

LaneMap™ Guide

SCAA Bowling Centre - Hong Kong

31 July 2014

KEGEL



Introduction

Kegel is pleased to provide you with this revolutionary LaneMap™ Guide. This guide is an assessment of the gravitational forces on each board of each lane in this bowling center. It will assist you in knowing how much and where gravitational forces come into the play on each lane as the bowling ball travels from foul line to head pin.

Understanding the Data

This guide is designed to compare each pair of lanes in the bowling center. The data presented are:

- 🦅 LaneMap™ Graph - A colored gravitational slope graph of each lane
- 🦅 3-D contour map of each lane

The Kegel LaneMapper™ is a state of the art device that can efficiently and accurately log digital recordings of surface topography. Designed by Kegel specifically for bowling lanes, the LaneMapper™ reads and records both length and crosswise levels while simultaneously logging crowns and depressions of all 39 boards at any distance on the lane to an accuracy of .0001 inch. The LaneMap Guide was derived from this tool and information.

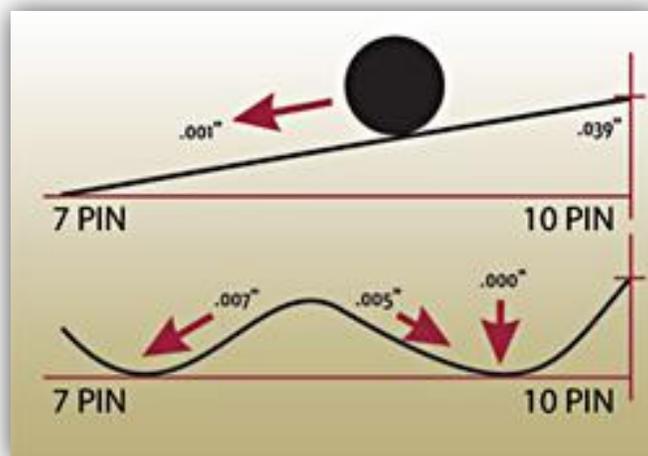


Topography is defined as the graphical representation of surface features indicating relative positions and elevations. It's a known fact that changes in topography adversely affect the ball path and ball motion (rate of energy depletion). When topographical features are randomly different on a bowling lane, so is ball motion.



Another variable is **Slope per Board**. Each board has a specific slope, calculated from the crosswise tilt, crowns, and depressions. The degree of this slope also has a proportional effect on the ball path.

For example, a board with a $2/1000''$ slope will affect the ball twice as much as a board with a $1/1000''$ slope. Bowlers throw balls on different boards and each ball is only affected by the slope of the board it's on. The other slopes don't matter to that ball because quite simply, it's not on them.

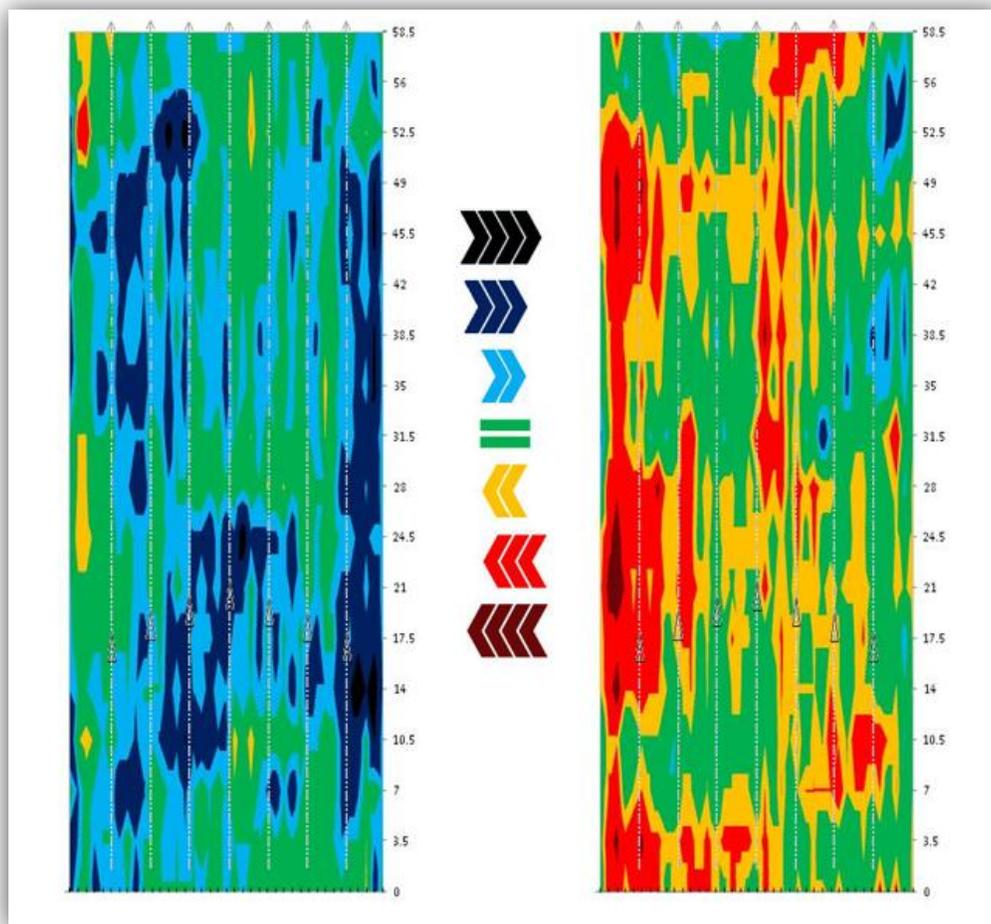


LaneMap™ Graph

The revolutionary LaneMap™ graph shows the slope per board and is the gravitational influence on the "canvas" (lane) prior to the application of "paint" (lane conditioner). Gravity and friction are separate forces on a bowling ball but gravity problems cannot be fixed with friction, or lack of friction, solutions.

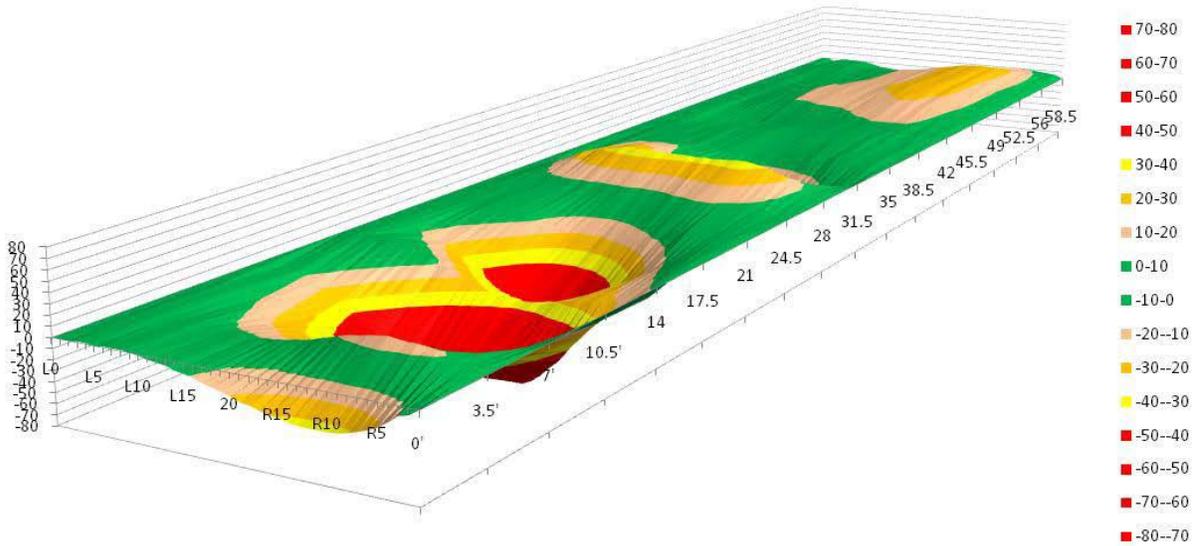
Since the lanes are generally oiled identically, differences between lanes in ball reaction will be a function of differences in gravitational forces "under" the conditioner. In order for two lanes to play the same, they must not only be oiled the same, but they also must have similar gravitational influences in comparable places.

The black and dark blue areas on the LaneMap™ graph are very strong gravitational influences to the right while light blue areas are less, but still substantial influences to the right. The maroon and red areas are very strong gravity influences to the left and yellow areas are substantial influences to the left. Green represents areas of very little gravity influence. The bottom of the graph is the foul line.

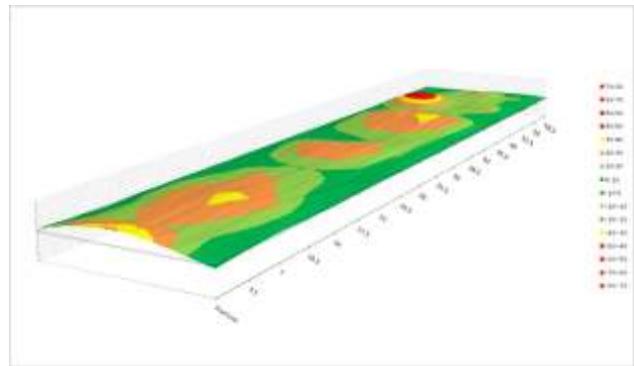
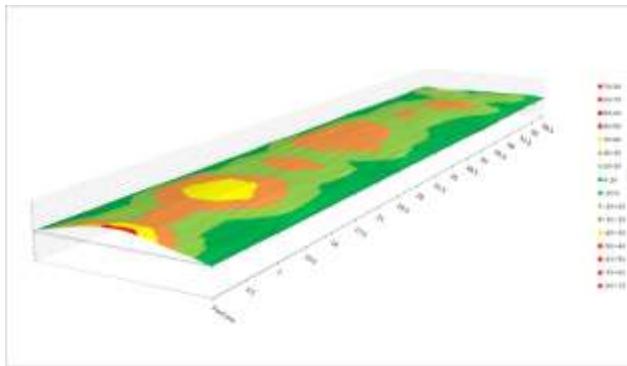
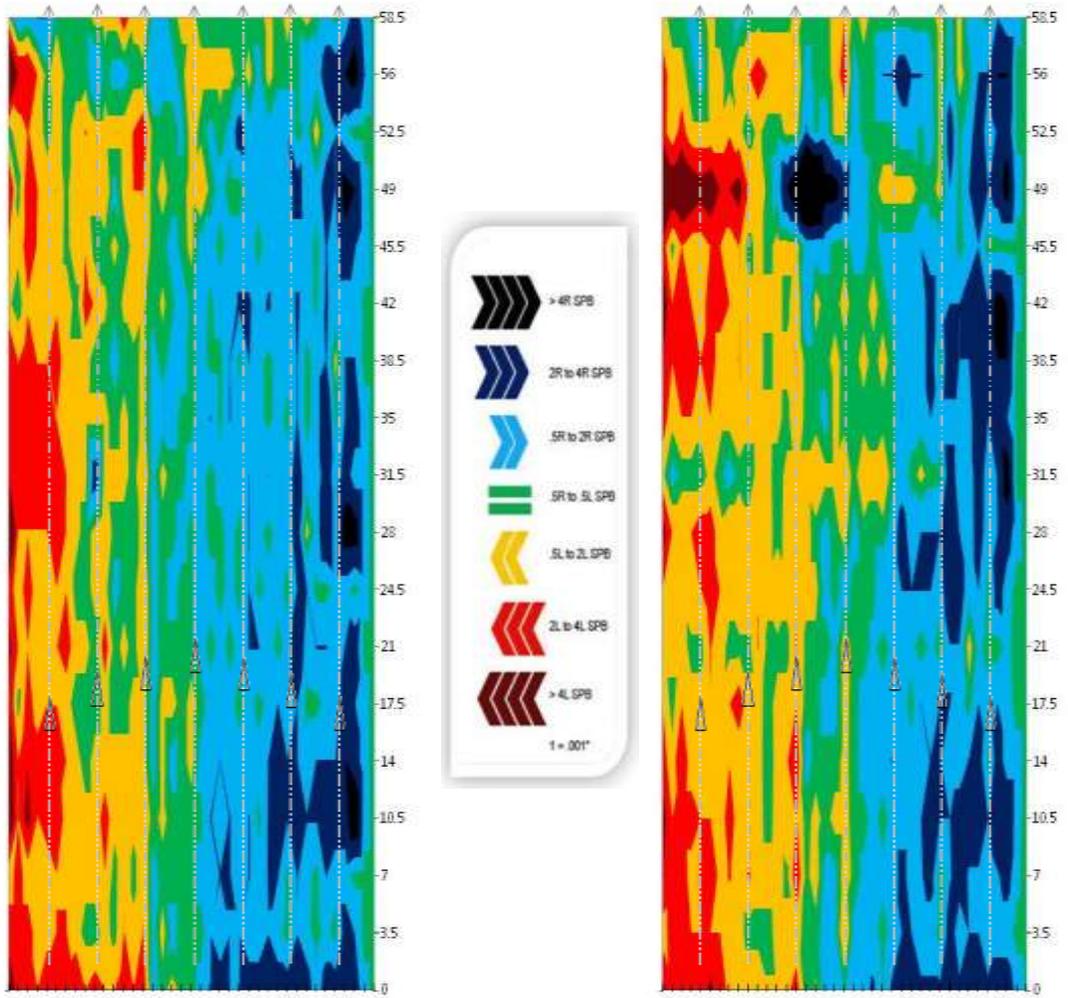


