0.015	5.811	1.622	0.3
15	112-84 Rse	Hangingwall	26.367	0.142	11.752	3.076	1.2
14	109-87 E2	Hangingwall	22.828	0.161	1.119	2.681	2.5
3	104-88 W6	Hangingwall	21.219	0.435	0.083	1.466	0.1
12	104-88 E1A	Hangingwall	26.119	0.052	0.103	0.533	0.4
13	104-88 W7	Hangingwall	25.495	0.017	0.236	1.286	0.8
10	96-94 E2	Hangingwall	35.468	0.005	0.086	1.748	2.7
1	94-94 E1	Hangingwall	32.547	0.114	0.758	2.992	0.7
11	100-92 Wze	Hangingwall	30.133	0.022	1.710	4.817	0.6
2	99-94 E2	Hangingwall	28.454	0.000	1.038	1.954	0.7
Average			*22.629*	*0.906*	*2.676*	*3.288*	*1.4*
Maximum			*35.468*	*4.184*	*11.752*	*6.734*	*8.0*
Minimum			*0.088*	*0*	*0.014*	*0.533*	*0.1*

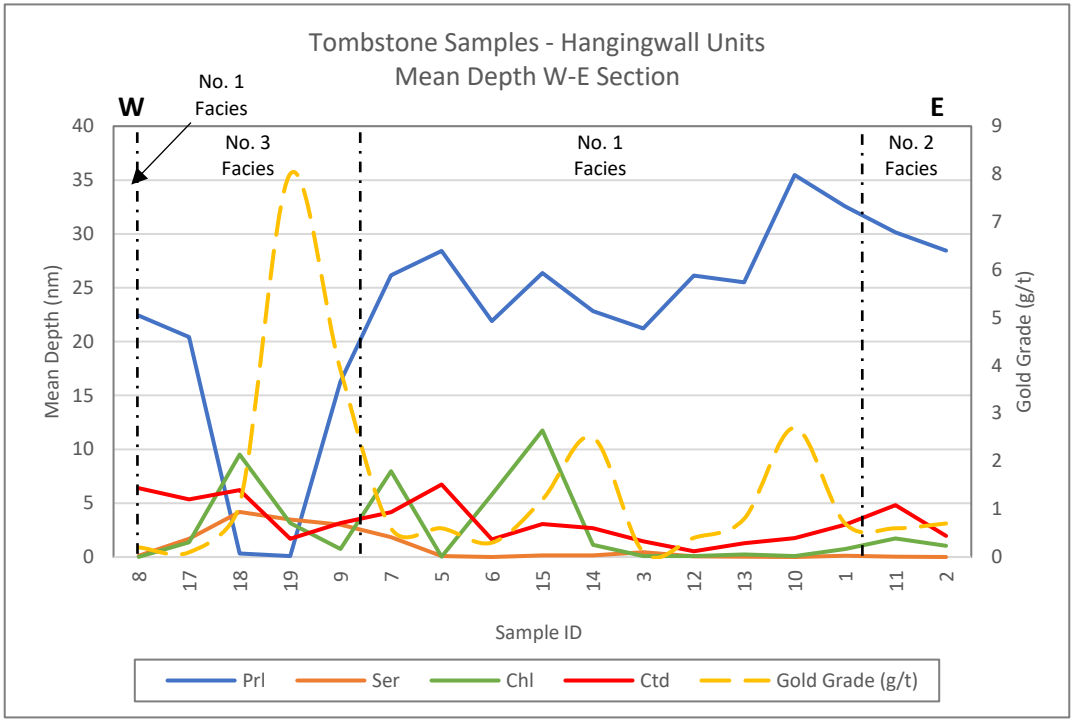


Chart A5.1: *Spectral mean depths in west-east section across TauTona Mine plotted against gold grade (g/t).*

Table A5.2: Spectral mean depths of the Carbon Leader Reef units of the tombstone samples (exclusive of Sample 4 that was not spectrally scanned, as well as the Internal Quartzite unit for Sample 15). [a] Pyrophyllite; [b] Pale Pebbly Quartzite (PPQ) for Sample 2; [c] No. 2B Facies for Sample 2; [d] Sericite; [e] Chlorite; [f] Chloritoid

