IGas Energy

# Half-year Results 2019
## 12 September 2019

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# Half-year Highlights

Solid Production – upper end of guidance

Strong operating cash flow

Forward work programme of incremental projects - potential to add significant value

World class results from

SR-01 well - Springs Road

CCC Net Zero Report recognises significant role of gas to meet targets

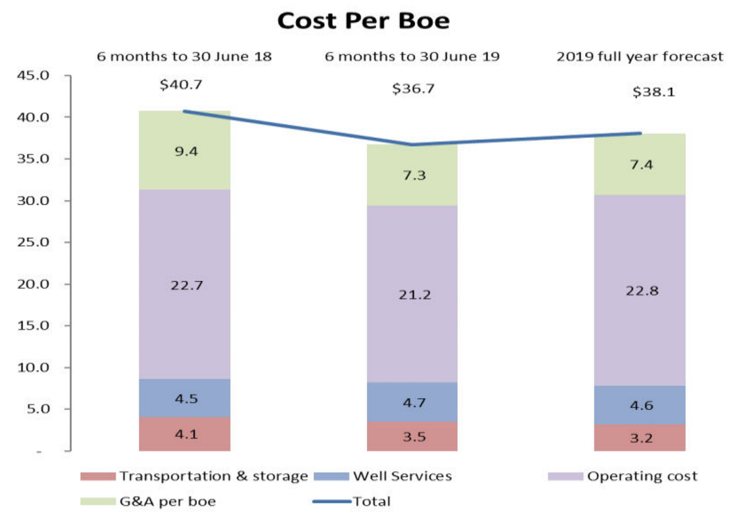
# Financial Highlights

| | **Six months to 30 June 2019 £m** | Six months to 30 June 2018 £m |
|---|---|---|
| Revenues | **21.2** | 21.1 |
| Adjusted EBITDA | **7.7** | 6.0 |
| Profit/(loss) after tax – continuing activities | **0.8** | (1.2) |
| Operating cash flow before working capital movements | **8.7** | 5.5 |
| Net debt (excluding capitalised fees) | **5.9** | 7.4 |
| Cash and cash equivalents | **14.4** | 14.5 |

- **Revenues** – lower oil prices and volumes in H1 2019 were offset by positive impact of stronger dollar vs. sterling. Realised price (pre hedging) was $64.0/bbl vs. H1 2018 $68.3/bbl
- **Adjusted EBITDA** – was higher in H1 2019 mainly due to an improved hedging position (realised loss of £0.8m in H1 2019 vs £3.1m in H1 2018) partially offset by higher operating costs (including lease costs)
- **Profit/(loss) after tax** – was higher in H1 2019 due to higher operating profit, lower financing costs and a tax credit in H1 2019 vs a tax charge in H1 2018
- **Operating cash flow** – was higher in H1 2019 mainly due to an improved hedging position (realised loss of £0.8m in H1 2019 vs £3.1m in H1 2018) and lower cash operating costs (as lease payments were classified as financing activities in H1 2019)
- **Net Debt and cash** – net debt was £0.5m lower at 30 June 2019 vs 31 December 2018. A repayment of bonds of £1.1m was offset by a net cash outflow for the period of £0.6m.

# Key statistics

- Realised price post hedge of $61.1/bbl (2018: $57.7/bbl)
  - Hedging cash outflow of £0.8m in 2019 related to cost of put options (2018: £3.1m cash outflow due to the impact of rising commodity prices on hedging put/call options)
  - 480,000 barrels hedged for 2H 2019 and 1H 2020 with an average put price of $53.5/bbl ($2.50 premium per barrel)
- Operating costs (excluding the impact of IFRS 16) of $29.4/boe (2018: $31.3/boe)
  - Decrease principally due to US$ exchange rate partially offset by by an increase in regulatory, production and workover costs
- G&A of £2.5m (2018: £2.8m)
  - Continue to focus on reducing corporate costs
- Tax credit of £0.1m (2018: £0.3m charge)
  - Deferred tax credits relate to the recognition of future available ring fence tax losses
- Gross carry at 30 June 2019 of £164 million (Y/E 2018: £170 million)
  - £6.0 million drawn down principally in relation to Springs Road
- Net debt at 30 June 2019 was £5.9m (31 December 2018: £6.4m)



