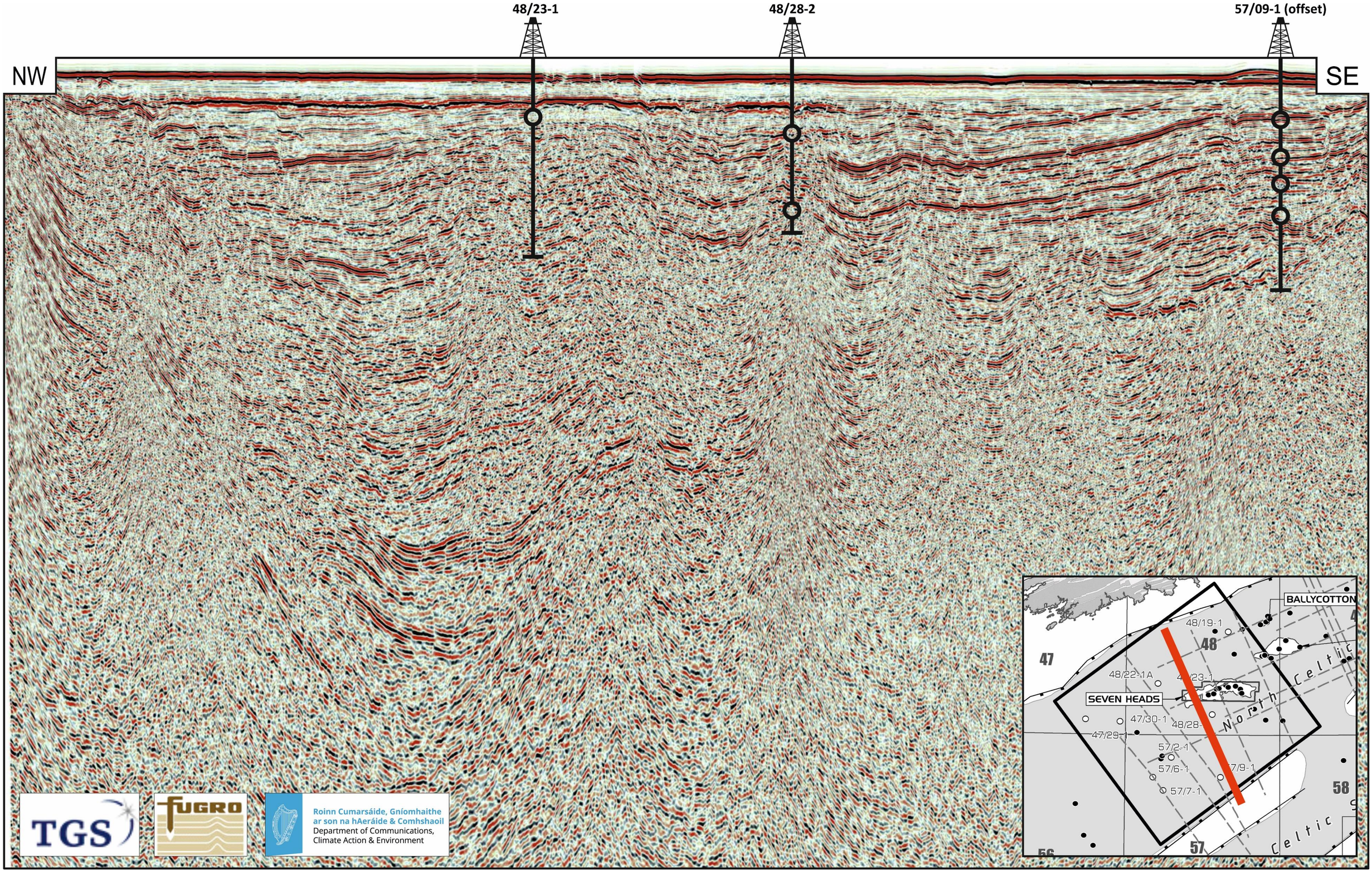
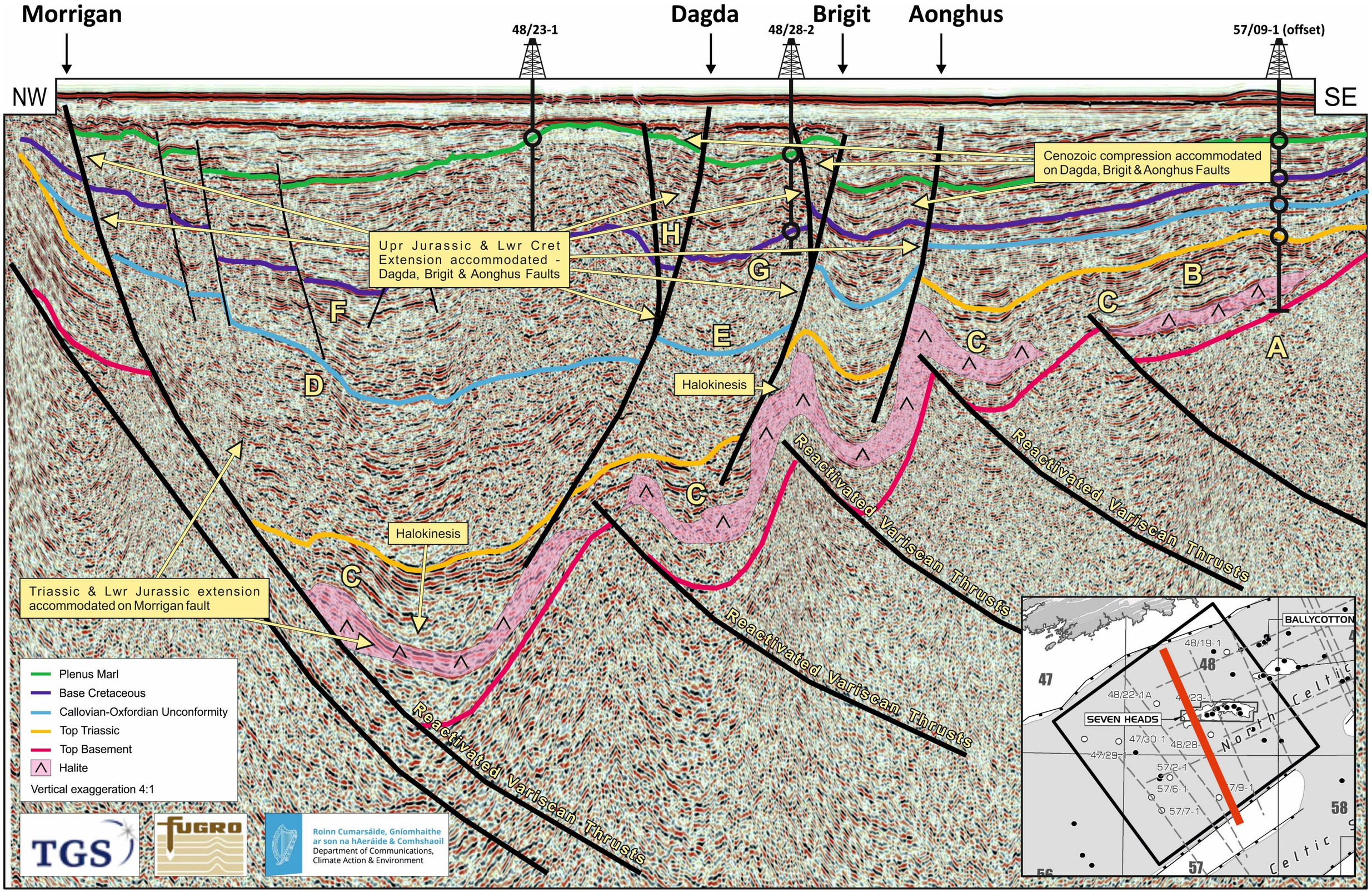
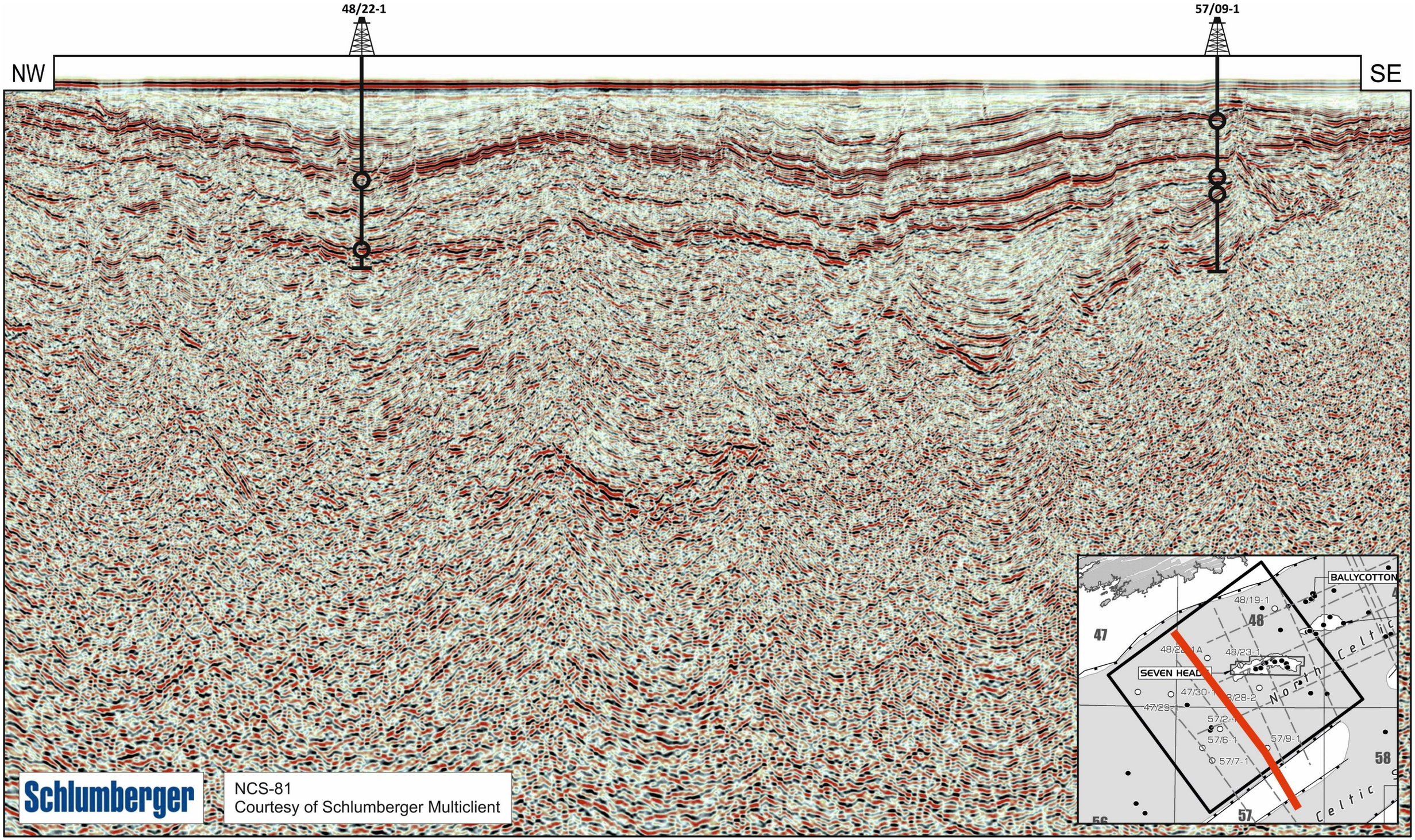


