CUADRILLA RESOURCES LIMITED

APPENDIX - B

SEISMIC INTERPRETATION

Cuadrilla Resources Limited
July 2010

Cuadrilla Resources Limited
BBD House
Stowe Court
Stowe Street
Lichfield
WS13 6AQ

GEOLOGICAL SUMMARY BECCONSALL PROSPECT

Becconsall-A is located on the southern side of the Ribble Estuary, within PEDL 165, western Bowland Basin, Lancashire, Northern England (see Figure 1 under Appendix B). The well is located approximately 1.5 kms east of Becconsall and 3.6km to the SW of the BP/BG well-site at Hesketh Bank and about 3km NE of the Banks-1 well location drilled by Clyde Petroleum in 1992. A geological map based on the BGS Preston and Southport Sheets (Figure 1) shows the relative location of these sites.

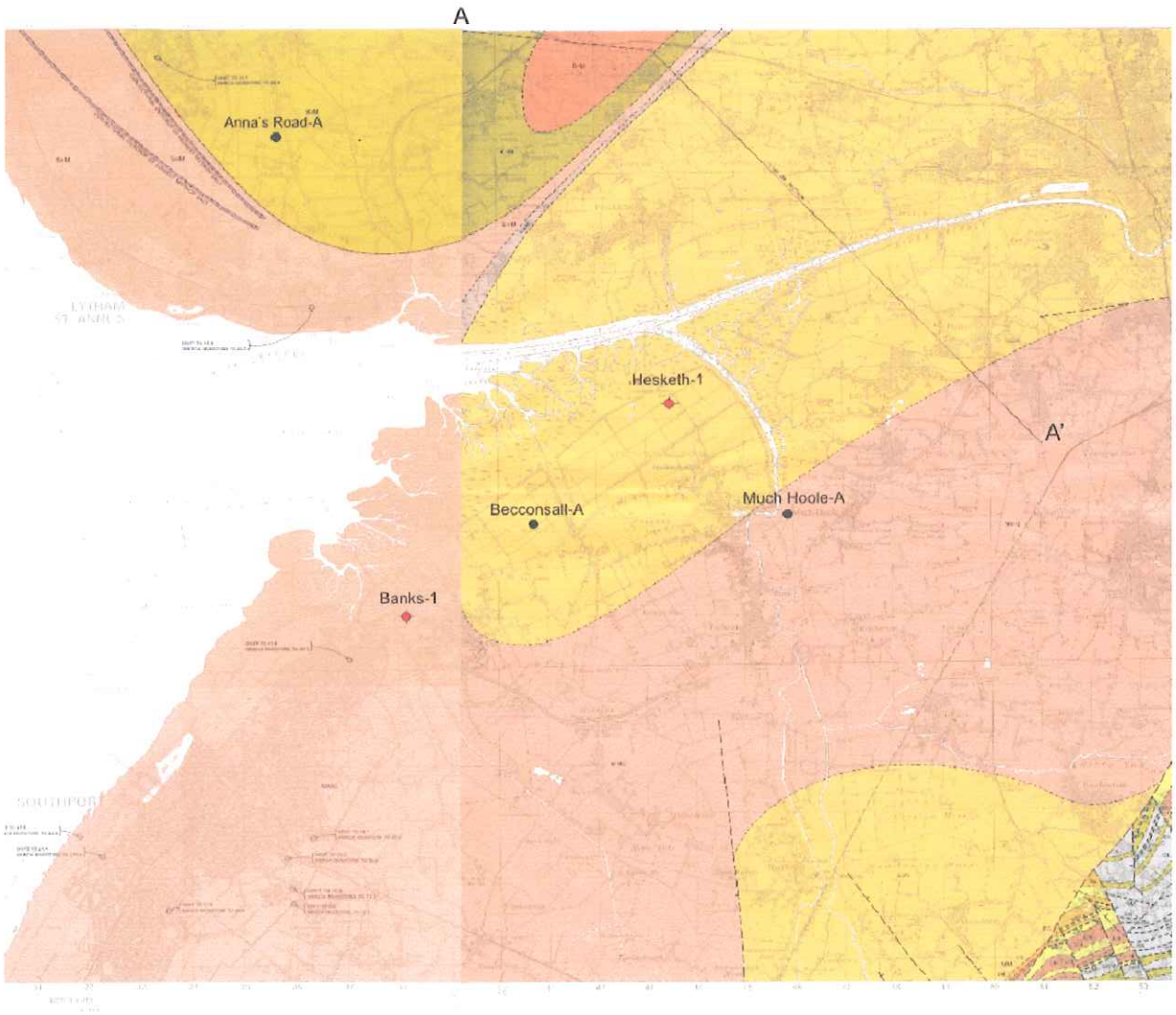

Figure 1. Geological map of the southern Ribble Estuary area based on the British Geological Survey Sheet 75 showing the location of the proposed well at Becconsall and its relation to other wells drilled in the area.