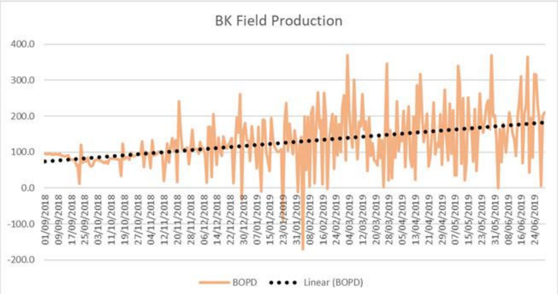

Excludes the impact of IFRS 16 - Leases

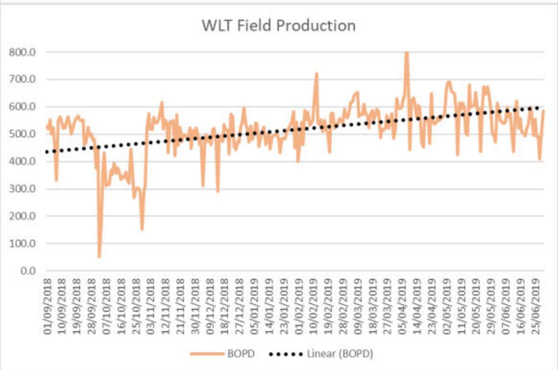
# Production Performance

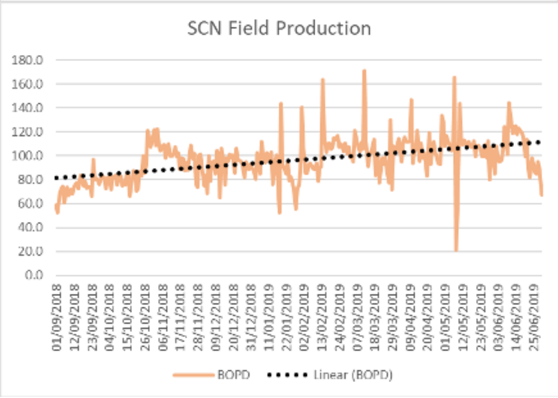
- 2019 Net Production for H1 2019 = 2,360 boepd (H1 2018: 2,292 boepd)
- YE Forecast Range: 2,200 to 2,400 boepd
- 2019 projects - delivery ahead of schedule and above expectations

# Optimisation of our Well Stock

**Examples of Adding Value**




**What Did We Do ?**

Beam Gas Compressor (BGC) Technology Trial

- Installation of 9 x Beam Gas Compressors across 13 wells
- Backpressure reduction

**Outcome = c.40% increase in field production**

**What Did We Do ?**

Phase 1 - Expansion of Waterflood scheme

- Conversion of well to water injector
- Recompletion of well for production
- Installation of surface injection facilities.

***Outcome = c.4% increase in field production***

**What Did We Do ?**

Well Reinstatement

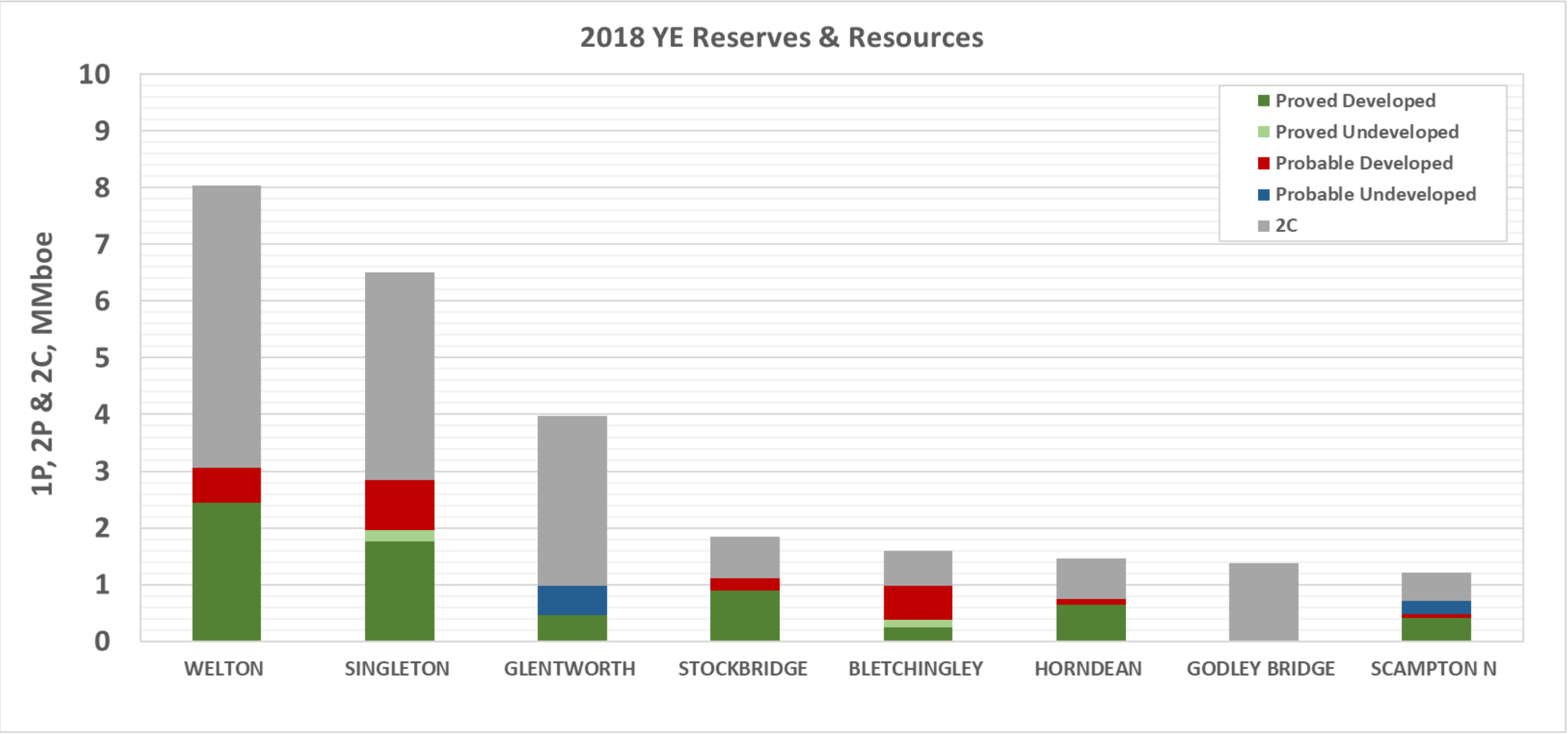
- *Recompletion of shut-in well*
- *Installation of surface production facilities*