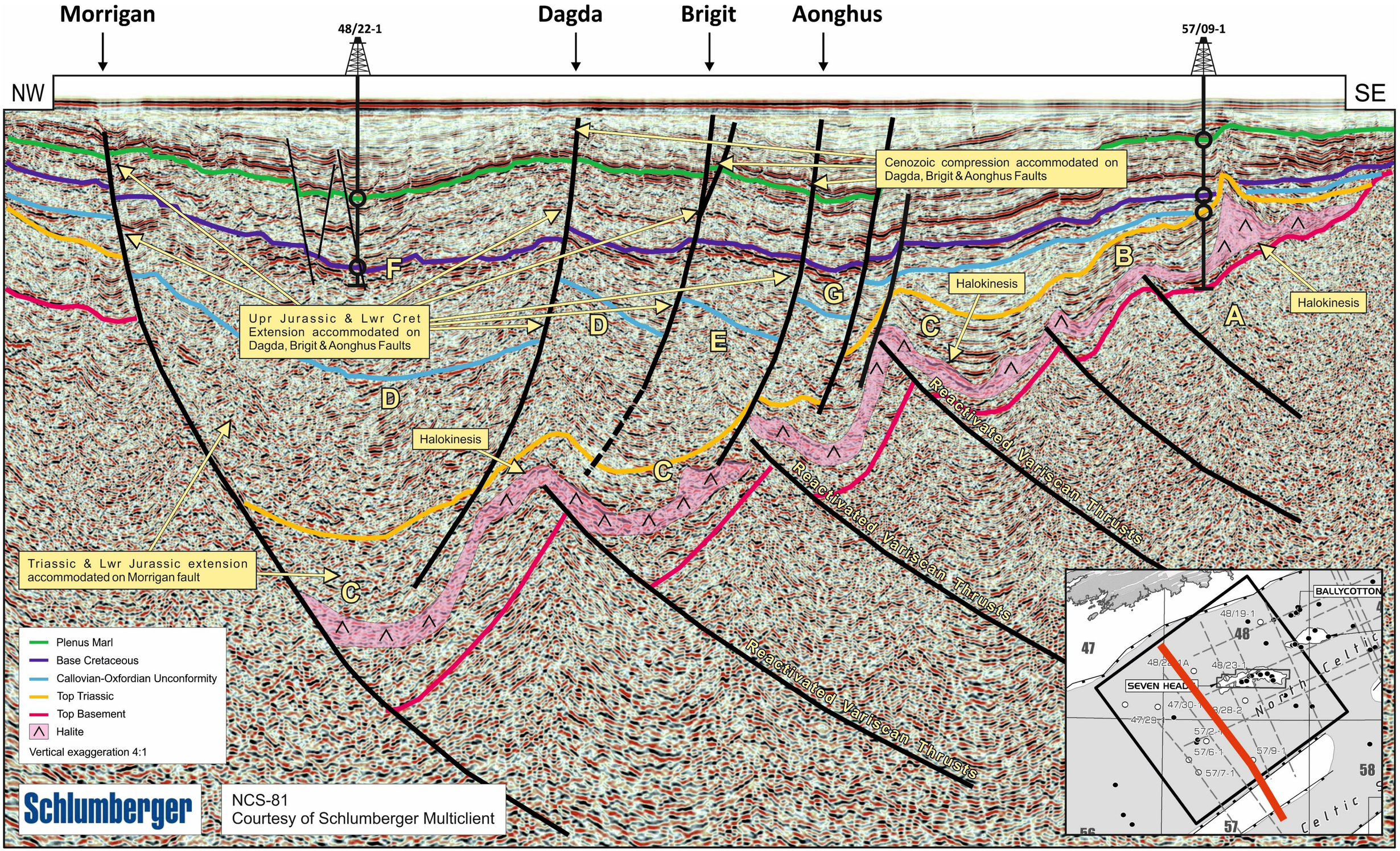

**Appendix E.1**. Seismic line SGC06-553689 imaging the entire NCSB, hydrocarbon exploration wells, without interpretation.



