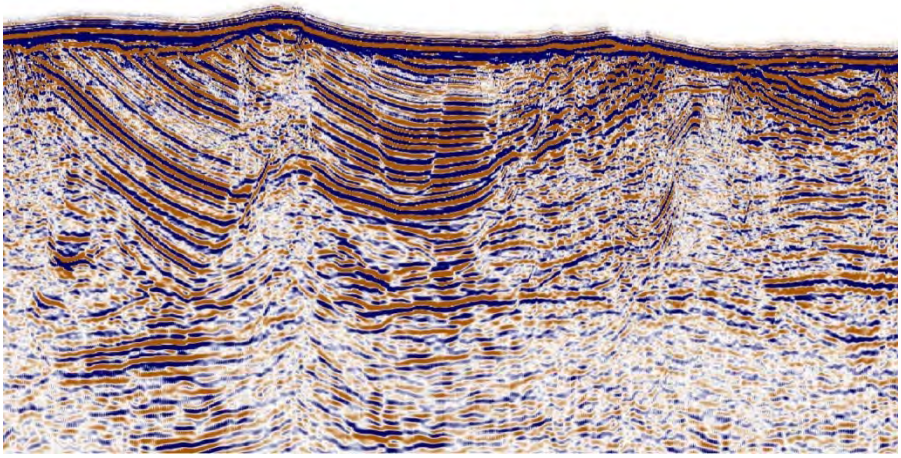
British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

A geological interpretation of the nearshore area between Belfast Lough and Cushendun, Northern Ireland, utilising a newly acquired 2D seismic dataset to explore for salt layers for possible gas storage within man-made caverns.

Marine Geoscience Programme

Commissioned Report CR/10/069

Volume 2



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Geological Survey of Northern Ireland

BRITISH GEOLOGICAL SURVEY

MARINE GEOSCIENCE PROGRAMME

COMMISSIONED REPORT CR/10/069

Keywords

Gas storage, salt caverns, Northern Ireland.

National Grid Reference

SW corner 999999,999999
Centre point 999999,999999
NE corner 999999,999999

Map

Sheet 999, 1:99 000 scale, Map name

Front cover

Detail from newly acquired high resolution 2D seismic profile.

Bibliographical reference

QUINN, M.F., SMITH, K. and BULAT, J. 2010. A geological interpretation of the nearshore area between Belfast Lough and Cushendun, Northern Ireland, utilising a newly acquired 2D seismic dataset to explore for salt layers for possible gas storage within man-made caverns.. British *Geological Survey Commissioned Report*, CR/10/069. 70pp.

A geological interpretation of the nearshore area between Belfast Lough and Cushendun, Northern Ireland, utilising a newly acquired 2D seismic dataset to explore for salt layers for possible gas storage within man-made caverns.

MF Quinn, K Smith and J Bulat

Contributors/editors

H Johnson and D Reay

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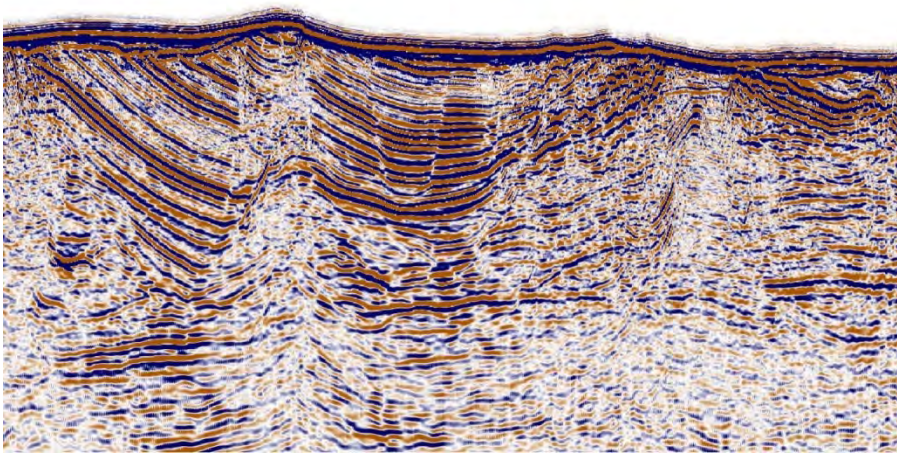

British Geological Survey, Edinburgh 2010

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British Geological Survey offices

BGS Central Enquiries Desk

Tel 0115 936 3143 Fax 0115 936 3276

email enquiries@bgs.ac.uk

Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG

Tel 0115 936 3241 Fax 0115 936 3488

email sales@bgs.ac.uk

Murchison House, West Mains Road, Edinburgh EH9 3LA

Tel 0131 667 1000 Fax 0131 668 2683

email scotsales@bgs.ac.uk

Natural History Museum, Cromwell Road, London SW7 5BD

Tel 020 7589 4090 Fax 020 7584 8270

Tel 020 7942 5344/45 email bgslondon@bgs.ac.uk

Columbus House, Greenmeadow Springs, Tongwynlais, Cardiff CF15 7NE

Tel 029 2052 1962 Fax 029 2052 1963

Maclean Building, Crowmarsh Gifford, Wallingford OX10 8BB

Tel 01491 838800 Fax 01491 692345

Geological Survey of Northern Ireland, Colby House, Stranmillis Court, Belfast BT9 5BF

Tel 028 9038 8462 Fax 028 9038 8461

www.bgs.ac.uk/gsni/

Parent Body

Natural Environment Research Council, Polaris House, North Star Avenue, Swindon SN2 1EU

