Relinquishment Report for Licence P.1602

Block 211/12b

Submitted to DECC in March 2013

Registered in England and Wales

Registered Office Address: 8 The Courtyard, Eastern Road, Bracknell, Berkshire RG12 2XB, United Kingdom

Registered No. 06466429

1 – Introduction

Licence Number: P.1602

Licence Round: 25th Round – Start date 12 February 2009

Licence Type: Traditional

Block: 211/12b

Equity Holding: Elixir Petroleum (Europe) Ltd 100%

Licence Work Programme Summary:

PART I Firm commitments

- The Licensee shall obtain 20 km^2 of 3D seismic data
- The Licensee shall reprocess 10 km^2 of 3D seismic data

PART II Drill-or-drop commitment

- Drill one well to 3800 m or to the Base Magnus sandstone, whichever is the shallower, or:
- Elect to allow the licence to automatically cease

Licence P.1602 (Figure 1) was applied for in the 25th Round on the basis of an Upper Jurassic sandstone analogue to the Magnus Field. A single prospect had been identified, named the Tiger Prospect, in Upper Jurassic Magnus sands, deposited as a separate lobe to the submarine fan sandstones developed in the Magnus Field less than 5km to the west. Petrophysical analysis in the Magnus field shows that the sands are of excellent quality with porosities in the 18% to 24% range (average 21%) and permeabilities of up to 950 mD. The Upper and Lower Kimmeridge Clays were postulated to provide top, bottom and lateral seals to the prospect as well as the source rock for the petroleum system. This is a well known and well understood working petroleum system within the region.

