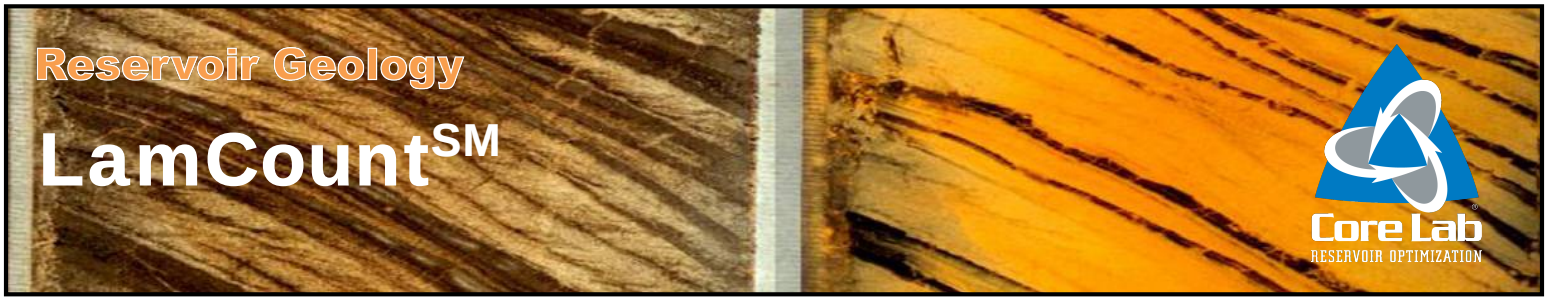


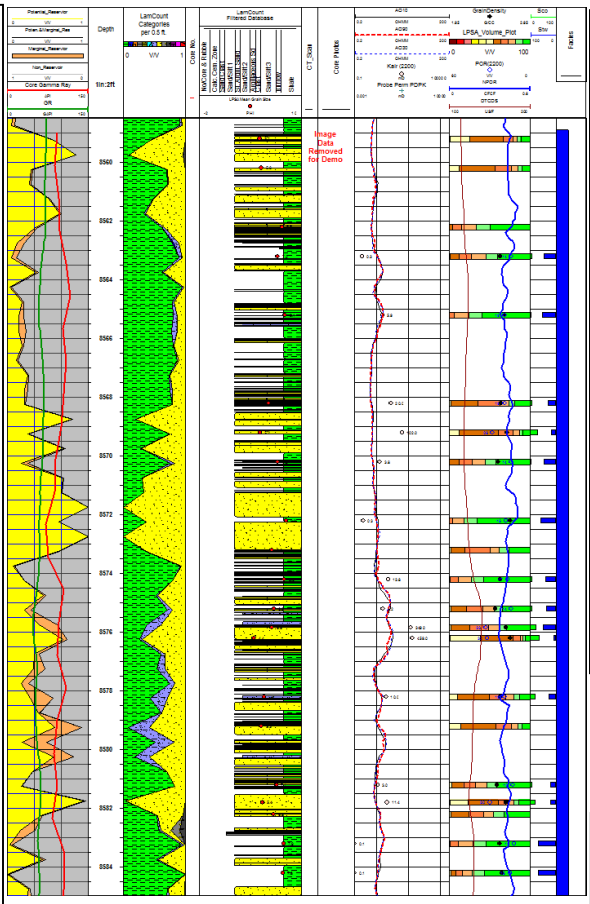
Reservoir Description

LamCount^SM analysis is a high-resolution net-to-gross reservoir evaluation. The purpose of the study is to define & quantify the reservoir potential using conventional cores. It has been helpful in defining "low-contrast" and/or "low-resistivity" reservoirs. These studies have allowed our clients to book accurate reserves, which were typically higher than what was previously expected from log analysis.