Tombstone Samples - Carbon Leader Reef							
Sample ID		Unit	Depth Mean				Gold grade
			Prl [a]	*Ser* [d]	*Chl* [e]	*Ctd* [f]	*g/t*
8	120-55 W4	No. 3 Facies	13.058	4.993	0.695	4.366	311.0
17	120-55 W5	No. 3 Facies	11.690	13.621	0.414	4.429	15.4
18	120-55 W7	No. 3 Facies	0.632	3.589	4.113	1.354	173.0
16	120-55 NE7	No. 3 Facies	0.236	2.672	8.691	1.709	36.0
19	120-70 W1	No. 3 Facies	0.159	3.951	2.371	3.734	141.0
9	120-77 S1	No. 3 Facies	5.536	4.940	1.752	2.341	80.7
7	114-78 E1	No. 1 Facies	6.140	5.028	1.272	3.452	21.1
5	112-83 W3	No. 1 Facies	8.534	2.635	1.461	2.920	73.6
6	112-83 W4	No. 1 Facies	8.339	1.822	4.334	1.468	119.0
15	112-84 Rse	No. 1 Facies	5.377	6.946	4.018	1.368	79.5
14	109-87 E2	No. 1 Facies	8.344	3.369	1.419	1.382	132.0
3	104-88 W6	No. 1 Facies	3.332	4.937	1.064	1.117	172.0
12	104-88 E1A	No. 1 Facies	3.011	4.629	1.606	0.961	83.9
13	104-88 W7	No. 1 Facies	5.010	4.121	1.551	1.827	130.0
10	96-94 E2	No. 1 Facies	7.066	4.769	1.670	1.510	284.0
1	94-94 E1	No. 1 Facies	11.652	5.772	2.767	1.478	10.3
11	100-92 Wze	No. 2A Facies	2.129	3.447	3.746	3.233	128.0
2	99-94 E2	No. 2A Facies	10.814	1.663	2.121	2.064	41.2
2[b]	99-94 E2	PPQ	28.592	0.156	0.465	2.049	0.5
2[c]	99-94 E2	No. 2B Facies	17.646	1.206	1.306	1.258	40.1
Average			*7.865*	*4.213*	*2.342*	*2.201*	*103.6*
Maximum			*28.592*	*13.621*	*8.691*	*4.429*	*311.0*
Minimum			*0.159*	*0.156*	*0.414*	*0.961*	*0.5*

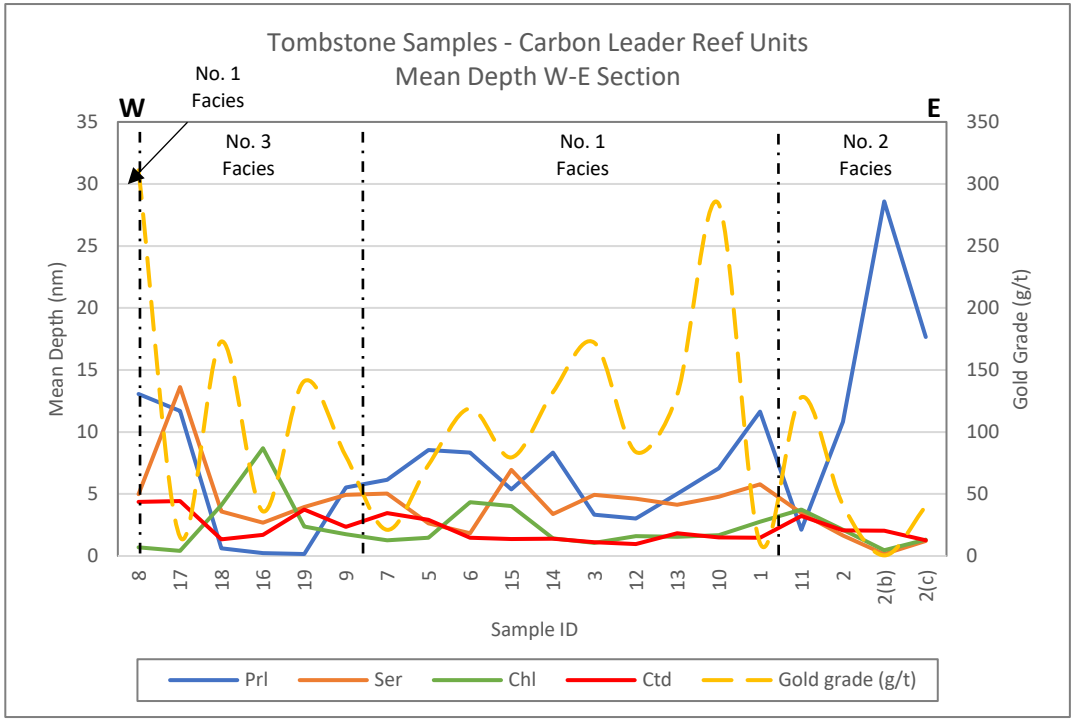


Chart A5.2: *Spectral mean depths in west-east section across TauTona Mine plotted against gold grade (g/t).*

Table A5.3: Spectral mean depths of the footwall units of the tombstone samples (exclusive of Sample 4 that was not spectrally scanned). [(a)] Pyrophyllite; [(b)] Sericite; [(c)] Chlorite; [(d)] Chloritoid; N/D: not determined

