

RELINQUISHMENT REPORT

**LICENCE P.2039
BLOCK 30/14B
UKCS**

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1. LICENCE INFORMATION

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Licence Number: P.2039
Licence Round: 27th Round
Licence Type: Traditional
Block Number: 30/14b
Start Date: 1st January 2013
Drill or Drop: 1st January 2017

Equity Holdings:

On award:

Maersk Oil North Sea UK Limited 50% (operator)
GDF Suez E&P UK Limited (50%)

On relinquishment:

Maersk Oil North Sea UK Limited 100% (operator)

Maersk Oil confirms that DECC / OGA is free to publish this report and that all 3rd party ownership rights have been considered and appropriately cleared for publication purposes.

2. LICENCE SYNOPSIS

Licence P.2039 is being relinquished having reached the end of the drill or drop period on 1st January 2017 (4 years into 6 year initial licence term).

Block 30/14b (Figure 2.0) was awarded to Maersk Oil North Sea UK Ltd (operator, 50%) and GDF Suez E&P UK Ltd (50%) on 1st January 2013.

After company name change, ENGIE E&P UK Ltd withdrew from the licence in May 2016, with Maersk Oil becoming operator with 100% equity in the licence.

Firm commitment on the P.2039 licence was:

- Reprocess a minimum of 550km² of Long Offset 3D seismic data through to Pre Stack Depth Migration

Drill or Drop:

- The Licensee shall either:
- (a) drill one well to 4724m or 30m into the Top Joanne Sandstone, whichever is shallower, or:
- elect to allow the licence to automatically cease and determine.

The licence application was submitted as part of the 27th licensing round with the purpose of evaluating the cross border Edinburgh prospect. The Edinburgh prospect straddles the UK/Norwegian boundary and 4 individual licence blocks. 30/14b hosts the southern extent of the Edinburgh structure.

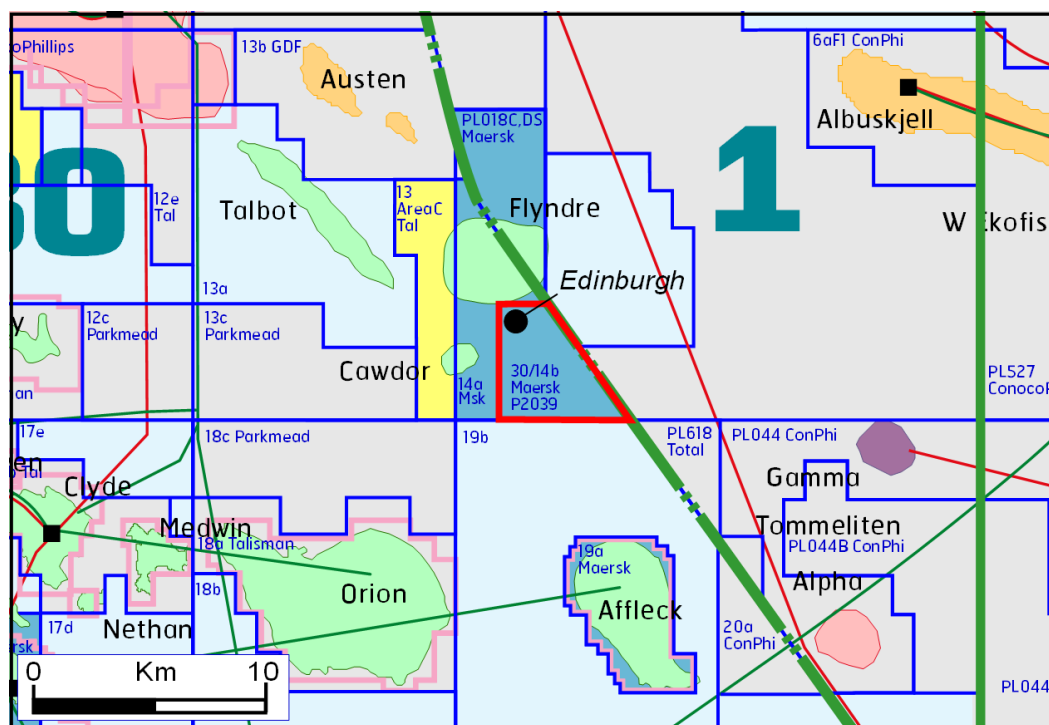


Figure 2.0: Location Map – Block 30/14b.

