evoone
UNIFIED TELEMETRY

arrives in the DJ Basin & increases ROP by 29’ per hour

CHALLENGE

To deliver higher ROP in the DJ Basin and improve downhole data quality so directional drillers and operators can make more informed decisions while saving both time and money.

SOLUTION

To deploy EvoOne and use its Unified Telemetry platform to provide multi-mode EM & Mud Pulse on simultaneous independent channels significantly improving ROP & gamma quality.

OUTCOME

1. **6.67 hours saved in drilling time**
2. **29’/hour increase in average ROP**
3. **9.8 less hours spent circulating**
4. **Significant improvements in gamma quality & reliability**

EvoOne Replaces Pulse, Saving 6.7 Hours on 11,224 ft Single Run

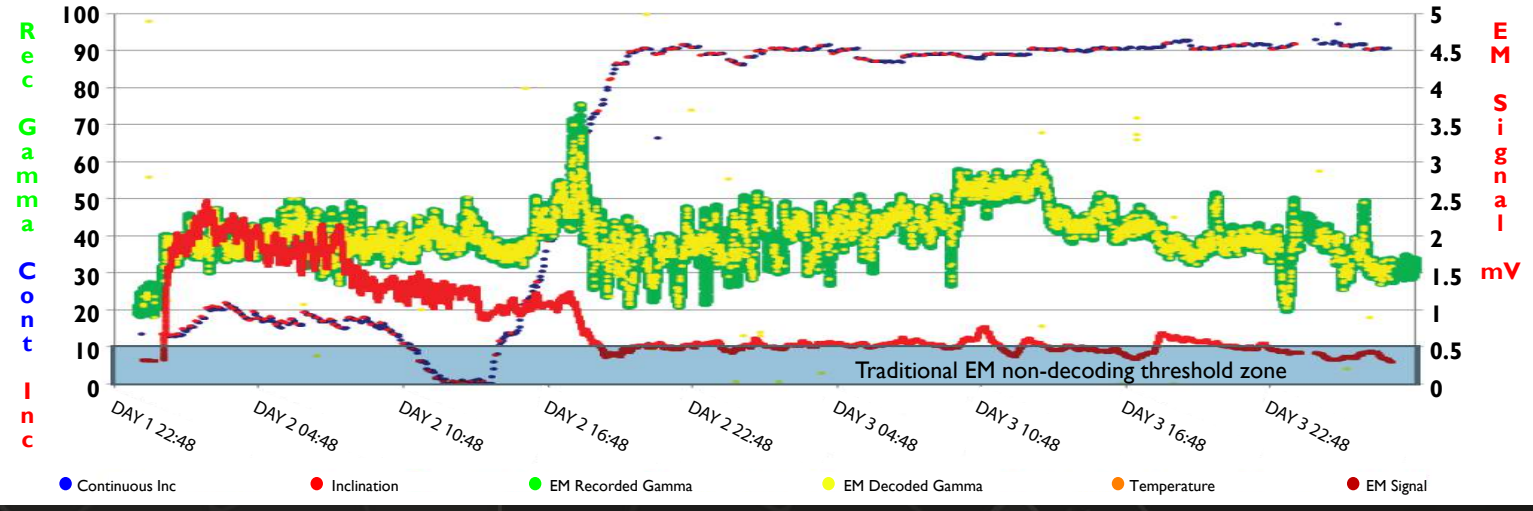
EvoOne was evaluated against a conventional mud pulse MWD tool targeting the Niobrara B formation in Weld County, Colorado. Prior to deploying EvoOne, the directional provider ran mud pulse tools in this county on over 50 wells. On this multi-well pad, the provider ran mud pulse on the first well. The final run lasted 72.17 hours from 1,888’ down to TD at 13,039’, a solid result for this region with mud pulse telemetry. Using EvoOne the next well was drilled (same pad) with an additional 73’ in measured depth, in the same section and with a single run. Using EvoOne, the second well was drilled in 65.5 hours, saving the operator 6.67 hours in drilling time.

EvoOne Unified Telemetry Decodes the Entire Well

Many attempts with EM products have been made in this basin with very little success. “I have tried EM telemetry tools in the DJ on many wells without ever decoding in the lateral,” said Jason Wackett, former President of ARK Directional and now Director of Operations with Inpetro Energy. “As a result, we had to piggyback tools in order to gain the benefits of EM. However, this increases the cost and downhole liability while placing gamma and directional sensors too far from the bit to trust.” The difference between EvoOne and other EM systems is its proprietary noise canceling and decoding algorithms which decode signal levels that are significantly lower than standard EM tools. The recently released EvoOne V15 Surface System is 30-50X more sensitive than current EM tools. This allows directional providers to decode EM signals as low as 0.01 mV. By comparison standard EM tools typically will not decode below 0.5 mV.

EvoOne Improves ROP & Decoded Gamma Quality in the DJ Basin

Before the introduction of EvoOne, the operator’s well program utilized conventional mud pulse tools which took four minutes to send up surveys after pumps up. During this delay, the driller would go to bottom and set the auto driller at 150’/hour until the survey populated. The DD would then decide to rotate or orient and slide, losing valuable time that could have been at max ROP. Using EvoOne, the DD received this data before the connection was made which allowed them to gain 5 minutes per stand at the desired higher ROP. With 118 survey stations on the EvoOne well, 9 hours and 51 minutes would have been spent on auto driller at 150’/hr. Using EvoOne also improved the quality of the Gamma logs. The mud pulse drilling program described above, forced the operator to sacrifice gamma log quality in order to get back on bottom. This limited their ability to send gamma data during surveys and while drilling ahead blind post connection. Figure 1 shows how the EvoOne Unified Telemetry system provided high quality gamma in addition to increasing the average ROP by 29’/hour for the entire well, an increase of 15% in average ROP.



evolution

evolutioneng.com