3-D Contour Graph

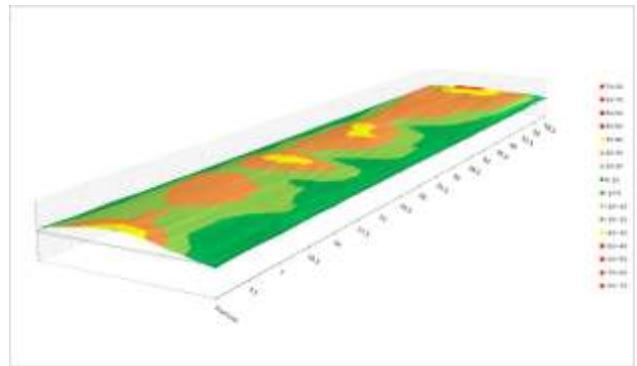
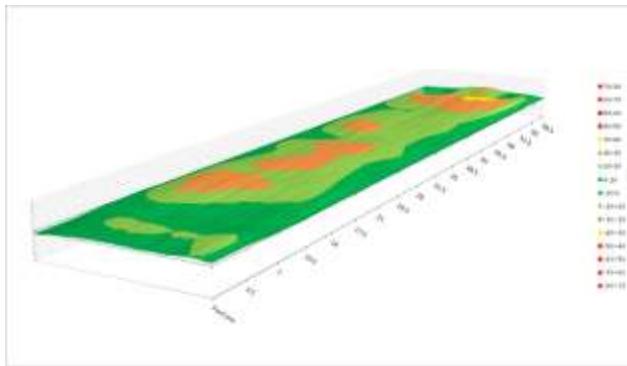
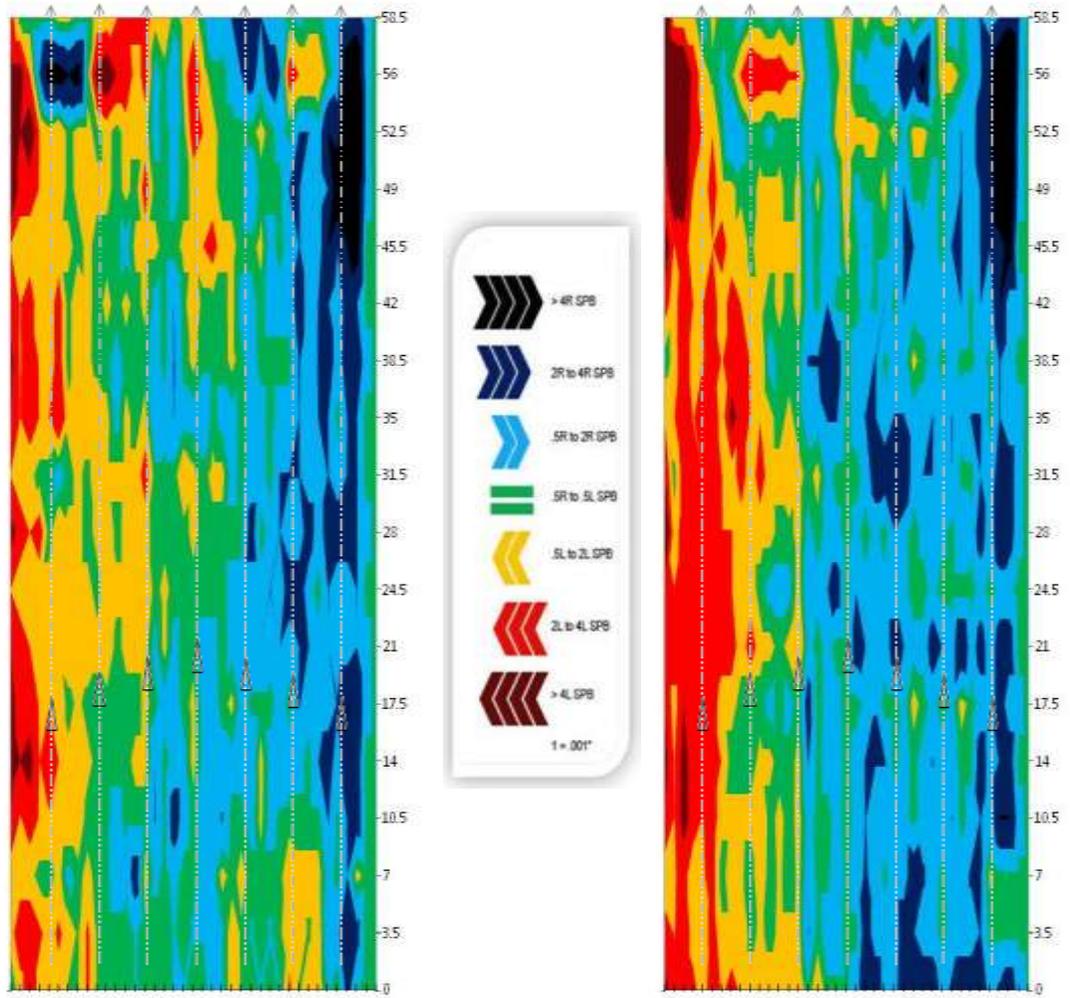
The 3D graph is a visual aid showing the highs (crowns), lows (depressions) and cross tilts of each bowling lane surface. The data was multiplied by a factor of four to make differences more obvious.



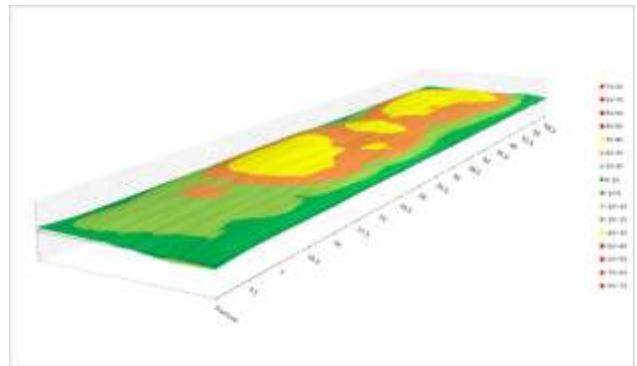
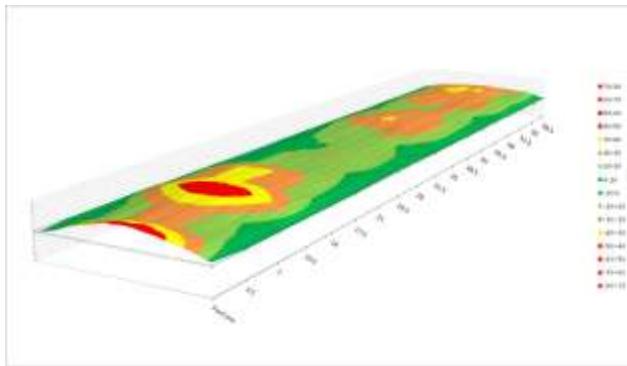
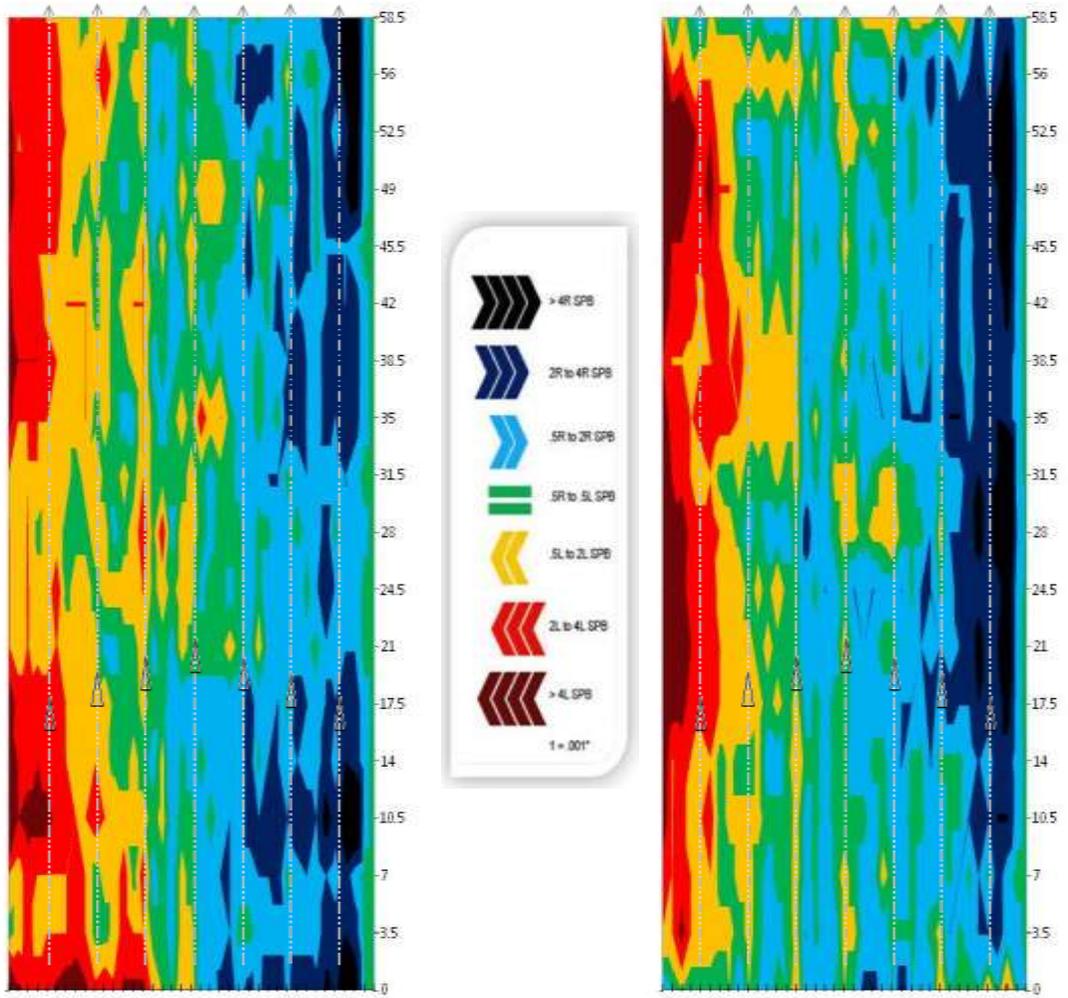
Lanes 3 - 4