3. WORK PROGRAMME SUMMARY

The firm work programme for block 30/14b was completed during the first 2 years of the initial term and was:

- Reprocessing of 550km² of 3D seismic data through to PSDM

Seismic reprocessing was carried out by CGG between March 2013 and June 2014. Although the commitment was to reprocess only 500km² of 3D seismic data, Maersk and GDF committed to reprocessing a final fully migrated output area of 605km² to cover key wells. A total area of 1053km² went into the total full fold area corresponding to the final migration output.

The main target area of interest is located between 3.5-5s TWT. The main objective of the processing was to create a high resolution 3D Volume with accurate imaging of the target structures, in particular the fault or salt trapping areas, to improve the quality of the hanging walls and the imaging of the diapir flanks and the pre-BCU events (Figure 3.0).

The main processing challenges were the attenuation of multiple energy – short and long period multiples and the TTI depth model building. A combination of Shallow Water Demultiple, Shot Tau-P Deconvolution and SRME were used to attenuate multiple energy.

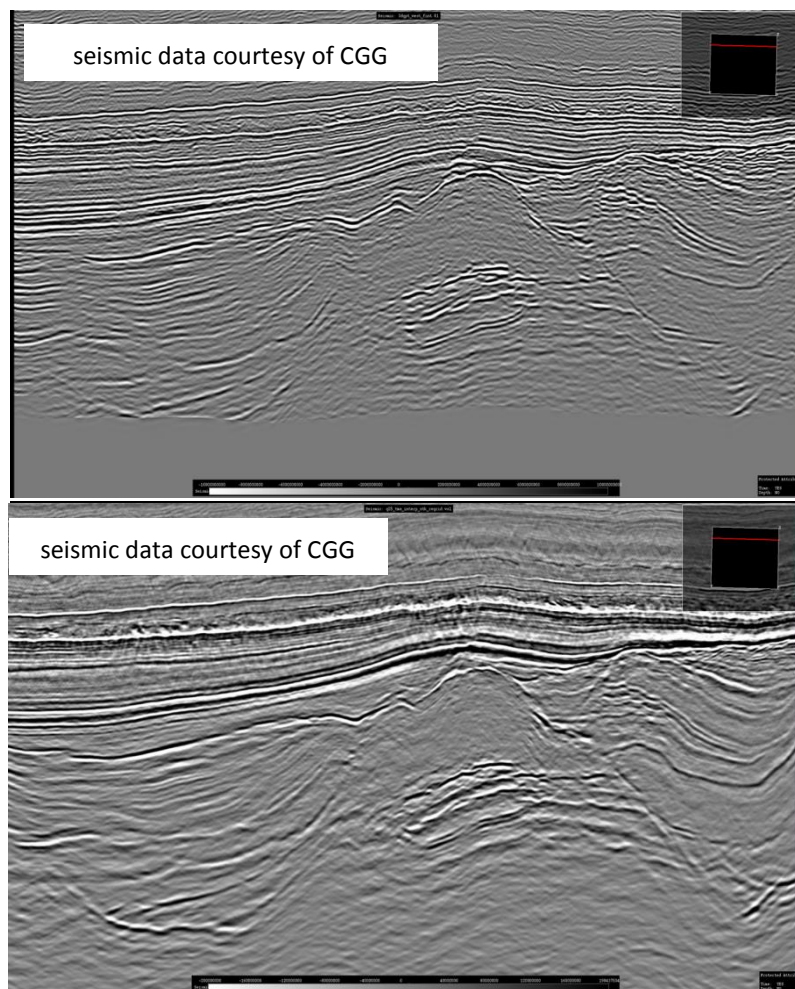


Figure 3.0: Vintage 2010 PSDM and Final 2014 PSDM, highlighting significant improvements in the structural elements of the salt and interface with Jurassic and Triassic stratigraphy.

4. DATABASE

4.1 Well Database

Maersk Oil has used a well database that includes all released wells in the Central North Sea (Common Data Access) and those from Norway (Norwegian Petroleum Directorate).