Tel 01793 411500 Fax 01793 411501

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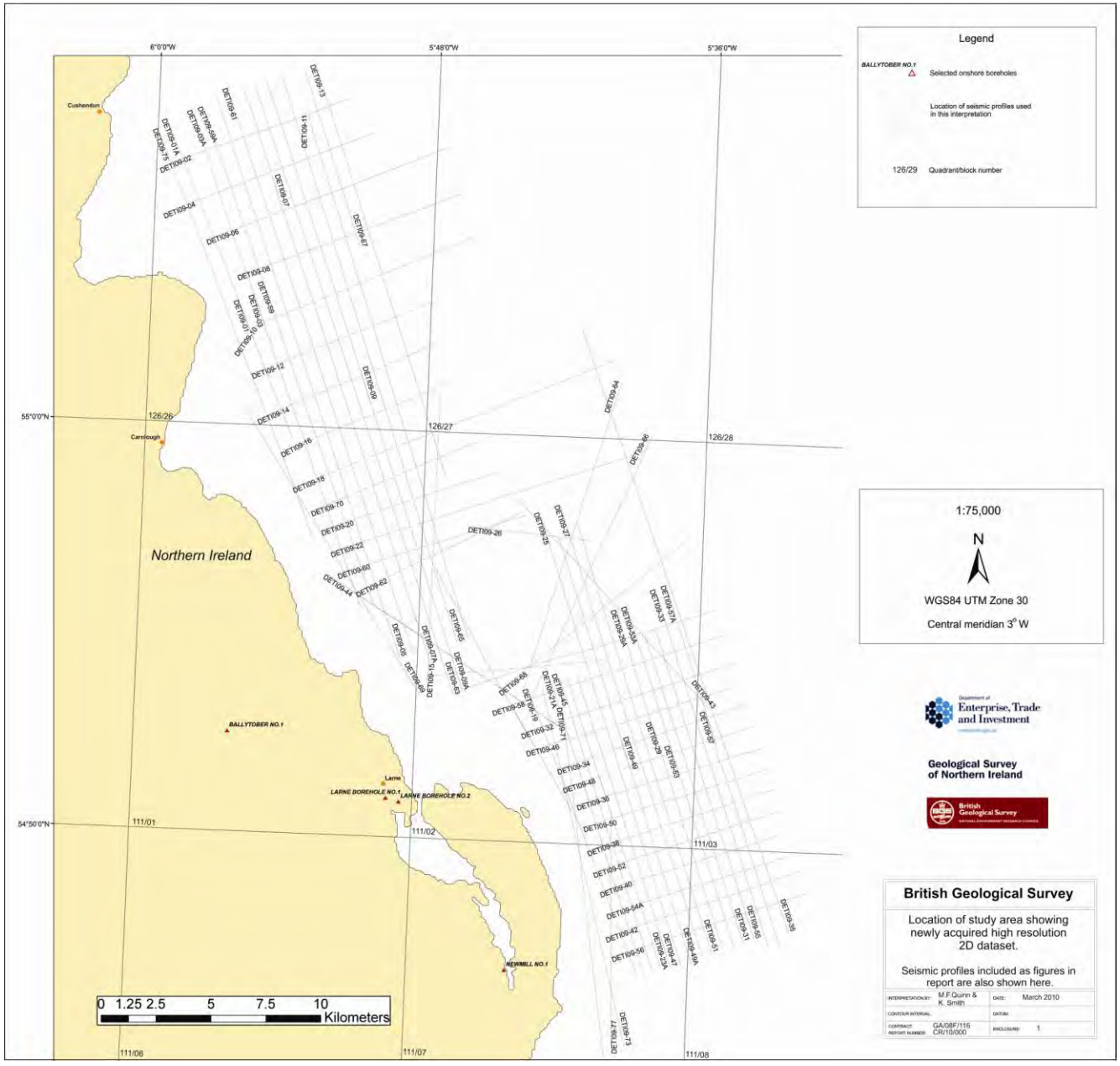
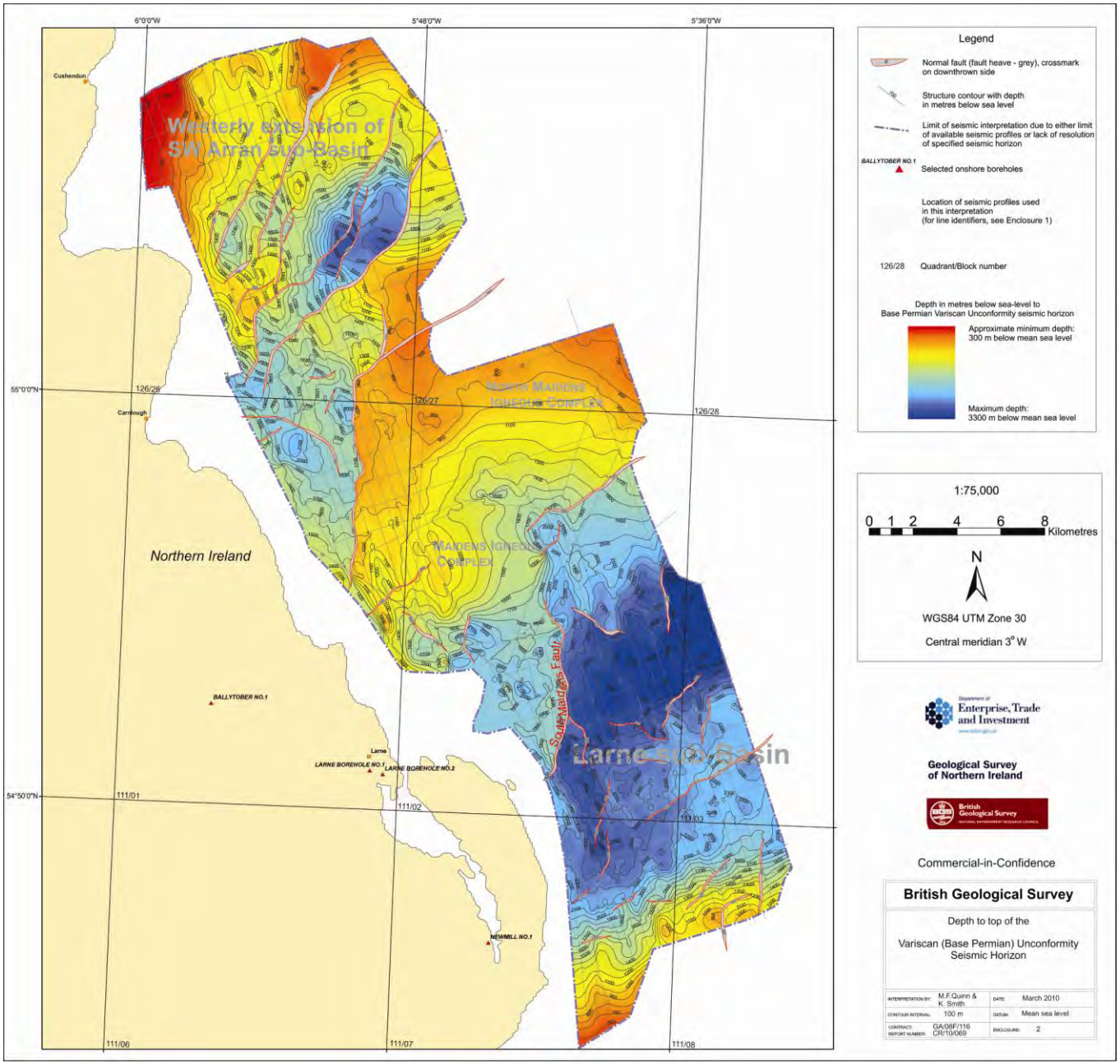
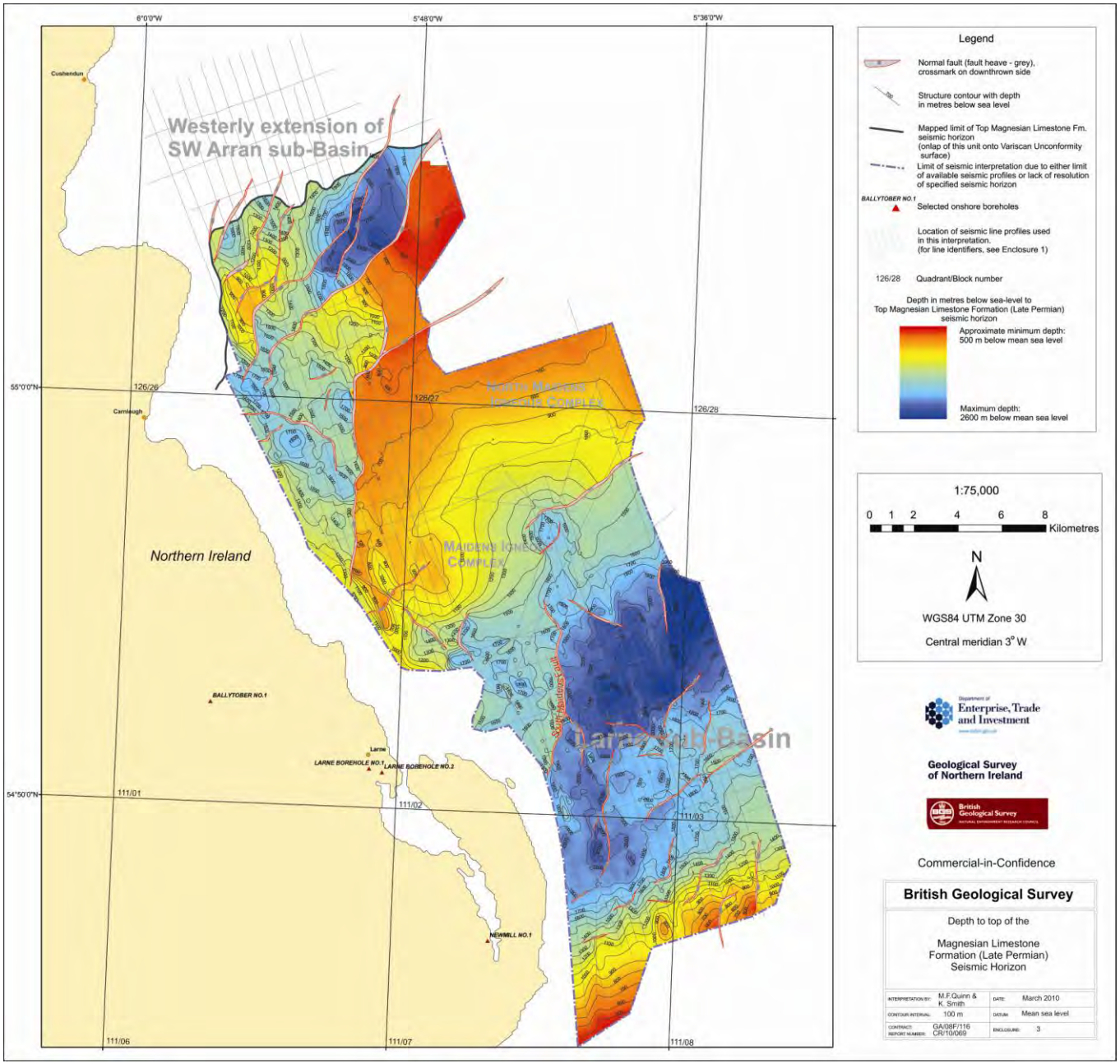