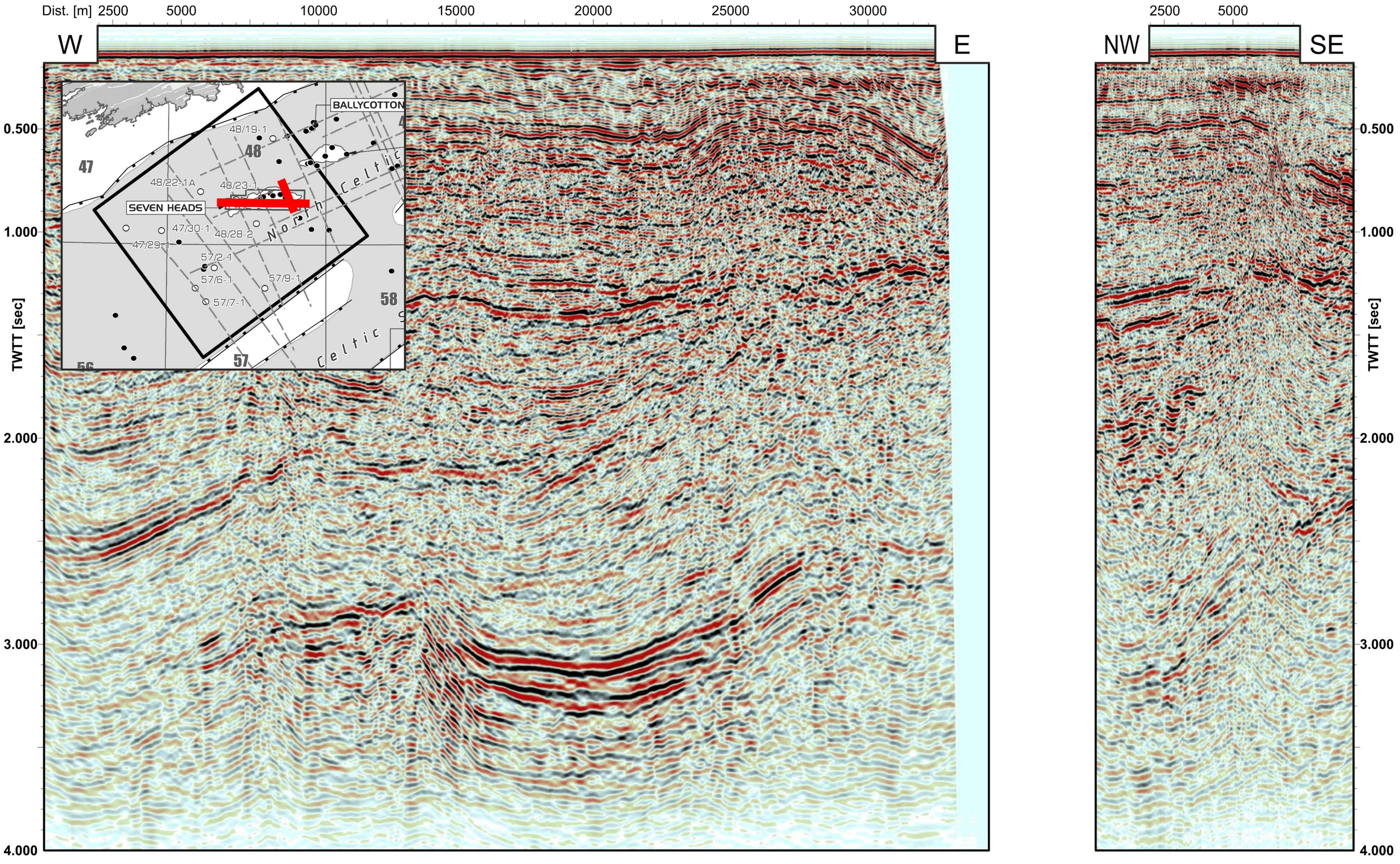

**Appendix E.2**. Seismic line SGC06-553689 imaging the entire NCSB with hydrocarbon exploration wells, major seismically indefinable stratigraphic markers and fault interpretation shown. “A” represents the opaque seismic character of the Paleozoic Basement. “B” represents the high amplitude continuous character of the Triassic. “C” indicates areas of syn-sedimentary growth within the Triassic. “D” indicates subtle change in dip of seismic reflectors at the Callovian-Oxfordian unconformity. “E” indicates areas where the Callovian-Oxfordian Unconformity is interpreted and there is no change in dip or well control. “F” indicates the areas where the Base Cretaceous is represented by the upper of two parallel reflectors in the basin centre. “G” indicates where the reflectors at “F” have thinned and coalesced as one reflector. “H” indicates areas of syn-sedimentary growth within the Cretaceous.



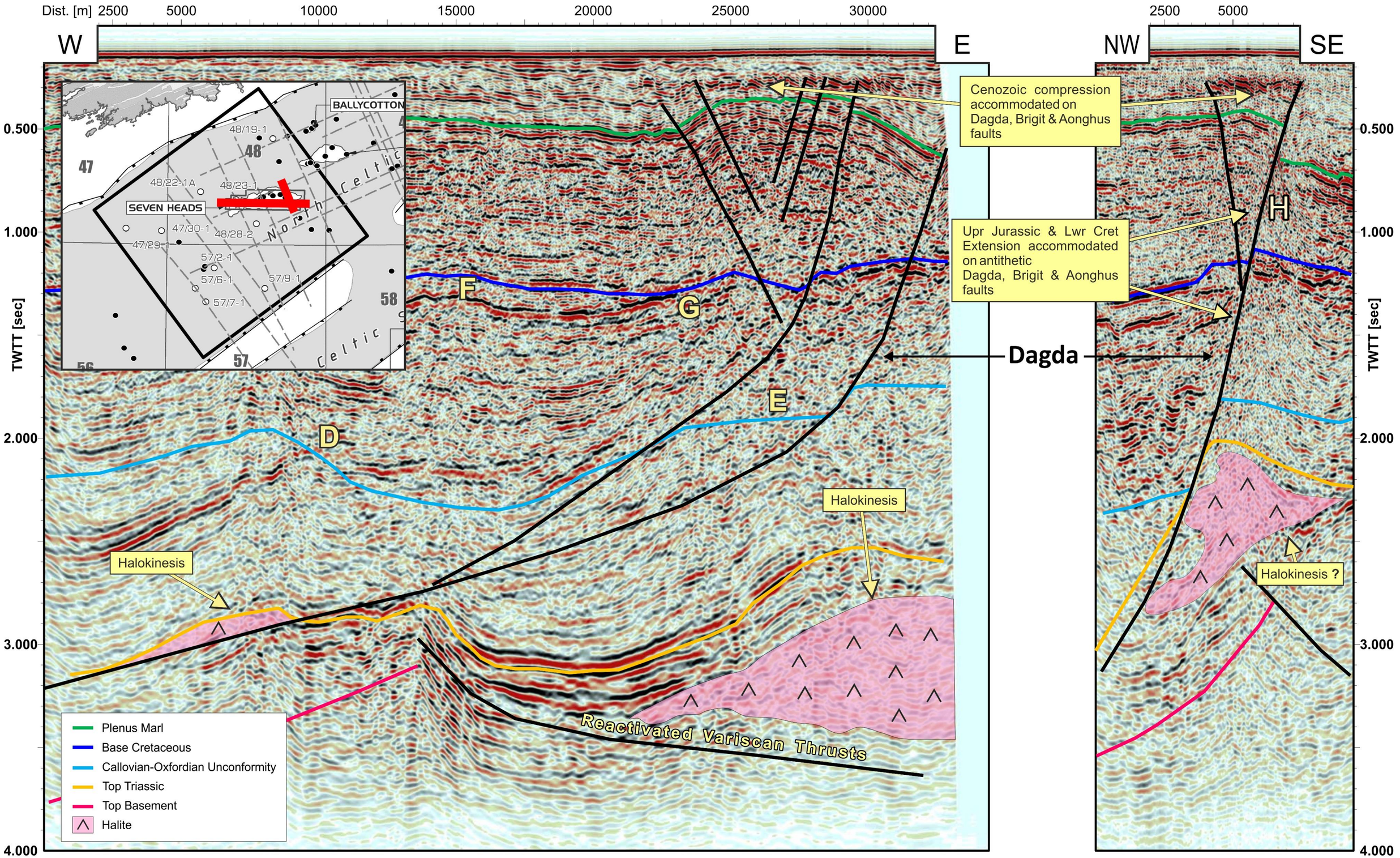

**Appendix E.3**. Northwest to southeast seismic line NCS81-59 imaging the entire NCSB, hydrocarbon exploration wells, without interpretation.



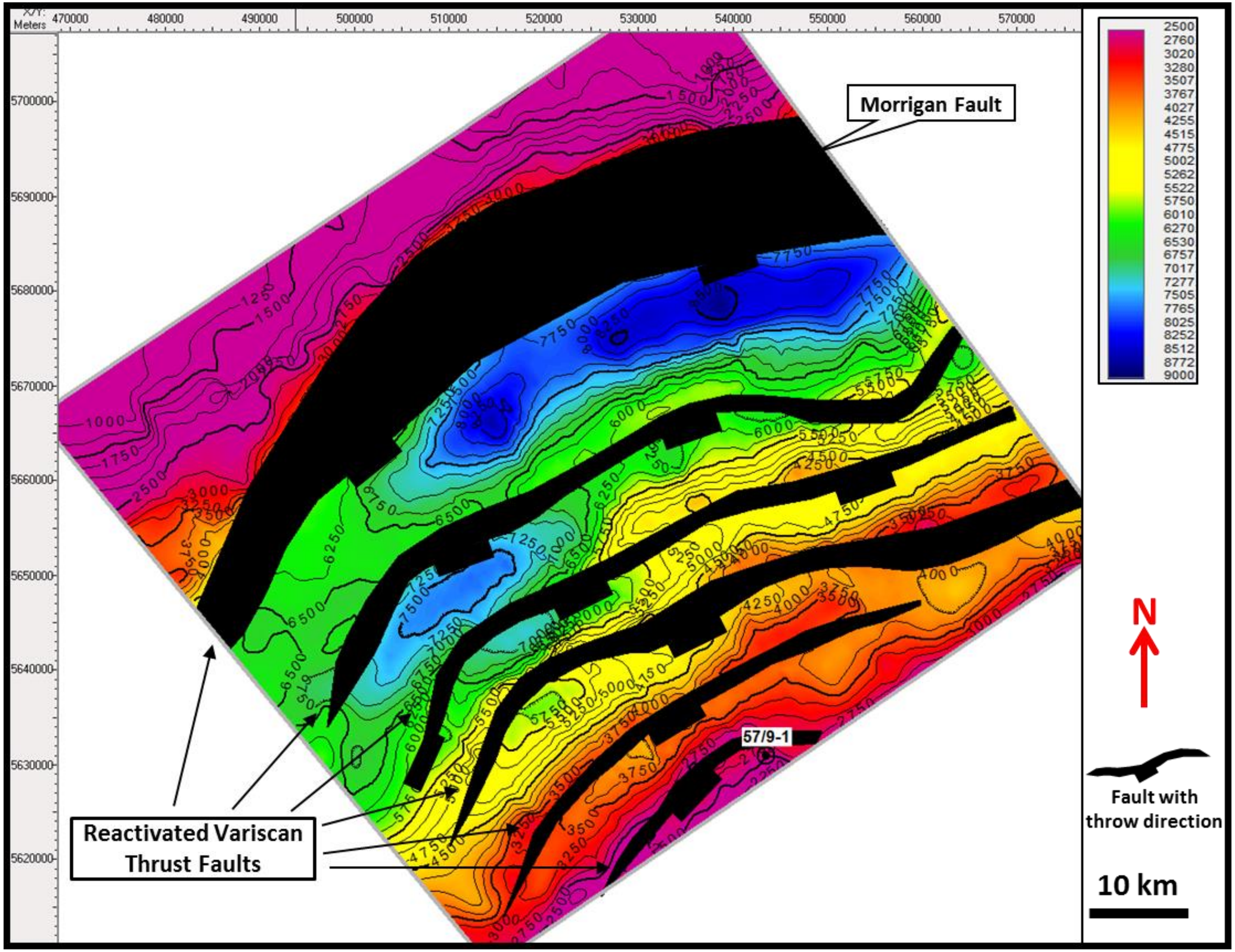

**Appendix E.4**. Northwest to southeast seismic line NCS81-59 imaging the entire NCSB, with hydrocarbon exploration wells, major seismically indefinable stratigraphic markers and fault interpretation shown, courtesy Schlumberger Multiclient. “A” represents the opaque seismic character of the Paleozoic Basement. “B” represents the high amplitude continuous character of the Triassic. “C” indicates areas of syn-sedimentary growth within the Triassic. “D” indicates subtle change in dip of seismic reflectors at the Callovian-Oxfordian unconformity. “E” indicates areas where the Callovian-Oxfordian Unconformity is interpreted and there is no change in dip or well control. “F” indicates the areas where the Base Cretaceous is represented by the upper of two parallel reflectors in the basin centre. “G” indicates where the reflectors at “F” have thinned and coalesced as one reflector.