***Outcome = c.19% increase in field production***

- **BGC Trial to be extended across Welton field.**
- **Phase 2 Waterflood expansion under review**
- **Scampton Waterflood project Sanctioned**

# Development Potential

## Optimising existing assets




- Material growth opportunities still exist in core assets
- Current projects being progressed include: associated gas monetization, infill and appraisal drilling, waterflood development, and production optimisation
- Significant exploration potential exists in prospective resources

# Scampton North Waterflood

- Convert suspended production well into a water injector, install a pipeline and injection facility to transport produced water from Scampton North B and C site
- Increasing oil sweep and field recovery in the western portion of the Scampton North field and reduce current water disposal costs
- Peak incremental production is anticipated to exceed 100 bopd with a mean recovery of 184 Mboe
- Timing: construction commenced August 27th and is anticipated to be on-line early Q2 2020

| Scampton North – Waterflood project: Key economics | |
|---|---|
| Estimated CAPEX, £m | 2.15 |
| Btax NPV, £m | 2.5 |
| Y1 Risked Avg. Production, bopd | 40 |
| Incremental Production, bopd | 75 |
| BET, mnths | 26 |
| EUR, Mbbl | 184 |

Economics based on $60/bbl, $1.3/£, discount rate of 10%

# Shale Development

## Springs Road – SR-01 Well Results

# SR-01 Operations, Costs & Community

## Operations

Drilling/Coring Rates significantly higher than forecast

- Drilling 13m/hr to 16m/hr
- Coring (8 ½”) 5m/hr
- Drilling (6”) 7m/hr

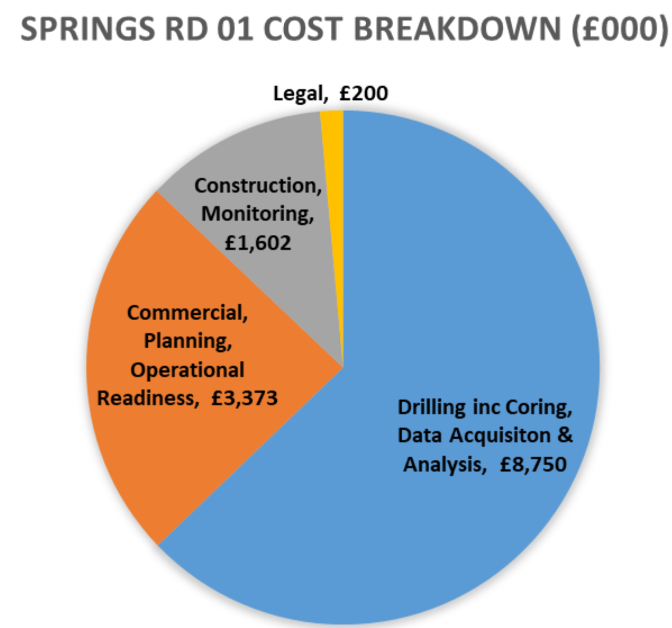
147m of 3.5” diameter core recovered

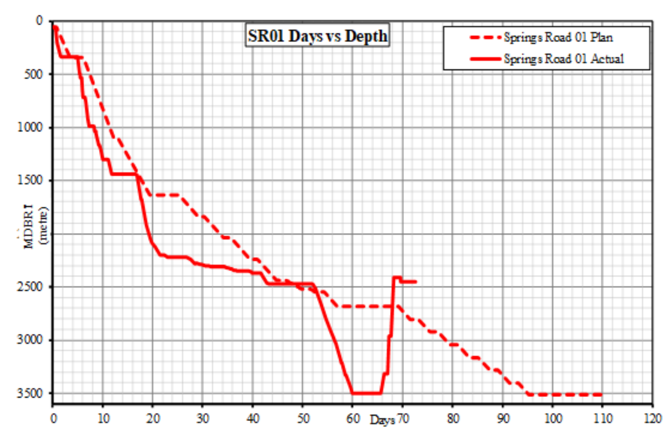
## Costs

- Drilled to max. permitted TD 3500m
- Significantly ahead of budget despite 50% more core obtained than planned for.
- Total costs (site acquisition through to drilling and data evaluation) ≈ £14m
- SR-01 well costs fully carried