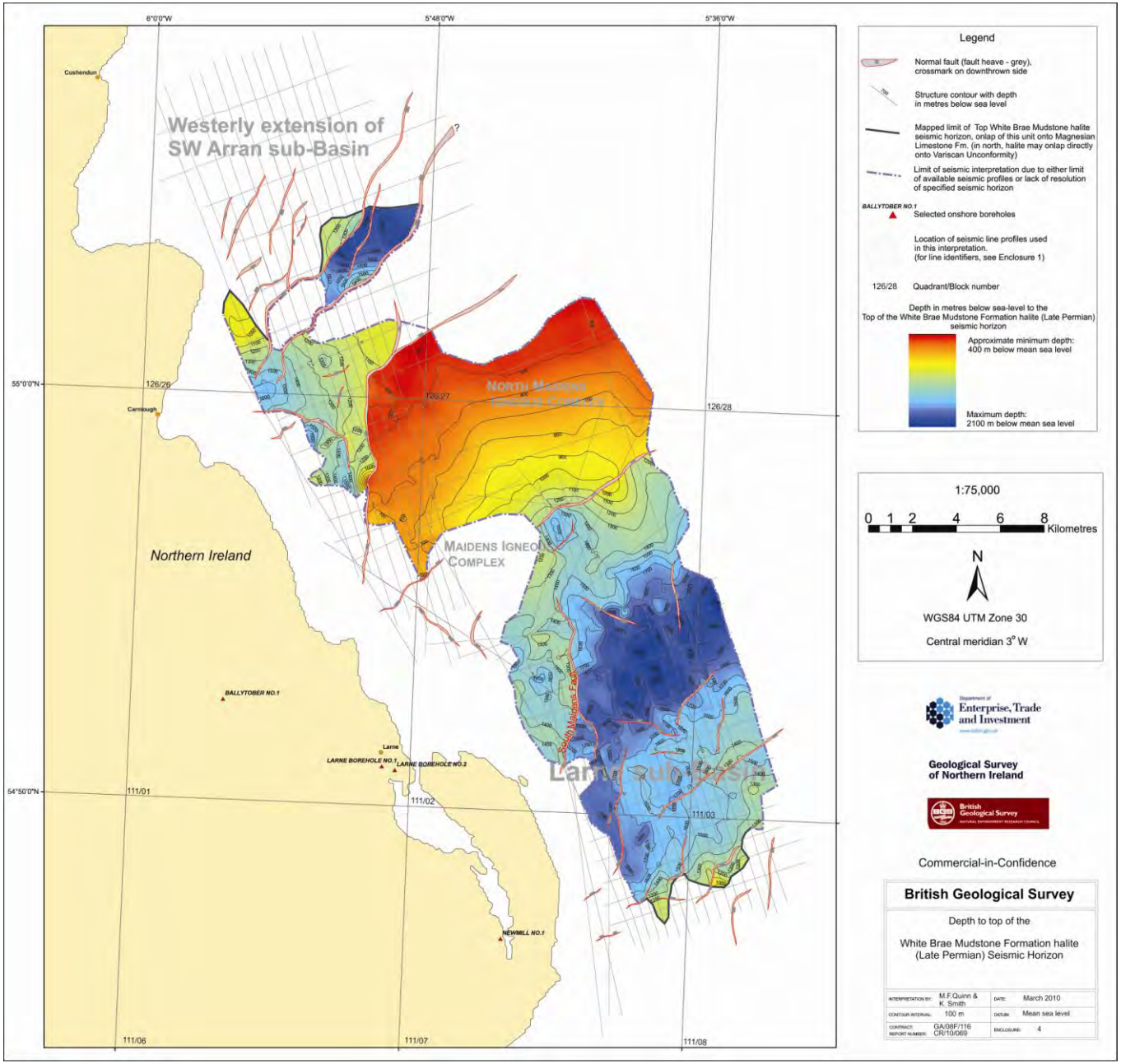
Enclosure 1. Location of study area showing new 2D dataset. Onshore boreholes are shown as red triangles.



