

3. FORMATION EVALUATION

3.1. Depth and Types of Cores and Cuttings, Well Evaluation Log and Fluid Samples

3.1.1. Drill Cores

Lithological Description of Cores

- **Run 1: 586.27 m-587.15 m** - Core Loss. 587.15 m to 587.75 m - Ripple bedding, sag structures, finely laminated <1 mm up to 35 mm bedding thickness of mudstone and siltstone layers, wavy-laminated and stromatolitic dolostones. Siltstone is light grey to dark grey, very hard with calcitic blebs (oolitic), dolomitic cement, no visible porosity with beds up to 35 mm in thickness. Mudstone (30%) is black, very hard, slightly dolomitic with very fine grained mica. 587.75 m to 589.0 m - Siltstone (90%) grey to dark grey, bedded, flat blebs (oolites) of calcite, calcitic/dolomitic cement. Mudstone (10%) is black, very hard, and slightly dolomitic with very fine grained mica.

Remarks: Core loss from 586.27 m to 587.15 m. Gas desorption samples; D#001 (587.15 m-587.45 m), D#002 (587.98 m-588.28 m), D#003 (588.70 m-589.00 m). Wax preservation samples; all desorption samples plus P#001 (587.45 m-587.75 m), P#002 (588.40 m-588.70 m).

- **Run 2: 753.12 m-759.3 m** - Core Loss. 759.3 m to 760.1 m - CLYST, mudstone, finely laminated <1 mm bedding thickness of mudstone and very fine siltstone layers, weak fizz, black, hard, micaceous (very fine grained mica), no visible porosity. 760.1 m-760.2 m - SLTST, light grey, very hard with calcitic blebs (oolitic), dolomitic cement, no visible porosity, tongue flow structures into mudstones. 760.2 m-760.30 m - CLYST, mudstone, finely laminated <1 mm bedding thickness of mudstone and very fine siltstone layers, weak fizz, black, hard, micaceous (very fine grained mica), no visible porosity. 760.30 m-760.35 m - SLTST, light grey, very hard with calcitic blebs (oolitic), dolomitic cement, no visible porosity, tongue flow structures into mudstones. 760.35 m-760.50 m - CLYST, mudstone, finely laminated <1 mm bedding thickness of mudstone and very fine siltstone layers, weak fizz, black, hard, micaceous (very fine grained mica), no visible porosity. 760.50 m-760.6 m - SLTST, light grey, very hard with calcitic blebs (oolitic), dolomitic cement, no visible porosity, tongue flow structures into mudstones. 760.60 m-761.40 m - CLYST, mudstone, finely laminated <1 mm bedding thickness of mudstone and very fine siltstone layers, weak fizz, black, hard, micaceous (very fine grained mica), no visible porosity. 761.4 m-761.5 m - SLTST, light grey, very hard with calcitic blebs (oolitic), dolomitic cement, no visible porosity, tongue flow structures into mudstones.

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Remarks: Core loss from 753.12 m-759.3 m. Gas desorption samples; D#004 (759.6 m-759.9 m), D#005 (760.6 m-760.9 m). Wax preservation samples; all desorption samples plus P#003 (759.3 m-759.6 m), P#004 (760.3 m-760.6 m).



Photo 1: Cow Lagoon 1 core section 587.15 m to 587.75 m.



Photo 2: Cow Lagoon 1 core section 587.5 m to 588.00 m.



Photo 3: Cow Lagoon 1 core section 588.00 m to 588.50 m.



Photo 4: Cow Lagoon 1 core section 588.50 m to 589.00 m.



Photo 5: Cow Lagoon 1 core section 759.3 m to 759.4 m.



Photo 6: Cow Lagoon 1 core section 759.4 m to 759.9 m.



Photo 7: Cow Lagoon 1 core section 759.9 m to 760.4 m.

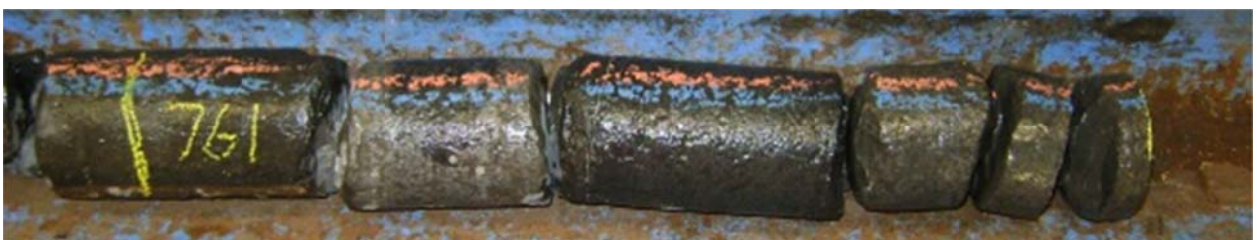


Photo 8: Cow Lagoon 1 core section 760.4 m to 760.9 m.



Photo 9: Cow Lagoon 1 core section 760.9 m to 761.5 m.

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- Run 3:** 1355 m-1356.02 m LIMESTONE, light grey - grey, very hard, dense, recrystallised/cryptocrystalline, trace disseminated pyrite and galena, minor mineral fluorescence, no visible porosity. No sedimentary structures, weak ghost bedding 1-8 mm in part. Infill along fractures, possible brecciation in part. Infill with trace pyrite and galena, vuggy/chemical erosion in part. 1356.02 m - 1357.24 m - CORE LOSS.

Remarks: Gas Desorption sample: d#016 (1335.1 m-1335.4 m), Preservation sample: desorption sample plus P#004 (1335.4 m-1335.7 m).



Photo 10: Cow Lagoon 1 core section 1355.0 m to 1355.5 m.



Photo 11: Cow Lagoon 1 core section 1355.5 m to 1356.02 m.

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Table 3: Drill Core Details

	Core 1	Core 2	Core 3
From [m]	586.27	753.12	1355.00
To [m]	589.00	761.50	1357.24
Run number	1	2	3
Run Length [m]	2.73	8.38	2.24
Recovered [m]	1.85	2.20	1.02
Recovery [%]	68	26	0.46
Lithology	SLST, MDST	SLST, MDST	LS
Rock Strength	R5	n/a	R6
Defect Type	C	C	J
Defects per m	>100	5	10
Angle to CA [°]	3 to 5 ⁰	5 to 1 ⁰	70-80 ⁰
Shape	Wavy	Wavy	Planar
Roughness	Smooth	Smooth	Smooth
Infill material	Calcite, dolomite	Calcite, dolomite	unknown
Infill Thickness [mm]	V	V	1-5

3.1.2. Cuttings

See Appendix 0: Drill Cuttings – Sample Description page 33.

3.1.3. Well evaluation logs

Quad-combo (GR-DEN-RT-SGS); FMI Cross-dipole sonic

3.1.4. Fluid samples

No fluid samples were taken from the well during drilling operations.

3.2. Hydrocarbon Indications

Gas shows were recorded on mud-logs in the Lynott, Reward and Barney Creek Formations.

3.3. Operation and Results including full raw pressure-time listings for all formation fluid sample tests and production tests carried out

No testing was carried out on the wellbore.