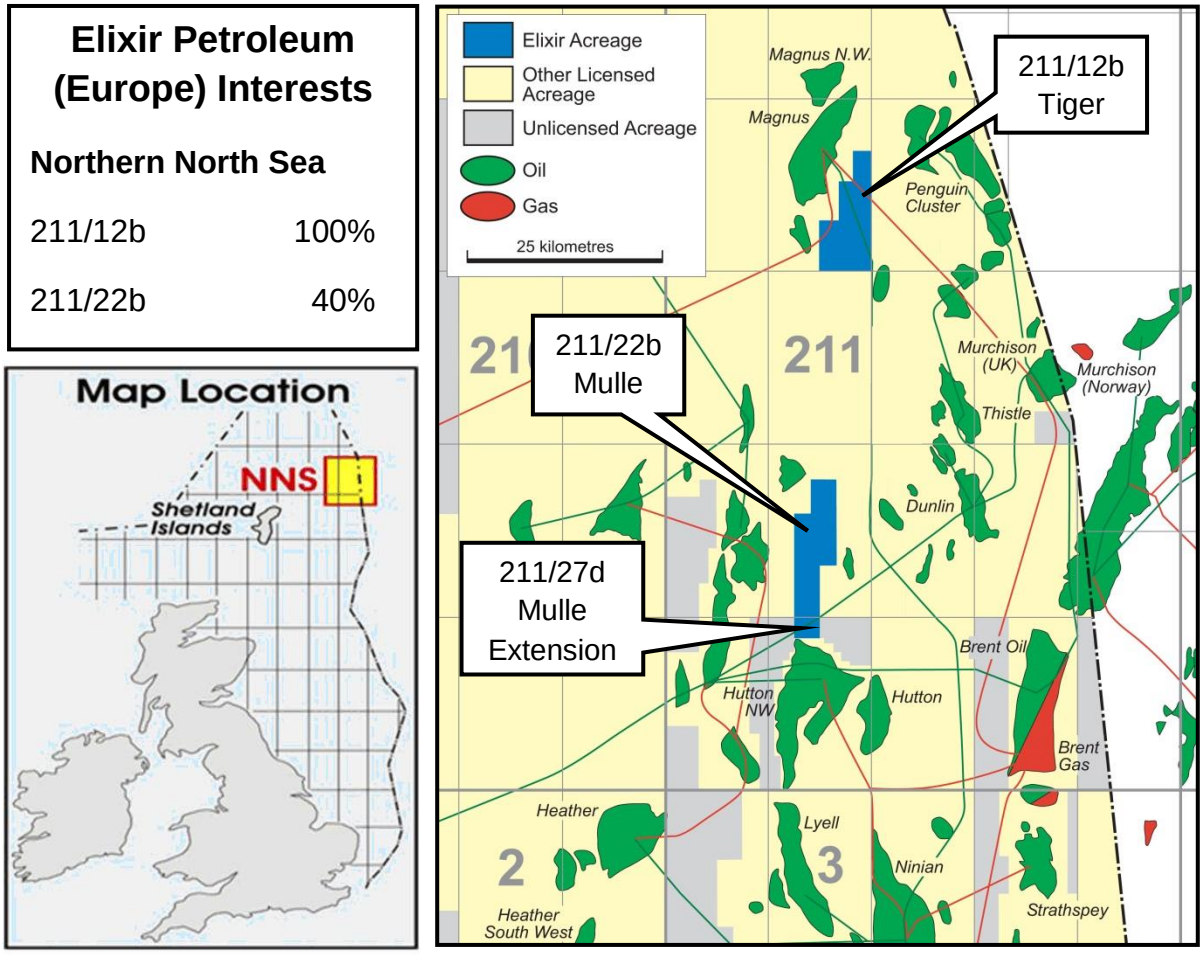

Figure 1 : Location Map

UK Licence Block 211/12 (see Figure 1 above) was originally awarded to BP in the 4th Offshore Licensing Round in 1972. The semi-submersible rig, Sedco 703, spudded the Magnus discovery well 211/12-1 in March 1974. The well encountered an unprognosed 63m net of oil bearing Upper Jurassic sandstone. The appraisal of the Magnus field saw six wells drilled between 1975 and 1978. Oil production commenced in August 1983 and to date, the Magnus Field has produced over 808 million barrels of the estimated in-place volume of 1.54 billion barrels.

Well 211/12b-15 was drilled in 1992 to test for younger turbidite fans in the centre of the Magnus basin. The well encountered 166m of Magnus sands with shows, but was plugged and abandoned. In 1993 the block was relinquished by BP and lay dormant for a number of years being relicensed in 2004 by Stratic Energy Corporation who relinquished the block in 2006.

2 – Prospectivity Analysis

In total, Elixir has obtained and reprocessed 633 km^2 of 3D thereby fulfilling PART I of the work programme commitments. The obtained 3D surveys are:

- 1989 - Shell 3D survey ("Penguin Survey") covering approximately 333 km^2

- 1989 - Western Geco 3D survey ("Quad 211 Survey") covering approximately 40 km^2
- 1992 - BP Magnus 3D survey ("Magnus Survey") covering approximately 260 km^2

The survey outlines are shown in Figure 2 below.