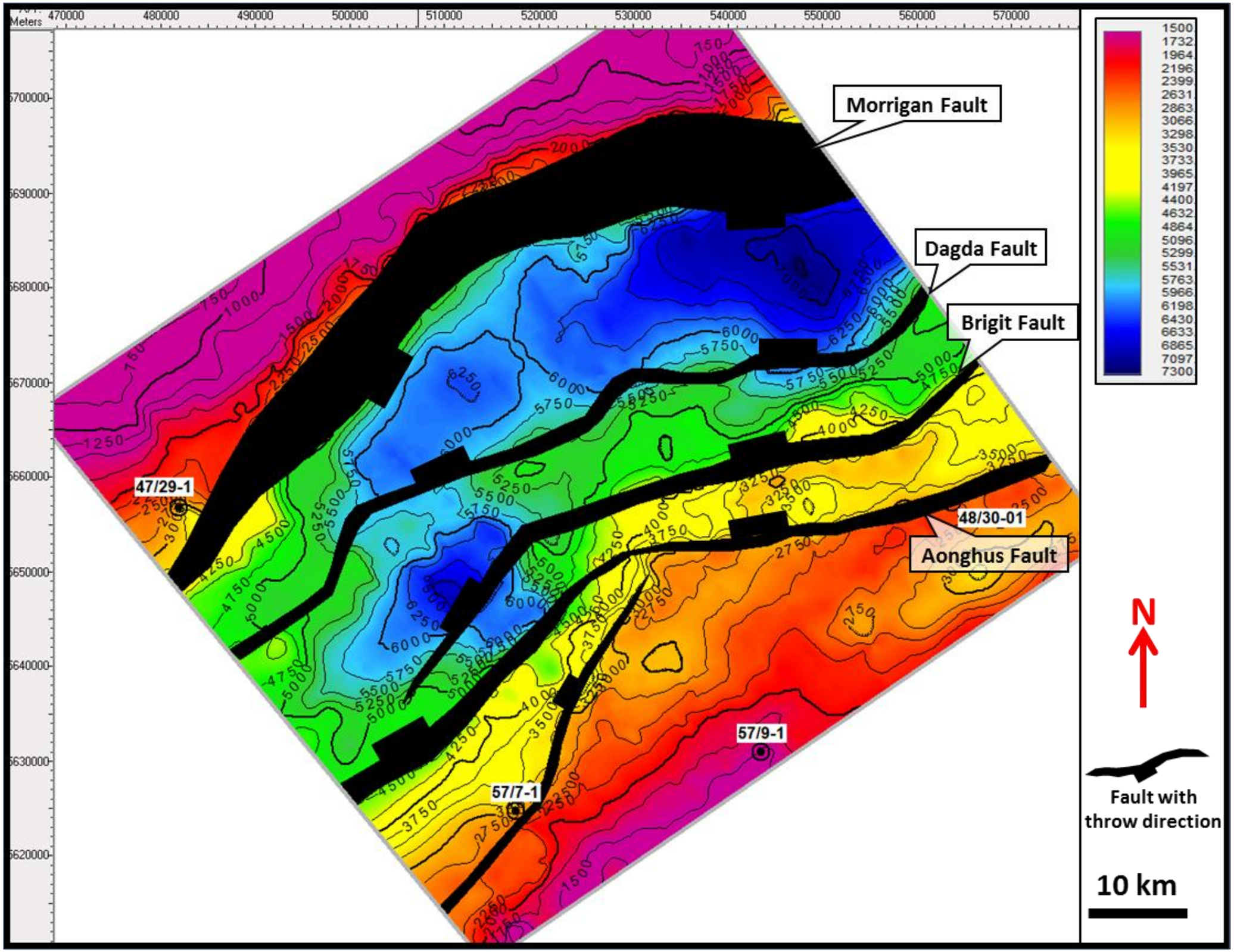

**Appendix E.5**. Barryroe 3D seismic data quality example, without interpretation. Courtesy Providence Resources Plc and Lansdowne Oil and Gas Plc.



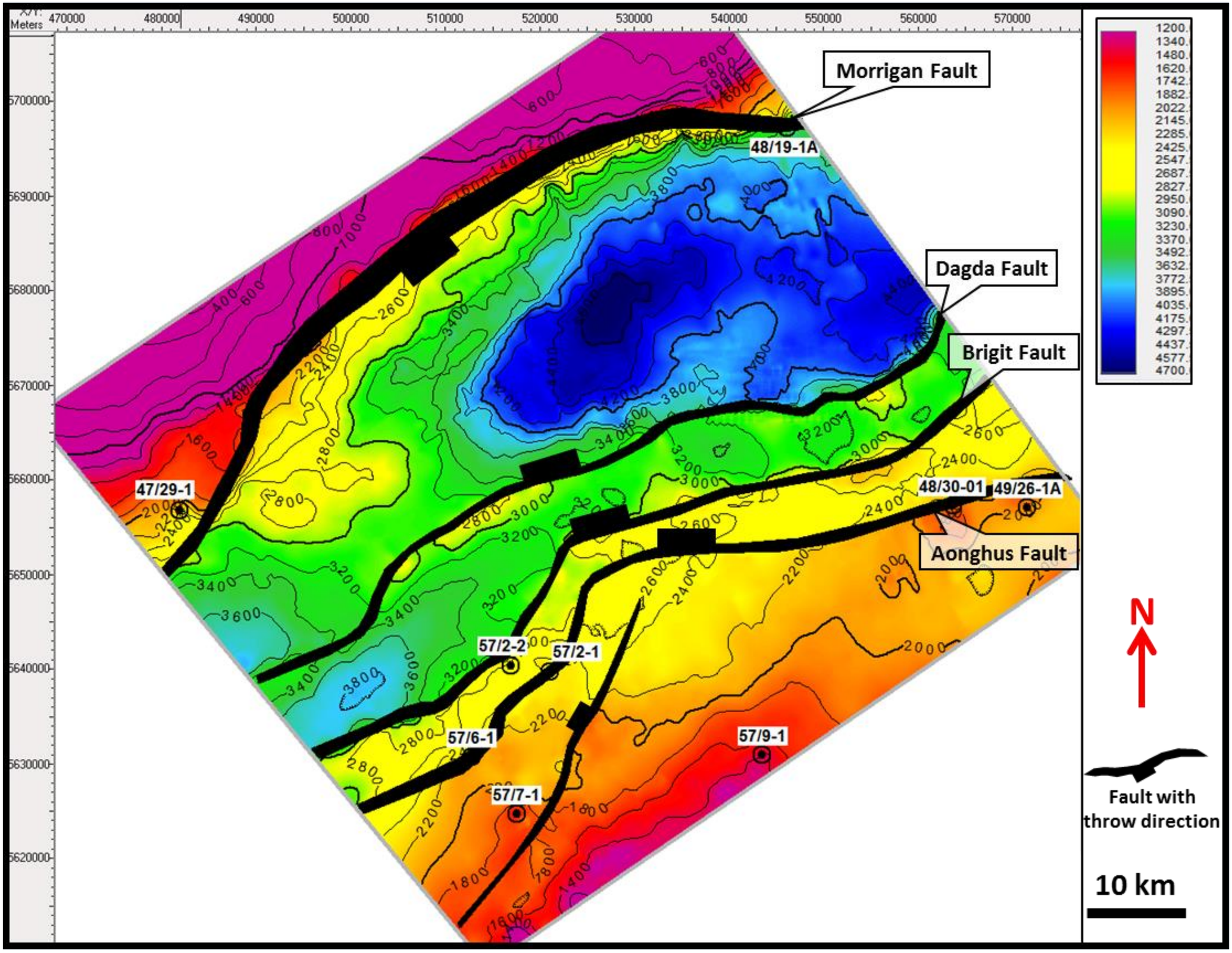

**Appendix E.6**. Barryroe 3D seismic data quality example, exhibiting imaging at depth and minor halokinesis. Courtesy Providence Resources Plc and Lansdowne Oil and Gas Plc. "D" indicates subtle change in dip of seismic reflectors at the Callovian-Oxfordian unconformity. "E" indicates areas where the Callovian-Oxfordian Unconformity is interpreted and there is no change in dip or well control. "F" indicates the areas where the Base Cretaceous is represented by the upper of two parallel reflectors in the basin centre. "G" indicates where the reflectors at "F" have thinned and coalesced as one reflector. "H" indicates areas of syn-sedimentary growth within the Cretaceous.