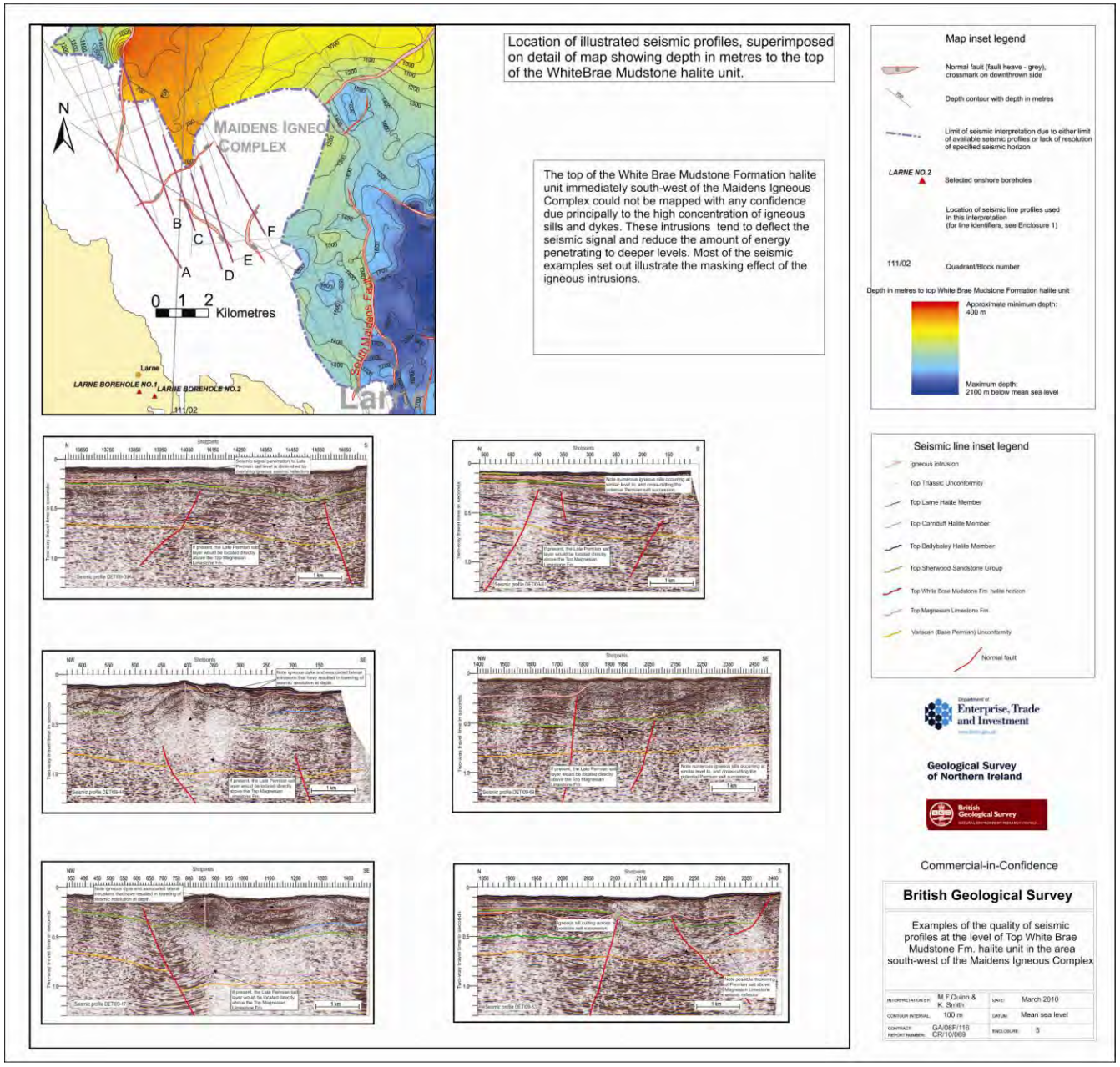
Enclosure 2. Depth to Base Permian Variscan Unconformity in metres below mean sea level.



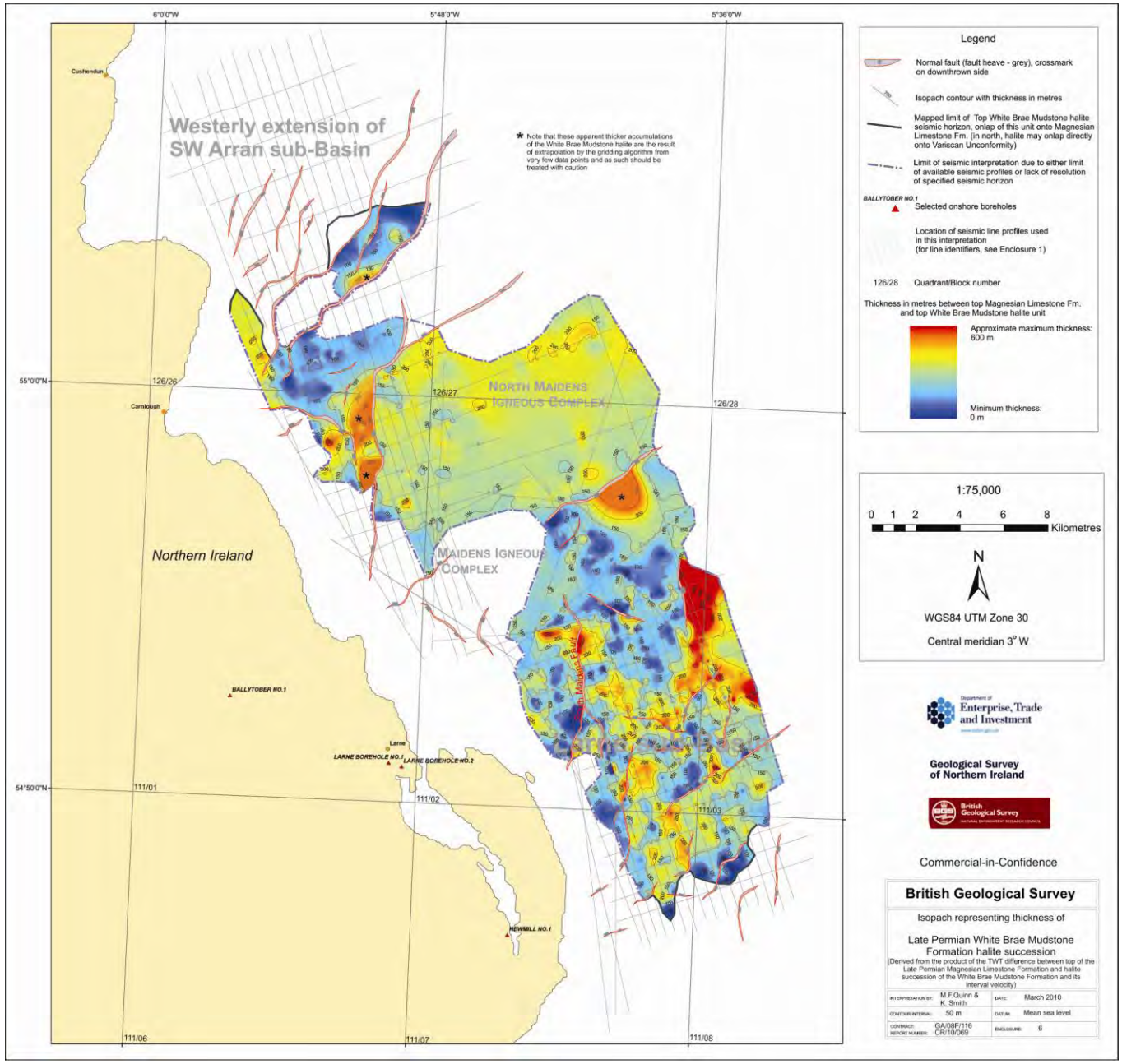
Enclosure 3. Depth to Top Magnesian Limestone Formation in metres below mean sea level.