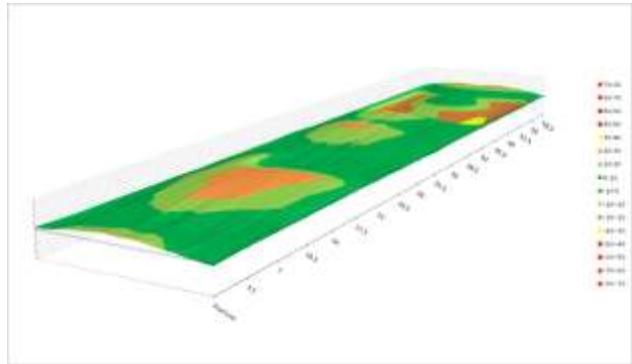
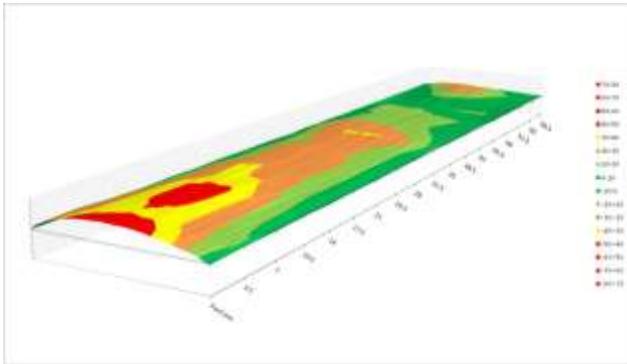
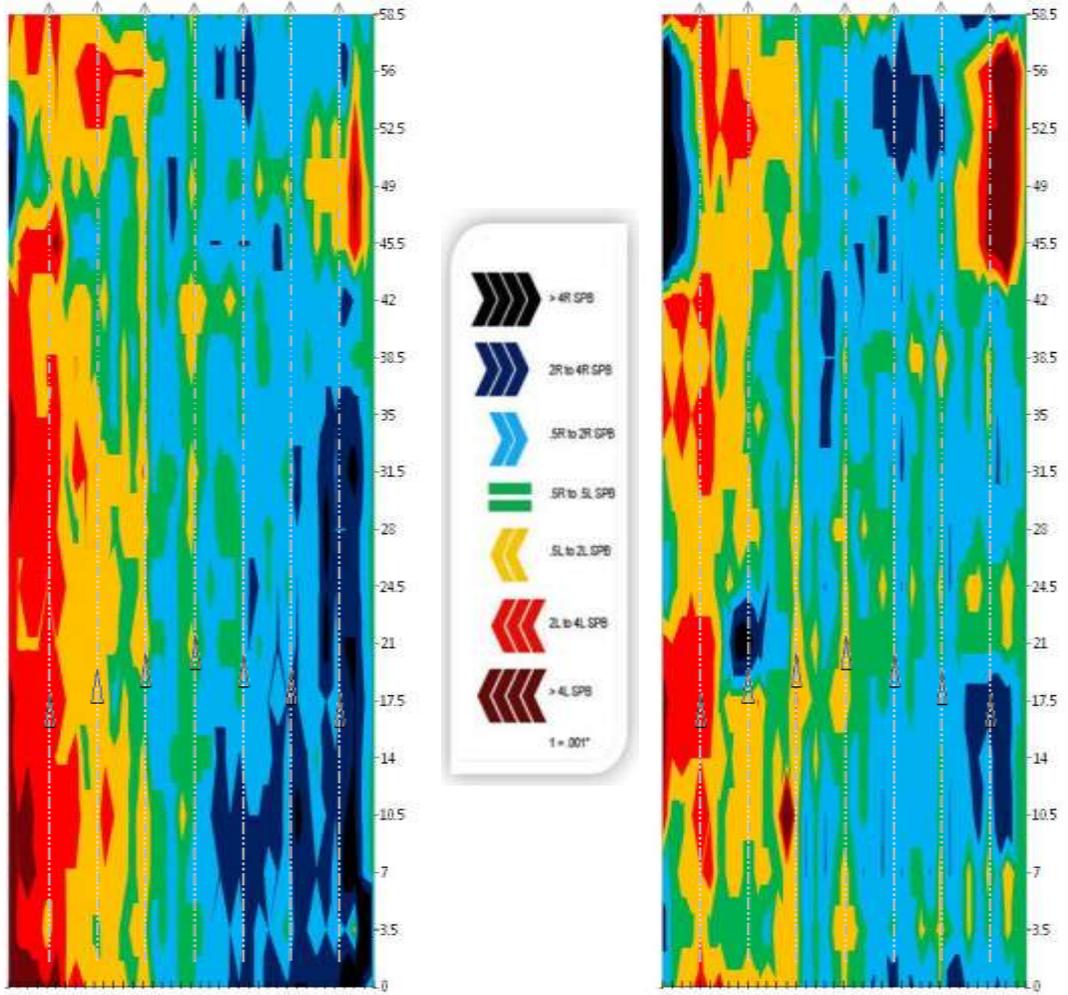
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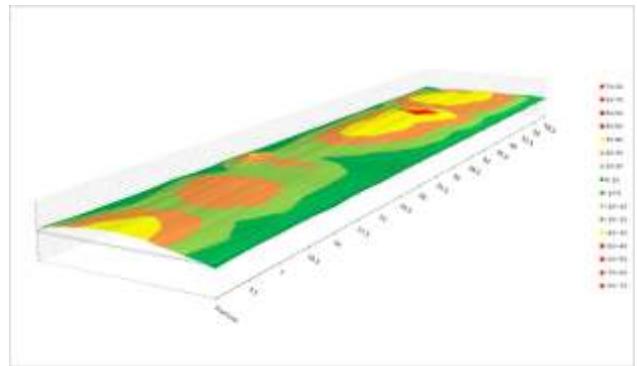
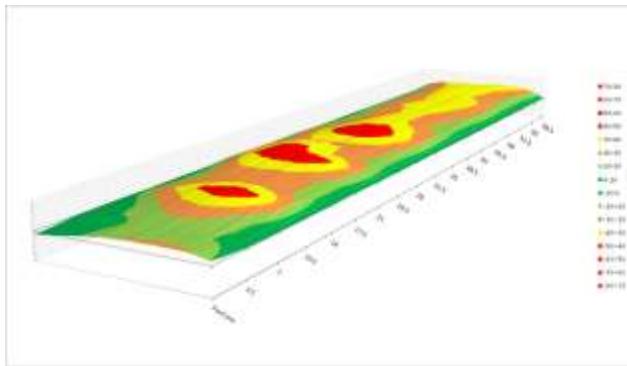
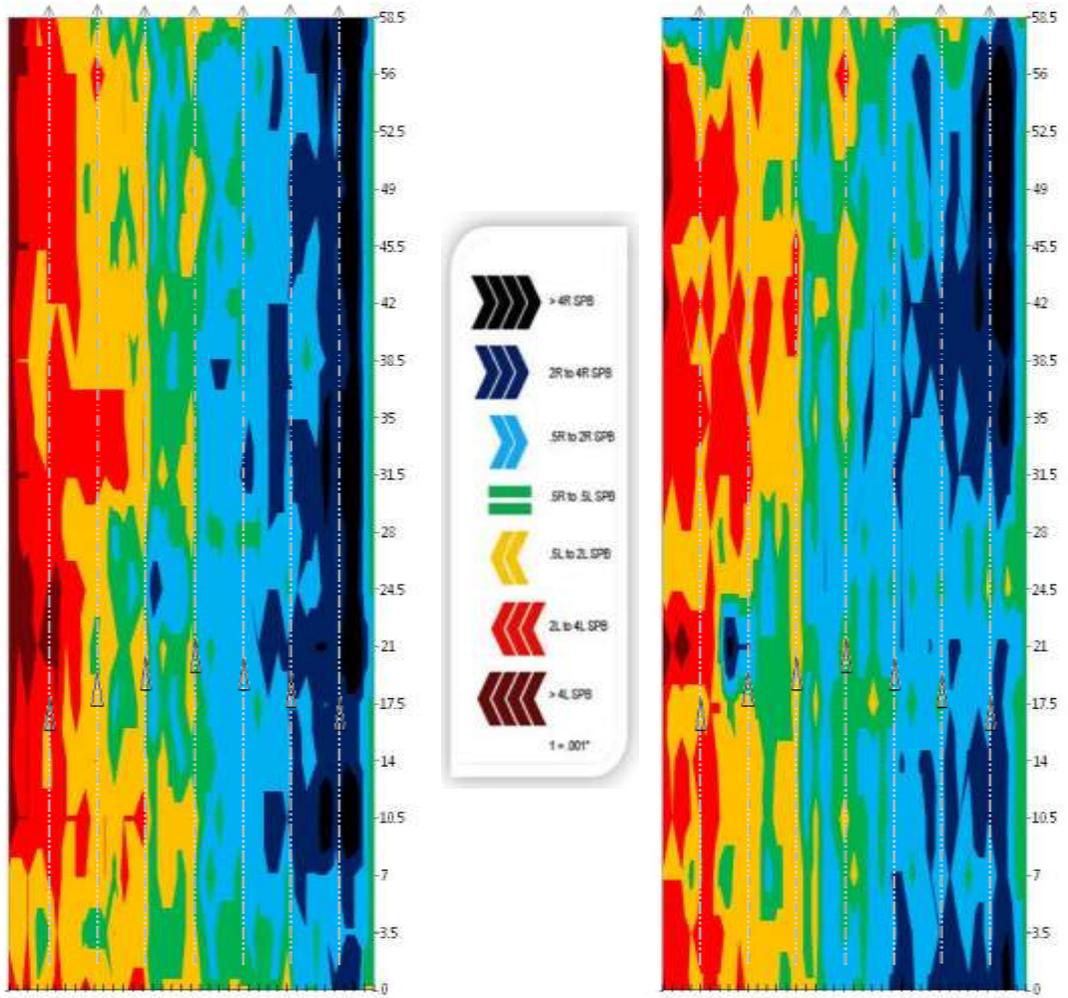
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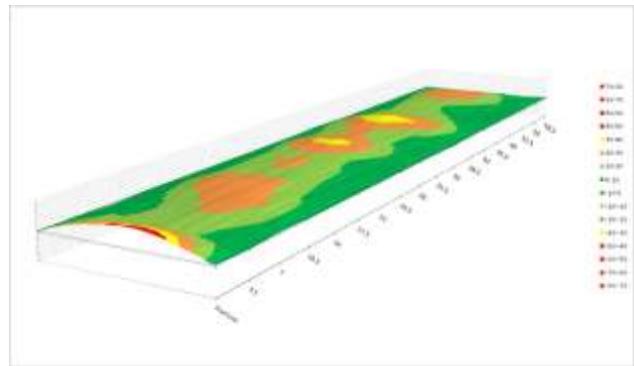
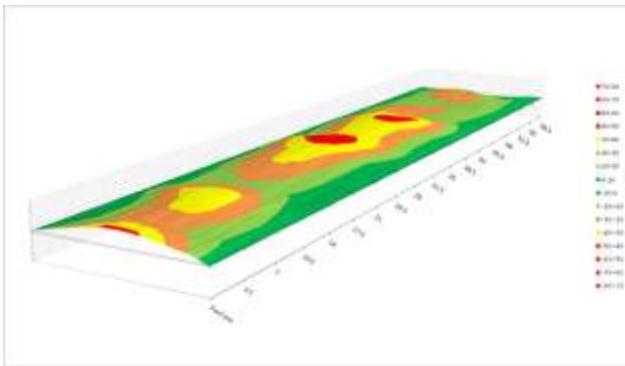
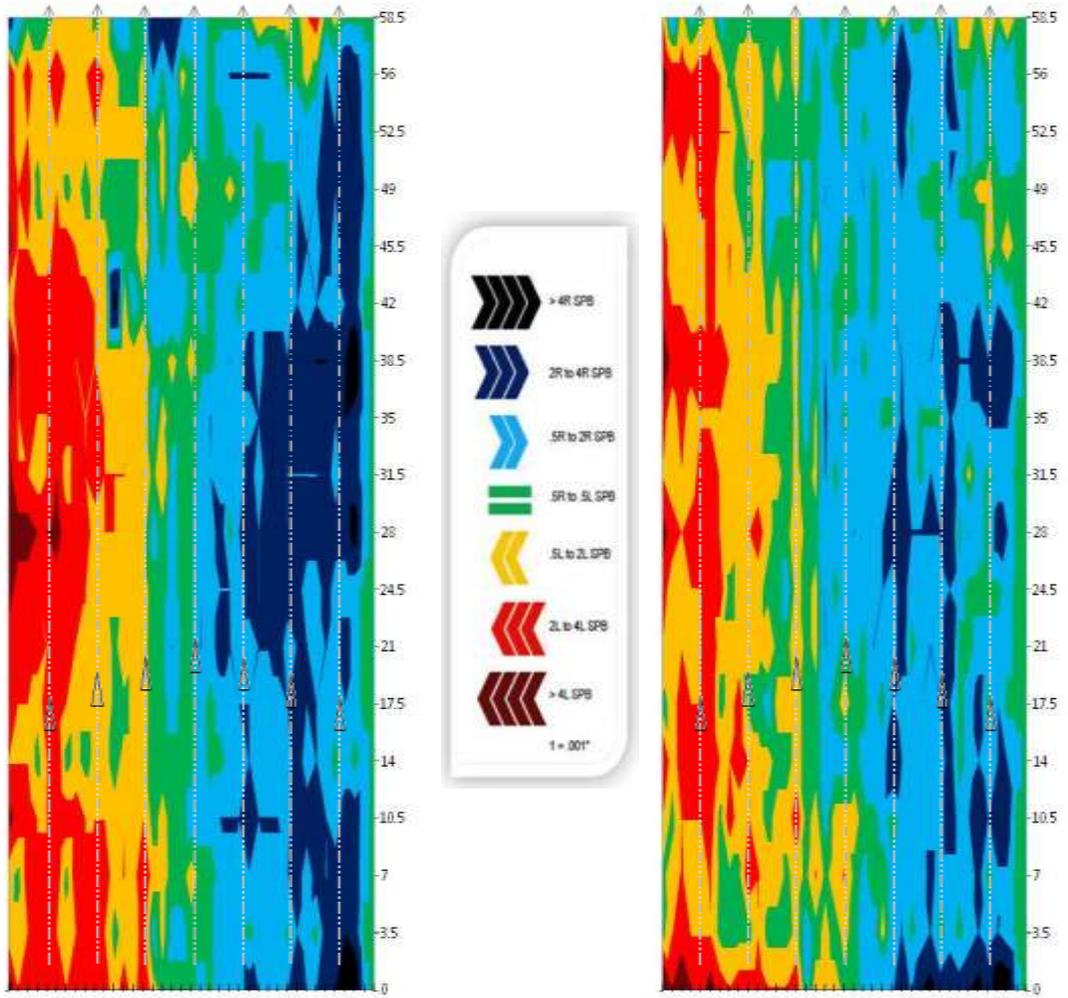
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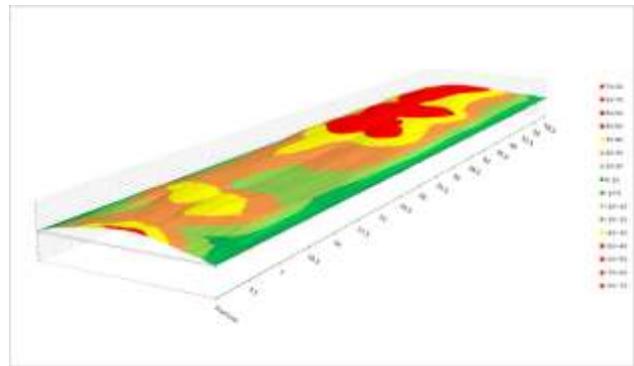
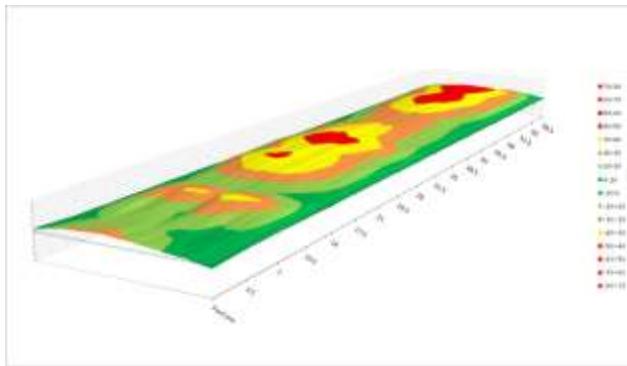
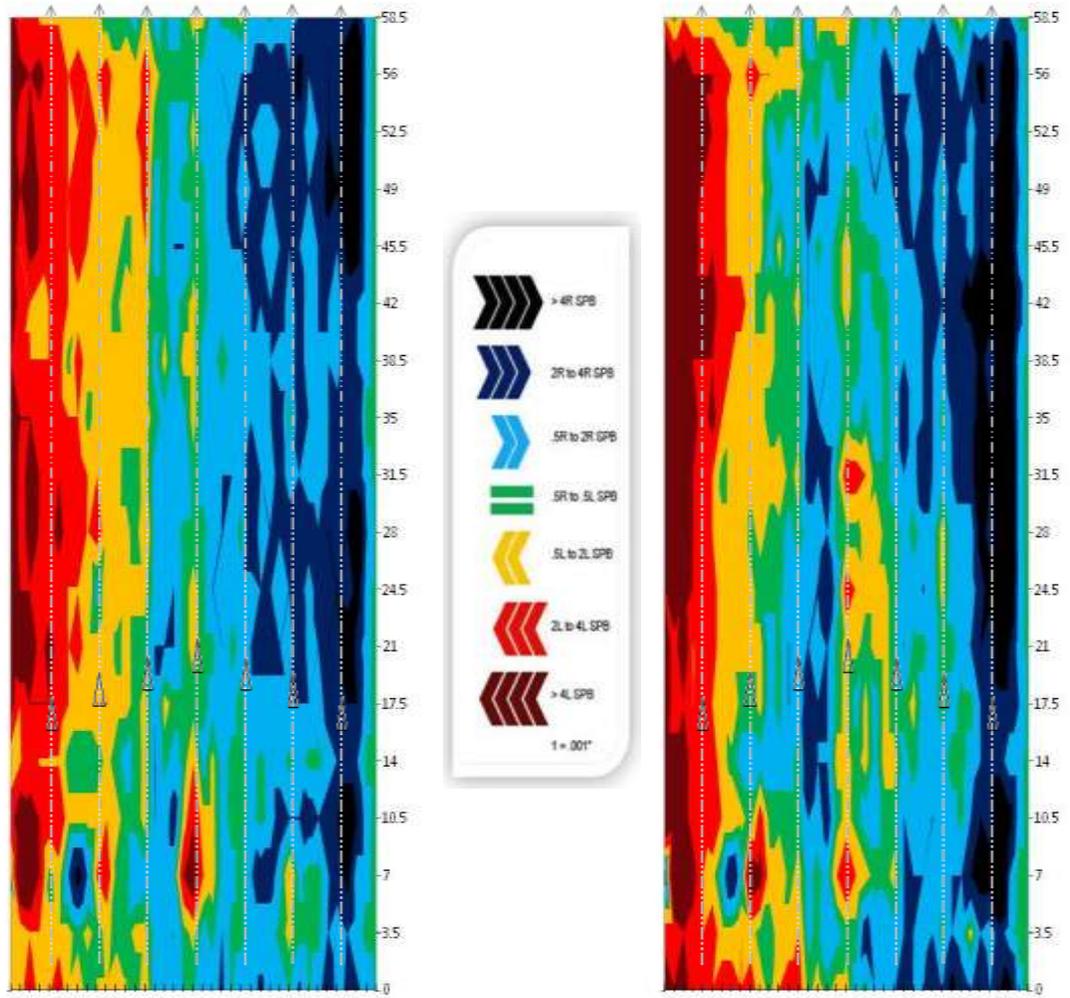
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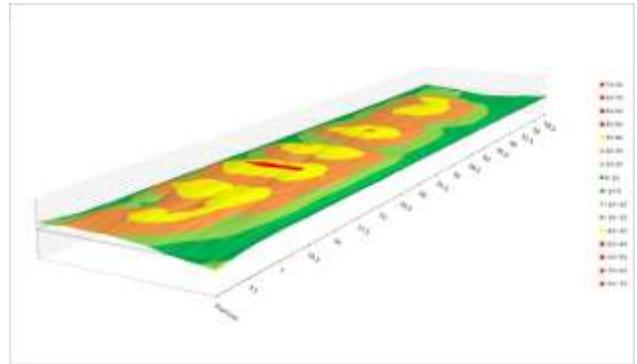
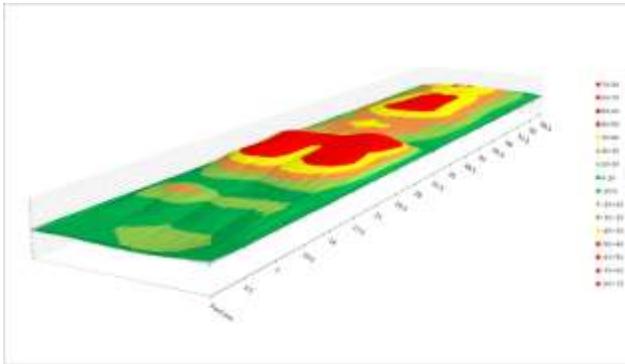
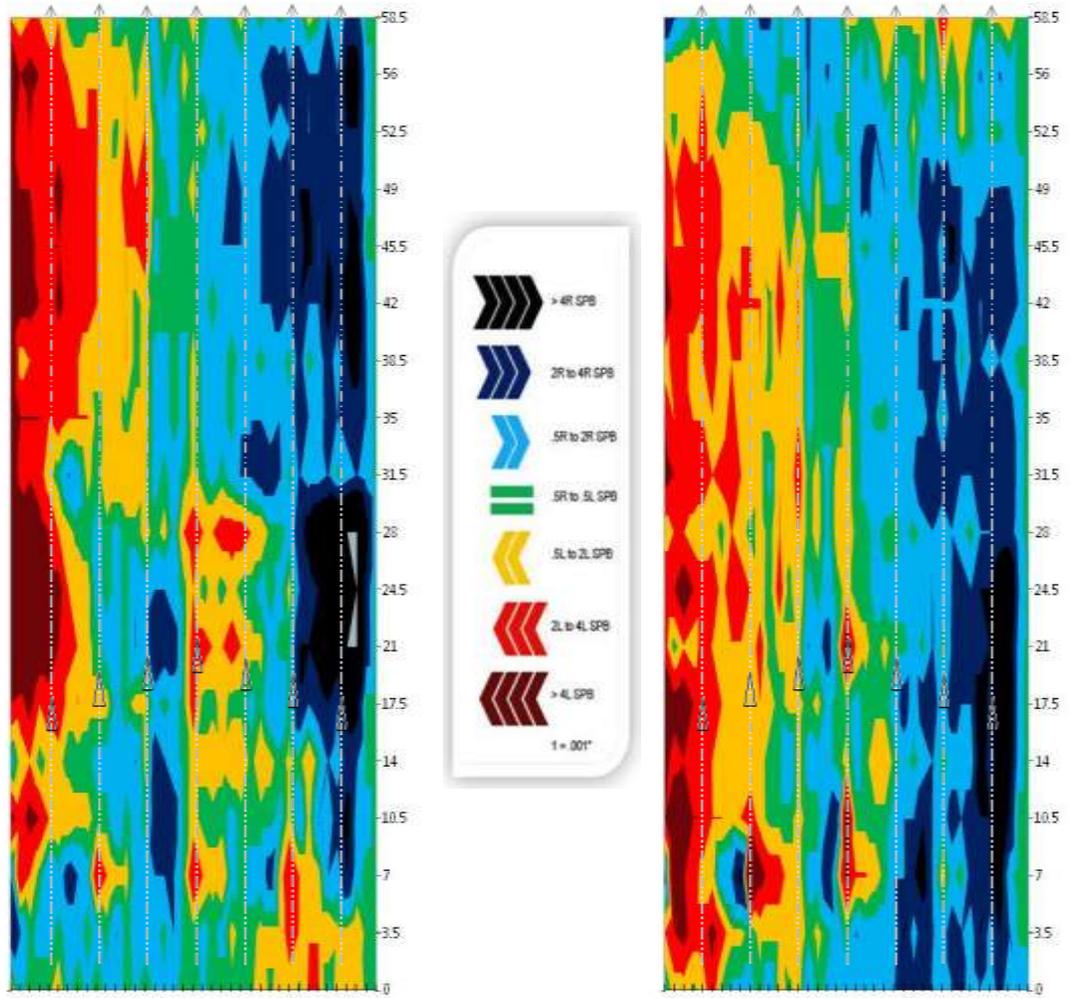
Lanes 13 - 14