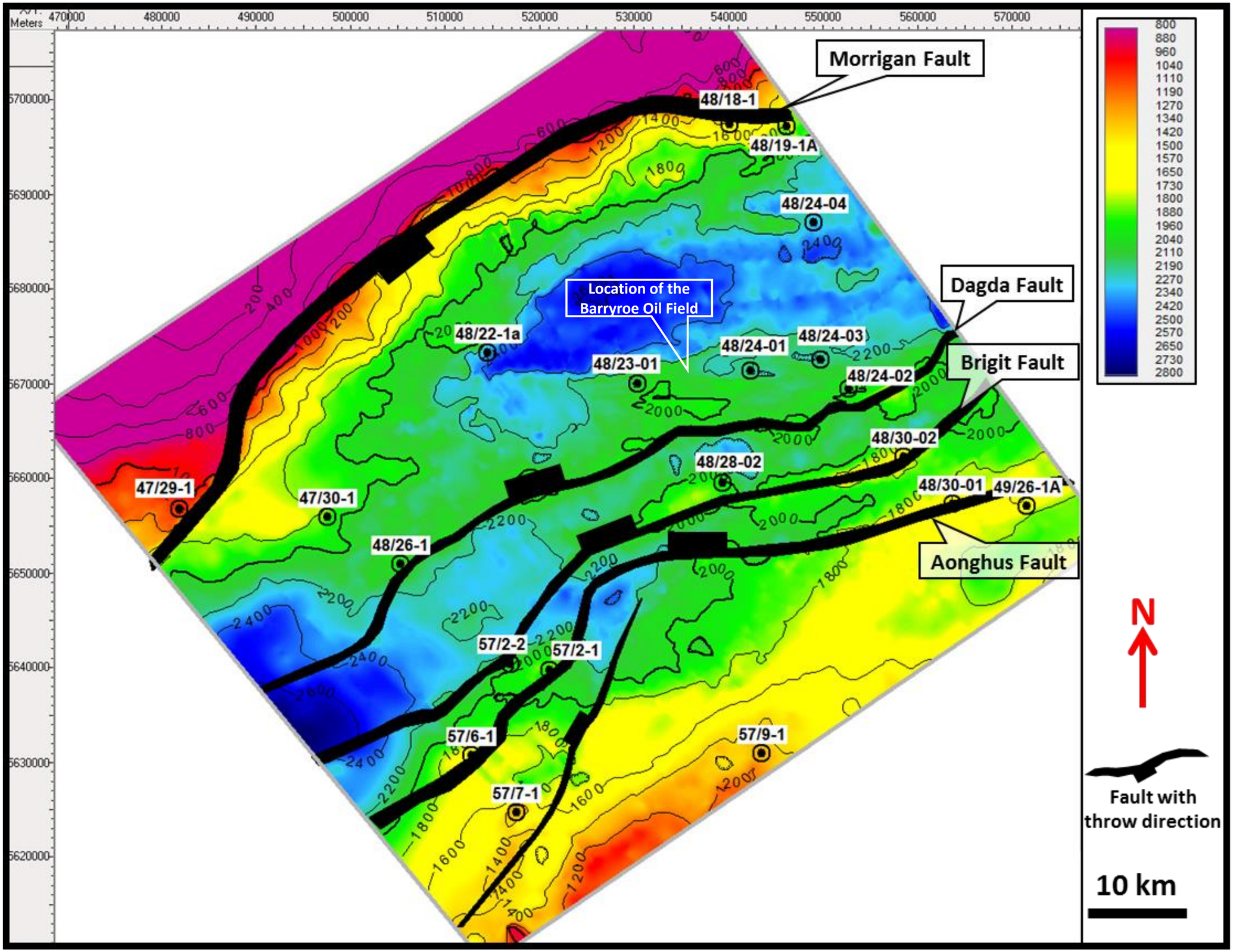

**Appendix F.1**. Depth map of Top Paleozoic Basement, interpreted within the study area, contour interval 250m (820ft), well control highlighted. Faulting has a NE-SW strike and southerly dip. The basin bounding Morrigan Fault exhibits the greatest throw.



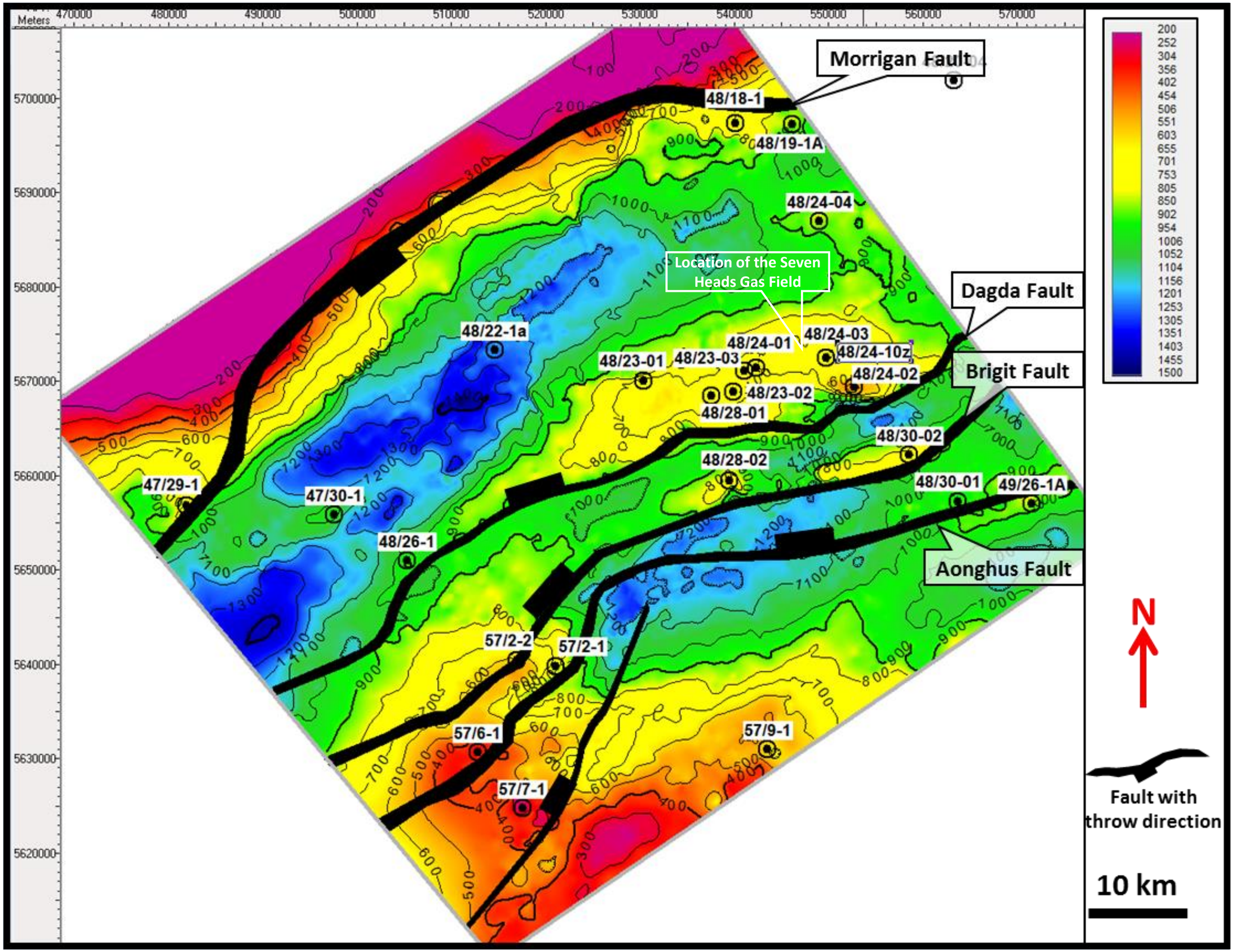

**Appendix F..2**. Depth map of Top Triassic, interpreted within the study area, contour interval 250m (820ft), well control highlighted. Note, the northerly dipping faults are younger and detach within the Triassic.