## Community

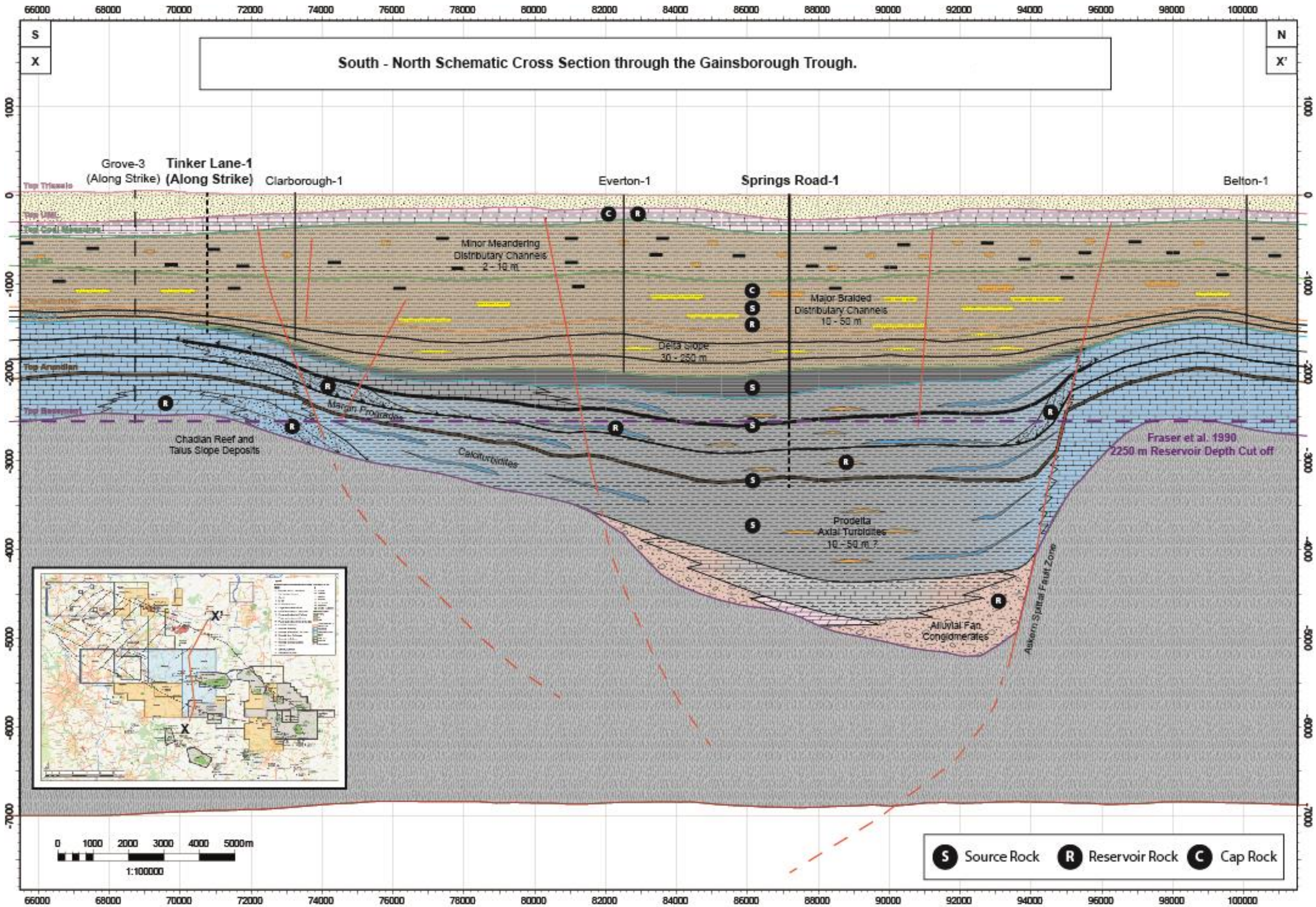
- Local CLG wants to work together as “we understand that you will be here for the long term.” and is open to amendments of conditions in order to bring commercial benefits to village
- Local MP held a regular drop in session during drilling. 120 people attended, not one raised Springs Rd or shale gas exploration as a concern



