

# Power Chokes®

## Managed Pressure Drilling applications delivers a cost effective-solution



### Objectives/background

- During connections, the well was becoming underbalanced and the customer was experiencing gas returns. This increased the likelihood of the well experiencing pressure control issues and concerns relating to flaring
- The customer was drilling in a formation that had a high pore pressure, this required a higher ECD and bottom hole pressure. The customer was looking for a solution to reduce the cost of drilling muds by mitigating the use of heavy drilling fluids
- The well plan called for a total depth of 20,308" and a run of 5.5" 23# P110 casing string
- Power Chokes® had worked with the customer previously but this is the first time the customer has utilized Power Chokes® new ABP software to aid their drilling operations

### Power Chokes®

Power Chokes® provided an MPD solution, which allowed the operator to drill with a lighter mud weight by applying backpressure at the surface, maintaining a high ECD and pressure downhole

- Power Chokes® completed MPD applications on another well utilizing our Automatic backpressure software, which is capable of trapping pressure automatically during connections. As can be seen in figure 1, the pumps can be ramped up and down very quickly to minimize the connection time during MPD operations while maintaining a constant ECD/ bottom hole pressure
- Power Chokes® assisted in calculating the surface backpressure required to maintain a constant pressure profile downhole with our in-house engineering team and hydraulic well modeling capabilities
- After visiting the rig site, we were able to provide a tailored solution for the customer's specific operational requirements leading to reduced rig uptime and a cost effective solution

- While conducting MPD operations, Power Chokes® auto-tuning software allowed operations to be fully automated through drilling and connection, using its patented ramp table technology
- Power Chokes® was able to rig up in a way that allowed the rig to hold backpressure of 20-80 PSI at the surface while drilling at flow rates over 700 gpm.
- This was completed utilizing the dual choke mode of the new ABP software, allowing flow to be managed through both chokes simultaneously

### Value to client

- Power Chokes® provided personnel and equipment for this application and assisted in calculating surface backpressure required to reduce the cost of our MPD operations for the customer
- Our customer did not have to weigh up the mud which resulted in time and cost savings
- Power Chokes® dual choke mode was able to successfully reduce surface friction pressure allowing pressures as low as 20 PSI to be held while drilling
- Our system is fully automated allowing a reduced amount of MPD operators on the rig
- We were able to reduce the connection gas to negligible and avoided any associated NPT
- Our Automatic backpressure system's software allowed us to trap pressure without compromising on connection times allowing the rig to drill quickly and safely



For further questions or quotation requests, contact [PowerChokes-Sales@adsmpp.com](mailto:PowerChokes-Sales@adsmpp.com).

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