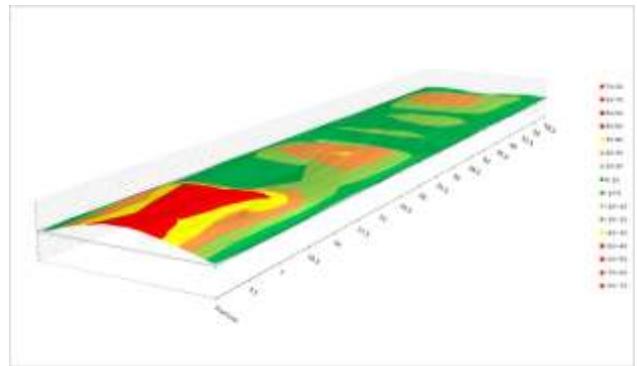
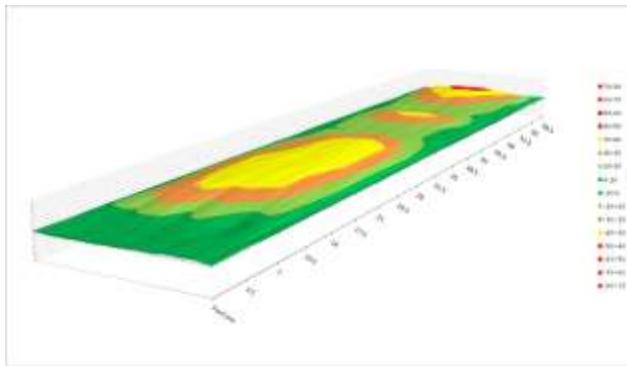
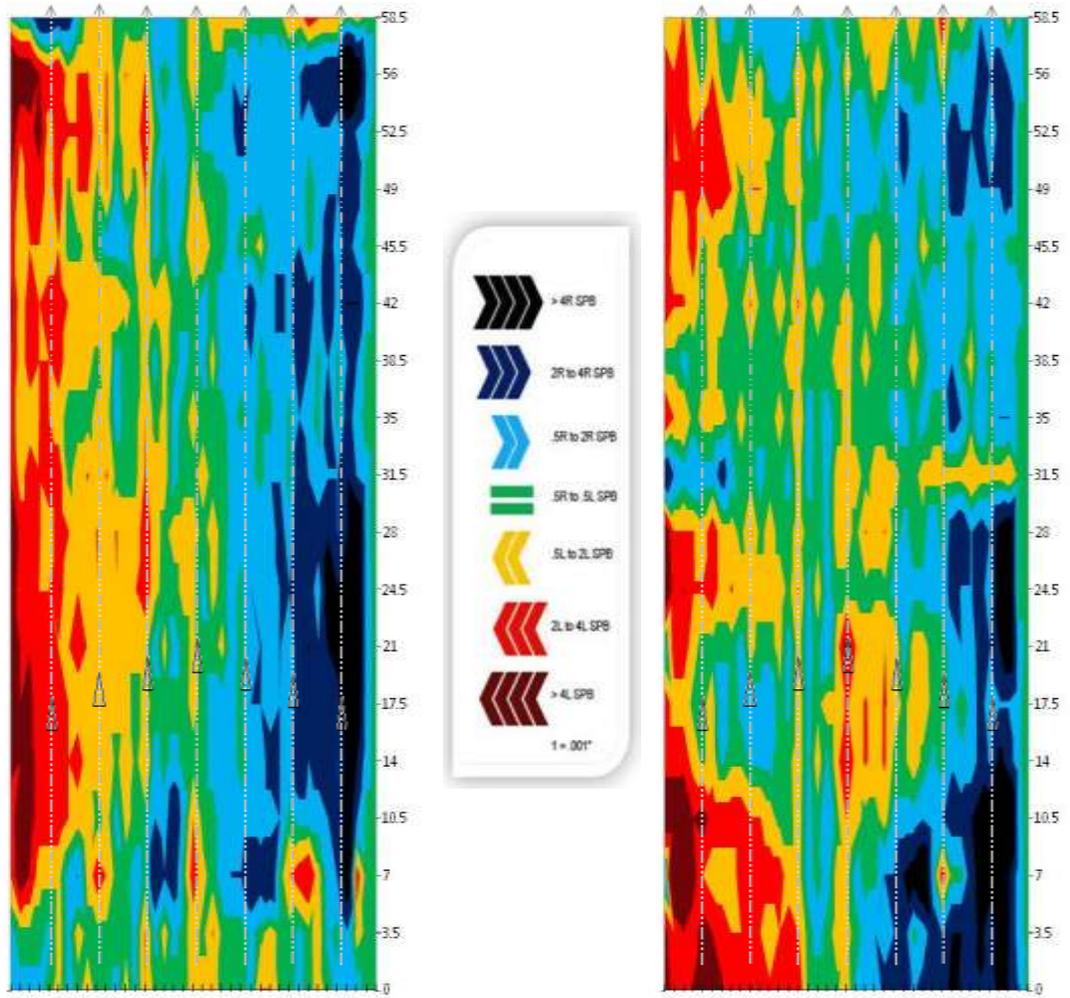
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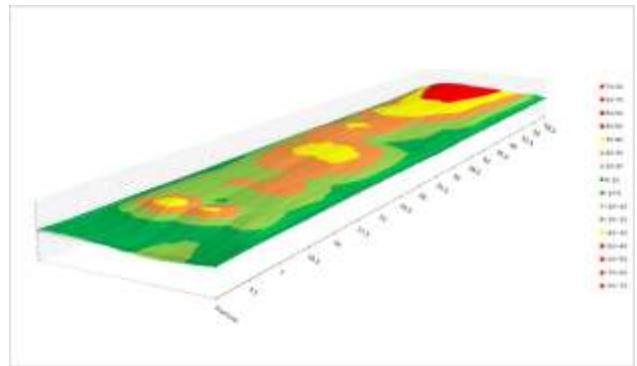
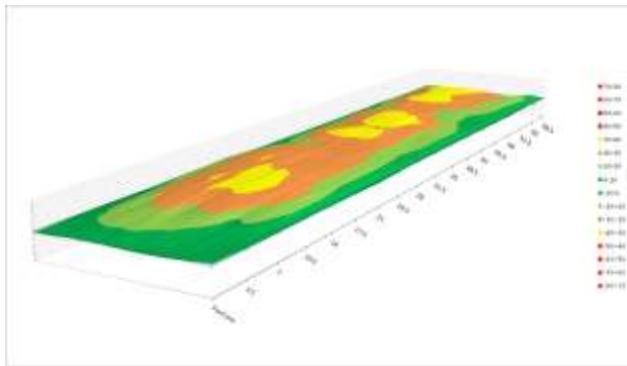
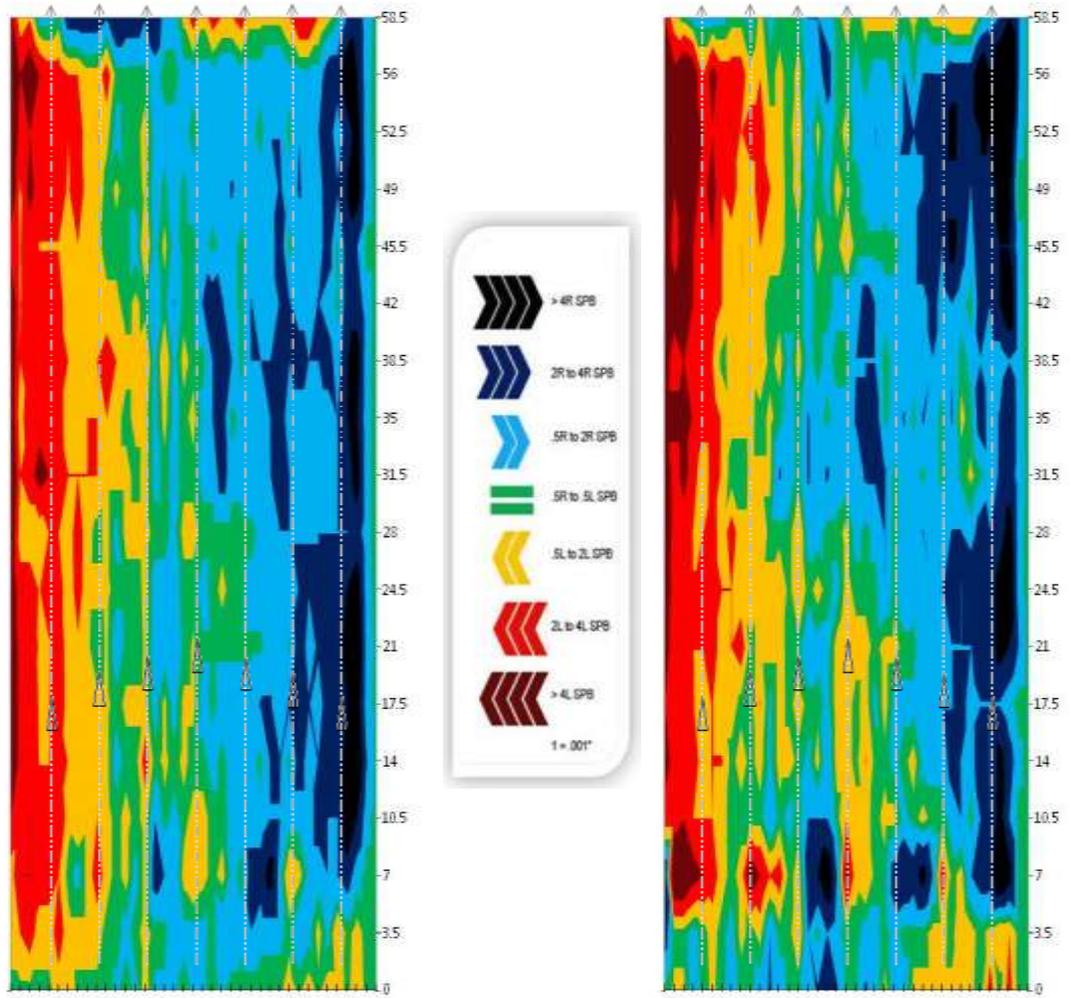
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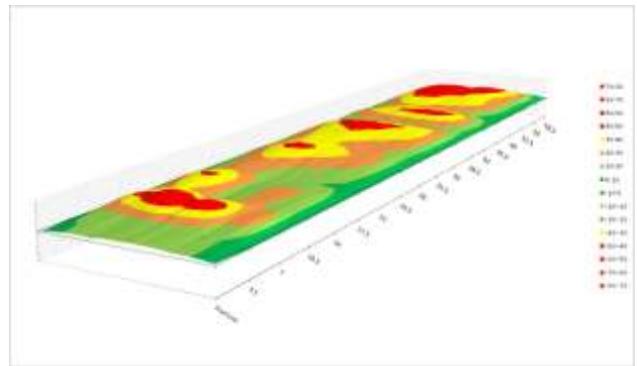
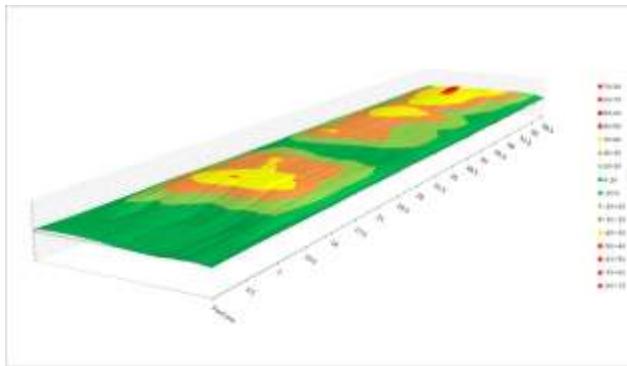
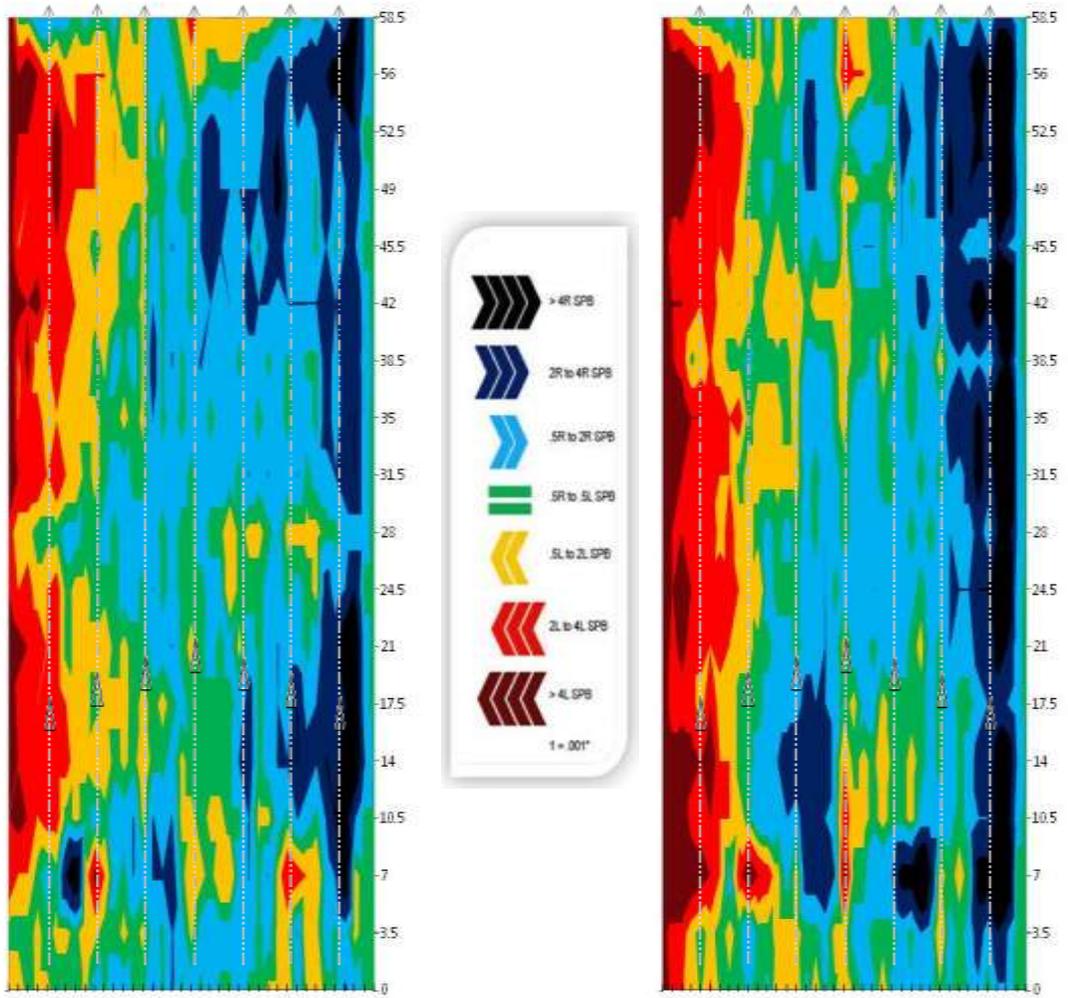
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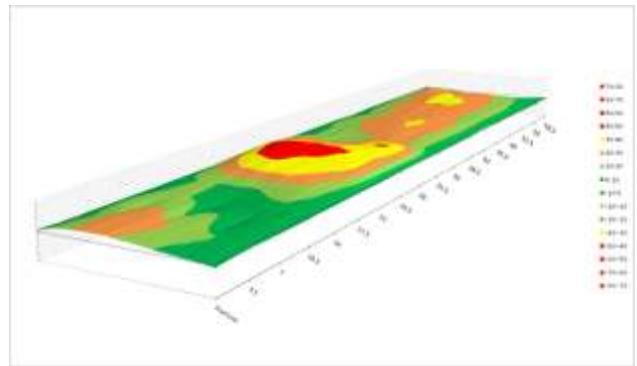
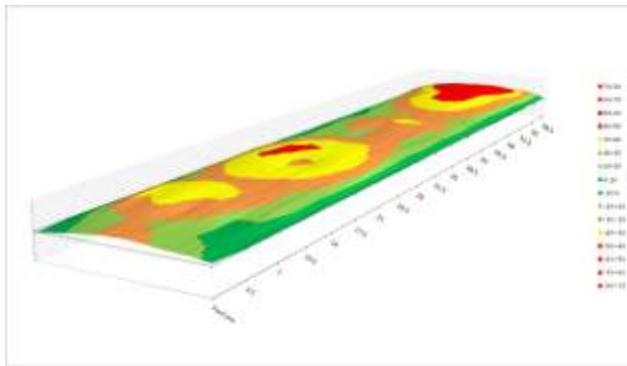
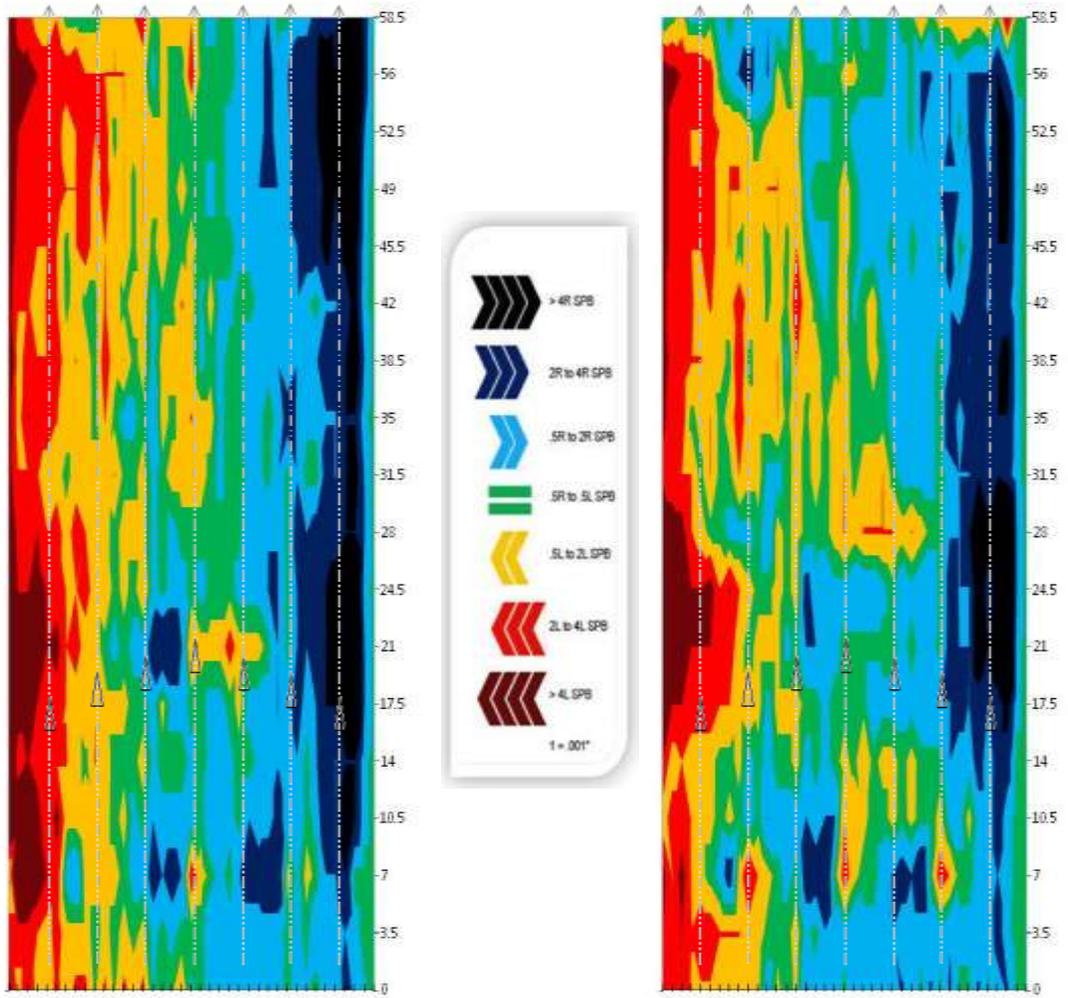
Lanes 21 - 22



