

26" Deep Water Drill Bit Development

Speaker Information

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- Applications Engineer – NAO
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26" Carbonate Raft Applications

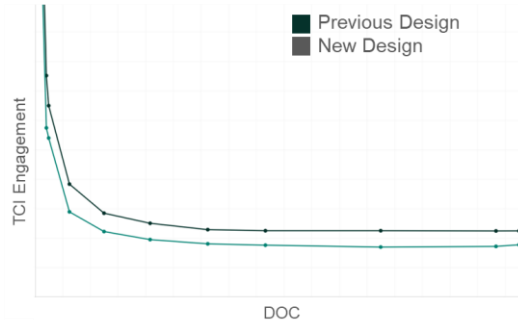
- Hard carbonate raft above salt
- WT, BT, CT to shoulder and gauge after drilling ~1,000ft of carbonate raft
- New design required for future wells with larger carbonate intervals



26" Hybrid Re-design

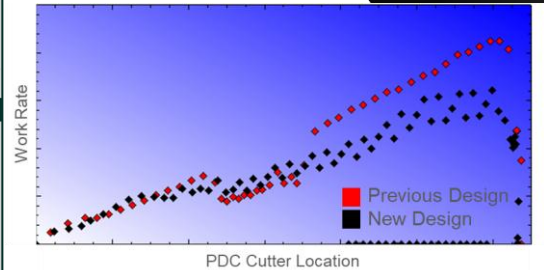
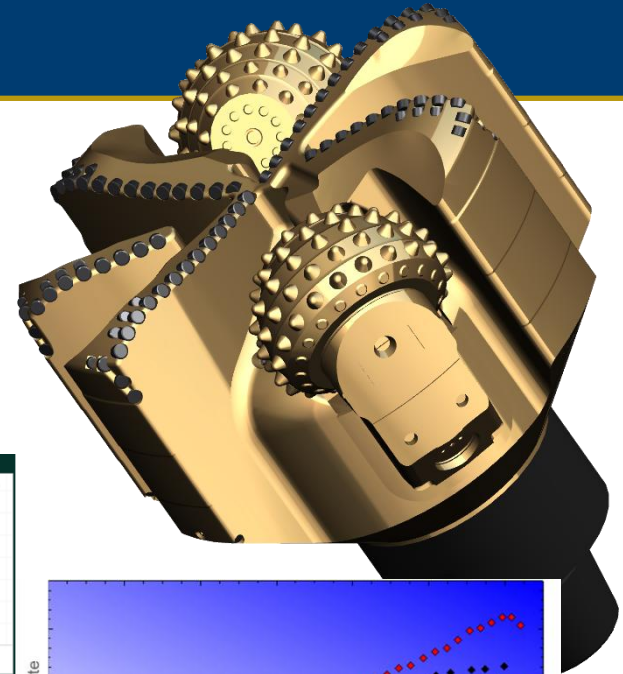
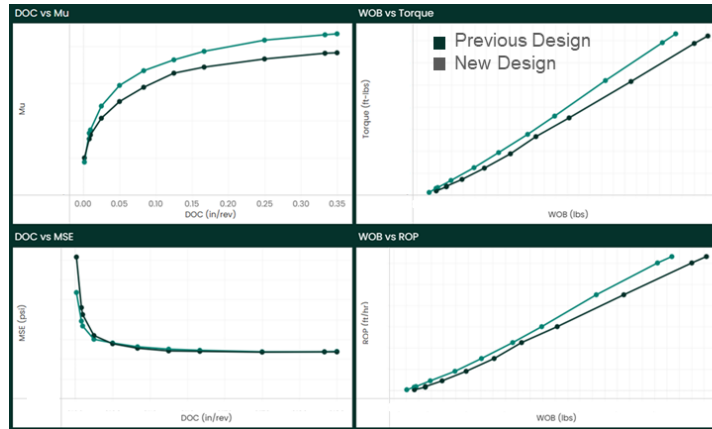
Objectives

- Improve PDC shoulder durability
- Revise TCI structure for durability and balanced structure