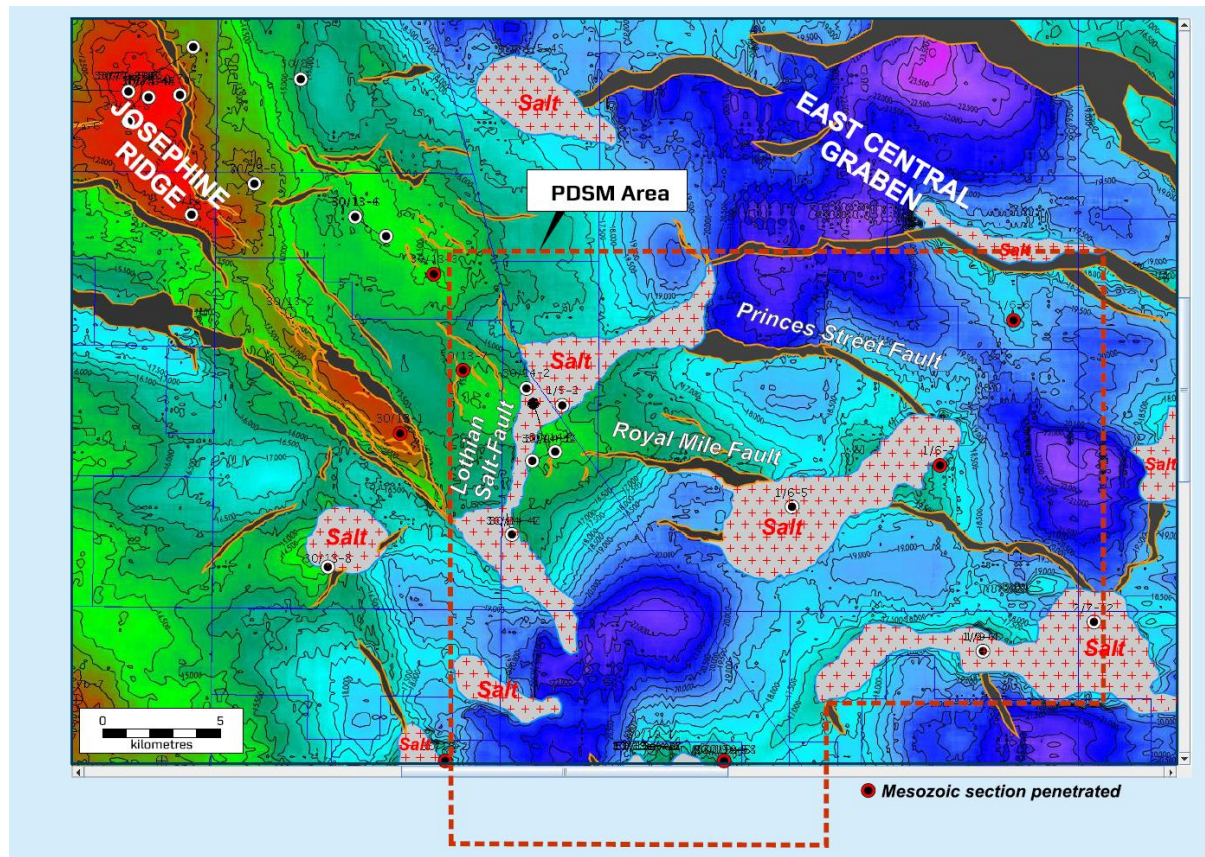
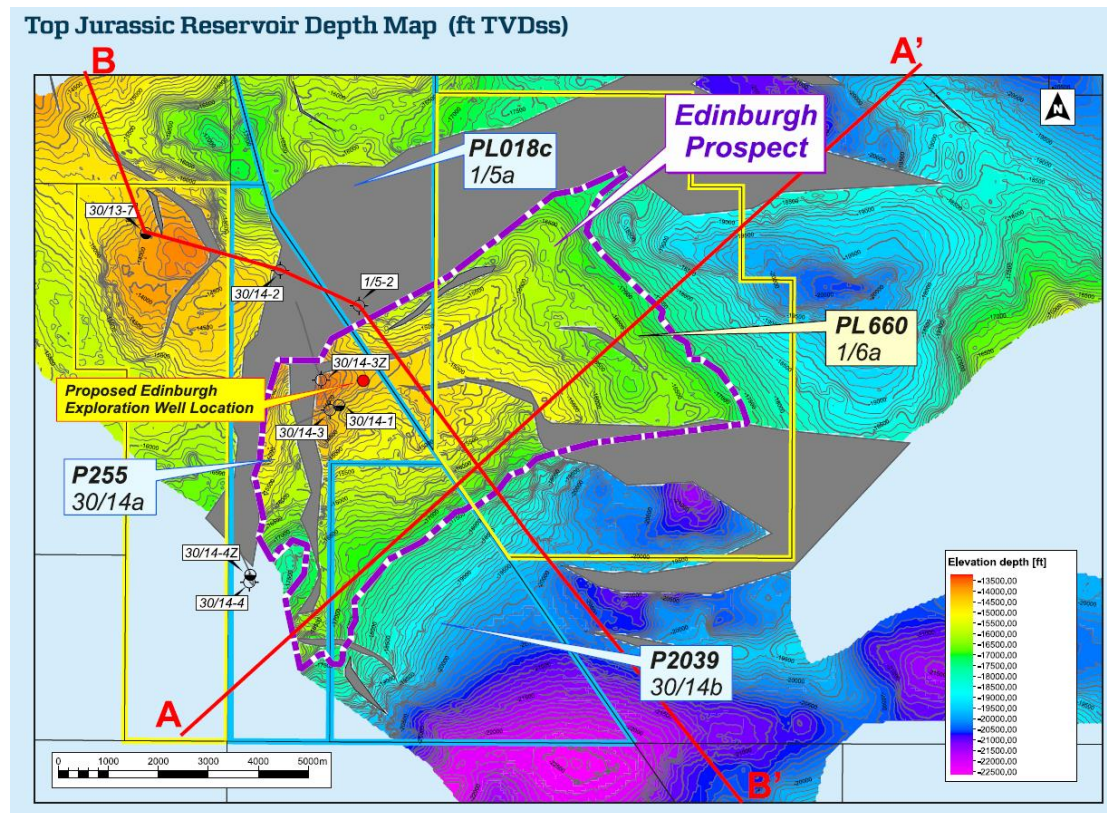