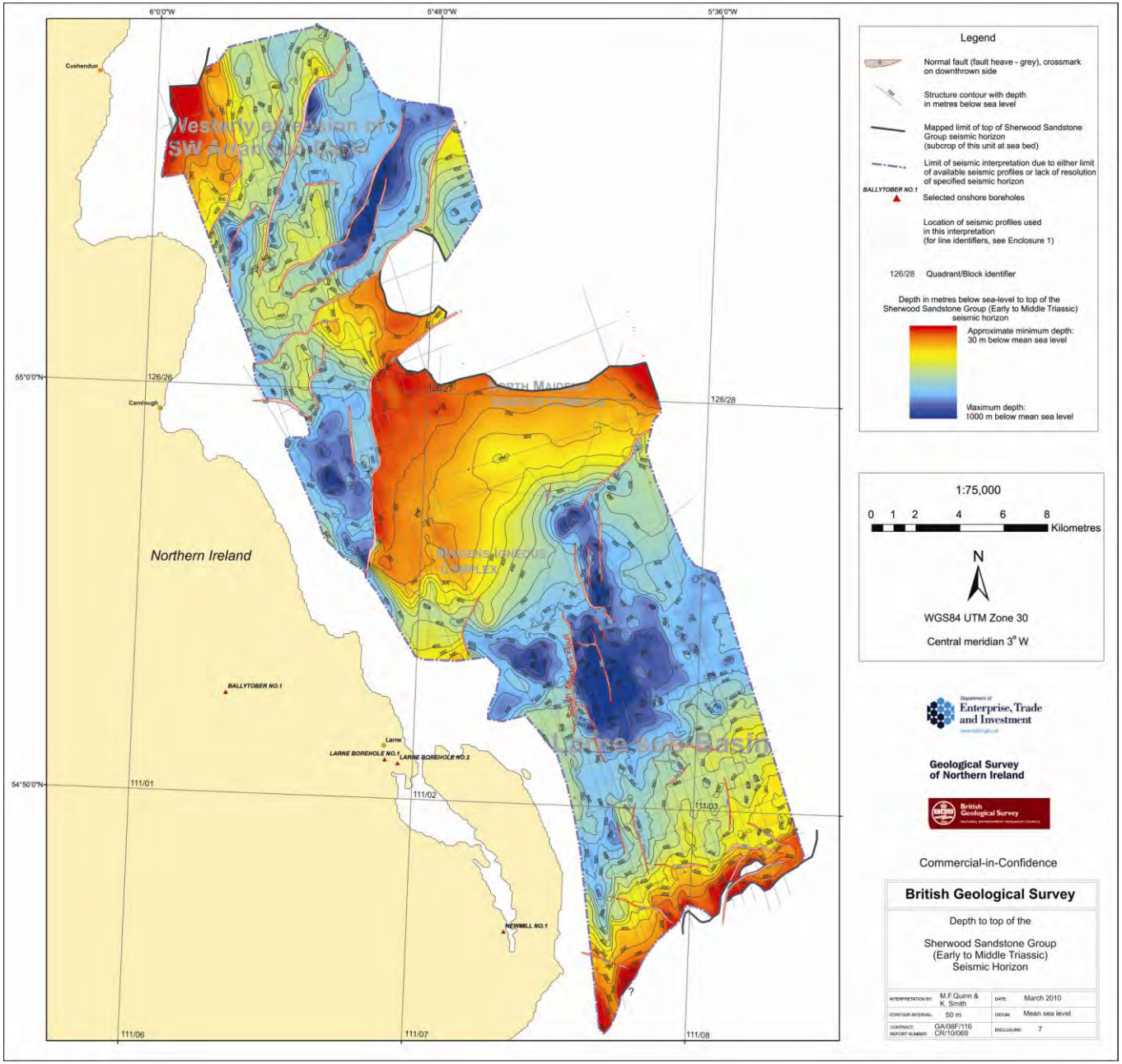
Enclosure 4. Depth to White Brae Mudstone Formation halite in metres below mean sea level.



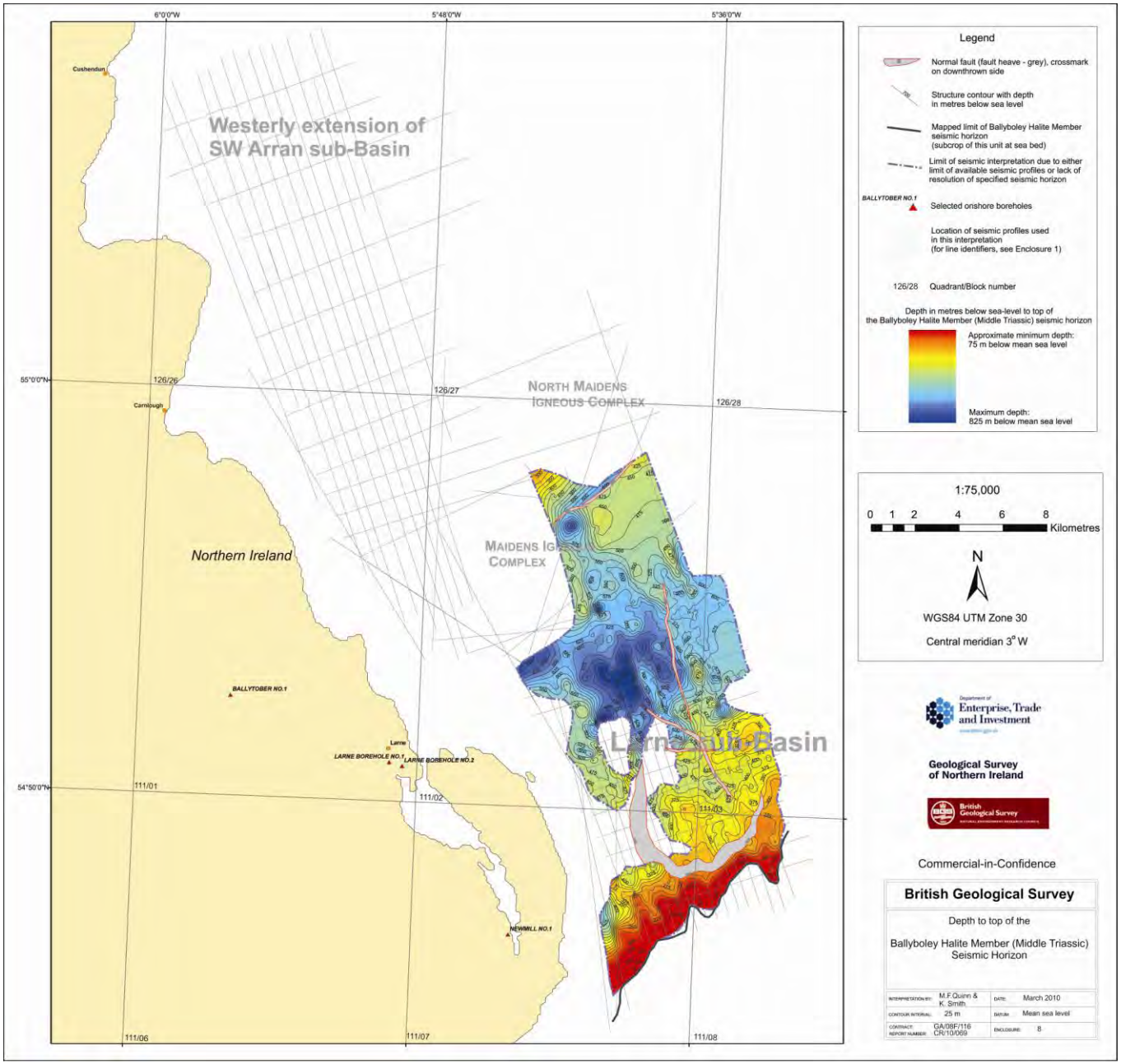
Enclosure 5. Examples of the quality of seismic profiles at the level of Top White Brae Mudstone Fm. halite unit in the area south-west of the Maidens Igneous Complex.