Becconsall-A is to be drilled as part of a shale gas exploration program, one of the first of its kind in Europe. Structurally the well is located in the Formby sub-basin which lies to the west of the Preston-Leyland Ridge and is bounded to the west by N-S trending fault system including the Woodsfold Fault and the Western Coalfield Boundary Fault. These faults form the western boundary fault of the Preston-Leyland Ridge which is a tilted fault block of Carboniferous rocks overlain by Triassic Sherwood Sandstone Group.

The target formation for Becconsall-A, as with the other Cuadrilla wells, is the Carboniferous Bowland Shale Formation. Here the target formation is somewhat deeper and the top Carboniferous is predicted to occur at a depth of about 6,200ft and the top of the Lower Bowland Shale at about 8,000ft. The total depth of the well is estimated to be 10,200 ft.

Structurally the well location lies in the Formby sub-basin west of the Preston-Leyland Ridge and bounded to the west by a complex N-S fault system (Figure 2 – regional seismic section).

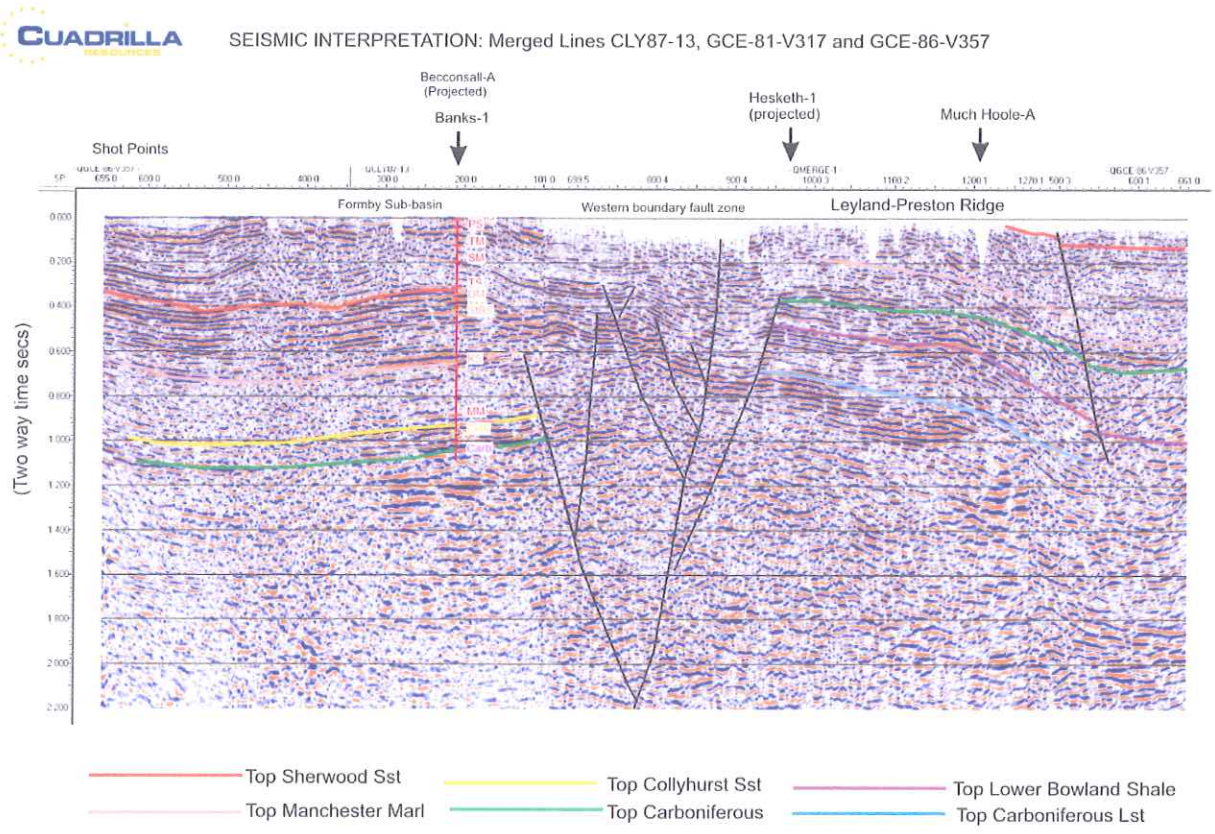

Figure 2. Seismic section showing the structural location of Becconsall and its relation to the wells at Banks and Hesketh and also the proposed well at Much Hoole.

Previous wells in the area, like the Hesketh-1 drilled by a Joint Venture between the Gas Council (British Gas) and BP in 1990, show strong gas shows within the Bowland Shale Formation. The well was drilled to a total depth of 4,250ft and encountered significant bituminous hydrocarbon shows at a number of levels and very significant gas shows in the Bowland Shale Formation. The depth structure shows that the depth of the top Bowland Shales increases down dip eastwards away from the Western Boundary Fault and we expect the whole target formation to be about 3,000 ft thick. Thus the final total depth of the well will be about 10,200ft.