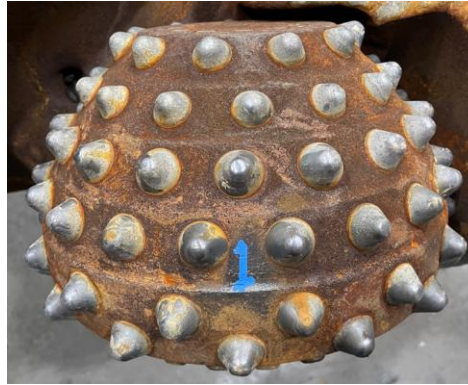
Changes

- 3 -> 6 Blades
- Backrake
- 3 -> 2 Cones
- TCI selection
- Optimize Cone engagement



26" Hybrid Re-design Results

- Drilled ~2900ft total with 1550ft of carbonate raft
 - Longest riserless carbonate raft in region
- 40ft/hr average
- 1-run to TD
- 3 days ahead of plan
- Next Steps → Iterate for further PDC shoulder durability



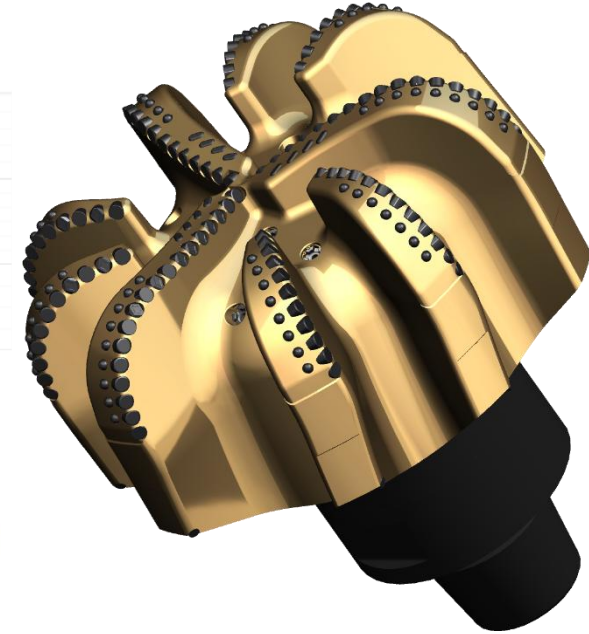
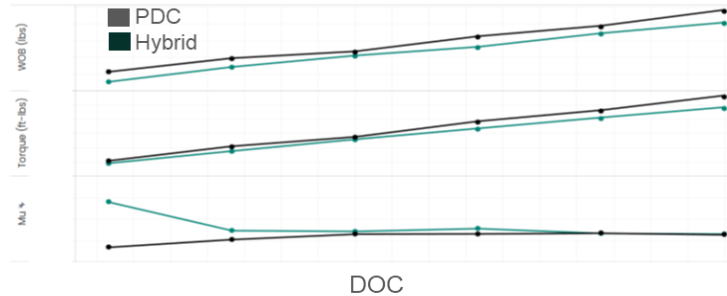
26" PDC – Carbonate, Salt entry and Salt Drilling

Objectives

- Drill section in 1 run
- Preserve cutting structure
- Directional friendly
- Minimize TQ fluctuations

Design

- 9 blade design
- Modified Cutting Layout
- Strategic placement of shaped cutters
- Significant rubbing features for DOCC



26" PDC - Results

- Drilled ~4,900ft at 73 ft/hr
- 1-run to TD
 - A first for the area
- Moderate vibration
 - Managed with parameters
- Achieved directional objectives
 - High steering force required
- Excellent dull
- Next Steps -> Further improve DOCC and Steerability



Conclusion

- Collaboration and buy-in with the operator is critical for application specific improvements.
- Hybrid bits continue to improve performance and expand capabilities through customization of cone engagement, cone count, blade count, profile, etc.
- PDC bits can increase performance through a refined balance of aggressivity and torsional stability.
- Thanks to:
 - Joey Rodrigue
 - Mike Savage
 - Mike Garcia

2026 Drill Bit Forum and Exhibition



Highland Pines Golf Club

February 24, 2026

Thank You