

Well 35/30-1

Preliminary Fluid Inclusion Study

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This report presents preliminary findings of a fluid inclusion study of 5 samples from well 35/30-1 from the Porcupine Basin. All samples were obtained from Jurassic horizons. The distribution and petrography of each sample are summarised in table 1. Quartz grains from all samples with the exception of sample 35/30-1-3 were separated for fluid inclusion studies. All quartz grains are small with a maximum grain size of 0.5mm. Composite resin based wafers were prepared for fluid inclusion petrography, UV microscopy and microthermometric analysis.

Preliminary microscopic analysis of quartz hosted fluid inclusions

Preliminary petrographic analysis and UV microscopy have been carried out for samples 35/30-1-1a, 35/30-1-1b, 35/30-1-2a, 35/30-1-2b, 35/30-1-2c and 35/30-1-4. Inclusions in all samples display a range of morphologies ranging from sub-rounded to irregular shapes. Inclusions are commonly <10µm in longest diameter with the majority being <3µm across. Three main inclusion types have been identified hosted within quartz grains, and these are summarised in table 2. Their recognition is based on their phase relations at room temperature and in the case of Type 3 (hydrocarbon bearing) inclusions through the use of UV microscopy.

Figure 1: Quartz grains and lithic fragments in sample 35/30-1-1a

Figure 2: Type 1 aqueous inclusions in sample 35/30-1-1b

Figure 3: Type 1 aqueous inclusions in sample 35/30-1-4 (note low % of vapour).

Figure 4: Type 3 hydrocarbon bearing inclusion from sample 35/30-1-1b (under PPL).

Figure 5: Type 3 hydrocarbon bearing inclusion from sample 35/30-1-1b (under UV).

Figure 6: Type 2 hydrocarbon bearing inclusion from sample 35/30-1-1b (under PPL).

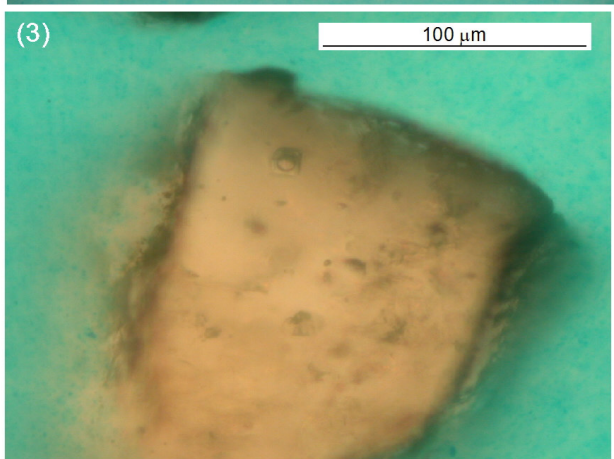
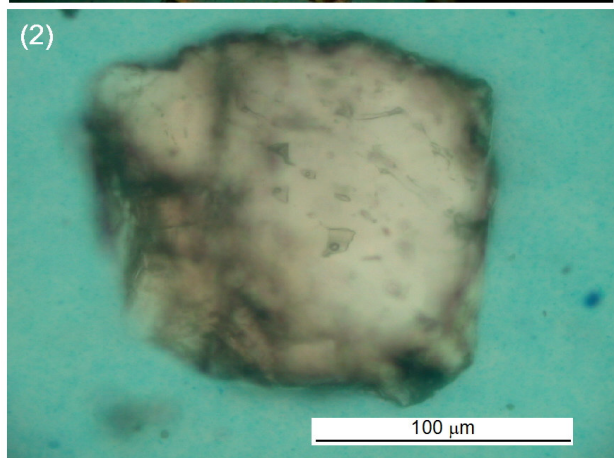
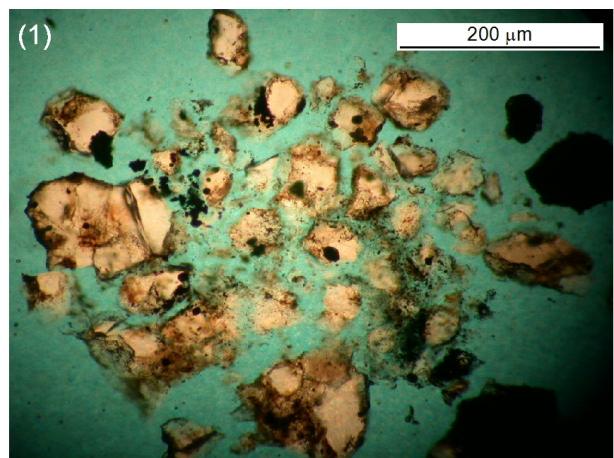
Figure 7: Type 2 hydrocarbon bearing inclusion from sample 35/30-1-1b (under UV).

Figure 8: Type 2 hydrocarbon bearing inclusion from sample 35/30-1-2a (under PPL).

Figure 9: Type 2 hydrocarbon bearing inclusion from sample 35/30-1-2a (under UV).

Table 1: Distribution and petrography of samples from well 35/30-1.

Table 2: Classification of fluid inclusion type within quartz grains.