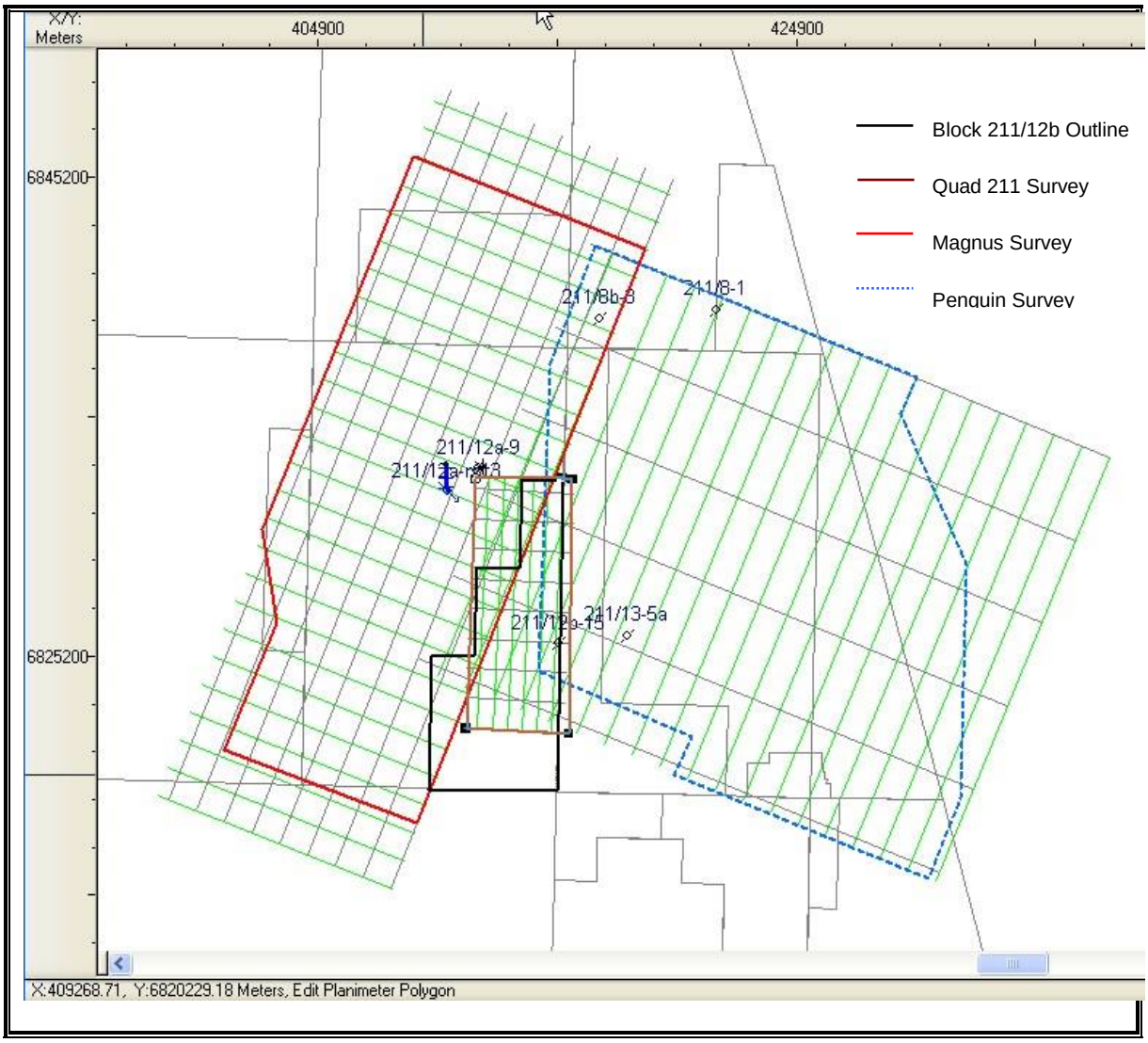

Figure 2 : 3D Seismic Coverage

The surveys were merged into one dataset and loaded onto the Kingdom interpretation platform. The Quad 211 Survey, the Magnus Survey and the Penguin Survey were interpolated in the inline and crossline direction using a tau-p domain interpolation process. The Quad 211 Survey was interpolated once in the inline and subline direction. The Penguin Survey was interpolated once in the inline direction and twice in the crossline direction due to the 37.5m inline spacing. The Magnus Survey has been used as the master grid and extended to the south and east to accommodate the two other 3D surveys. The 3D geometry was defined using the Magnus Survey information.

A 3D FXY linear prediction filter was used to enhance the signal content of the data, particularly the Penguin Survey without harming the structure and fault plane information.

Approximately twenty wells were used in the evaluation of the Tiger Prospect, with six key wells, including the 211/12b-15 well located down-dip of the Tiger prospect. Biostratigraphic analysis has

been used to confirm the sand present in the 211/12b-15 well is the time equivalent of the youngest, C fan, observed in the Magnus Field. Petrophysical analysis supports the presence of oil in the target reservoir section in the 211/12b-15 well down-dip of the Tiger Prospect, a petrophysical interpretation which is supported by live oil staining in core, potentially indicating a migration pathway in the vicinity of the well.

The presence of oil in the C sands in well 211/12b-15 is also supported by fluid inclusion studies which indicate both weak (migration pathway?) signals and a strong to very strong proximity-to-pay liquid indicator in the Magnus sands indicative of a nearby accumulation (see Figure 3).