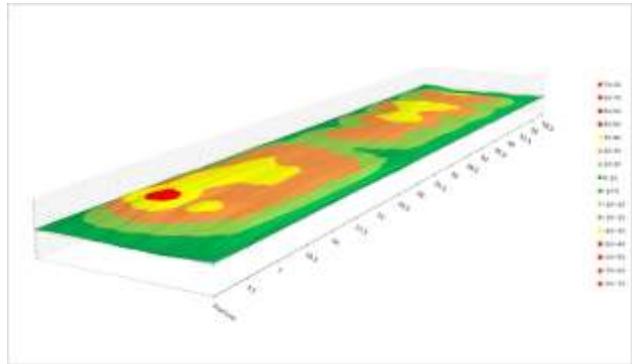
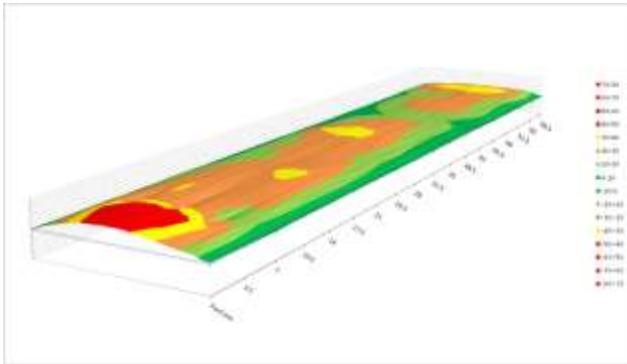
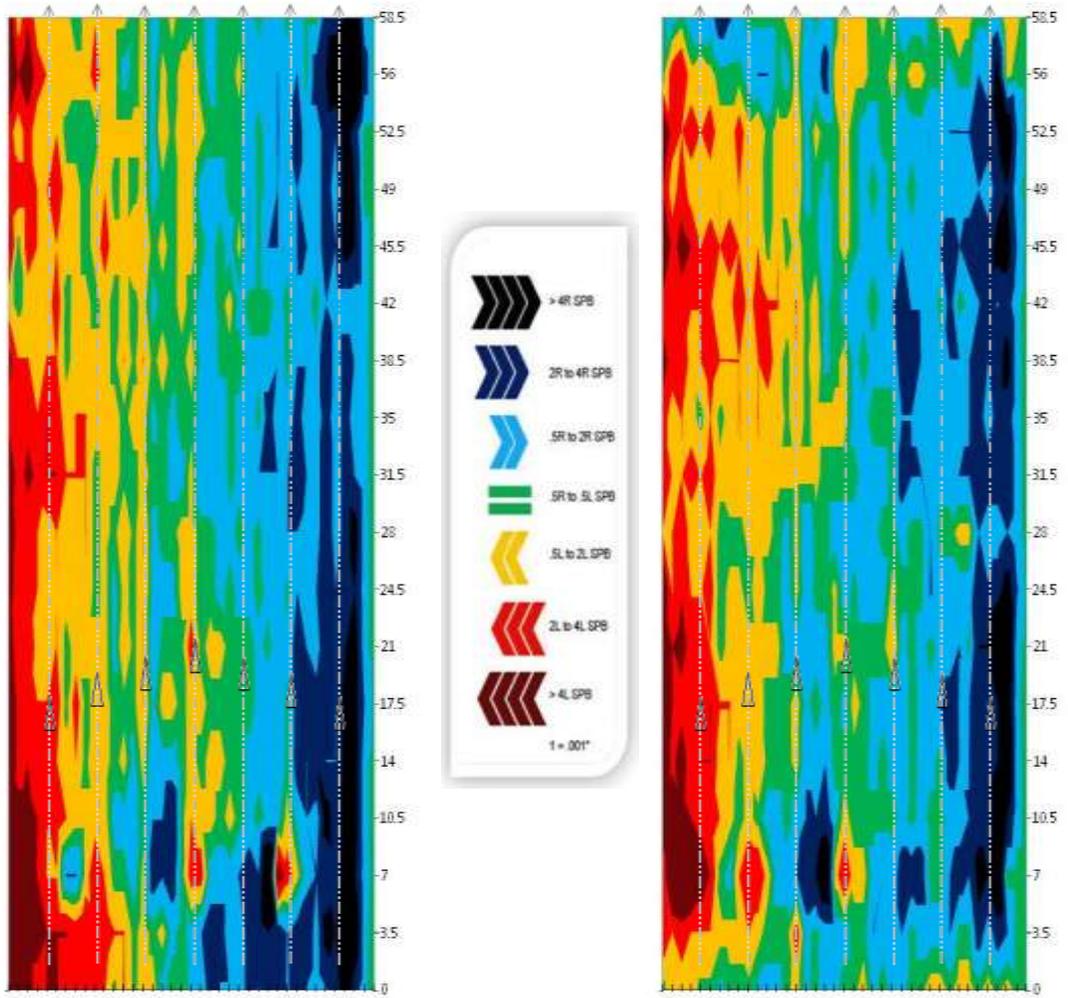
Lanes 23 - 24