Figure 4.0. Map of the BCU time structure showing structural framework and key well and seismic database.

4.2 Seismic Database

Block 30/14b is covered by the 2014 reprocessing of the CGG Cornerstone 6km offset, 3D seismic reflection data. Maersk Oil North Sea UK Limited has licensed 8,540sq km of the latest reprocessed CGG Cornerstone 6km offset, 3D seismic reflection data. This covers most of the UK Central Graben and a significant proportion of the Norwegian sector of the East Central Graben adjacent to Block 30/14b. Both the smaller scale PreSDM and the 2010 more regional dataset were used in the most recent evaluation. The outline of Edinburgh PSDM project is shown in Figure 4.0.

geological models largely relying on how the stratigraphy is set up within the basin. Although surrounded by a number of wells, there is still no direct and simple well tie into the structure.



Figure

5.1. Top Jurassic Reservoir depth map, Edinburgh prospect

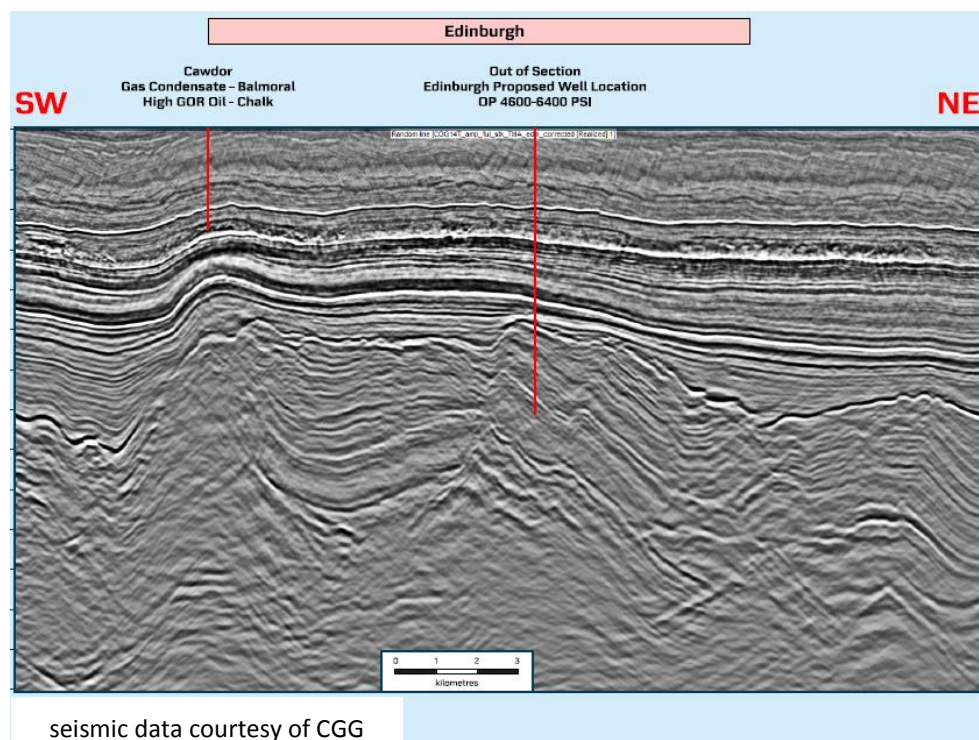


Figure 5.2. Seismic line A-A' across Edinburgh prospect, data courtesy of CGG.

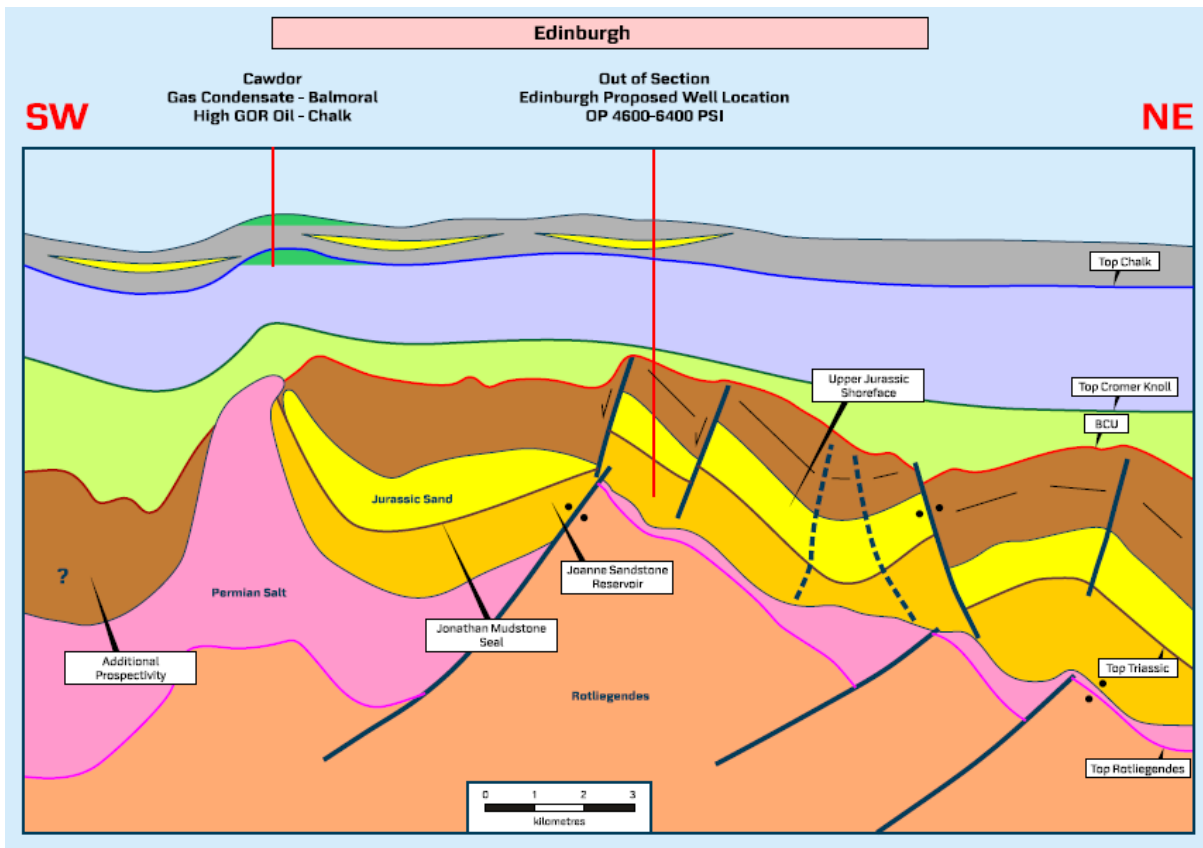


Figure 5.3 Geoseismic line A-A' across Edinburgh prospect.