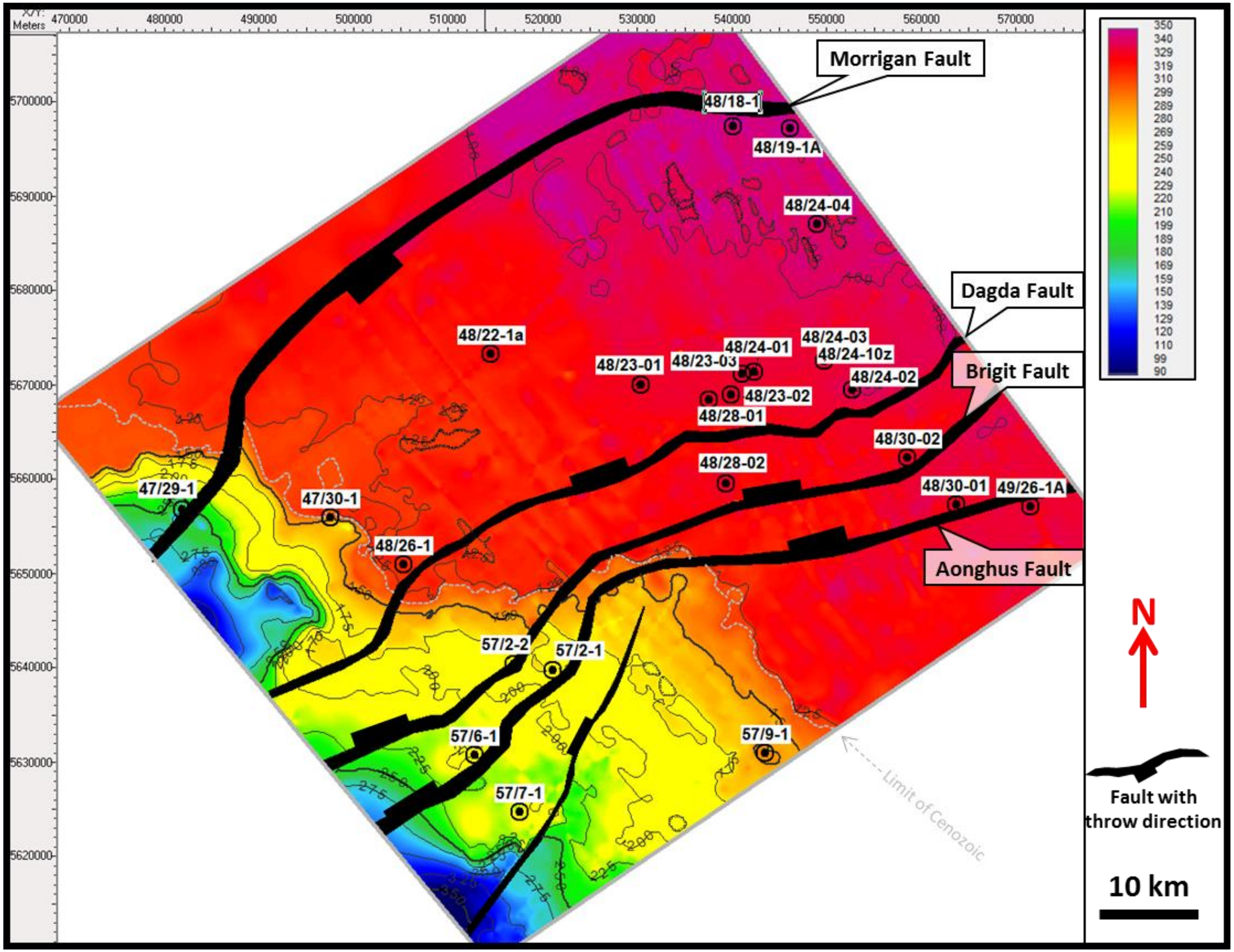

**Appendix F.3**. Depth map of Callovian-Oxfordian unconformity, interpreted within the study area, contour interval 200m (660ft), well control highlighted. The deepest area of 4700m (15,400ft) is located to the NE between the Morrigan and Dagda faults. Local high areas of 2800m (9,200ft) exist to the west adjacent to the Morrigan and Dagda Faults..



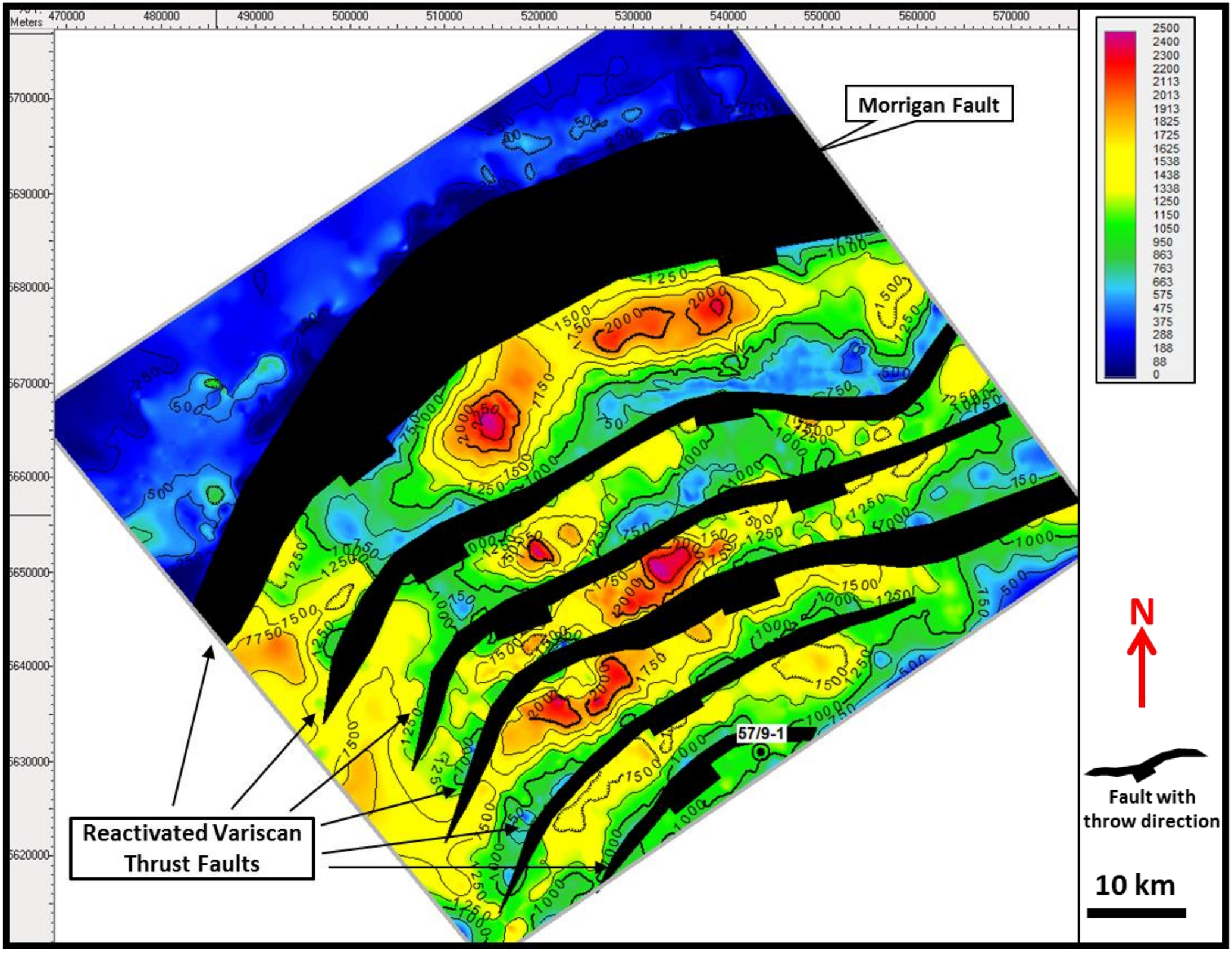

**Appendix F.4**. Depth map of Base Cretaceous interpreted within the study area, contour interval 200m (660ft), well control highlighted. There are two mid-basinal lows of up to 2600m (8500ft). A subtle mid-basinal high is also evident following the 2200m (7200ft) contour against the Dagda fault, in the region of the 48/23-1, 48/24-1 and 48/24-3 wells; this is the Barryroe Oil Field.