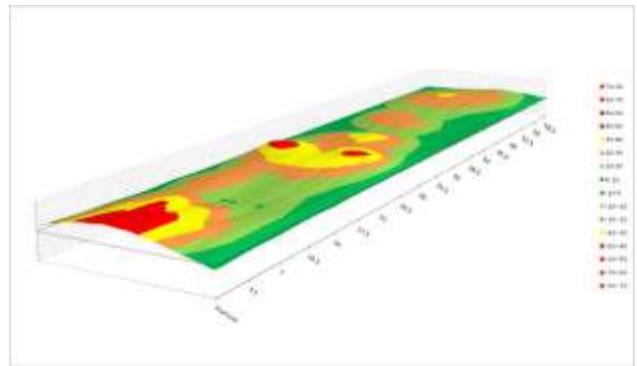
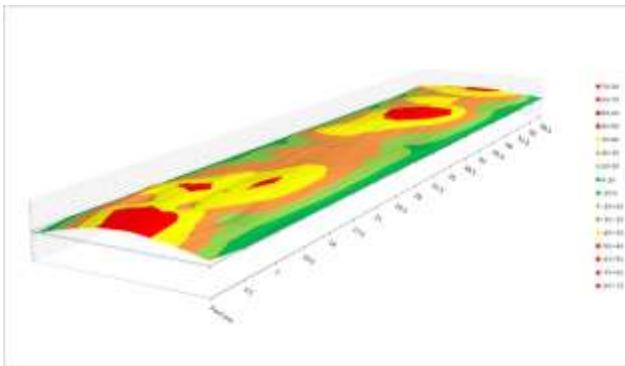
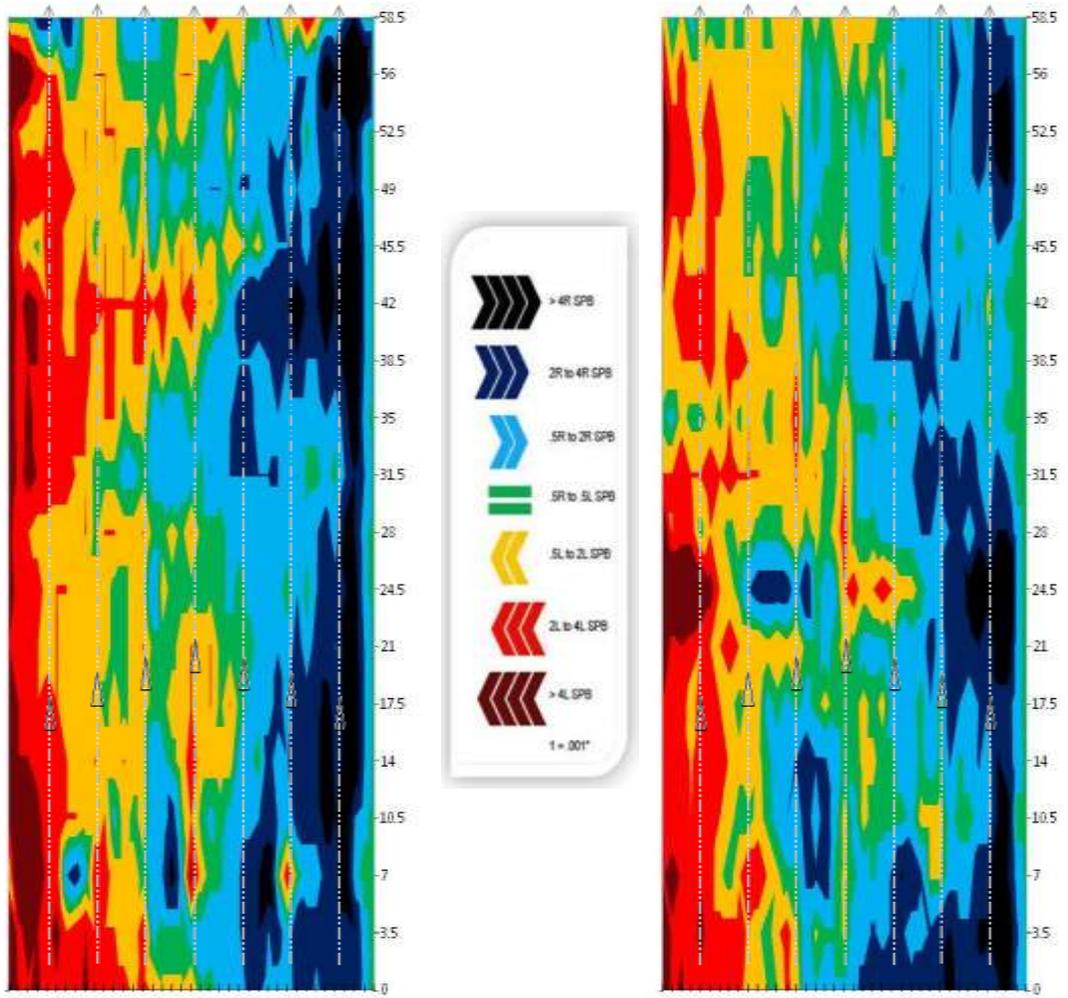
Lanes 25 - 26