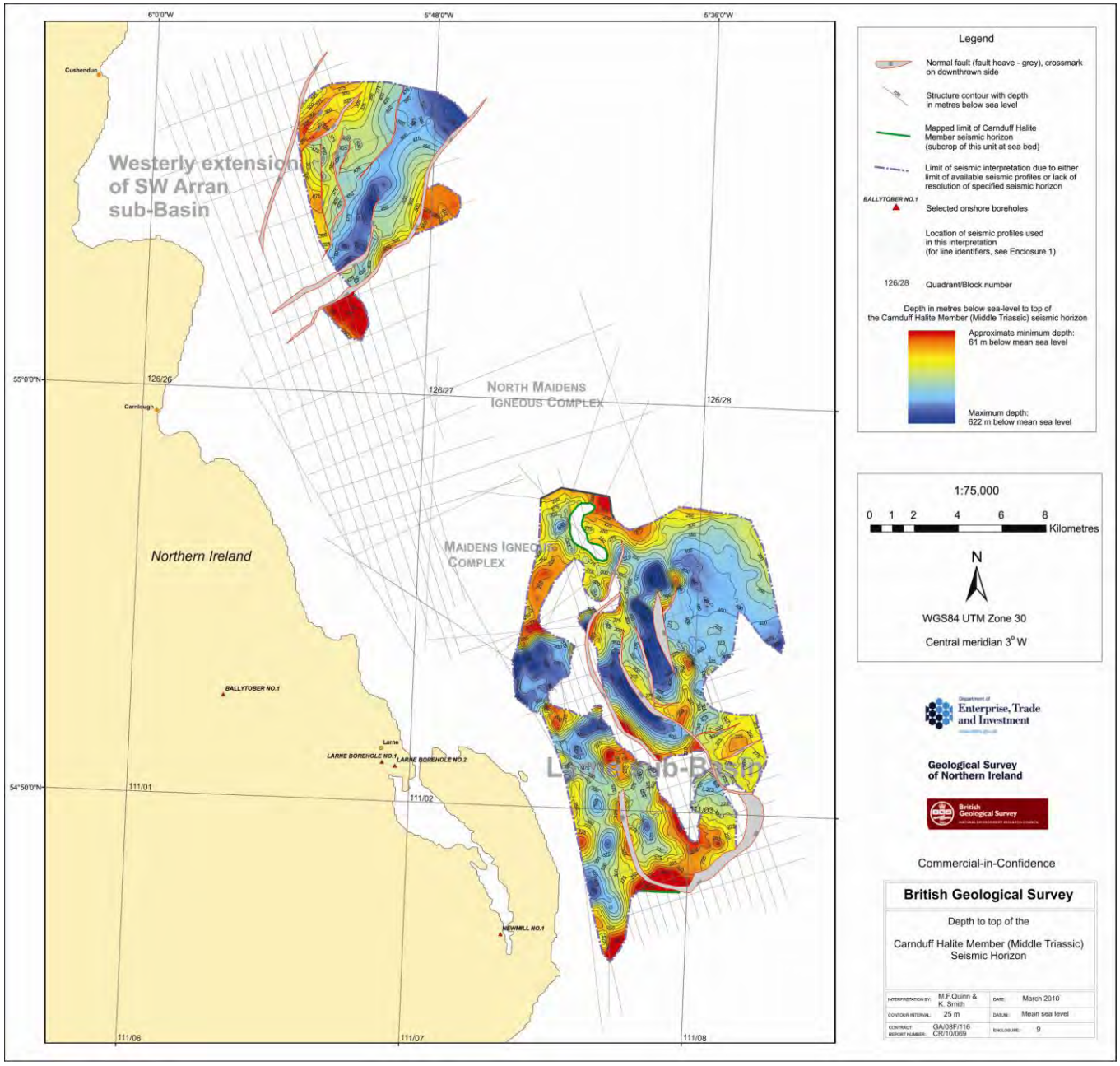
Enclosure 6. Thickness of White Brae Mudstone Formation halite in metres.