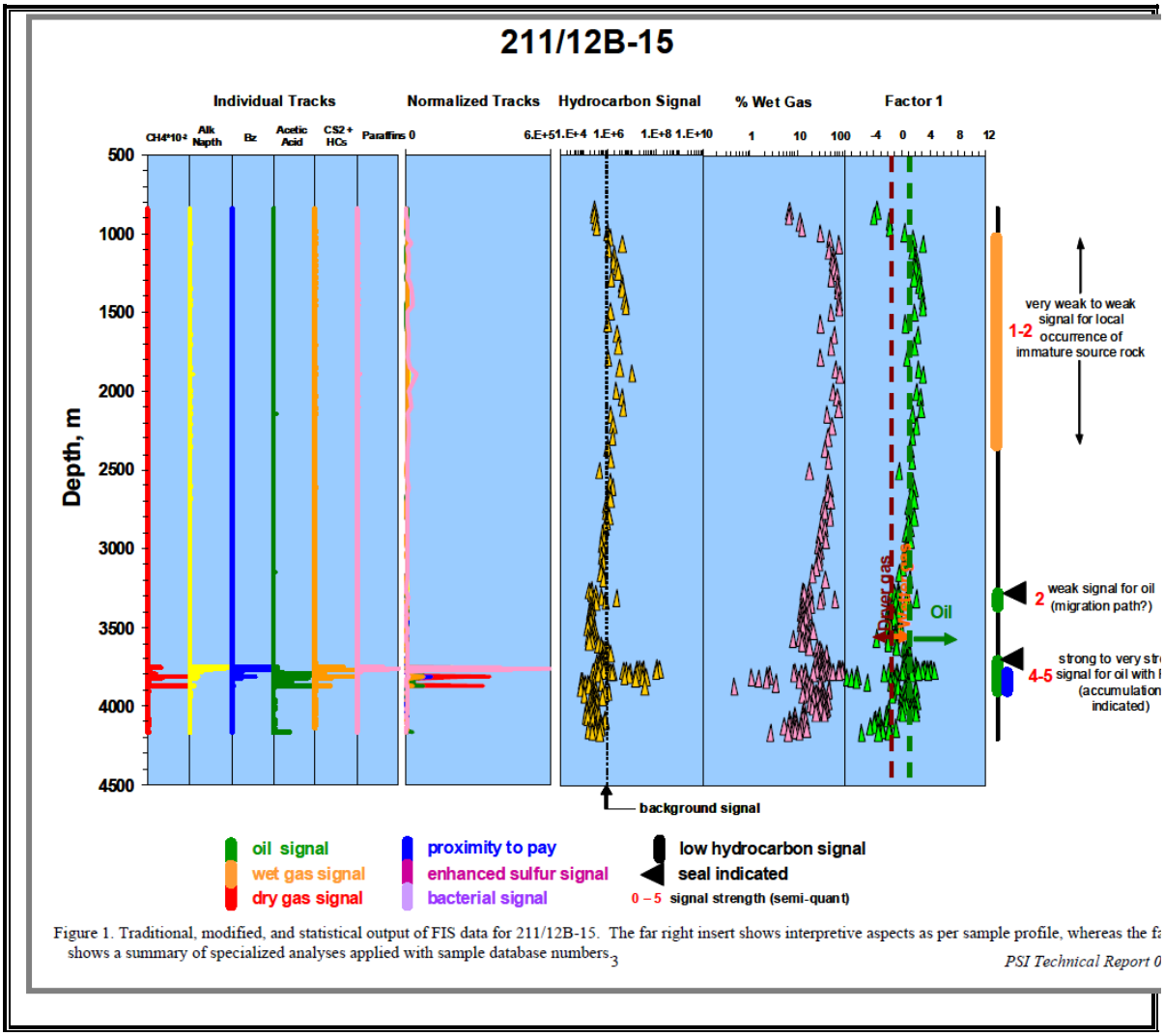

Figure 1. Traditional, modified, and statistical output of FIS data for 211/12B-15. The far right insert shows interpretive aspects as per sample profile, whereas the fa
shows a summary of specialized analyses applied with sample database numbers.

Figure 3 : Proximity-to-Pay Liquid (PTPL) signal from FIS study

The Tiger trap requires separation of the C sands drilled in 211/12b-15 from the same sands in the Magnus Field which has an oil-water contact structurally above the proposed Tiger Prospect. Two models were investigated using the 3D data:

1) A down-dip structural component with fault-related trapping; and
2) An upside model related to a potential updip pinch-out before the Tiger C Sands reach the Magnus Field (Figures 4 and 5).

