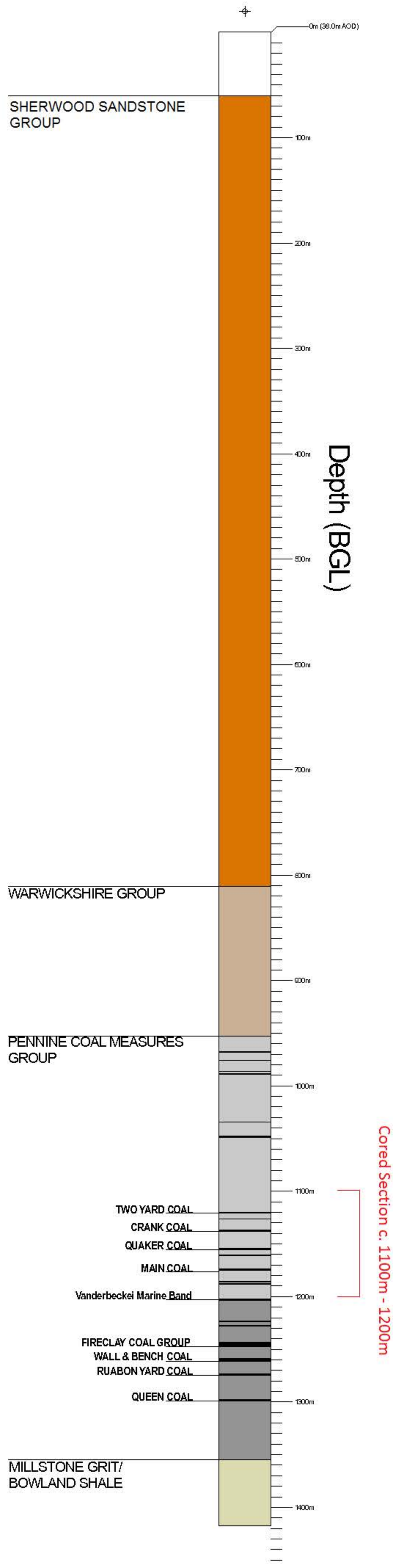


PEDL 189 'Site 10'



Chester Pebble Beds Formation is dominated by red-brown, crossstratified, pebbly, and medium to coarse grained sandstones, with conglomerates that commonly vary in both degree of sorting and in thickness. The abundance of pebbles decreases downstream to the north-west. Erosional and reactivation surfaces are common. This formation conformably overlies the Kinnerton Sandstone Formation in the central part of the Cheshire Basin, but the boundary may become unconformable towards the eastern margin of the basin. It is expected that this formation will be thin, if present at all, at this location.

Kinnerton Sandstone Formation consists mainly of red-brown, non-pebbly, cross-stratified, fine to medium grained, arenaceous sandstones. A very micaceous sandstone marks the transition to the overlying Chester Pebble Beds, where conformable.

Salop Formation is formed from interbedded red and red-brown mudstones and sandstones with beds of pebbly sandstones and conglomerates composed of recycled Carboniferous and possibly Devonian lithic material. The sandstones are mostly sublitharenitic. The clasts within the conglomerates are generally formed from limestone and chert. Thin *Spirorbis* limestones and calcrete and rare thin coals can be found in the lower part of the formation. The formation is characterised by the presence of caliche. It is unlikely that this formation will be present at this location.

Halesowen Formation predominantly formed from grey-green micaceous sandstone and mudstone. Thin coals, *Spirorbis* and pedogenic limestones and local intraformational conglomerate are also present. Non-marine bivalve faunas and plant debris may also be visible in this formation. It is expected that this formation will be thin, if present at all, at this location.

Etruria Formation comprises red, purple, brown, green and grey mudstones with subordinate lenticular sandstones and conglomerates. There are common pedogenic horizons but coal seams are rare.

Middle Coal Measures comprises repeated cycles of sandstones, siltstones, mudstones, seatearths and coals. In the lower section there are at least seven cycles marked by thin coals or seatearths with, in places, shelly ironstone layers. The middle section contains cycles with the thickest coals in the formation; however there are extensive and wide splits in most of the coals and large variations in inter-coal thickness. The upper section contains several marine bands and *Esteria* bands. There are several locally thick sandstones with erosive bases. Most of the coals in this section are thin and of inferior quality.

Lower Coal Measures comprises three sequences containing repeated cycles of sandstones, siltstones, mudstones, seatearths and coals. The lowest sequence contains up to eleven well defined cycles most of which have a marine band at the base. A few have locally thick sandstones and several have a thin coal or seatearth at the top. The middle sequence has about thirteen cycles but they are poorly defined. It is dominated by sandstone with a few thin coals. The highest sequence contains up to twenty five cycles most with a coal at the top, several of which are quite thick. There are no marine bands in this sequence and the sandstones it contains are generally thin.

Millstone Grit/Bowland Shale marked by a white, fine to coarse grained sandstone of Aqueduct Grit in the upper, below which the Bowland Shale, often referred to as the Holywell Shale in this location, forms a combination of interweaved shales, siltstones and sandstones. The Bowland Shale and Cefn-y-fedw Sandstone often form a complex sequence with the sandstone ultimately marking the base of the sequence despite beds of the formation being present throughout the Bowland Shale Formation. Beyond the Cefn-y-fedw Sandstone, the sequence is increasingly calcareous before passing into the Limestone dominated Brigantian.

Estimated Net Coal = 8.45m

Planned TD 1200m