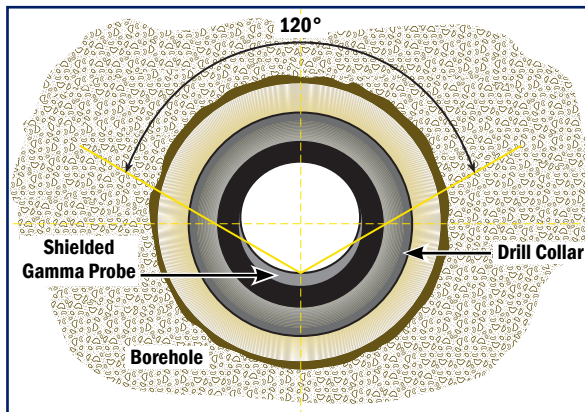


Departure Energy Services introduces the the Focused Gamma add-on to the LATITUDE®, a Positive Pulse Measurement While Drilling System (MWD).

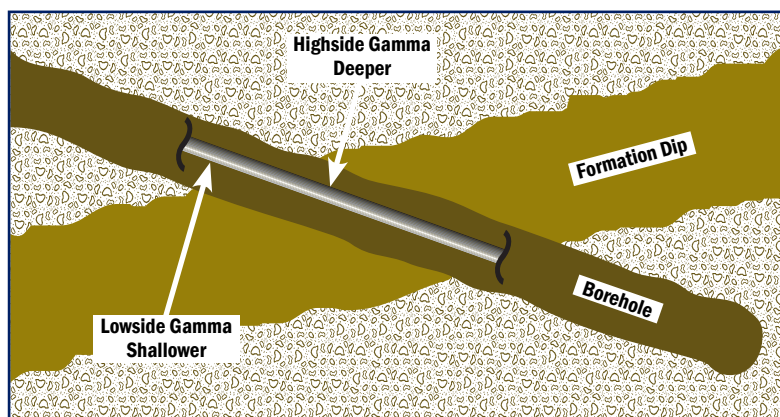
The 'Focused' Gamma is an add-on to DES's Latitude® MWD with an eccentrically shielded scintillator providing a 120° aperture. As part of our Positive Pulse System the tool ensures top performance in a variety of flow ranges and collar diameters from 3.5 inches to 9.5 inches outside tool diameter. This modularity, combined with the MWD System's rugged and retrievable design, minimizes rig downtime and financial risk. This has been proven to be the most efficient manner of adding directional sensitivity to the Gamma.

The aperture is then physically oriented to Mud Motor Highside eliminating any confusion over orientation. This service allows the ability to geosteer based on Gamma in areas where there is significant difference of natural radioactivity in between formations. This directional sensitivity also allows the potential for inference of relative formation dip angles, with a twin pass sweep.



Benefits

- STAYING IN THINLY BEDDED FORMATIONS.
- INFERENCE OF FORMATION DIP ANGLES.
- RELATIVE DISTANCE FROM FORMATIONS WITH LARGE DIFFERING API COUNTS



Refer to DES Latitude specification for further operational and system specifications.



DEPARTURE  
ENERGY SERVICES INC.

LEDUC OPERATIONS FACILITY

#106, 8009 - 39th Street  
Leduc, Alberta, Canada  
T9E 0B3

Phone 780.980.3900 24hrs

CALGARY SALES OFFICE

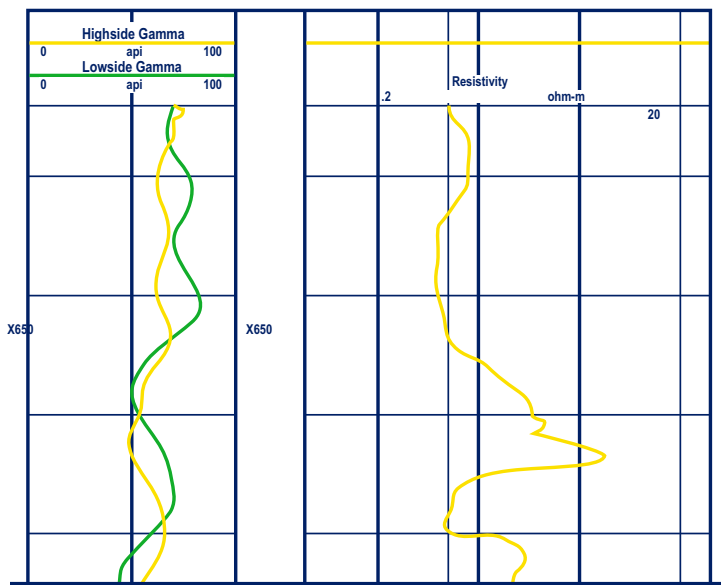
Phone 403.266.3940

Toll Free 877.233.3940

**Departure Energy Services introduces the the Focused Gamma add-on to the LATITUDE®, a Positive Pulse Measurement While Drilling System (MWD).**

The system comes with a windows-based, full color graphics LCD Rig Floor Display which can be readily viewed in normal rig operating conditions. The Rig Floor Display contains the necessary barriers and protection circuits for safe operation. Combined with touch screen capabilities and software the system becomes a reliable, efficient and easily configurable, avoiding the need to "hand decode". The Surface Logging system can be 'tied into most Electronic Data Recorders through the WITS interface to provide real time logging. Hardcopy logs on location are generated and printed to a hi-speed thermal plotter.

TWINNED-PASS GAMMA RAY RESPONSE



**The Latitude® Focused Gamma MWD Assembly consists of:**

- DIRECTIONAL SENSOR
- BATTERY MODULE
- GAMMA MODULE
- ELECTRONICS MODULE
- PULSER DRIVER

**Dimensions**

- DIAMETER 47.6 MM (1.88IN.) – RUBBER STABILIZERS ARE SIZED TO FIT COLLAR I.D.
- LENGTH 7.30M (24 FT.) WITH FOCUSED GAMMA

Directional Probe

Battery Pack

Gamma Probe

Pulser

Helix



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LATITUDE® POSITIVE PULSE MWD  
FOCUSED GAMMA ADD-ON

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