

An estimate of the cost of the erection of suitable blast furnaces has been obtained from a reliable source, which shows that with a capital of £22,000 invested, 18,000 tons of pig iron could be produced annually, at a cost of less than £100,000 for working expenses. (See Parl. Papers 1873, E. 10, p. 25.)

I.—TABULAR STATEMENT OF IRON SANDS.

No.	Locality, and Matrix from which probably derived.	Magnetite.	Hematite.	Titanite.	Per cent. of iron.	Accessory Minerals.
1	Upper Buller River, Nelson—Hornblende rocks ...	87.5	9.4	...	70.2	
2	Lower Buller River—Tertiary gold drift of diorite slate...	54.0	...	42.3	59.0	Auriferous
3	Upper Molyneux River, Otago—Mica schists ...	82.7	...	9.7	65.9	Auriferous
4	Lower Molyneux River—Mica schist and tertiary strata...	74.4	...	2.5	58.7	Auriferous, and with 12 per cent. of glauconite
5	Mountain Stream, Canterbury—Palæozoic slates, &c. ...	62.7	37.2	...	66.2	
6	" Otago ...	86.1	10.5	...	58.5	Auriferous
7	Tuapeka, Otago—Old gold drift ...	2.2	92.8	...	63.8	Auriferous
8	Wakatipu, Otago—Mica schist ...	80.0	7.6	...	52.9	Auriferous
9	Mataura River (Upper)—Diorite slate ...	9.8	...	70.9	41.2	
10	" on a spur close by—Old gold drift ...	63.5	16.1	8.0	60.6	
11	Stewart Island—Granitic rocks, with greenstone dykes ...	77.8	...	20.1	57.3	Auriferous
12	" Hornblende rocks ...	71.5	20.0	8.2	70.1	Auriferous
13	Anatoke, Nelson—Granite and hornblende ...	79.8	7.7	3.4	60.2	Auriferous
14	Mahinepoa Lake (old channel of Hokitika)—River drift from diorite rocks ...	...	...	58.0	29.1	Auriferous, with garnets, topaz, disthene, &c.
15	Sea Beach, Hokitika—Sea sand drift ...	75.0	...	...	54.0	Auriferous
16	Motueka River, Nelson—Tertiary strata and granite ...	33.0	...	32.5	42.0	Auriferous
17	Wairau River, Marlborough— " schist ...	21.0	...	48.4	38.9	Auriferous
18	Wanganui River, Nelson—Granite and tertiary ...	54.0	...	13.0	43.2	Auriferous
19	Saddle Hill, Otago—Basaltic ...	58.3	...	25.6	52.9	
20	Green Island, Otago— " or sea beach... ..	53.3	...	29.6	50.3	
21	Hooper Inlet— " ...	20.0	...	74.2	53.0	
22	W. Bluff, Southland, Foveaux Straits—Diorite, or sea beach ...	12.2	...	40.6	28.6	Auriferous and Platiniferous
23	D'Urville Island, Nelson—Diabase and Granite ...	78.6	...	...	57.4	Chrome iron
24	Taranaki Beach—Trachyte ...	91.9	...	6.2	70.1	
25	" " ...	71.0	...	8.0	56.1	Olivine and hornblende
26	Tauranga Beach— " ...	87.4	8.6	...	68.0	

TABLE II.—MASSIVE IRON ORES, OXIDES, AND TITANITES.

No.	Variety.	Locality.	Centesimal Composition.					Per-centage of Iron.	Remarks.
			Magne-tite.	Hema-tite.	Titanic Iron.	Sili-ceous matters.	Water.		
1269	Impure magnetite ...	Manukau, Auckland ...	60.20	37.90	traces	1.90	...	70.06	
426(b)	Magnetite ...	Dunstan Gorge, Otago ...	86.32	...	traces	13.68	...	63.60	
426(a)	Hematite ...	Dunstan, Otago ...	...	96.11	...	3.89	...	68.30	
	Magnetite ...	Dun Mountain, Nelson ...	...	90.60	...	7.60	1.8	63.40	
1274	Mixed magnetite and hematite ...	Maramarua, Auckland ...	2.24	87.10	traces	10.66	...	62.30	
22	Bog iron ore ...	Spring Swamps, Auckland ...	...	73.17	...	13.83	13.00	51.22	
1395(b)	Brown iron ore ...	Raglan ...	...	72.69	...	9.68	17.63	50.88	
1199	Brown iron ore ...	Kawau ...	...	67.98	...	19.65	12.37	47.58	Manganese oxide, 1.38
1230	Hydrous hematite ...	Parapara, Nelson ...	...	62.68	...	24.08	13.24	43.87	Contains a little manganese

BLACK BANDS OR SPATHIC IRON ORES.

No.	Variety.	Locality.	Prot-oxide of Iron.	Sesqui-oxide of Iron.	Car-bonic Acid.	Sili-cates.	Per-centage of Iron.	
1296(1)	Black band ...	Collingwood, Nelson ...	...	35.23	25.77	21.12	3.93	46.06
1351	Black band ...	Collingwood, Nelson ...	...	40.38	5.26	21.97	16.69	35.12

No. 3.

Mr. S. A. LEECH to the DIRECTORS, Albion Coal Mining Company.

GENTLEMEN,—

Harbour Office, Westport, 15th August, 1873.

At the request of Albert Beetham, Esq., your managing director, I accompanied that gentleman to the Ngakawau River in the steamer "Result," to explain, on the spot, my views of straightening and improving the navigation of the river up to the mine, as the channel in its present state is difficult to navigate, except with small vessels like the "Result," notwithstanding a considerable expenditure on it by the original promoters and the Nelson Government,