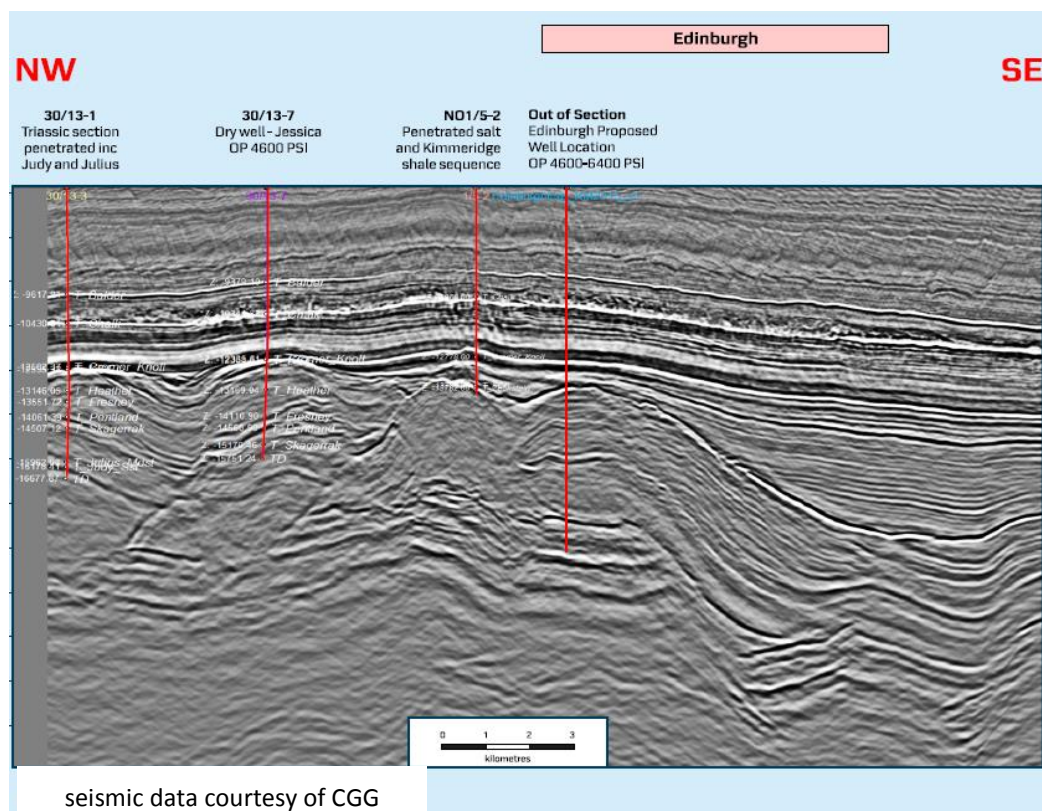


Figure 5.4 Seismic line B-B' across Edinburgh prospect, data courtesy of CGG.

