

PD83 PT-05

<u>From (m)</u>	<u>To (m)</u>	
0	1.0	Ferricrete, cemented pisolitic goethite
1.0	1.5	Basalt - highly weathered
1.5	1.7	Silcrete - silica cemented quartz granule gravel
1.7	2.5	Clay, sandy, orange/brown
2.5	3.5	Sand, clayey, pale brown to cream (ex lithic arenite)
3.5	6.0	Arenite, lithic, medium grain size
6.0	6.54	Mudstone
6.54	6.74	Coal
6.74	9.03	Mudstone, grey and minor carbonaceous
9.03	9.60	Coal, (possibly heavy dull 9.03-9.44m)
9.60	10.20	Mudstone, carbonaceous
10.20	10.64	Coal, (possibly heavy dull 10.38-10.64m)
10.64	11.04	Mudstone, carbonaceous
11.04	11.22	Coal
11.22	11.84	Mudstone, grey
11.84	12.22	Coal, (possibly heavy dull 11.84-12.04m)
12.22	13.20	Mudstone, grey + plant fossils
13.20	14.10	Mudstone, carbonaceous
14.10	14.75	Mudstone, grey + plant fossils
14.75	15.40	Coal, (possibly heavy dull 14.96-15.27m)
15.40	15.70	Mudstone, carbonaceous
15.70	16.32	Coal, (possibly heavy dull 15.70 - 16.12m)
16.32	16.56	Mudstone, carbonaceous
16.56	17.00	Coal, (possibly heavy dull 16.56-16.86)
17.00	19.20	Mudstone, grey
19.20	19.60	Mudstone, carbonaceous
19.60	21.60	Mudstone, grey
21.60	22.80	Siltstone
22.80	25.40	Mudstone, grey
25.40	26.00	Siltstone
26.00	27.00	Mudstone, grey
27.00	28.60	Siltstone
28.60	29.80	Mudstone, grey
29.80	30.50	Siltstone
30.50	31.60	Contact aureole, equigranular amphibole-sericite in baked ?mudstone
31.60	32.80	Contact aureole, chlorite/sericite/pyrite zone
32.80	40.00	Dolerite, chlorite, fine to medium grained

Comments

- (i) Base of oxidation \approx 6.5m
- (ii) The sequence encountered in this hole has been thermally metamorphosed by a dolerite sill, the top of which was intersected from 30.5-40.0m
- Alteration has been expressed as increased density of the sandstone/mudstone sequence, changing from \approx 2.15 to 2.5 T/m³ (an increase of \approx 16%), and by a 75% reduction in the neutron porosity of the mudstones.
- Accordingly as a result of this recrystallisation of the sedimentary rocks, the density contrast between coal and sediments has been extensively suppressed, such that the long spaced density log is almost featureless.