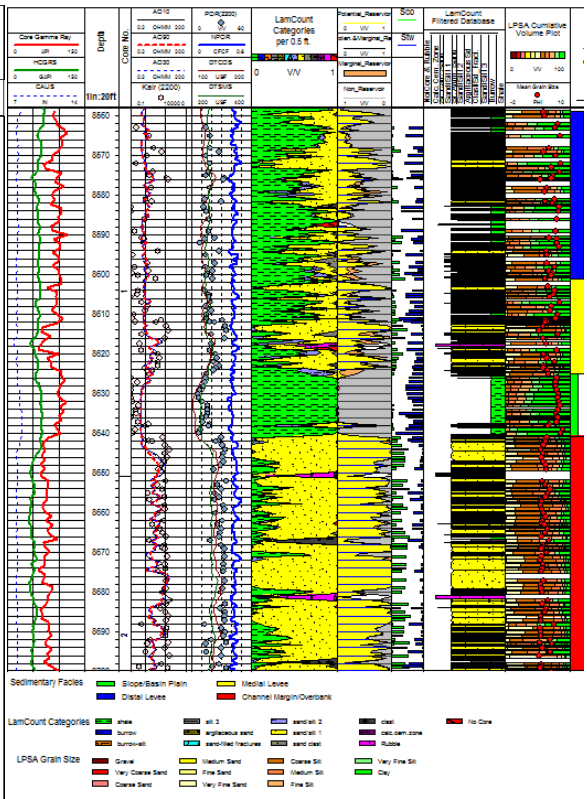
Laminated and thin-bedded strata can form in a variety of depositional environments, including channel-levee complexes and fan lobes in deep-water settings.
Evaluating thin-bedded and laminated formations can be difficult because the bedding architecture is below the resolution of well logs. Conventional "log-based" evaluations of these deposits can over-estimate shale content, which results in a pessimistic reservoir evaluation.

The LamCount^sm technique uses a hyper-detailed core description to accurately quantify net-to-gross ratios. Every lamina/bed is measured and statistically grouped by depth and facies. Each layer is also categorized into 'potential', 'marginal', and 'non-reservoir' units.
The results are presented in graphical and tabular format, and in a detailed lamination database suitable for log modeling and reservoir simulation.
In addition, sand thickness distribution plots are designed to reevaluate the net to gross ratio after removing beds of a certain thickness.

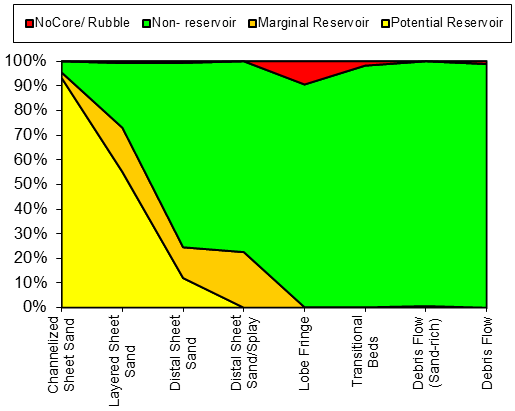
Detailed Plot (1:24)

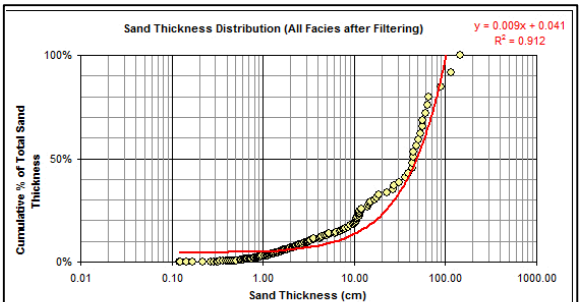


Log Plot (1:240)



LamCount Reservoir Categories per Facies





Cutoffs using the trendline of the Cumulative Percent of Total Sand Thickness (CPTST).							Cutoffs using the (CPTST)		
Cumulative % of total sand thickness	Sand Thickness (cm)	Bedding Thickness Classification (after Ingram, 1954)	Cutoff of X cm	Results in X % loss of the sand to shale ratio	New total sand thickness (ft)	New percent sand to shale ratio	Results in X % loss of the sand to shale ratio	New total sand thickness (ft)	New percent sand to shale ratio
5%	5.5	Thin-laminated (<3 cm)	0.00	0%	17.20	75.3%	0%	17.20	75.3%
10%	11.1		0.15	4%	16.48	72.1%	0%	17.20	75.2%
15%	17.7	Thick-laminated (3 to 1cm)	0.3	4%	16.45	72.0%	0%	17.17	75.1%
20%	22.2		0.65	5%	16.40	71.7%	1%	16.98	74.3%
30%	33.3	Very thin-bedded (1 to 3 cm)	1	5%	16.34	71.5%	3%	16.72	73.2%
40%	44.4		1.5	5%	16.27	71.2%	5%	16.38	71.7%
50%	55.5	Thin-bedded (3 to 10 cm)	3	7%	16.03	70.2%	9%	15.62	68.3%
60%	66.6		6.5	10%	15.49	67.8%	14%	14.75	64.5%
70%	77.7	Medium-bedded (10 to 30 cm)	10	13%	14.95	65.4%	18%	14.10	61.7%