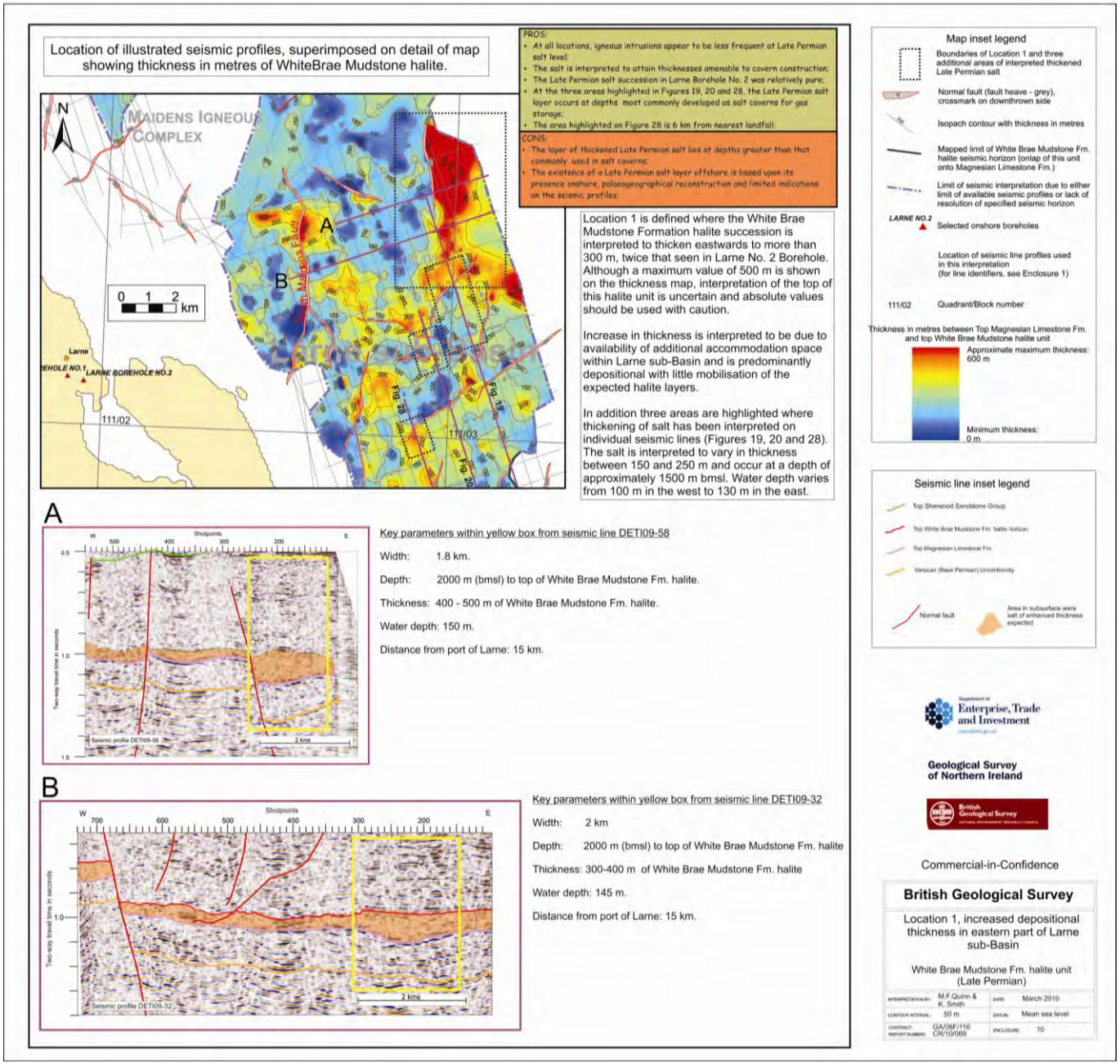
Enclosure 7. Depth to top Sherwood Sandstone Group in metres below mean sea level.



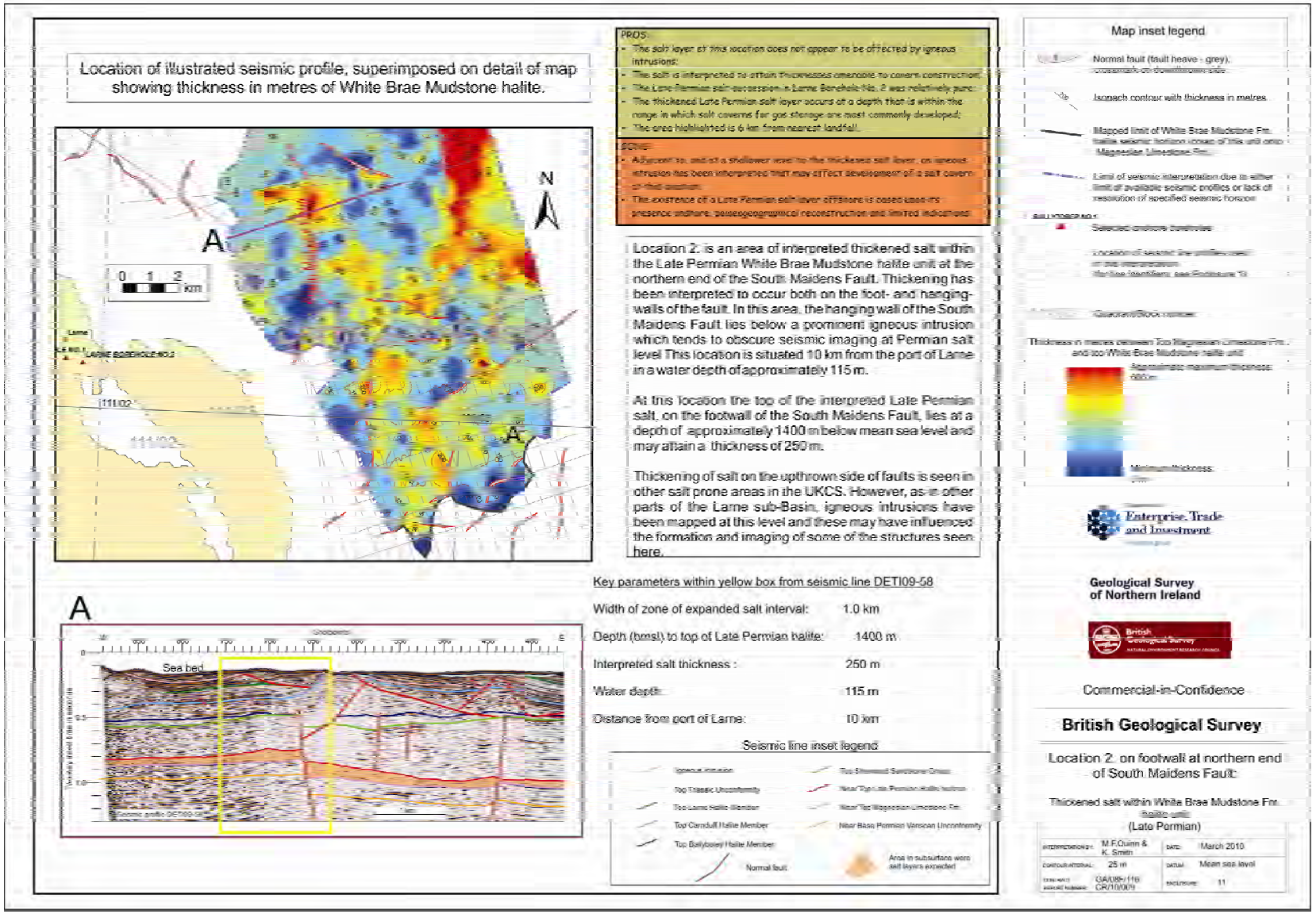
Enclosure 8. Depth to top Ballyboley Halite Member in metres below mean sea level.