# SR-01 & TL-1 Basin Position

## Basin Center Interpretation



# Key Evaluation Criteria for Shale

**Bowland Shale Formation**

**Areal extent**
Gross: 434 sq miles
Net: 243 sq miles

**Organic content**
≥ 2.0%

**Maturity**:
Ro ≥ 0.6%
*(Mature source rock - Type II/III kerogen)*

**Gross reservoir thickness**:
≥ 30m

**Natural fractures**
present

**Favourable stress regime**
present

**Matrix porosity**
≥ 2%

**Pressure gradient**:
TBD

**Clay content**
(low = brittle)

**Flow characteristics (type curves and IPs)**
TBD

**Depth**:
1,000m to 4,500m

# Key Evaluation Criteria for Shale

**Bowland Shale Formation**

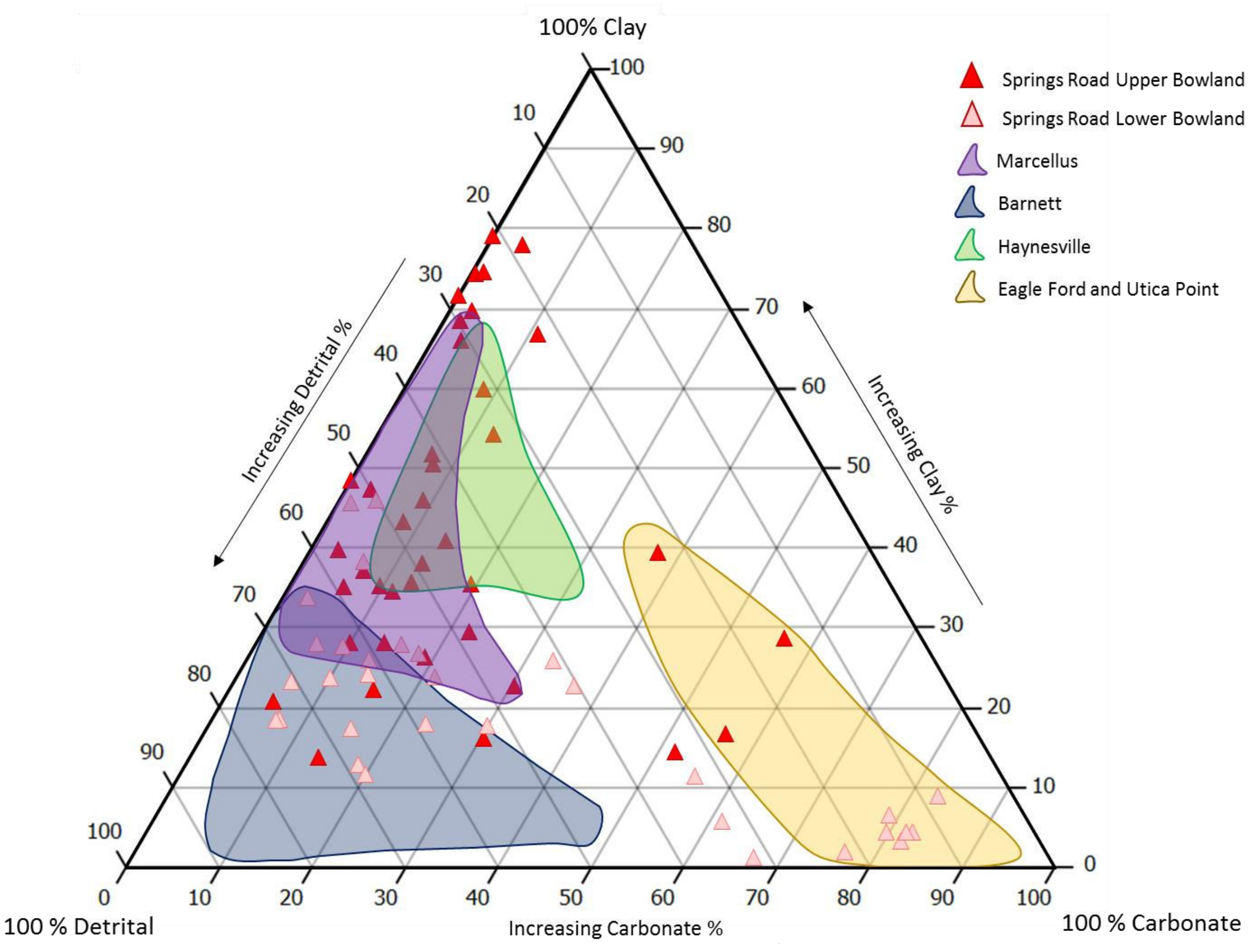
## How does SR-01 Bowland Compare to U.S. Shale?