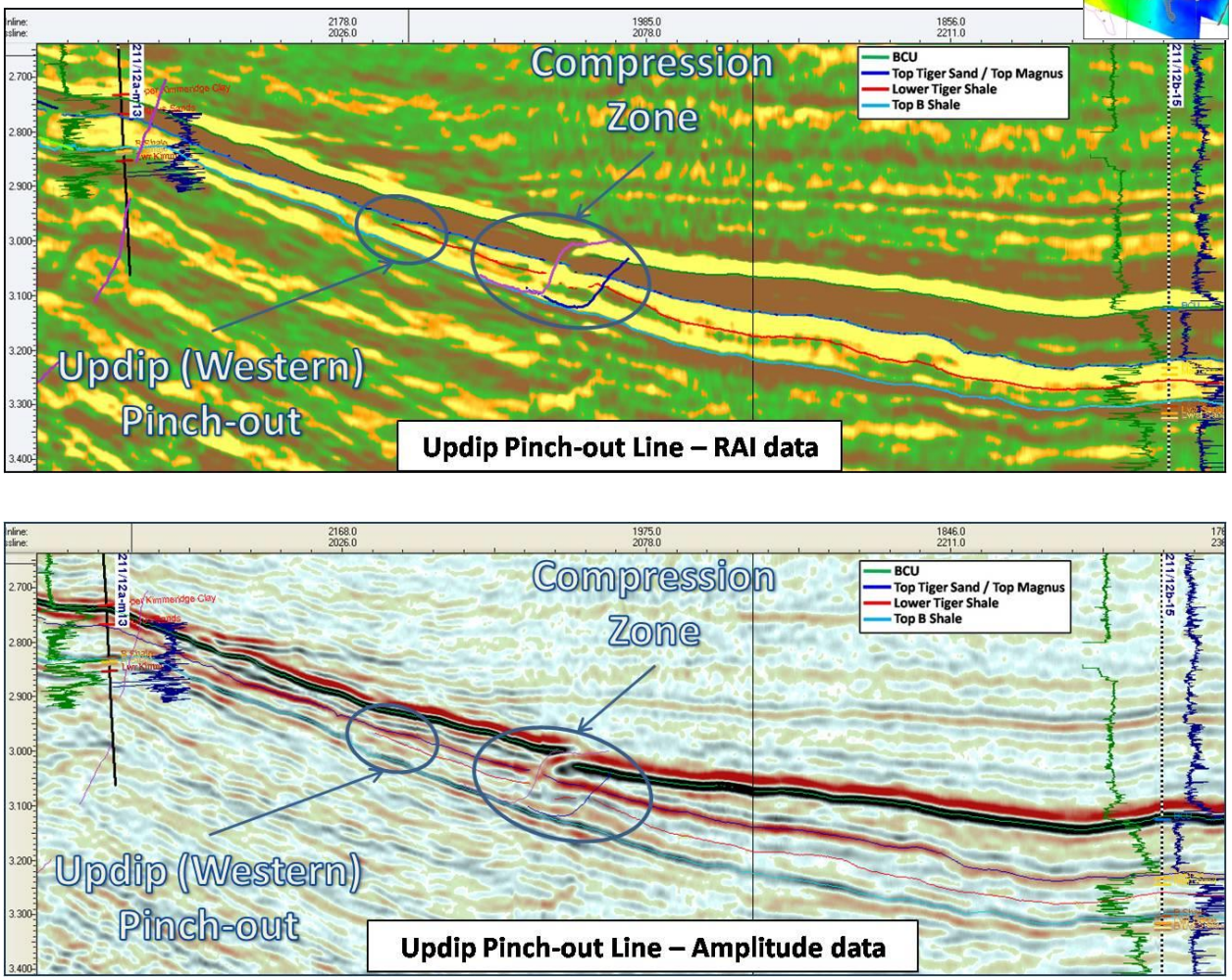

Figure 3 : Arbitrary 'updip pinch-out line' – Tiger Prospect, RAI & Amplitude data

To some extent both models are supported by the 3D seismic. A continuous disturbance formed by the slumping of part of the Magnus section on the eastern slope of the Magnus High (Figures 4 and 5) forms the seal to the downdip structural trap (closing contour at 3620m), and this may be combined in different structural scenarios with trapping formed by one of the larger west northwest-trending cross-faults. The same 3D amplitude data combined with relative acoustic impedance (RAI) sections also supports an upside case where the Tiger Prospect Magnus sands pinch-out updip of the zone of slump-related disturbance before reaching the Magnus Field (Figure 4).

