

6 7/8" PRODUCTION SECTION: CURVE + LATERAL

Montney, Western Canada

\$100k
POTENTIAL COST SAVINGS

172
CIRCULATING HOURS IN SINGLE BIT RUN

54%
DECREASE IN SHOCKS PER HOURS

The Thruster provides consistent force to bit by balancing hydraulic and mechanical forces. This balance provides smooth energy transfer to the bit, even in erratic situations. By providing consistent parameters, the Thruster reduces shock and vibration, BHA damage and failures.

THE CHALLENGE

An operator in Canada was seeking to successfully drill a 6 7/8" curve and lateral section with RSS but was experiencing multiple downhole failures, mainly due to high shock and vibration. Three production sections were drilled with different vibration mitigation drilling tools.



THE SOLUTION

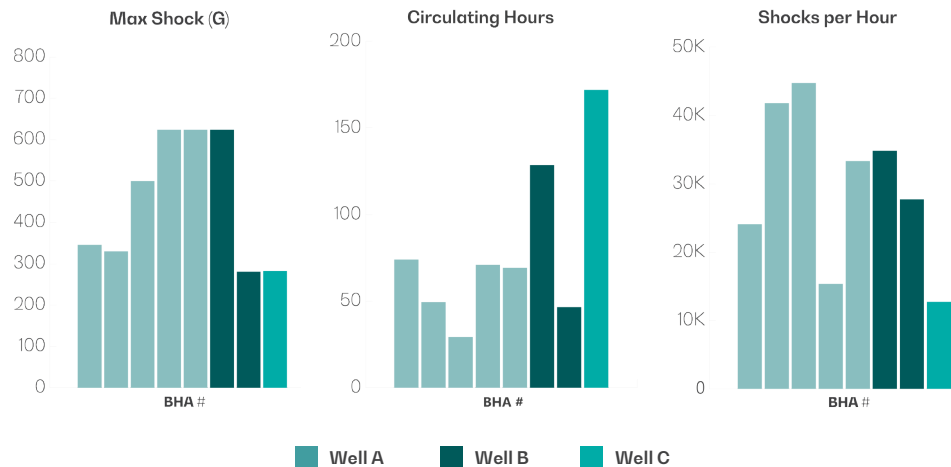
New objective was set to drill the production section in a single run and decrease shocks to avoid RSS and MWD damages. The 5" Thruster with standard spring setting was added to the BHA after considering the well profile, and downhole parameters. The tool was placed in between the MWD and the mud motor to assist with shock and vibration mitigation.

THE RESULT

The BHA with the Thruster below the motor received the fewest number of shocks per hour. The maximum peak shocks the BHA received was lowest on the two BHAs with the Thruster. The BHA with the Thruster below the motor successfully drilled Well C in one run.

RUN OVERVIEW

- 6 7/8" Hole Size
- PowerDrive Orbit RSS
- Mud Motor 7/8 - 8.4 stg
- Average section length of 5,100m
- 5" Thruster with standard spring



Well A was drilled with a total of 5 BHAs(Competitor) The production section of Well B was drilled with 2 BHAs. Run 1 had no vibration mitigation tool and run 2 had a Thruster. The production section of Well C was drilled in a single run and a Thruster was included below the mud motor.

	WELL A					WELL B		WELL C
#BHA	1	2	3	4	5	1	2	1
Vibration Mitigation Tool	Competitor					None	Thruster	Thruster
Circulating Hours	74.14	49.47	29.44	71.09	69.39	128.63	46.61	172.06
Shocks per Hour	24,109	41,828	44,775	15,388	33,371	34,860	27,744	12,762
Max Shock (G)	346	330	500	624	624	624	281	283