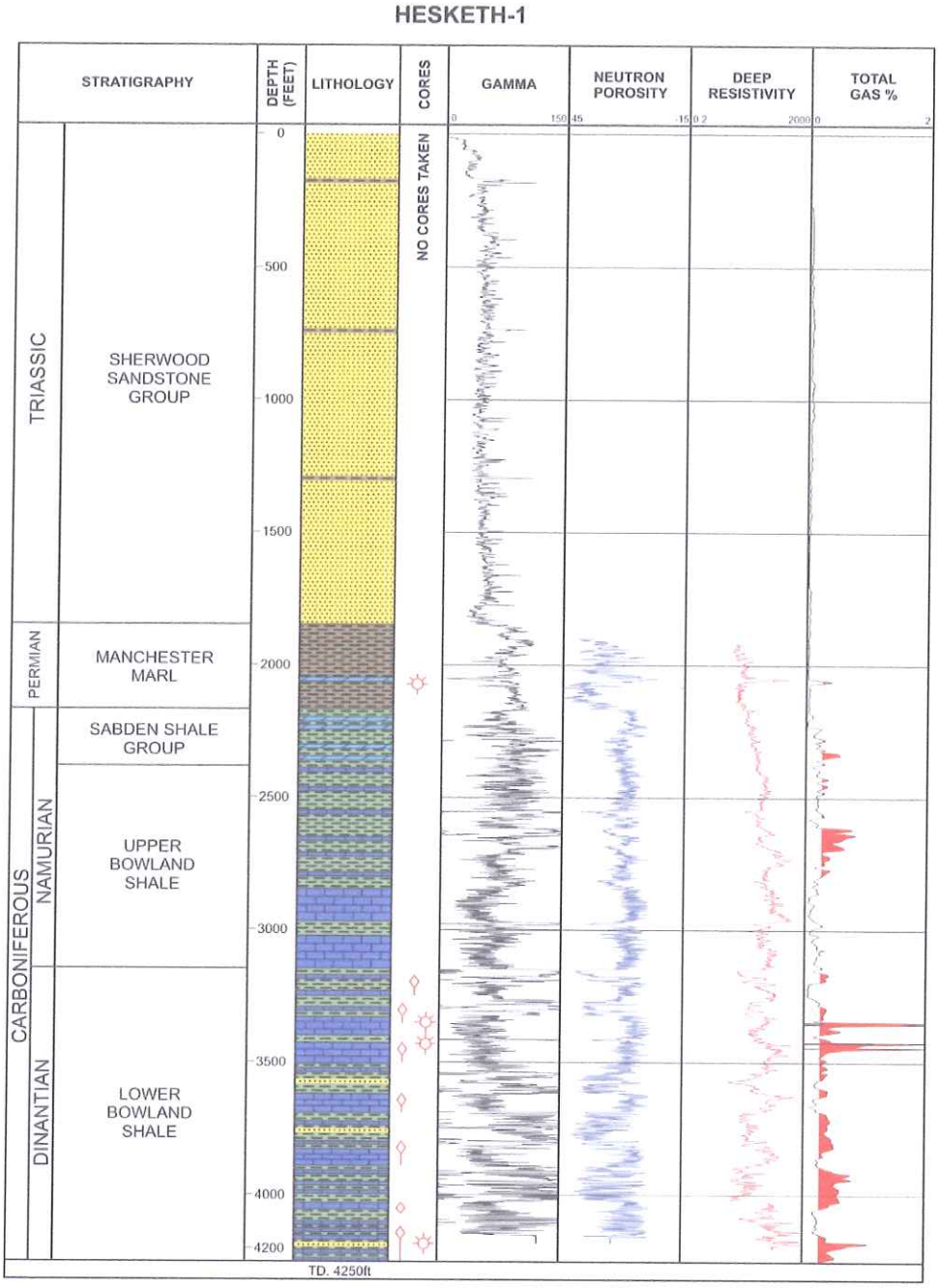

Figure 3. Simplified well section of the Hesketh-1 well showing lithology, wireline logs and gas shows. The section encountered is estimated to be very similar to that predicted for Much Hoole-A.

Hesketh-1 was drilled on the crest of the Preston-Leyland Fault block. A summary of the well section and gas shows is shown in Figure 3. The well penetrated the Sherwood Sandstone Group and terminated in Carboniferous rocks of probable late Dinantian age. The Collyhurst Sandstone is absent in the Hesketh-1 well but is well developed in the Formby sub-basin and is expected to have a thick development in the Becconsall well. It was the results from the Hesketh well (and Thistleton-1) which attracted Bowland Resources to the shale gas potential in this area.

The Becconsall-A well is located immediately NE of Banks-1 and we are expecting to encounter very similar conditions to those encountered in the Banks-1 well. In particular a relatively thick Permo-Triassic section overlying a thick Carboniferous section. The Bowland Shale gas reservoirs in these wells are described as 'unconventional' reservoirs. In such reservoirs the source, reservoir and seal rocks are all in the same formation and methane gas in widely distributed as adsorbed and free gas throughout the formation in relatively low concentrations. Subsurface stimulation is needed to help flow the gas to surface. Unconventional reservoirs of this type are making huge contribution to the natural gas reserves in the USA and elsewhere and could supply a significant proportion of the UK's energy needs.

The proposed well, Becconsall-A, is designed to be drilled as a vertical well with 13 3/8" casing being set to depth of 2200ft in order to prevent any damage to the aquifers in the Sherwood Sandstone Group and is planned as an integral component of the Cuadrilla exploration programme in PEDL 165.

