

| Morning Report PNR1z | | | | |
|---|---------|----------------------|---------------------------------|-------------------------------|
| Management System: | | HSE | File Name: | 019-PNR1z-26.10.18-RMR |
| Approver: | | Senior Geoscientist | Version No: | 1 |
| Reviewer: | | Frac Manager | Date of Issue: | 27 th October 2018 |
| Author: | | Senior Geoscientist | Proposed date of Review: | n/a |
| Version | Section | Revision Information | Date | Reviser |
| 0.1 | All | Draft Publication | 27/10/2018 | Senior Geoscientist |
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| <i>Documents are reviewed as per proposed review date, or sooner if a significant change to the operation has taken place, to ensure relevance to the systems and process that they define.</i> | | | | |

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Summary

Overview of day's operations:

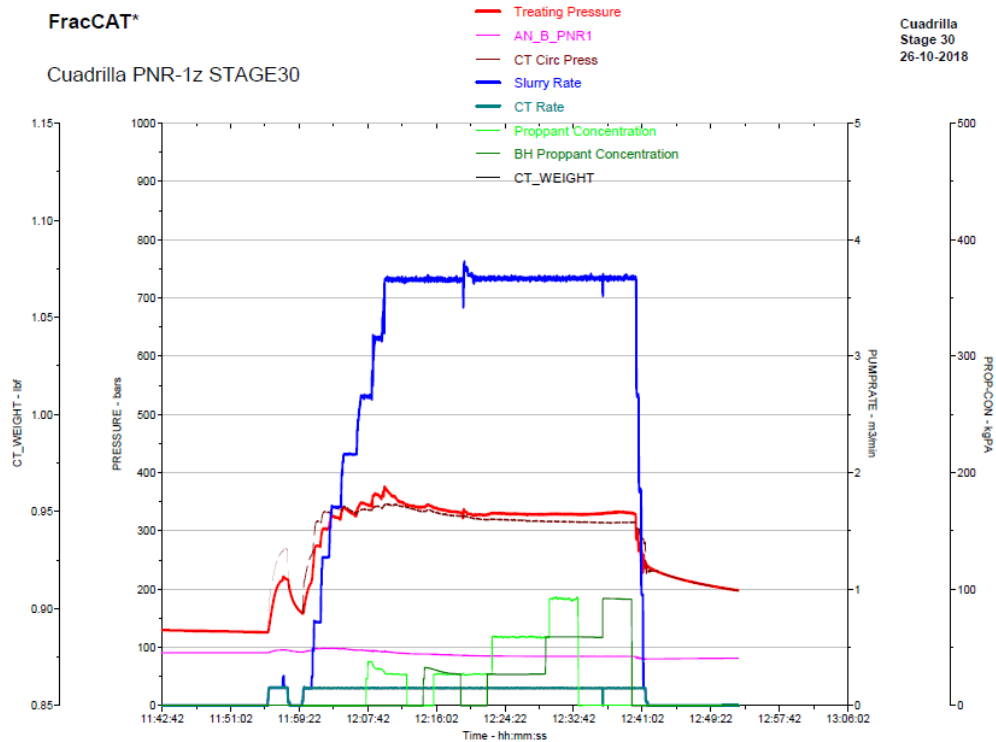
- 1x Diagnostic Injection Test + 1x Main Frac into Stage 30
- Flow back performed
- Induced seismicity at:
 - 12:26:43 – $M_L = 0.26$ [Amber]
 - 12:36:59 – $M_L = 0.76$ [Red]
- No red line boundary breached

Injection Summary

Stage 30

| Injection Depth m (RT) | Volume (fluid m3, proppant tonne) | Fluid System | Additives (type, mass kg, %) |
|------------------------|------------------------------------|--------------|--|
| -2858.25 M MDRT | Slickwater Frac (142.2 m3 & 3.6 T) | Slickwater | B528 Friction Reducer, Slickwater Frac – 35 kg – 0.02 % |
| -2334.25 M TVDRT | | | |

