



Sustainable Sand Management Control and Solutions - Balancing Performance, Costs, and Environment

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World's First Successful Installation of 7" Single-Trip Multi-Zone Sand Control Technology on High Angle 5 Zones Well in Offshore Malaysia

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PETRONAS

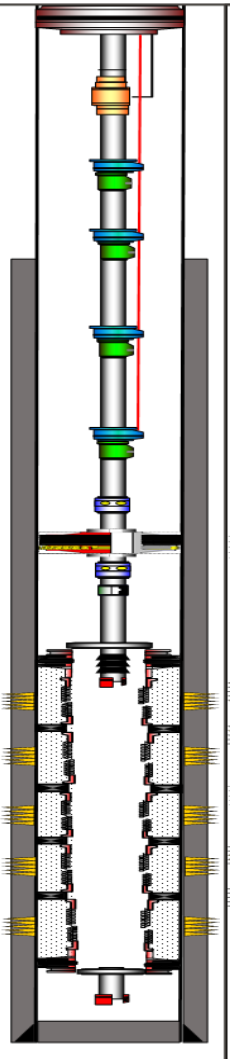
Mohd Ehsanul Hafizi Daud

Halliburton (HLB)

HALLIBURTON

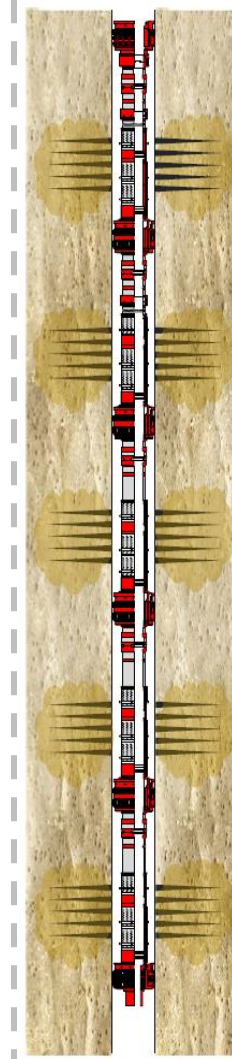
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PROBLEM STATEMENT: HIGH ANGLE 5 ZONES



The Challenge At Hand

- 5 Zones Oil Producer Well in Offshore Malaysia
- Single selective design via CHGP.
- Different gravel treatment requirement.
- Long perforation interval.
- High risk of tool stuck post GP.



The Tech

- Single Trip Multi Zones Sand Control:
- One trip perforation.
- One trip treatment.
- Selective zone isolation.
- 10,000 psi rated.
- Max treatment rate is at 20 bpm.
- Zonal length may differ.