CUADRILLA RESOURCES

Proposed Becconsall Well Location: Seismic Line IELP-99-11

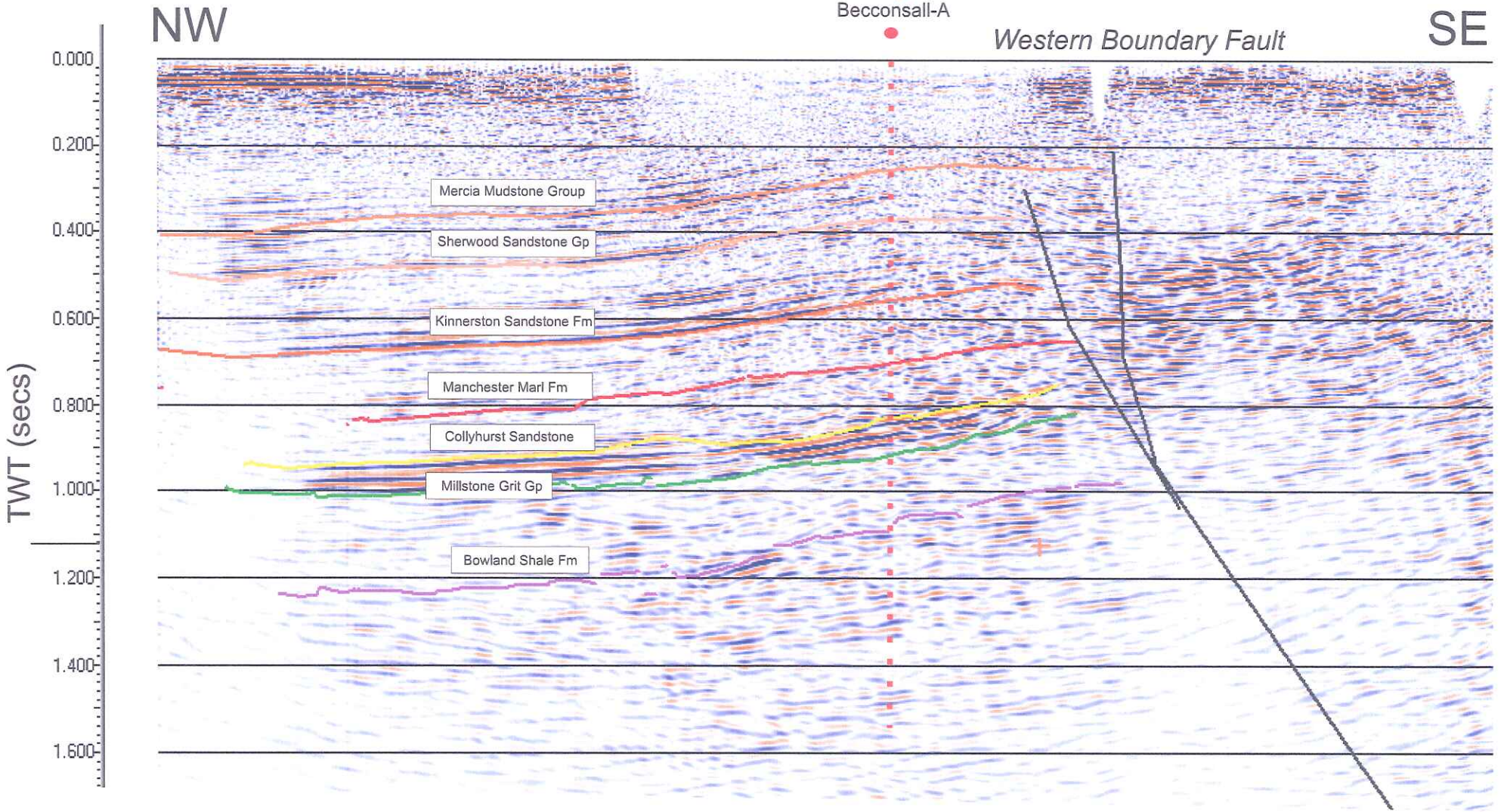

Figure (B01)

Becconsall-1 Well section prognosis

Nearest seismic line: IELP-99-11 200m to SW

Nearest well: Banks-1 3km to SW

Depth (ft)

FormationTops

8 ft cellar

20" casing (hammered in)

13 3/8" casing set at 2200ft; 17 1/2" open hole

9 5/8" casing set at 6200ft; 12 1/4" open hole

2000

4000

6000

8000

10,000

5 1/2" casing set at 10,200ft; 8 1/2" open hole (TD)

Triassic

MERCIA MUDSTONE GROUP:

Red claystones and silty mudstones with occasional thin sandstones

Possible halite (400 ft in Banks-1)

SHERWOOD SANDSTONE GROUP: (1650ft)

Red and buff coloured medium grained sandstones and thin shales

ST BEES SANDSTONE: (2500ft)

Red fine gained sandstones with abundant interbedded shales. Hard and relatively well cemented compared with the Sherwood Sandstone

Permian

KINNERTON SANDSTONE FM: (3400ft)

Fine grained red and orange-red sandstones. Argillaceous in places and with abundant thin claystone bands. In places dolomitic and anhydritic.

MANCHESTER MARL: (4800ft)

Purple and reddish siltstones and mudstones with thin anhydrite interbeds and nodules

COLLYHURST SANDSTONE: (5400ft)

Alternations of white and orange fine sandstones with claystone partings

Carboniferous

MILLSTONE GRIT GROUP: (6200ft)

Fine, medium and coarse hard sandstones interbedded with darkshales

BOWLAND SHALE FORMATION: (6900ft)

Dark grey and black mudstones with thin interbedded carbonate bands. Hard and flinty in places.

Limestone Unit. Pendleside Limestone equivalent

HighTOC basal Namurian shales. Black, fissile. Pyritic

CARBONIFEROUS LIMESTONE: (10,200ft) Hard, grey, well-cemented, limestones

Figure (B02)