Tombstone Samples - Footwall							
Sample ID		Unit	Depth Mean				Gold grade
			Prl [(a)]	*Ser* [(b)]	*Chl* [(c)]	*Ctd* [(d)]	*g/t*
8	120-55 W4	Footwall	29.616	0.152	0.105	8.001	0.5
17	120-55 W5	Footwall	19.410	8.630	0.065	7.154	0.9
18	120-55 W7	Footwall	14.774	6.599	0.689	1.306	135.0
16	120-55 NE7	Footwall	4.783	11.185	3.066	3.566	0.1
19	120-70 W1	Footwall	0.081	2.308	0.652	9.806	26.8
9	120-77 S1	Footwall	26.626	0.236	0.248	6.752	0.5
7	114-78 E1	Footwall	36.714	0.153	0.046	3.314	0.9
5	112-83 W3	Footwall	28.430	0.096	0.035	6.734	N/D
6	112-83 W4	Footwall	38.977	0.013	0.154	4.578	0.4
15	112-84 Rse	Footwall	31.981	3.107	0.627	4.072	2.1
14	109-87 E2	Footwall	33.515	0.033	0.078	5.838	0.6
3	104-88 W6	Footwall	23.734	0.562	0.295	3.959	0.9
12	104-88 E1A	Footwall	29.699	1.474	0.124	2.902	3.8
13	104-88 W7	Footwall	25.156	0.014	0.293	1.985	0.5
10	96-94 E2	Footwall	33.838	0.003	0.107	2.981	1.3
1	94-94 E1	Footwall	35.479	0.788	0.253	3.374	0.1
11	100-92 Wze	Footwall	2.980	3.690	0.107	15.984	1.1
2	99-94 E2	Footwall	30.524	0.012	0.366	1.776	0.2
Average			*24.795*	*2.170*	*0.406*	*5.227*	*10.3*
Maximum			*38.977*	*11.185*	*3.066*	*15.984*	*135.0*
Minimum			*0.081*	*0.003*	*0.035*	*1.306*	*0.1*

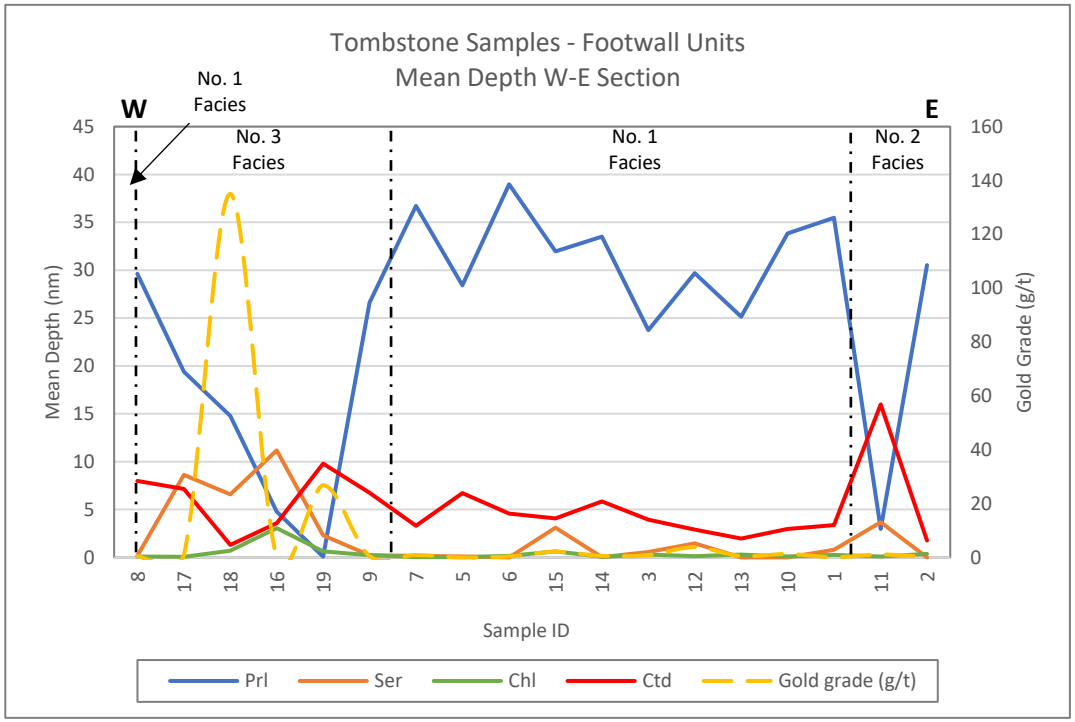


Chart A5.3: *Spectral mean depths in west-east section across TauTona Mine plotted against gold grade (g/t).*