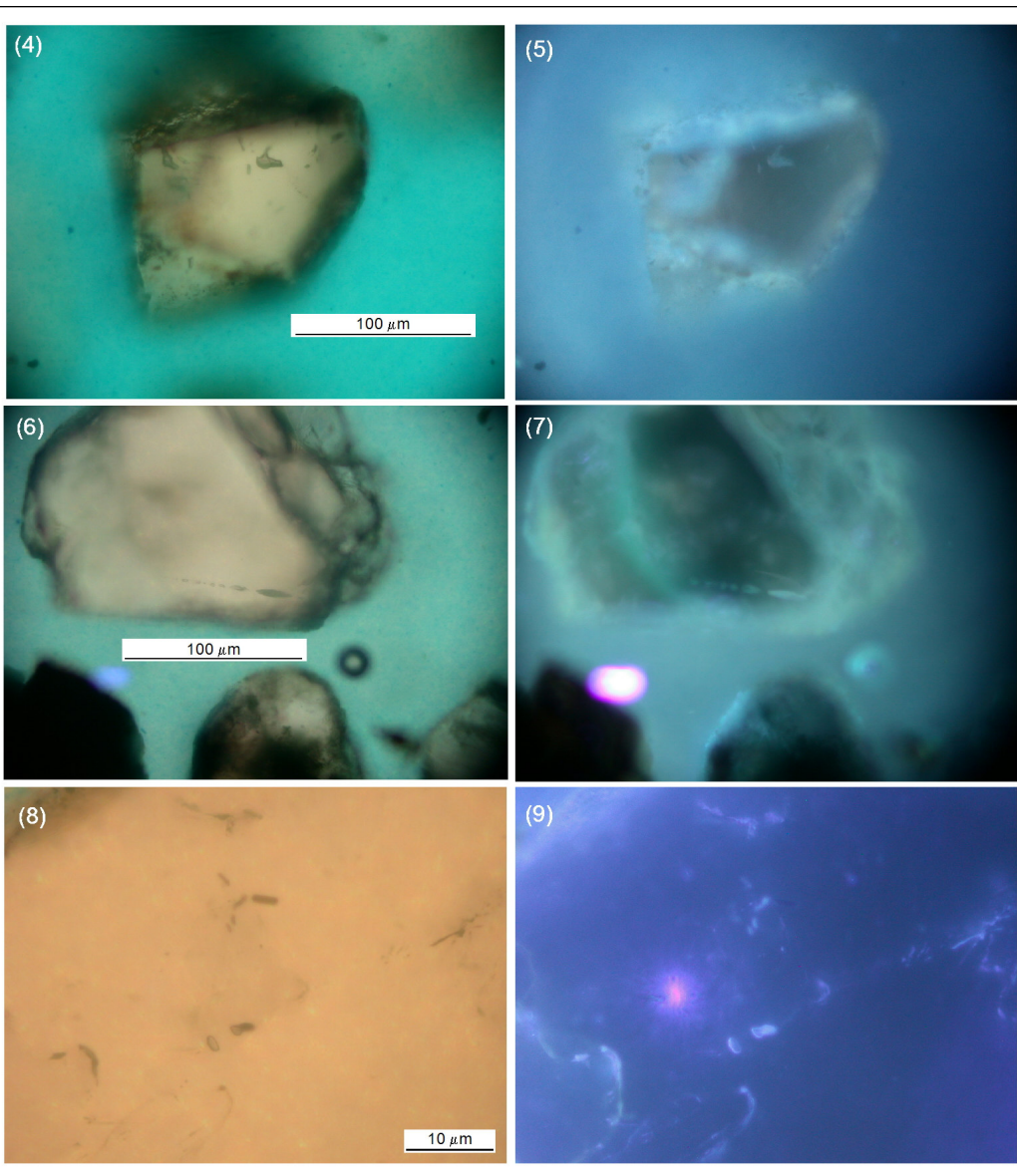


Table 1

Sample	Horizon	Depth Horizon	Lithology	Type 1	Type 2	Type 3
35/30-1-1a	Upper Jurassic	15010 ft	Fine grained sst chippings	x	x	x
35/30-1-1b	Upper Jurassic			x	x	x
35/30-1-2a	Upper Jurassic	15220 ft	Fine-medium grained sst chippings	x	x	x
35/30-1-2b	Upper Jurassic		Fine grained sst chippings	x	x	
35/30-1-2c	Upper Jurassic		Very fine grained sst chippings	x	x	x
35/30-1-3	Middle Jurassic	15470 ft	Coarse grained lithic fragments	No quartz grains have been identified within the sample		
35/30-1-4	Middle Jurassic	15910 ft		Yet to be analysed		
35/30-1-5	Middle Jurassic	16270 ft	Fine grained sst chippings			
35/30-1-6	Middle Jurassic	16970 ft	Fine grained sst chippings			

Table 2

TYPES	1	2	3
PHYSICAL STATE (S)	Liquid-rich, two-phase (L + V)	Monophase liquid/vapour (L/V)	Monophase liquid (L)
COMPOSITION	L > 50%	L=100% or V=100%	Hydrocarbon
SIZE RANGE	3 µm- 10 µm	2 µm- 6 µm	< 5 µm
DISTRIBUTION	isolated inclusions or aligned within trails	isolated inclusions or aligned within trails	isolated inclusions or aligned within trails
UV FLUORESCENCE	-	-	white blue

Classification is based upon morphological features and proportion of the major phases observed at room temperature. Liquid (L) and vapour (V) composition expressed in volume %.