Injection Chart

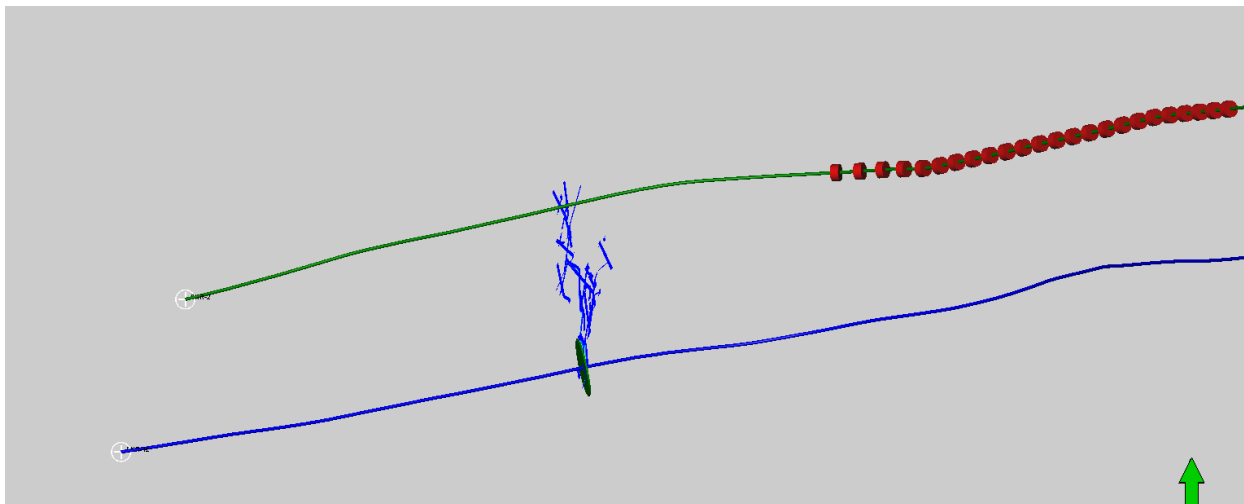


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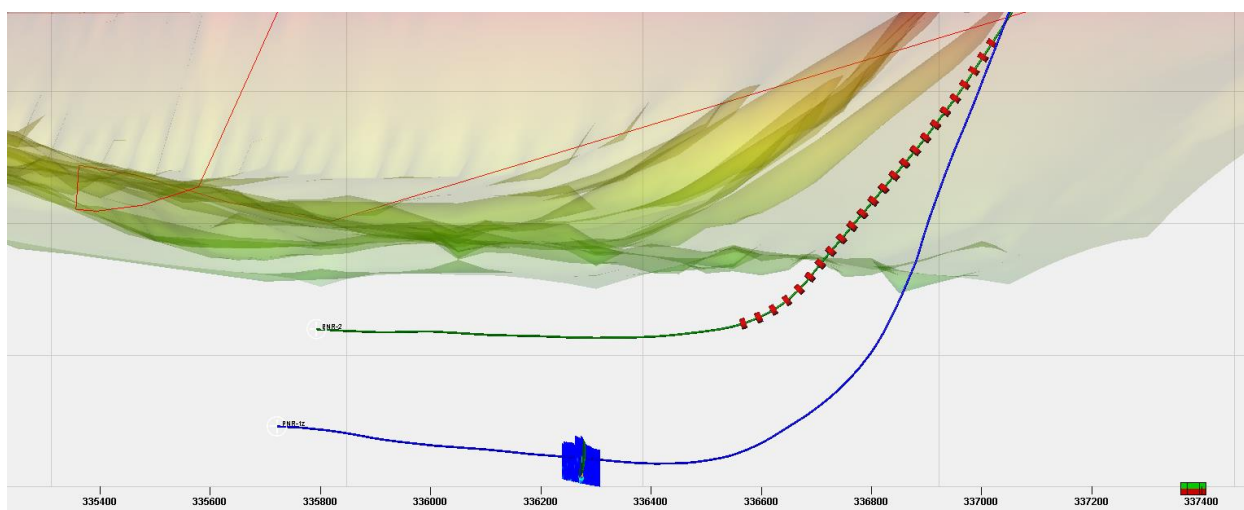
Pumping Time:

1) 26/10/2018 11:59:42 – 26/10/2018 12:41:42

Fracture Growth

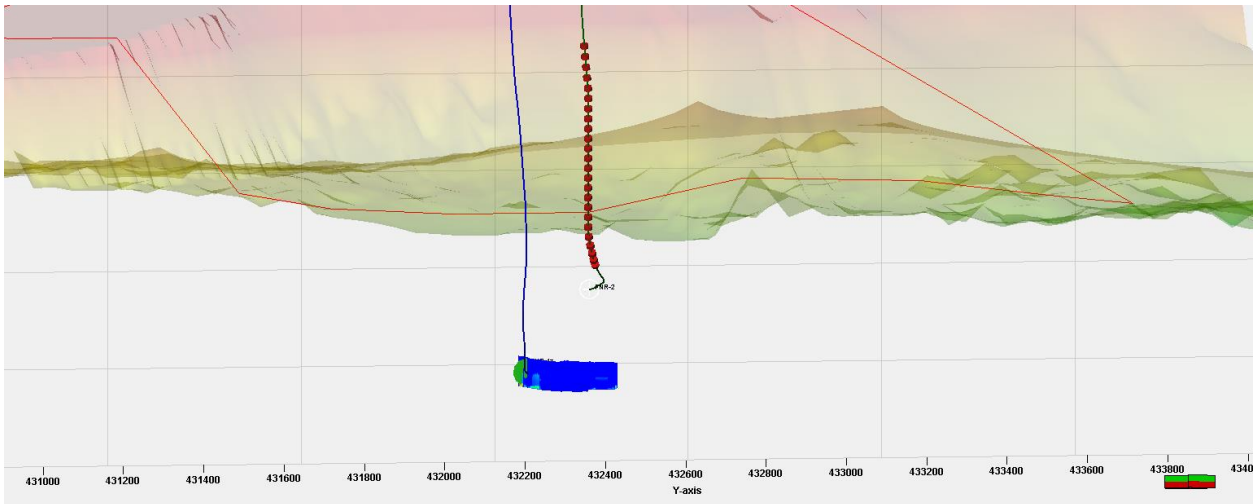


- Map View, scale north bar



- X-section due north

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- X-section due east
- Max hydraulic frac half length: 241.80 m
- Hydraulic frac height at well: 69.98 m

Well Integrity Status

- No change

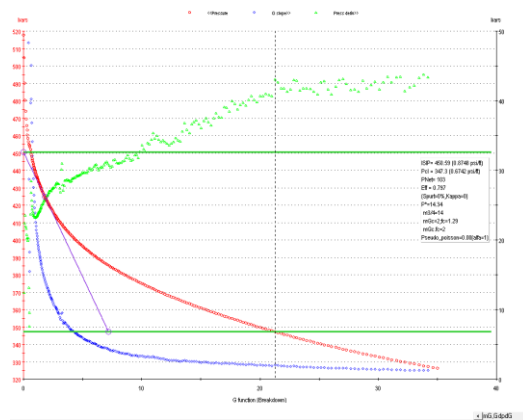
Induced Seismicity of Note

- 26/10//2018 12:26:43 = $M_w = 0.41$ & $M_L = 0.26$
- 26/10//2018 12:36:59 = $M_w = 0.61$ & $M_L = 0.76$

Update to Stress Magnitude

No update to stress magnitude as closure was not observed

- $S_{Hmin} = 0.0152$ MPa/m



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