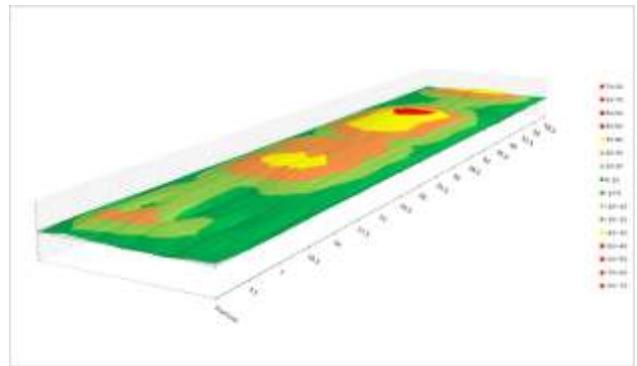
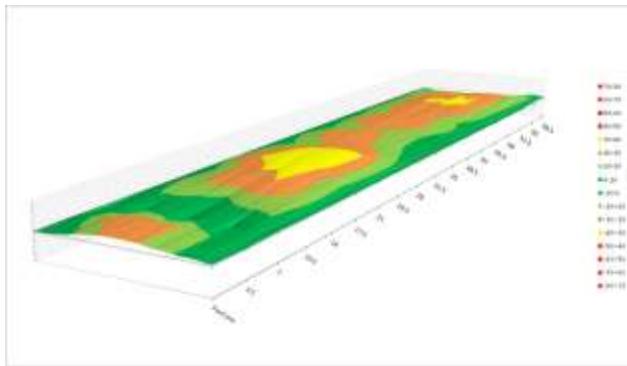
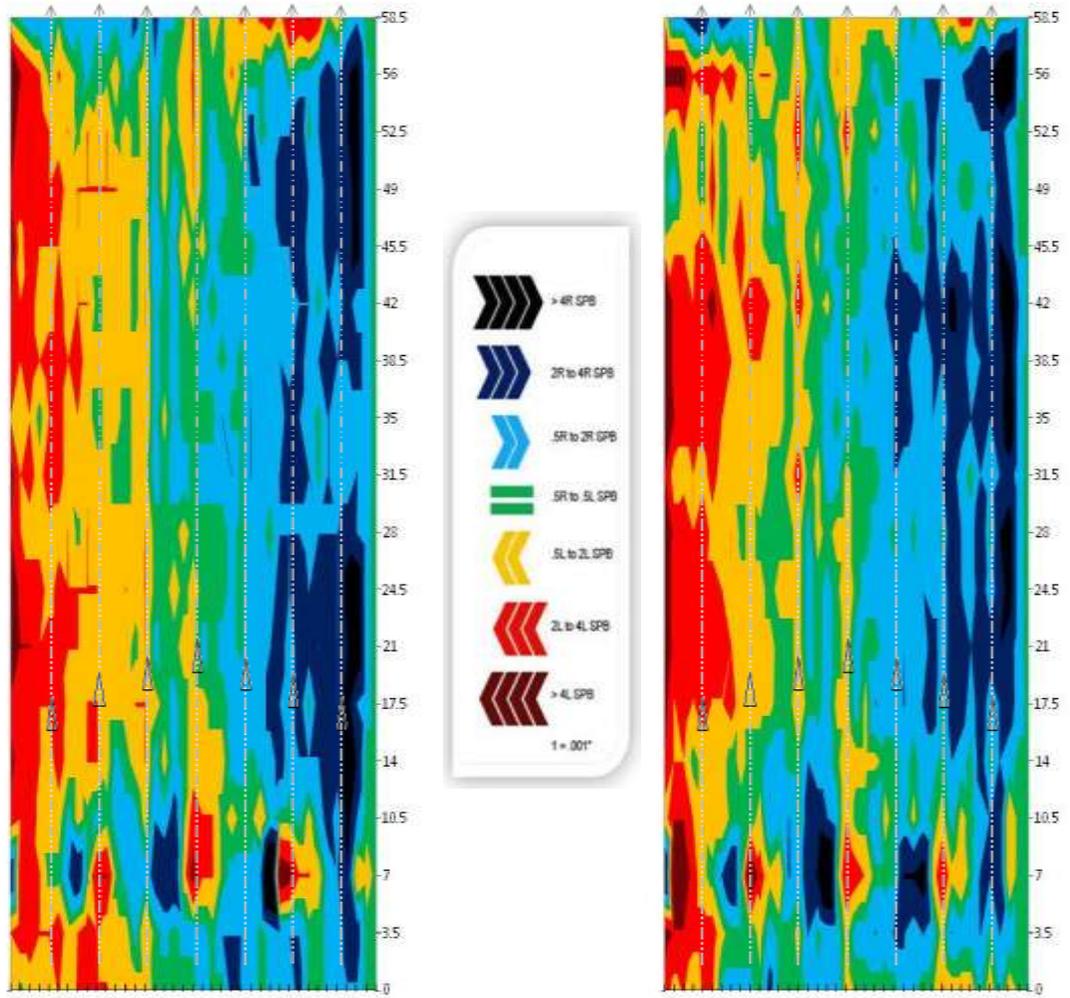
Lanes 27 - 28



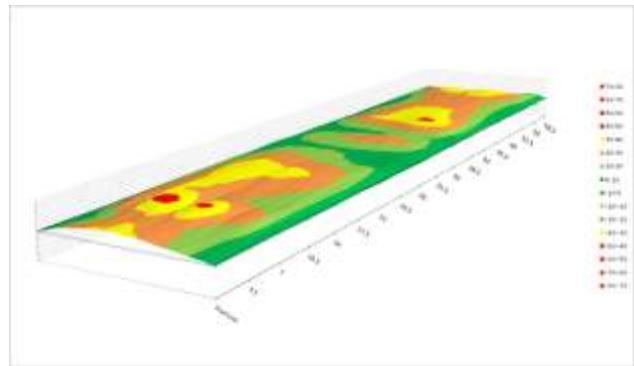
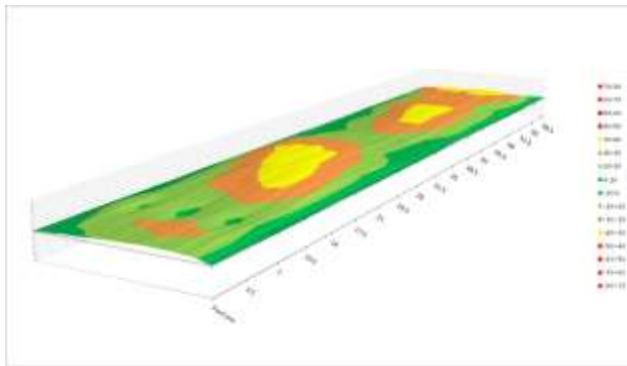
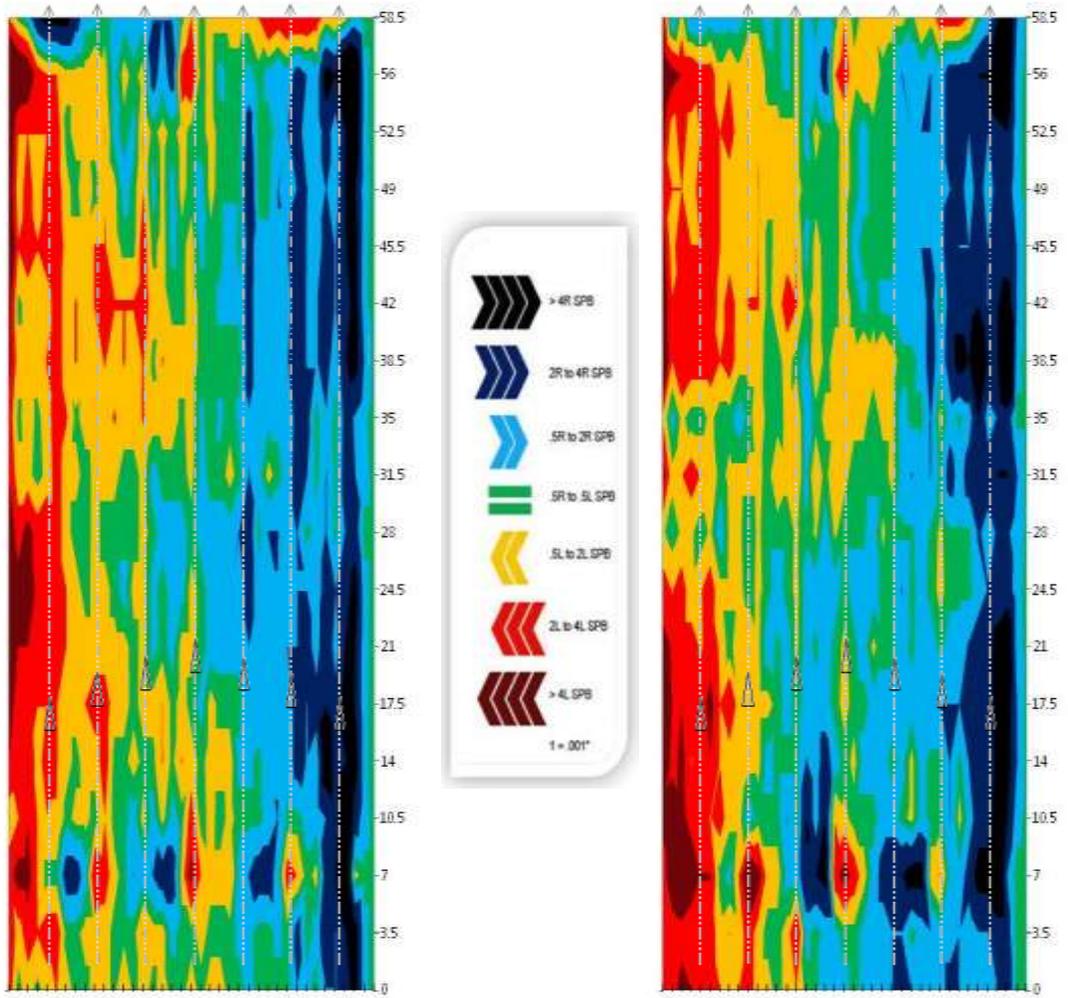
Lanes 29 - 30