| | U.S. Key Shale Attributes | SR1 Upper Bowland | SR1 Lower Bowland | Barnett | Eagle Ford | Utica | Fayetteville | Marcellus |
|---|---|---|---|---|---|---|---|---|
| Organic Content | >2.0% | 3.2% (0-8.4%) | 2.5% (0-6.6%) | 4% | 2.5% | 3% | 3.8% | 6.5% |
| Maturity (Ro) | >0.6% | c. 1.17% | c. 1.29% | 2.3% | 1.2% | 1.8% | 2.5% | 1.6% |
| Shale Thickness | >30m | 179m (whole interval) | 305m (whole interval) | 80m | 50m | 50m | 42m | 50m |
| Approx. Depth | 1000m-4500m | 2,109-2,288 m | 2,288-2,593 m | 2000m | 2500m | 2500m | 1750m | 1900m |
| Clay Content | <40% (Brittle) | 43% (High) | 22% | 30% | 20% | 20% | 40% | 30% |
| Matrix Porosity | >2% | 4.8% (1-11%) | 3.0% (1-9%) | 3.5% | 3.5% | 4.5% | 5% | 6.5% |
| Natural Fracturing | Present | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

*Note: Secondary (Millstone Grit) and tertiary (Arundian shale) targets excluded*

# Bowland Shale Mineralogy

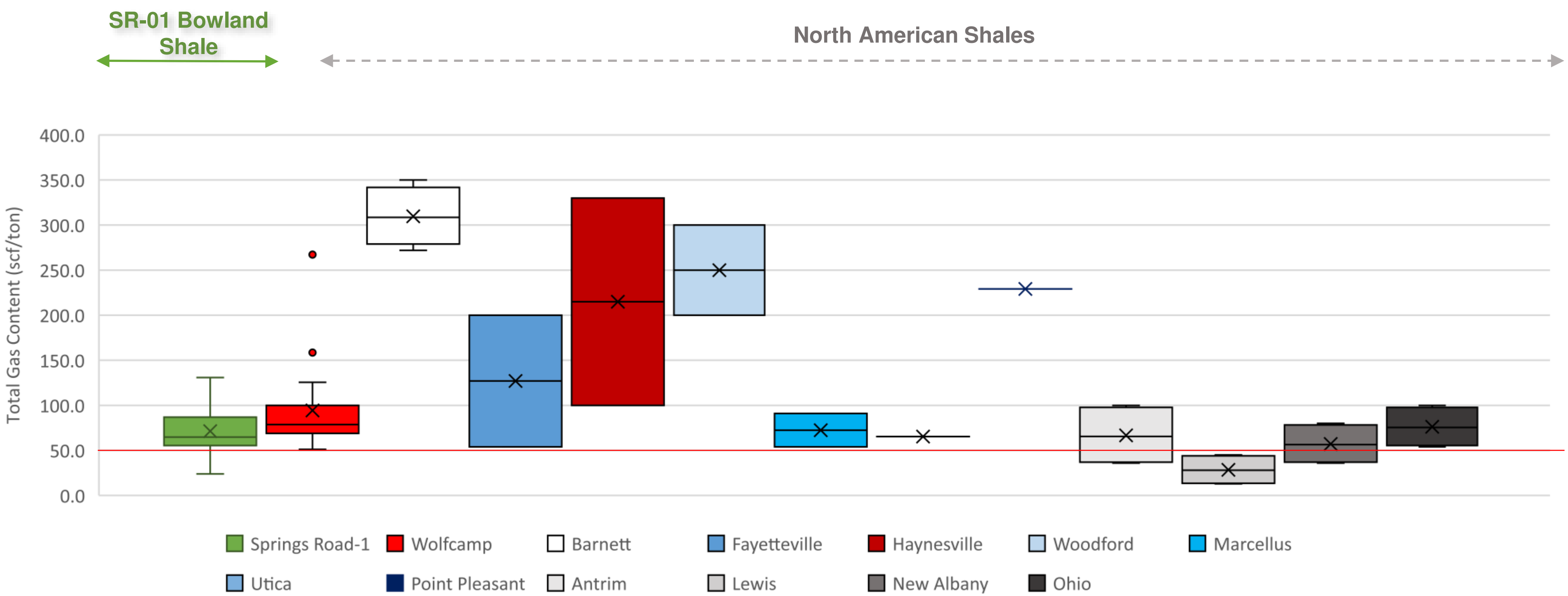
## Springs Road 01 Ternary Plot




- Ternary plot identifying mineralogical characteristics of commercial US shale plays
- Data points from Upper and Lower Bowland shale at Springs Rd overlaid
- Key determining characteristic is clay content
- Heterogeneous mineralology observed throughout the Bowland Shale, the majority of data points are within commercial US shale envelopes

# Canister Desorption Gas Content Results

## UK Shale and Analogous USA Shale Plays




- Guideline for commerciality is c.50 scf/ton
- SR-01 results exceed this and are in line with commercial US shale plays

# Volumetric Estimates

## Bowland Shale

Estimated Adsorbed, Free and Total GIIP in the shale formations are:

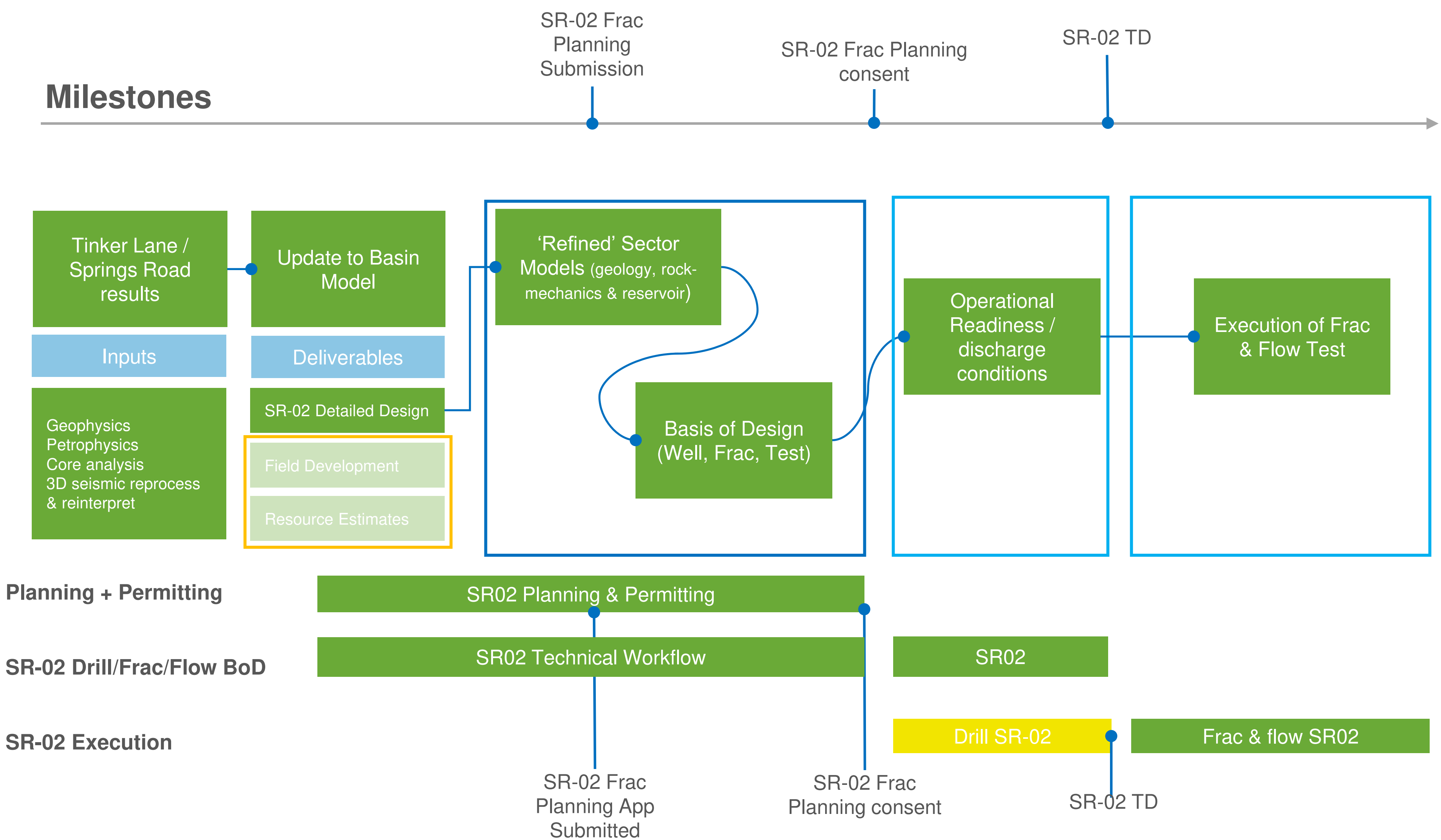
| Formation (mTVDSS) | Estimated GIIP ( Bcf/Sq Mile ) | | |
|---|---|---|---|
| | Adsorbed | Free | Total |
| **Upper Bowland (2,109 – 2,288)** | 46.3 | 184.7 | 231.0 |
| **Lower Bowland (2,288 – 2,593)** | 70.2 | 338.5 | 408.7 |

*Note: Secondary (Millstone Grit) and tertiary (Arundian shale) targets excluded*

