Excellent Data Density at High ROP In The DJ

CHALLENGE

Provide high-quality gamma ray log while drilling 800ft/hr in intermediate and 500ft/hr in the lateral. Gamma ray log needed to have one gamma point per foot. Mitigate rig electrical noise at 2hz and 10hz.

SOLUTION

12hz and 8hz configurations provide necessary data rates to produce one gamma point per foot. Use the two configurations to move away from rig noise.

OUTCOME

1. **Used 12hz-12bps EM configuration to 11900ft and then 8hz-8bps configuration to TD at 14150ft.**
2. **EM decoded at 99% and achieved one data point per foot.**
3. **EM configurations used did mitigate electrical noise from rig.**

evoone EM Data Density

Data density up to 16 bit per second ensures the user can count on accurate real time data being decoded on surface. If recorded mode gamma is needed, gamma is recorded at 3 second intervals, providing excellent data density. *Note: below table, configurations can be modified to increase or decrease frequency of desired data point. Frequency doesn't directly correlate to bit rate.

EM Data Transmission Rates (With Continuous Inc/Azi, Shock Data, and Diagnostics)									
EM Frequency	1	2	3	4	6	8	9	12	16
Survey Time From Pumps Down (In Minutes)	2.6	1.6	1.2	1	1	1	0.9	0.8	0.6
Max ROP For 1 GR Point Per Foot (ft/hr)	132	261	371	491	491	491	694	992	1438
Max ROP For 2 GR Point Per Foot (ft/hr)	66	131	186	246	246	246	347	496	719

evoone's Flexibility

Ease of setup and ability to configure the evoone system to a specific drilling application is what makes the difference. This system can be configured from 1hz to 16hz wavelength, 1bps to 16bps data rates, EM power setting from 2 watts to 30 watts, tool can be loaded with 8 different configurations for EM and MP.

One Run

Drilled intermediate, curve and lateral in one run. Evolution's nLIGHT™ Software can merge real time, EDR, and tool log data to perform real time or post run analysis. See nLIGHT™ graphical output below.