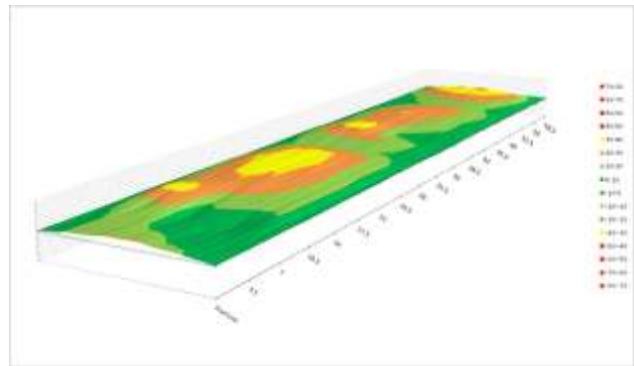
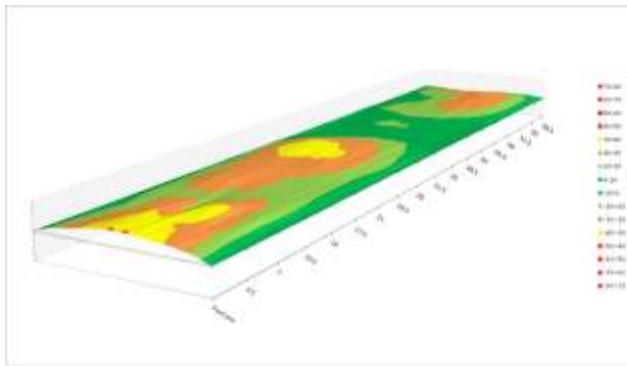
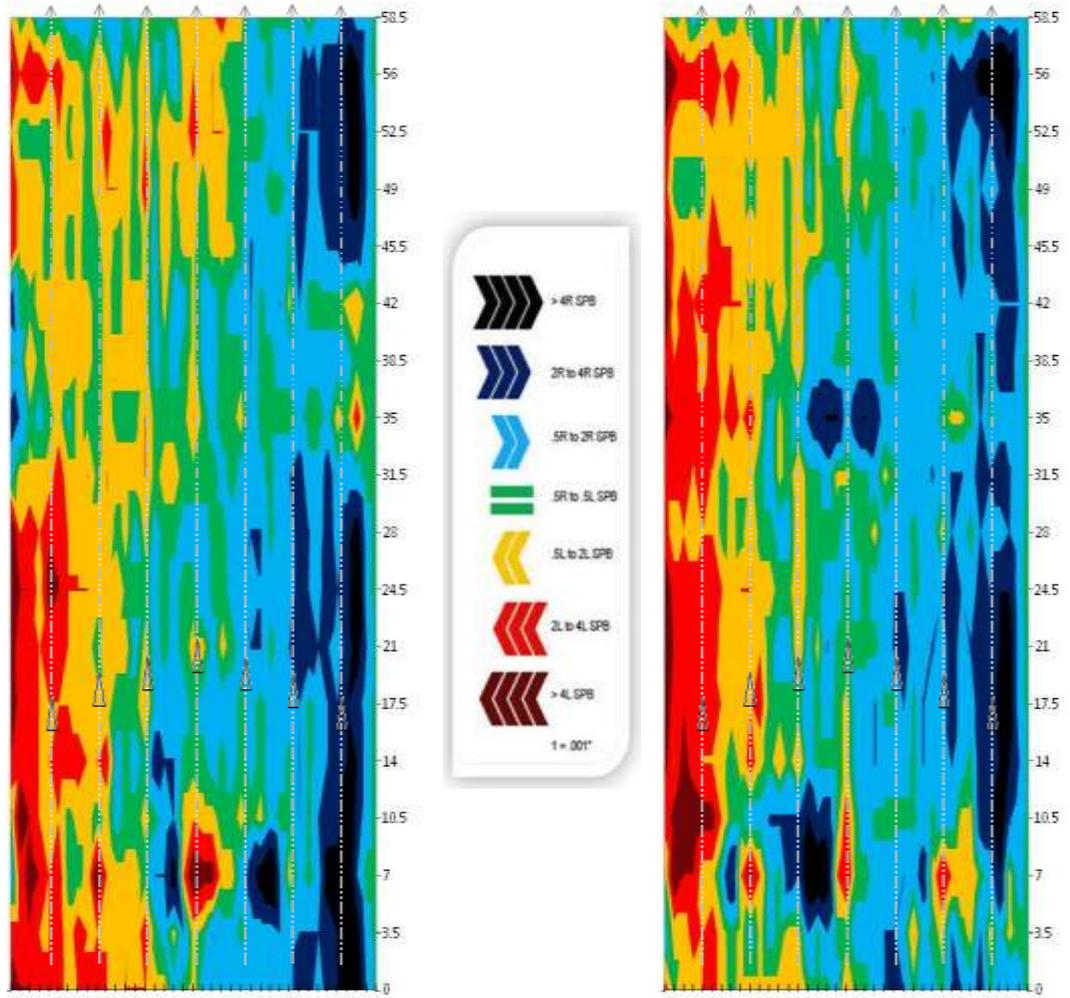
Lanes 31 - 32



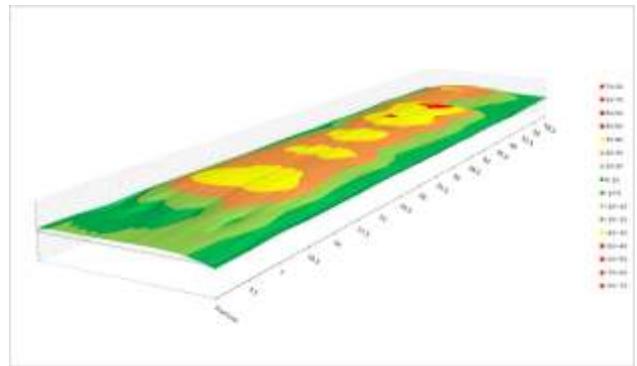
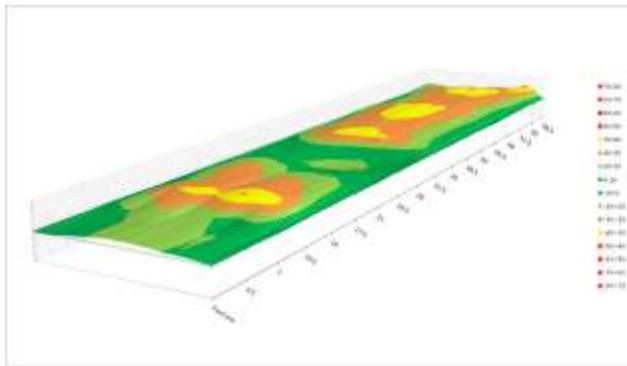
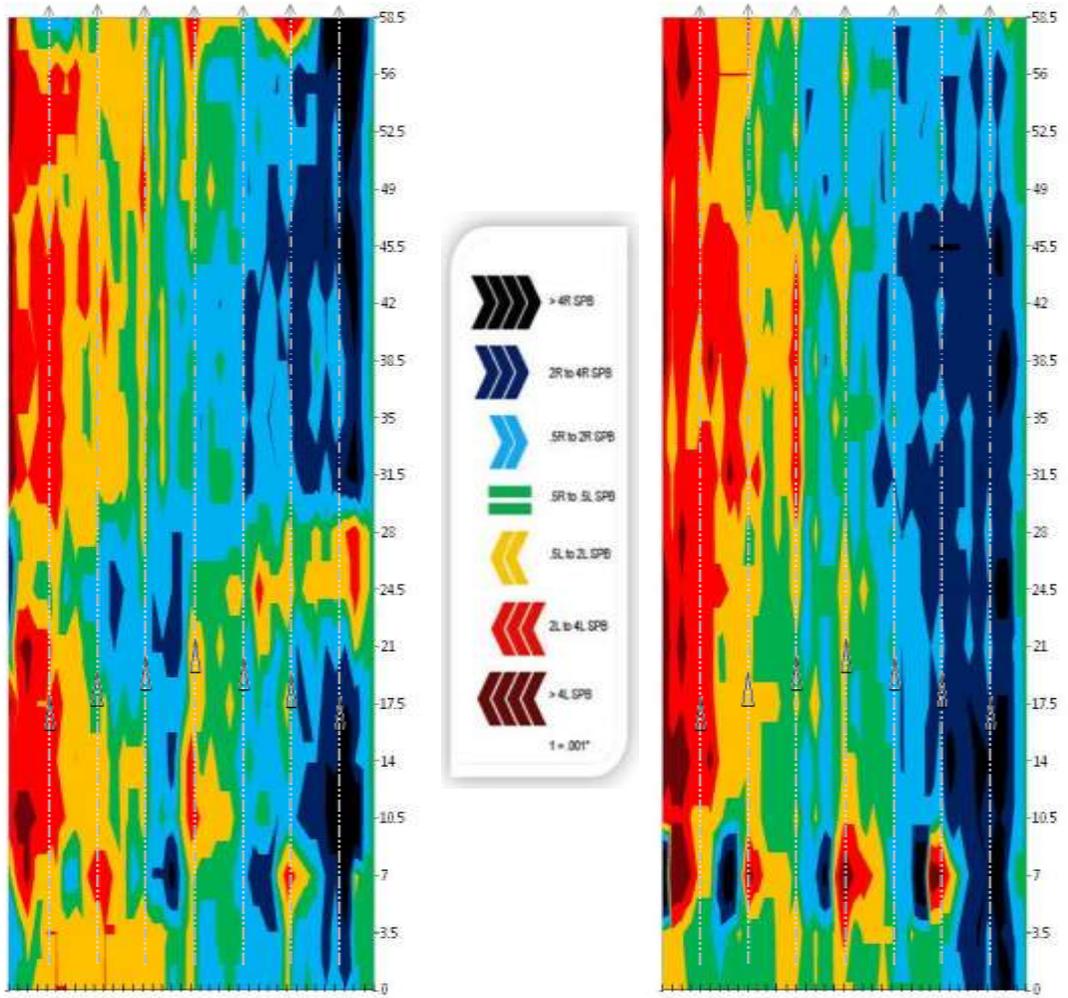
Lanes 33 - 34



Lanes 35 - 36



Lanes 37 - 38



Lanes 39 - 40