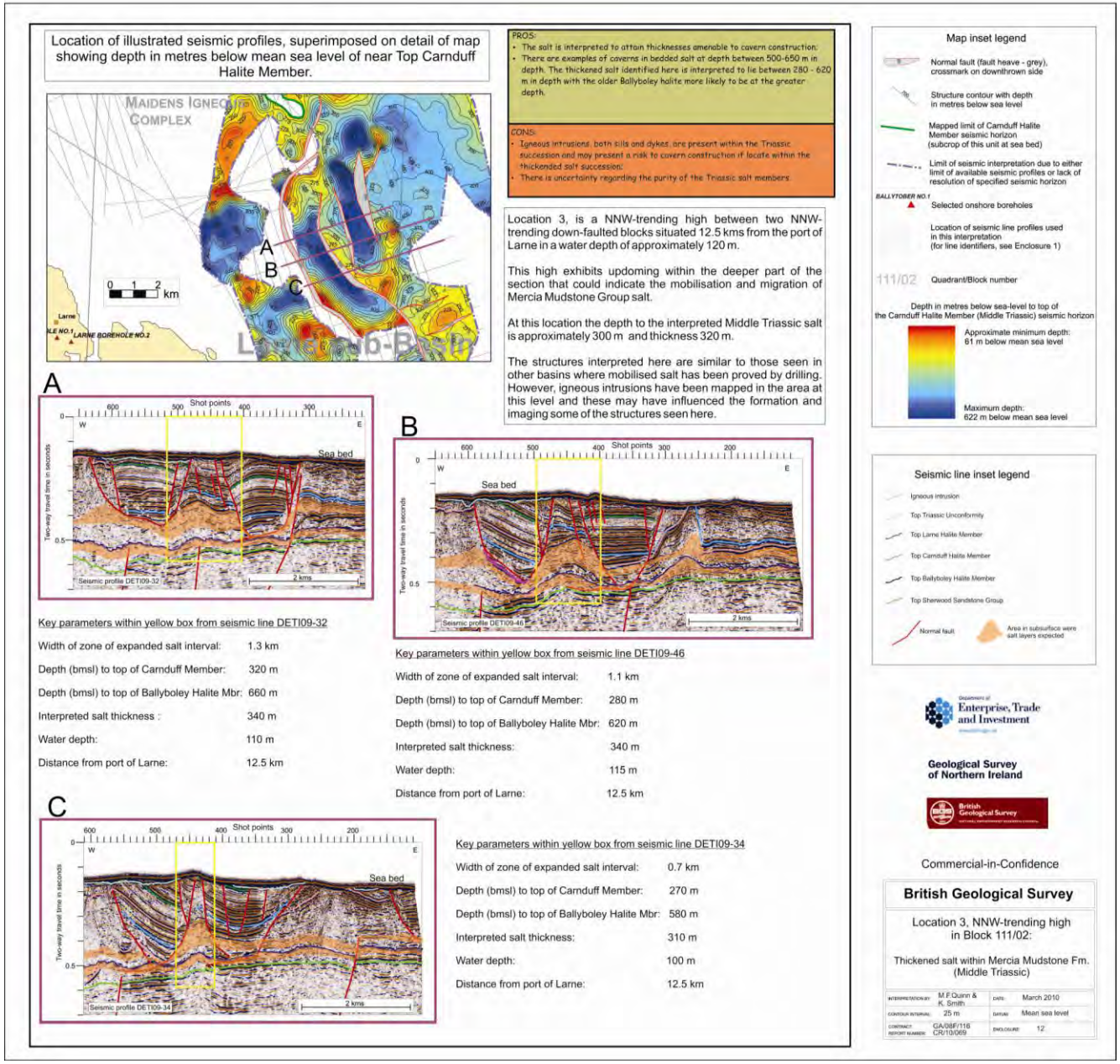
Enclosure 9. Depth to Carnduff Halite Member in metres below mean sea level.



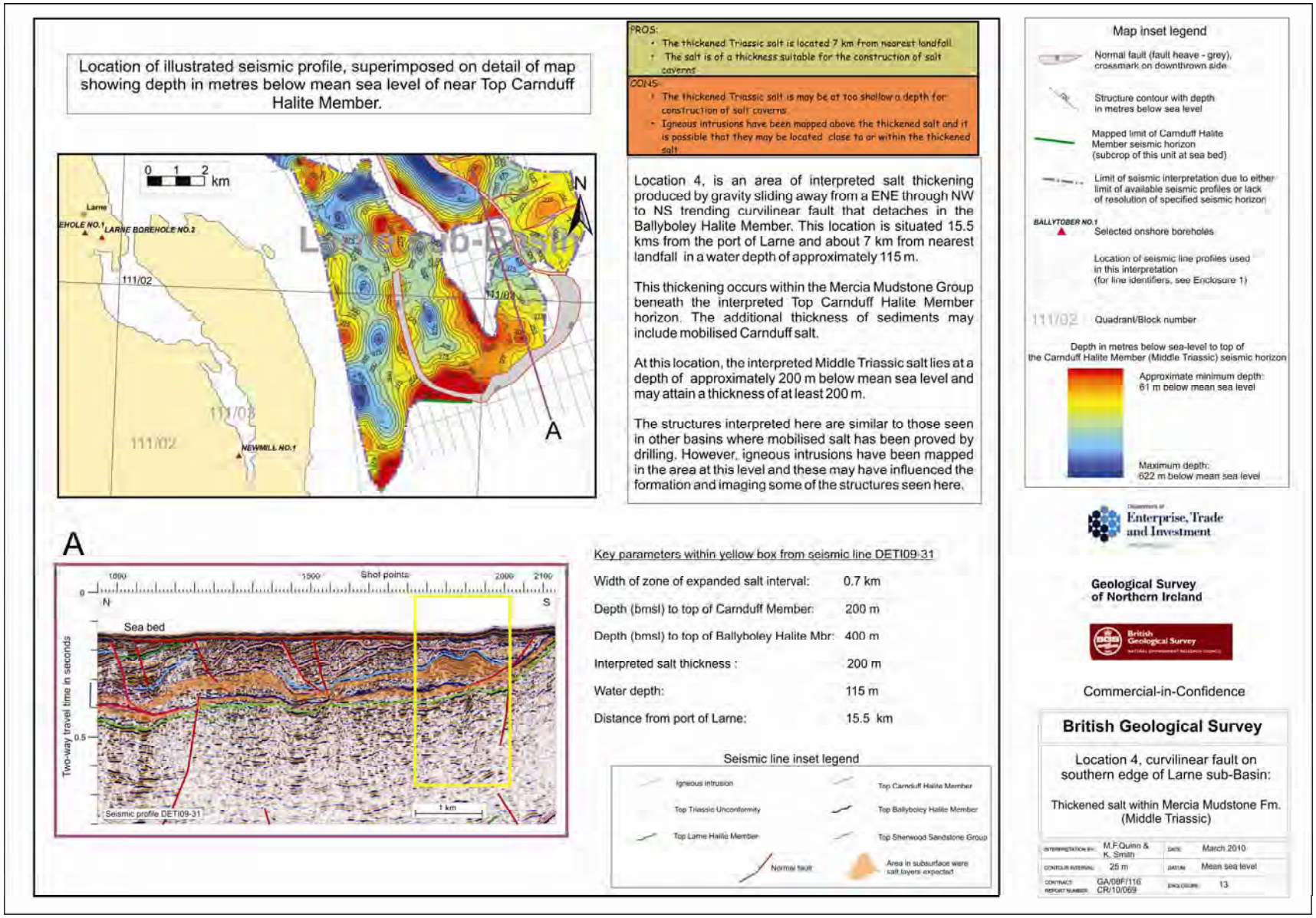
Enclosure 10. Location 1, increased depositional thickness in eastern part of Larne sub-basin. White Brae Mudstone Fm. halite unit.



Enclosure 11. Location 2, on footwall at northern end of South Maidens Fault: Thickened salt within White Brae Mudstone Fm. halite uni



Enclosure 12. Location 3, NNW-trending high in Block 111/02: Thickened salt within Mercia Mudstone Fm.



Enclosure 13. Location 4, curvilinear fault on southern edge of Larne sub-basin: Thickened salt within Mercia Mudstone Fm.