BLACK MAMBA ROD LIFT

REPORT 24.2

# PRODUCTION ENGINEER ADDRESSES EXTREMELY CHALLENGING CONDITIONS TO EXTEND RUNTIMES

## GAS INTERFERENCE, SIGNIFICANT SAND, 1,000BFPD, CURVE PUMPING, DLS

**In Loco Hills, NM, a multi-well pad averaging 20 day run times before intervention (after being converted to rod lift from ESP) needed addressing. The worst well, often the first candidate for a trial run with Black Mamba's product, would not produce fluid longer than 9-days before rod failure. Although these wells were shallow (4,000 feet), a large tubing pump was utilized to produce over 1,000 bfpd.**

## CHALLENGE

In an ideal world, Black Mamba would down-size the pump from the 3.25" bore to a 2-3/4" pump which would significantly reduce the side-load due to reduced fluid load and rod tension. With **DLS varying from 3 degrees to 15 degrees throughout the survey**, the rods found themselves grinding into the tubing, priorly causing rod and tubing failures in days. A highly wear resistant material with low friction coefficient was required.

The engineer over these assets was originally skeptic of having so much plastic and guide down-hole, expecting to see dramatically increased polished rod loads from guide installation.

## SOLUTION

**The first installation featured Black Mamba's PPS-TS material, a stiff, wear resistant thermoset molding compound also featuring a low coefficient of friction, These side-loads and conditions demanded 7-guides per rod - our best foot forward**.

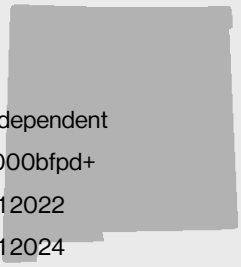
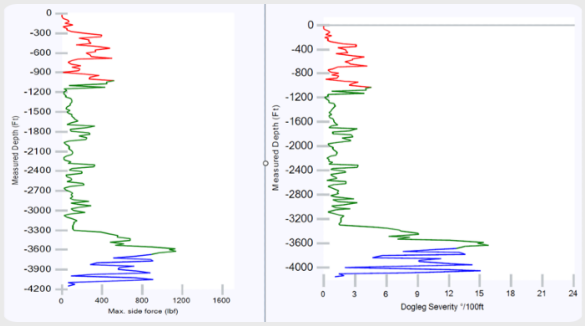
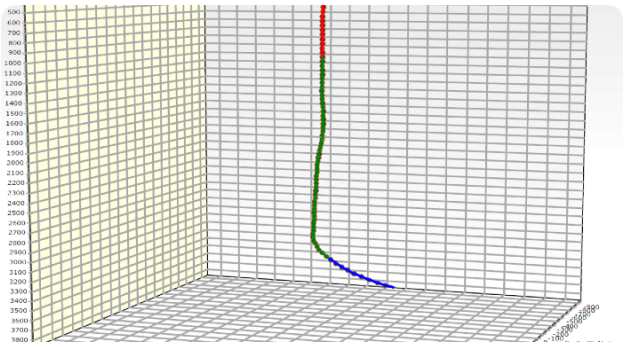
Black Mamba also typically designs rod strings to have balanced stress loading, taper to taper. In this case, we guided rod inventory that the customer already owned, which resulted in unbalanced tapers, not ideal. The pump should have been down-sized to reduce side-load and rod loading, however a 2-3/4" pump was not available in the timing needed for the operator.

## RESULTS

Initial install featured PPS-TS product. This well needed a pump change after 6-months. The operator then switched to UPK Black Mamba guides. From there, the run time exceeded 500-days without any intervention. **This operator has handed all rod-work and rod inventory management to Black Mamba after addressing every well on this pad. Each well had the same result, beyond 35x prior best run-time.**

## PROJECT DESCRIPTION

**LOCATION:**
**Loco Hills, NM**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|---|---|
| CUSTOMER TYPE: | Independent |
| PRODUCTION: | 1,000bfpd+ |
| INSTALL DATE: | Q12022 |
| CURRENT DATE: | Q12024 |
| RUN TIME: | 500 days+ |