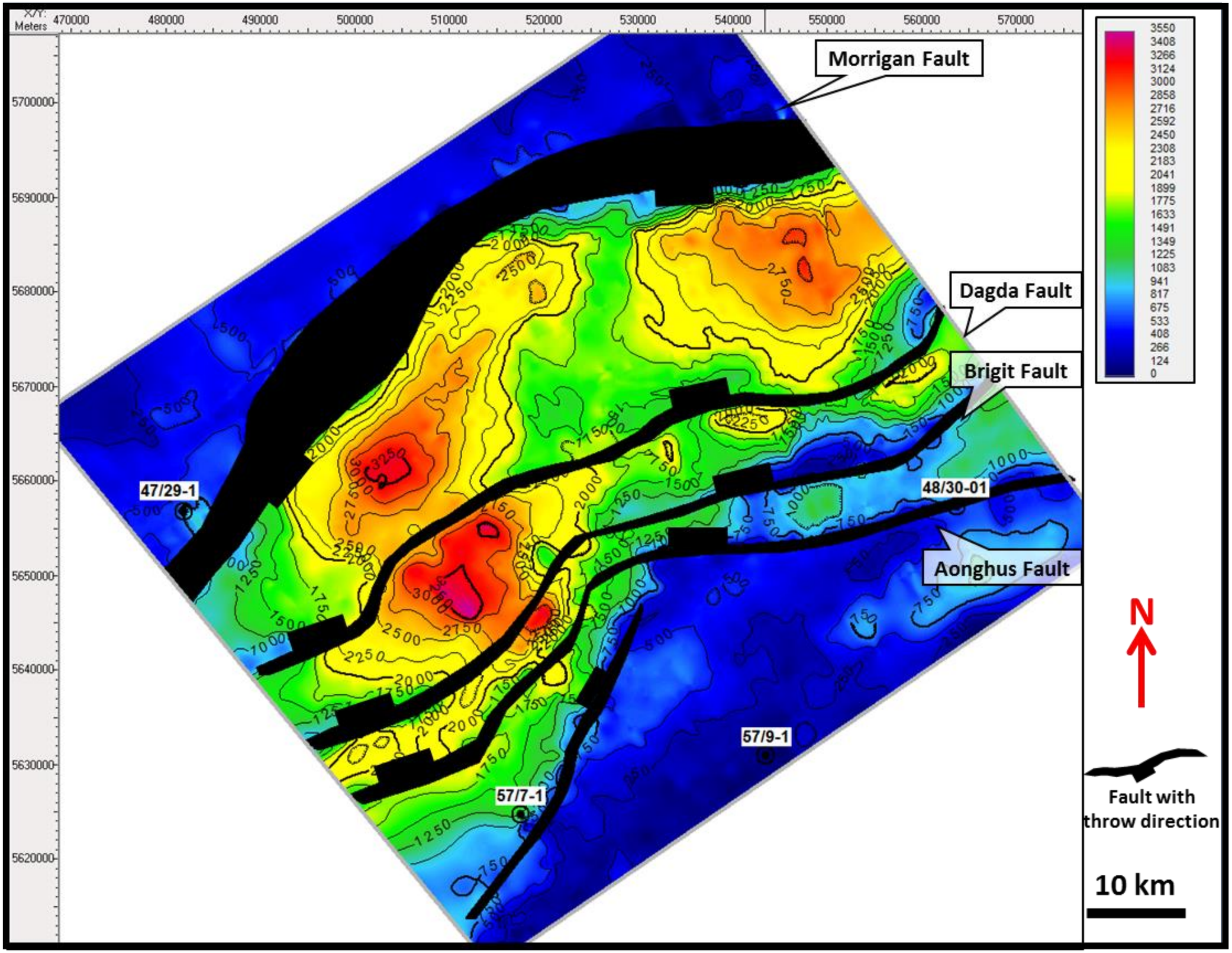

**Appendix F.5**. Depth map of Plenus Marl interpreted within the study area, contour interval 100m (330ft), well control highlighted. Note the mid-basinal highs adjacent to the Dagda and Brigit Faults in the northeast of the study area caused by Cenozoic compressional reactivation.



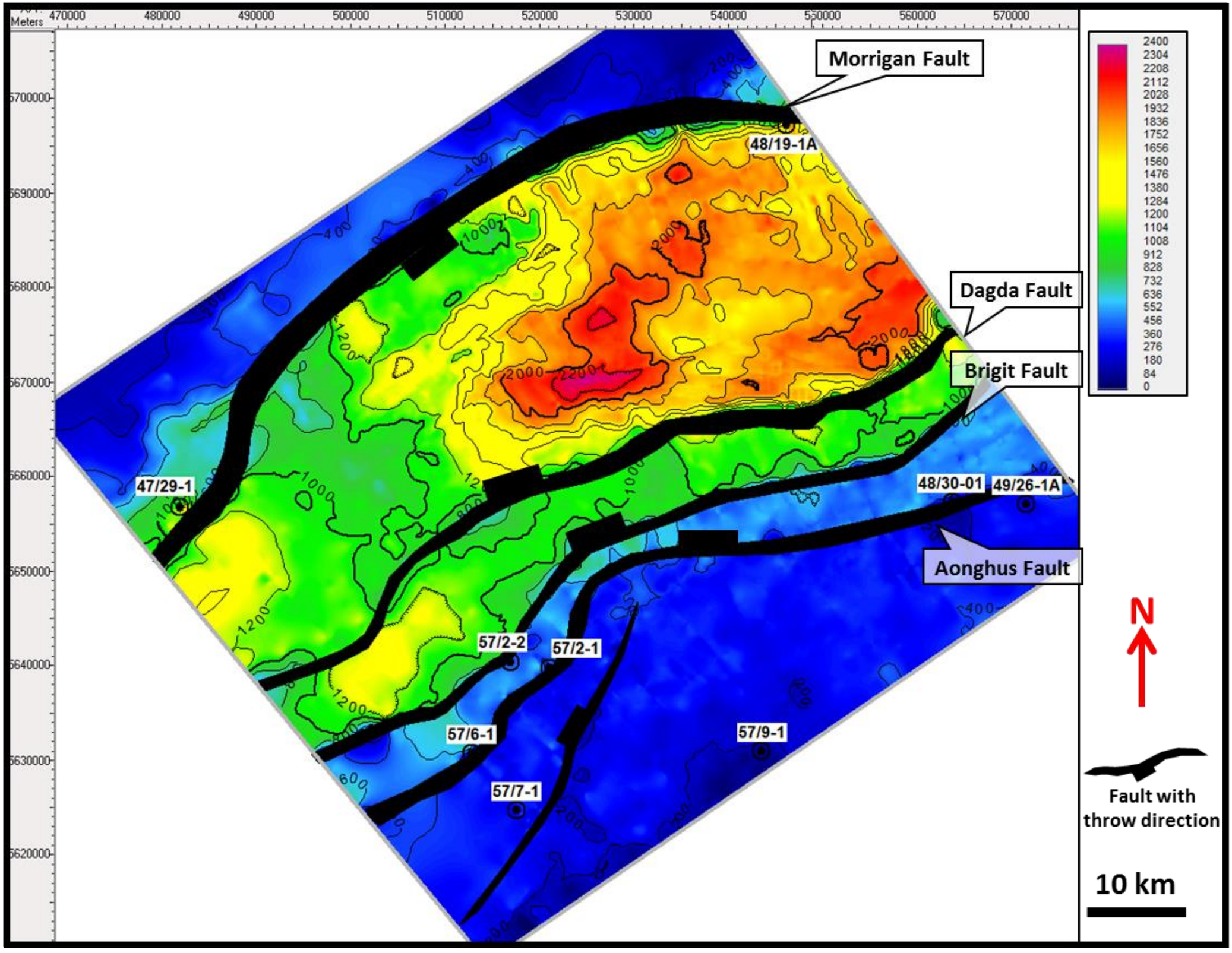

**Appendix F.6**. Depth map of Top Chalk (Seabed/ Base Cenozoic), interpreted within the study area, contour interval 25m (80ft), well control highlighted. A Cenozoic outlier is present to the southwest of the study area, to the northeast of this the Top Chalk outcrops at the seabed. .




**Appendix G.1.** Isopach of the Triassic interpreted within the study area, contour interval 250m (820ft), well control highlighted. NW-SE reactivated Variscan faults accommodate Triassic extension creating 6 half grabens. Sediment thickness also changes along the strike of the half grabens suggesting both fault and paleo-topographic control on sedimentation.




**Appendix G.2.** Isopach of the Lower Jurassic interpreted within the study area, contour interval 250m (820ft), well control highlighted. A western and Eastern isopach thick are readily identified. Note - faults are present day, any apparent thickness changes across northerly dipping faults may be an interpretation error on poor data..




