

HDD™ Provides More Accurate Log Porosity Over High Resolution* When Compared to Core

CASE HISTORY: Comparison of HDD™ to Core Porosity through the Lloydminster Heavy Oil Formation, Viking-Kinsella Area, Alberta.

Objective:

Validate HDD™ log porosity values against core porosity to increase the confidence in log derived porosity for reserves calculations and bed boundaries.

Solution:

Compare core porosity values to main pass and HDD™ log data.

Benefits:

Increased confidence in matrix porosity values acquired with HDD™ resulting in less dependency on cutting core.

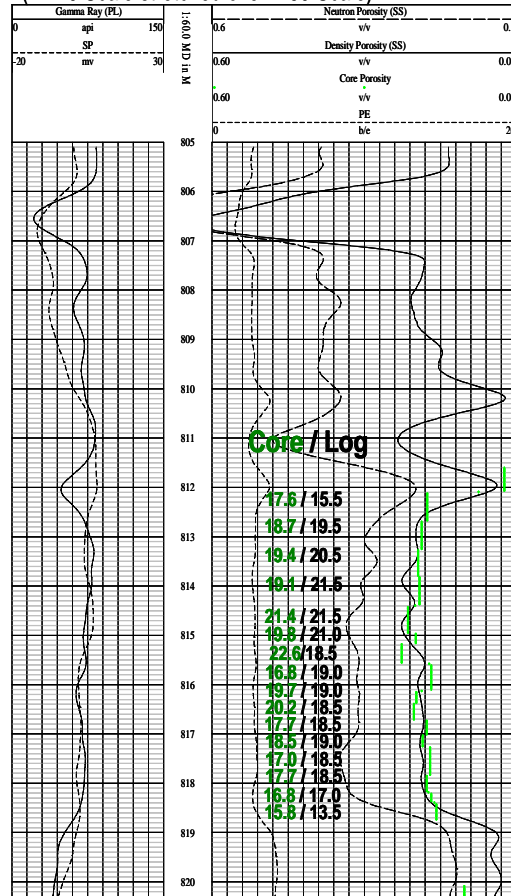
Core porosity values compare adequately to the average Density porosities in both cases.

Increased confidence in the log derived porosity for volumetric calculations, resulting in more accurate reserve assignments.

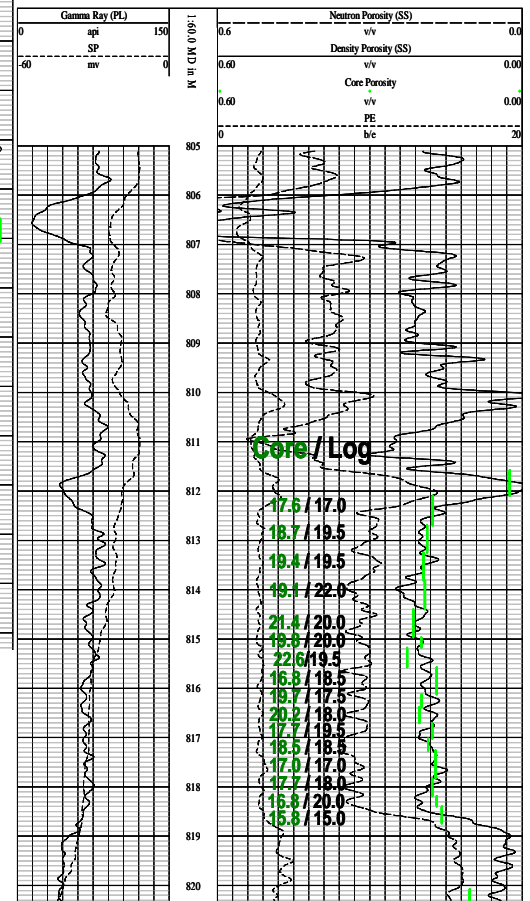
Clearer identification of inter zone lithology and variability.

HDD™ log data was acquired without incident and with minimal impact to log time.

RECON Main Pass 33 (filtered) Samples per meter
(1:240 Scale stretched over 1:60 Scale)



HDD™ 132 Samples per meter (1:60 Scale)



Results:

Main Pass 33 Samples per meter (filtered):
+/- 4.1% Variance

Net Pay (15% cutoff) LAS = 6.15 meters

HDD™ 132 Samples per meter:
+/- 3.2% Variance

Net Pay (15% cutoff) LAS = 6.25 meters

* 33 samples/meter, RECON Standard Logs, Industry High Resolution Logs