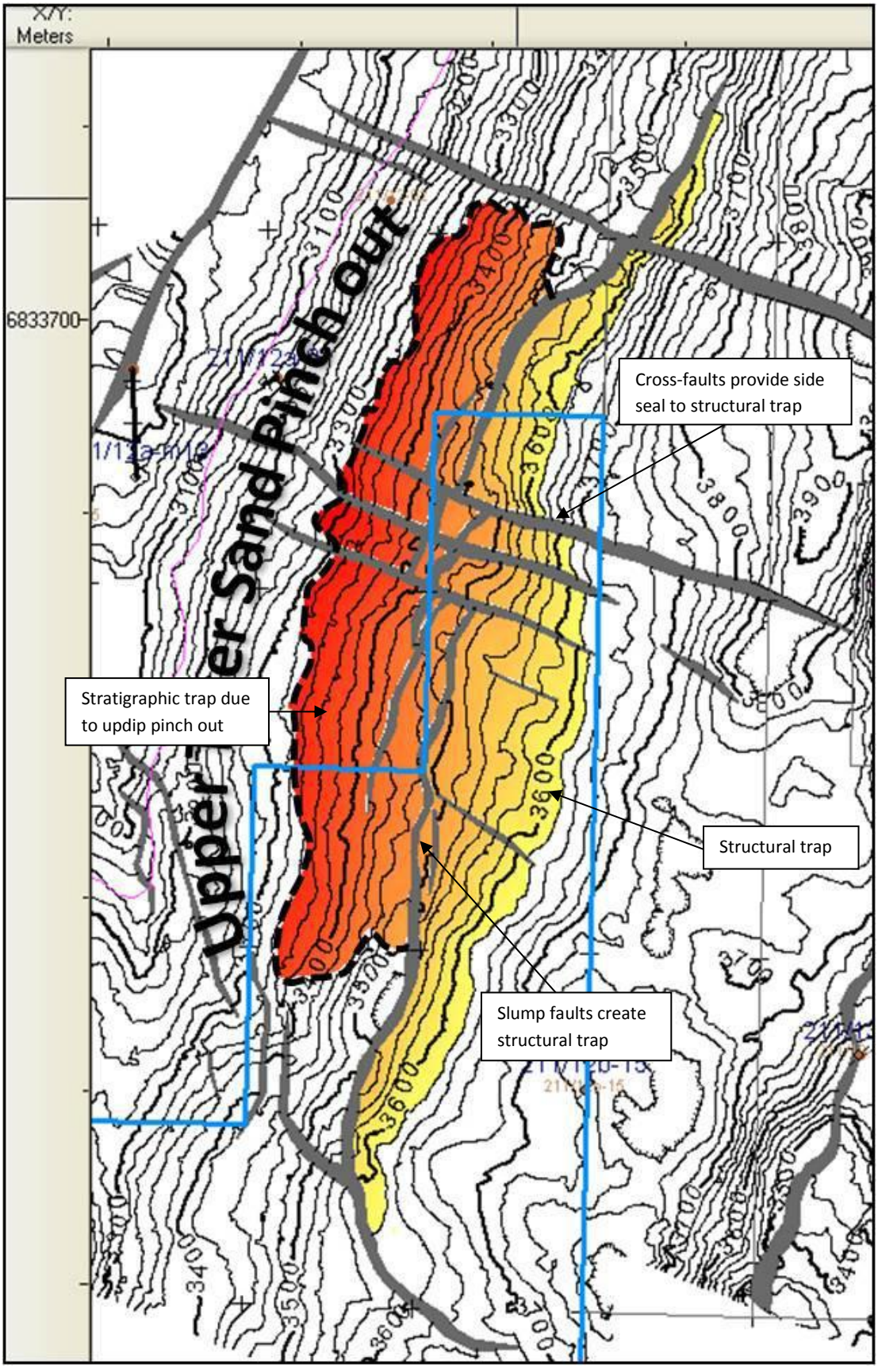

Figure 5 : Top Tiger Sand Depth structure

Table 1 illustrates Elixir's resource estimate for the Tiger prospect in the combined structural and stratigraphic trap case. A technical chance of success = 20% is estimated for the prospect. Trap is considered to be the greatest of the risk elements.

	STOIIP (mmbo)			RESERVES (mmbo)	
Low	**ML**	**High**	**Low**	**ML**	**High**
64	248	377	25	124	226

Table 1 : Tiger prospect, volumetrics case for the combined structural and stratigraphic cases

3 - Discussion

After completing the PART I commitment studies, Elixir Petroleum (Moselle) Ltd concluded that the Tiger prospect was economically viable, but would require a partner to help finance the PART II work programme of drilling an exploration well to 3800 m or the Base Magnus sandstone whichever is shallower. To this end, Elixir embarked on a farm-out campaign in 2011-2012, but without success and therefore elected to relinquish the Licence.

4 – Conclusions

Elixir has fulfilled the PART I work commitments by obtaining and reprocessing 633 km^2 of 3D seismic data. On the basis of this data and new biostratigraphic and fluid inclusion studies, Elixir has mapped the Tiger Prospect, which whilst economically attractive, required a farm-in partner to commit to drilling the contingent exploration well. Elixir has not been able to find such a partner and has elected to relinquish the Licence.