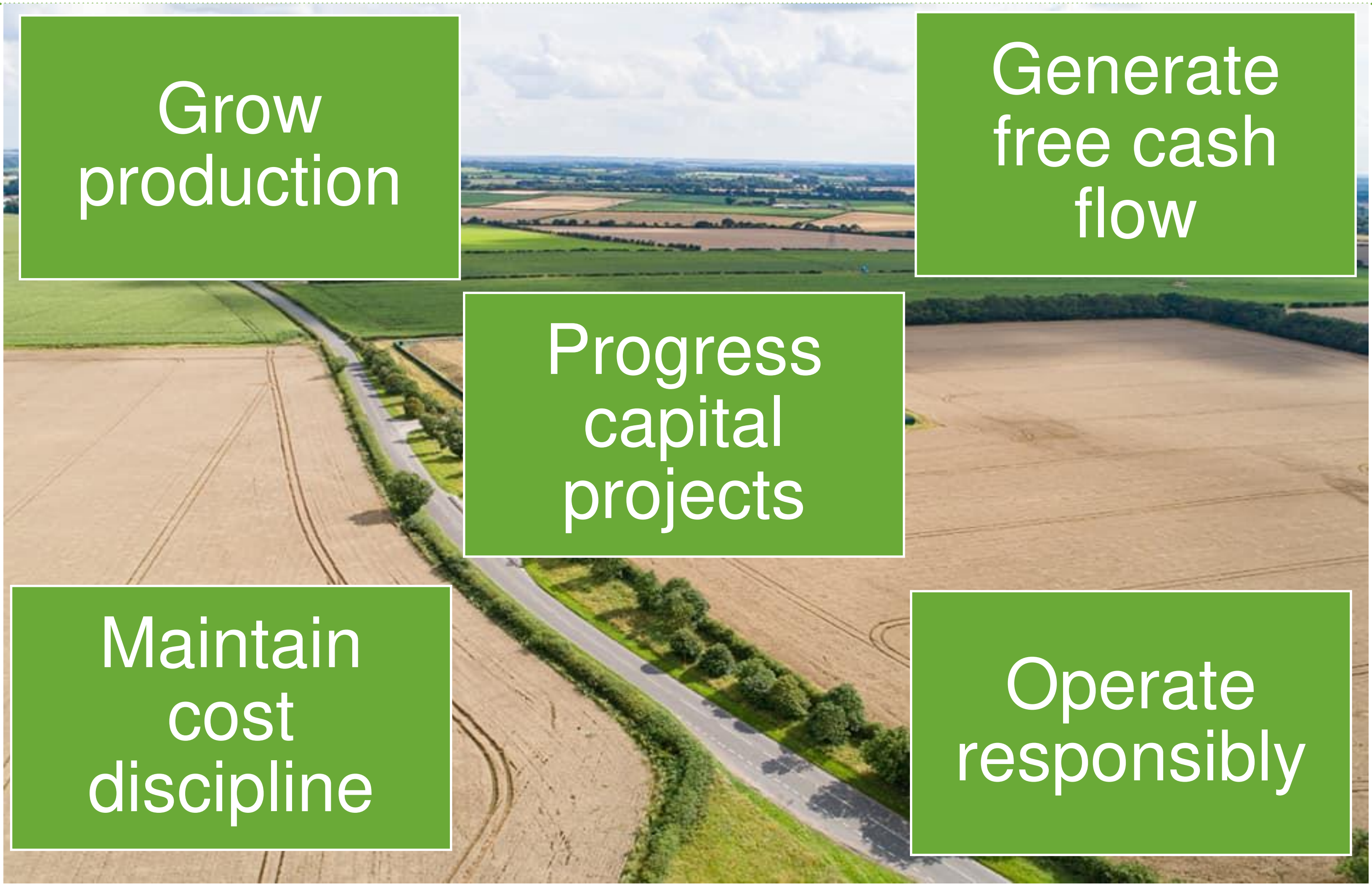
- Gas-Initially-in-Place (GIIP) was estimated using equations presented in Ambrose et al. (2011), Ambrose et al. (2012), Asquith (2013) and Hartman et al. (2011)
- D&M Unconventional Prospective Resources (CPR 2016) determined a mean GIIP 8.9 Tcf in PEDL140, with a mean area covering 25.5 Sq Miles (350 Bcf/Sq Mile)
- The volumetric estimates based on SR-01 Data only, no regional data has been incorporated in this assessment and as such does not account for thickness variations and reservoir heterogeneity within the basin

# What next?

## Planning for Execution of Springs Road 02 Drill, Frac & Test



# Summary and Outlook



# Appendix

# Future Implications for UK Energy

**National Grid Future Energy Scenarios & CCC Net Zero Report**

## FES

- Published July 2019
- Focused on gas and electricity
- Four scenarios - none compatible with net zero
- In terms of gas supply:
  - The UK is increasingly reliant on important gas from continental Europe and LNG
  - Shale gas could bring benefits to the UK economy
  - Natural gas imports are forecast to represent 87% of gas supply by 2050, comparable to the CCC assumption of 86%

## CCC

- Published May 2019
- UK Government legislates to bring all greenhouse gas emissions to net zero by 2050
- Recognises significant role of natural gas to meet target
  - gas consumption in 2050 will be 600 TWh against an estimate for UK production of only 85 TWh.
- Without  onshore gas and oil there will be a considerable import dependency (as high as 86%) even under net zero conditions