**Appendix G.3.** Isopach of the Upper Jurassic interpreted within the study area, contour interval 200m (660ft), well control highlighted. A primary depocenter is evident to the northeast between the Morrigan and Dagda Faults of up to 2,200m (7,200ft) thick. Syn-sedimentary growth is also evident across the Brigit and Aonghus Faults of 500m (1,650ft) and 300m (1,00ft) respectively.
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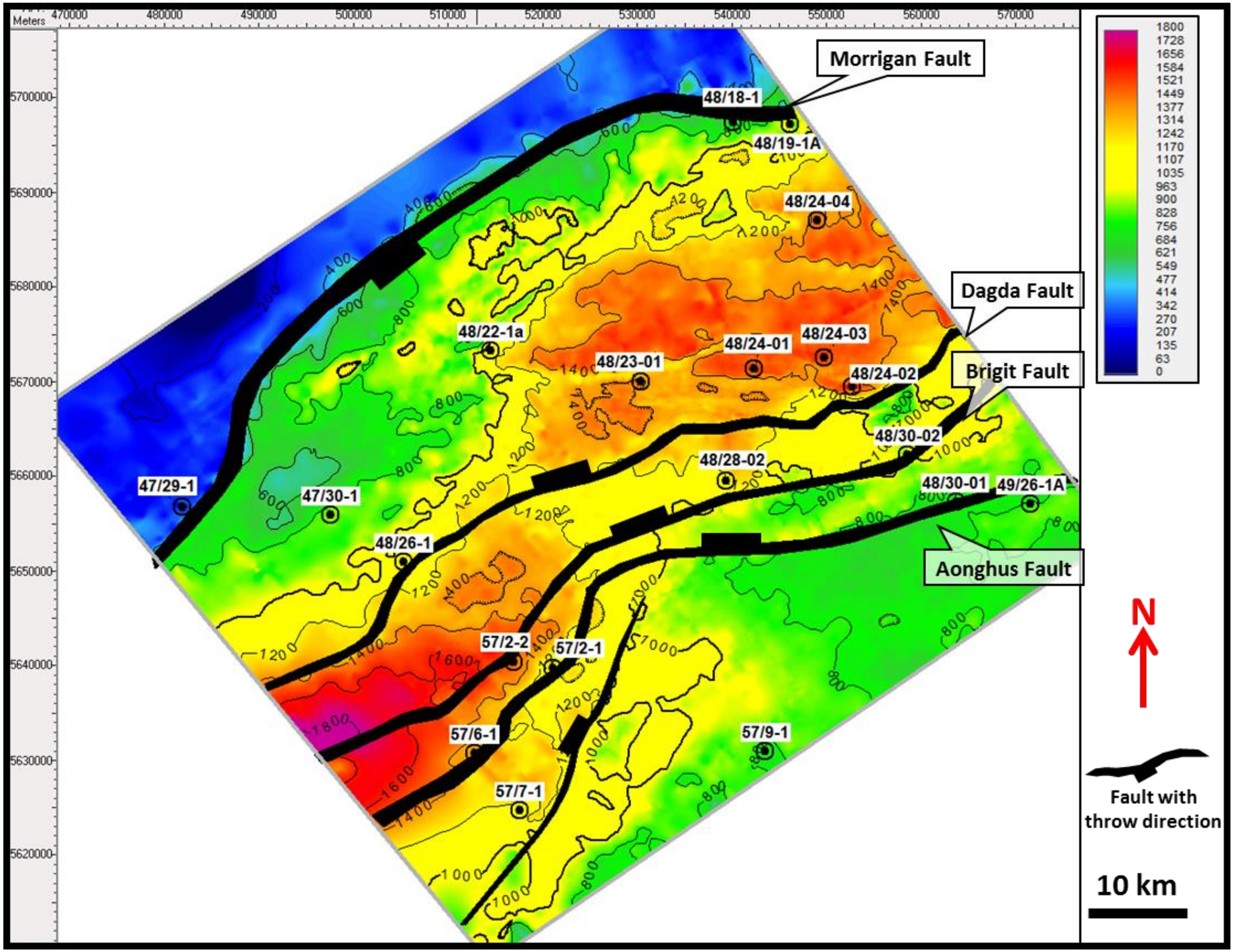
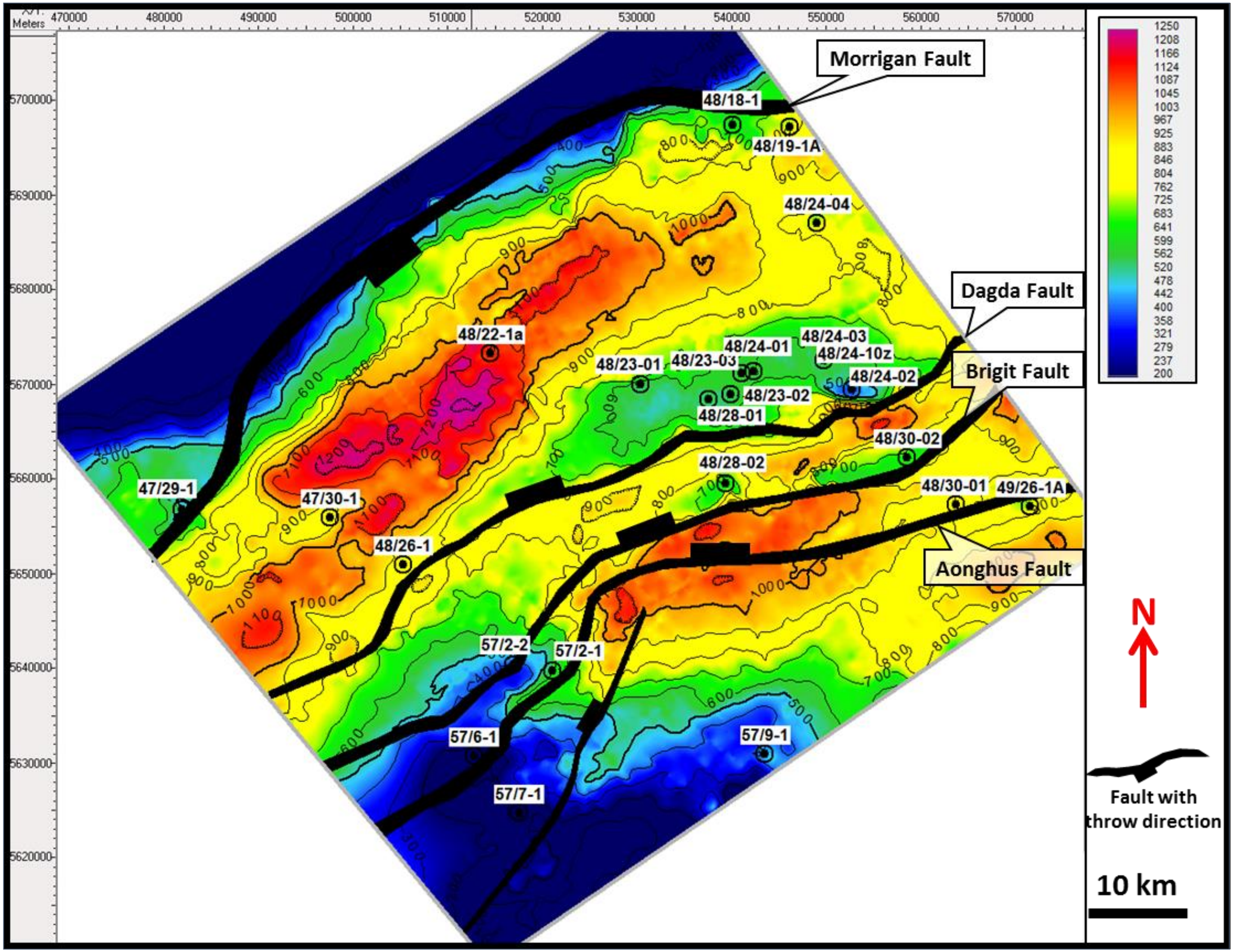
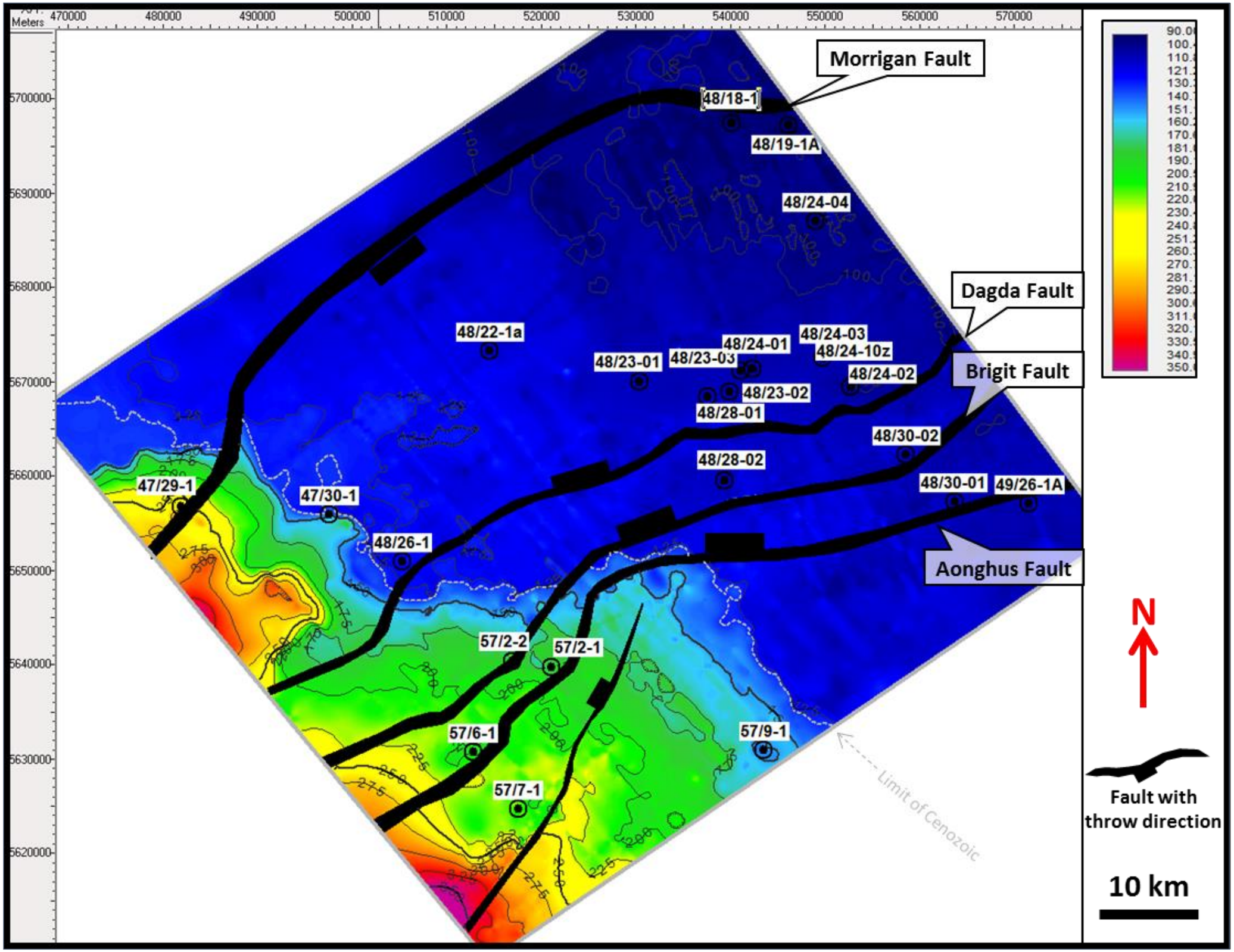



**Appendix G.4.** Isopach of the Lower Cretaceous interpreted within the study area, contour interval 200m (660ft), well control highlighted. Extension is accommodated primarily on the Morrigan, Dagda and Brigit Faults to the northeast and the Morrigan, Brigit and Aonghus Faults to the southwest.




**Appendix G.5.** Isopach of the Upper Cretaceous (Chalk) interpreted within the study area, contour interval 100m (330ft), well control highlighted. Note isopach thins to the northeast against the Dagda and Bridgit faults where Upper Cretaceous was eroded.




**Appendix G.6.** Isopach of Water Column and Cenozoic interpreted within the study area, contour interval 25m (80ft), well control highlighted. The water column is broadly consistent across the area at approximately 100-130m (330-430ft). The Cenozoic section is up to 200m (660ft) thick in the south west of the study area and absent to the north east.