SUPERIOR WELL COMPLETION OPERATION PERFORMANCE

Smooth Tool Execution

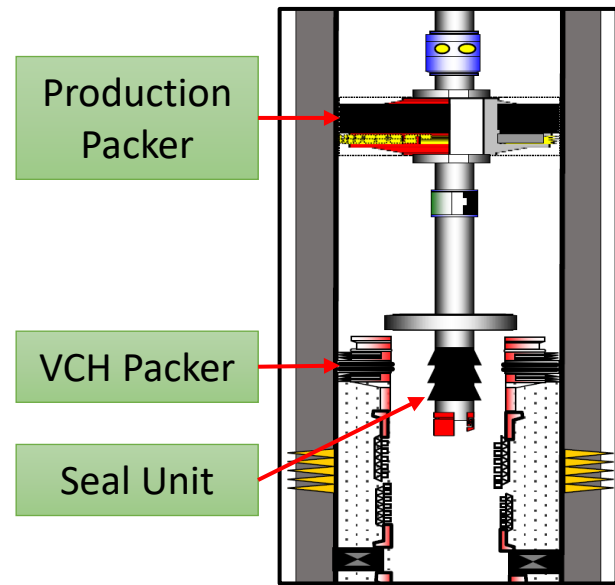
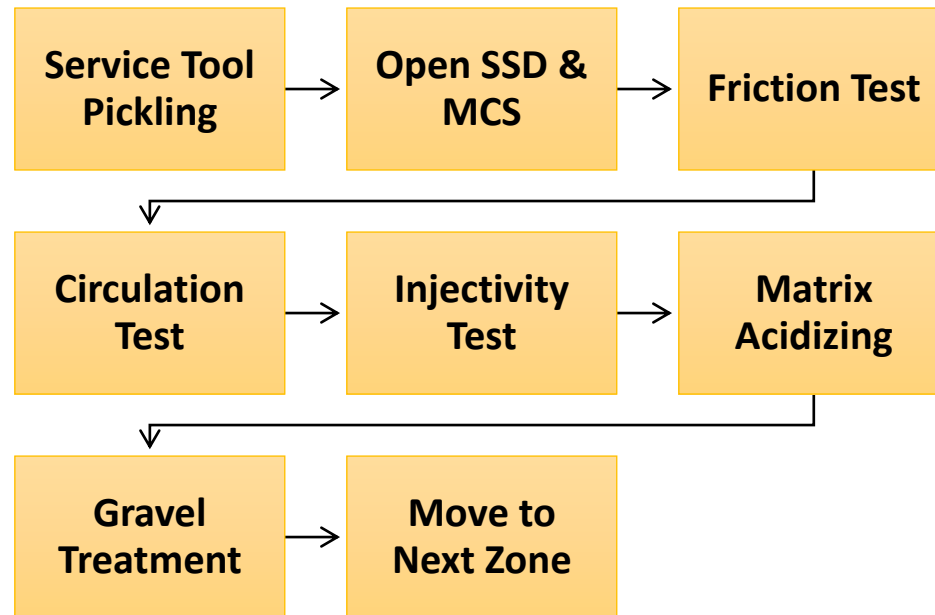
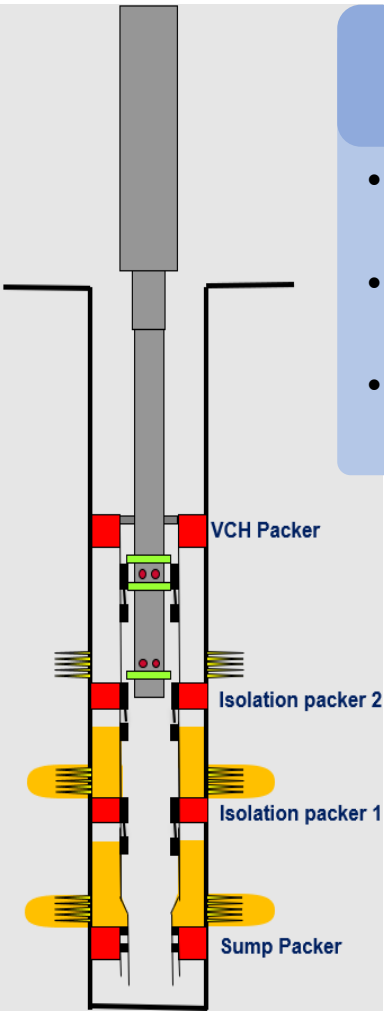
- RIH with SSD in CLOSED position.
- Pressure up against sump packer for tool installation.
- Perform work string for gravel treatment.

Gravel Pack In Action

- Gravel Pack pumping treatment for all zones consist of the following steps.

Superior Performance

- Interventionless packer setting via closed system.
- No debris inside the tubing.
- Fit for purpose solution with minimal cost.





CONCLUSION

- Recorded as 1st in the World Single-Trip Multi-Zone Sand Control Technology in High Angle 5 zones.
- Significant rig time and cost saving compared to conventional stack pack completion.
- Single-Trip Multi-Zone was successfully positioned and installed in the well.
- 5 zones were successfully treated up to Extension Pack.



ACKNOWLEDGEMENT

“ The team would like to extend their heartfelt appreciation to all the members who actively participated in and made valuable contributions to the successful execution of this project, despite the challenging and high-risk nature of the operations. Their unwavering commitment to ensuring safety and compliance is commendable.

Furthermore, special recognition to PETRONAS for allowing to data/info to be used for the SPE Workshop. ”

THANK YOU