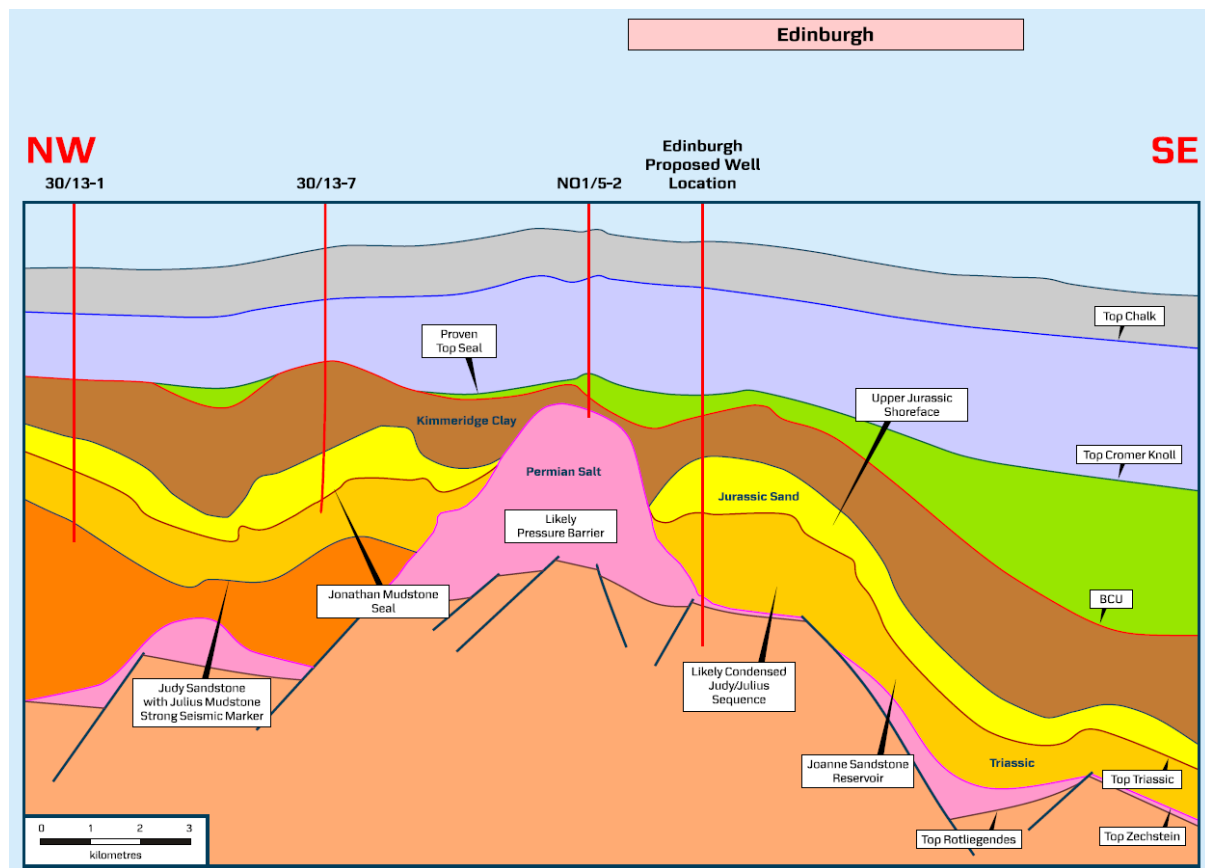


Figure 5.5 Geoseismic line B-B' across Edinburgh prospect.

Figures 5.1 to 5.5 characterise the Edinburgh prospect showing the Jurassic top reservoir depth structure map along with 2 representative seismic lines and interpreted geoseismic sections.

6. TECHNICAL WORK UNDERTAKEN

At the start of the work programme, the main geological uncertainty for the Edinburgh prospect included the structural complexity forming the lateral seal to the north and west and additionally the thickness and depth of stratigraphic packages within this salt influenced mini basin.

In addition to the full re-interpretation of the new seismic data, a full re-interpretation of the biostratigraphic analysis and stratigraphy was conducted in order to confirm the conclusions from the seismic interpretation. This work was carried out in parallel with a petrophysical evaluation to address rock quality and a basin modelling exercise to address the expelled volumes and likely phase of hydrocarbon charge within the prospect. Edinburgh is surrounded by a deep Kimmeridge and Heather basin to the South and North East with two access points for charge into the Triassic. Results from basin modelling suggests charge is not limited. The charge route is short and no major barriers exist at Jurassic level. A full evaluation of the regional pressures and overpressure cell mapping was conducted in order to better constrain the likely pressures that Edinburgh could sit at. The top seal is robust and still hold 1000ft Jurassic column in the high pore pressure scenario. Higher pressure wells in the Norwegian basin cannot be sustained at the crest of the currently mapped Edinburgh structure.

7. RISK AND RESOURCE SUMMARY

Edinburgh is at present the only recognised prospect in P.2039. Geological risk and recoverable volumes at the date of licence relinquishment are summarised in Table 7.0.

Prospect	P90	P50	P10	Mean		Pg
Edinburgh	6	35	210	86	mmboe	36%

Table 7.0 Recoverable resources and geological risk for the Edinburgh prospect at relinquishment.

8. CONCLUSIONS

Despite attempts to farmout equity in the Edinburgh prospect, Maersk Oil were unable, in 2016, to commit to drilling of a well on the Edinburgh prospect. This meant that the P.2039 licence in UK was relinquished.