EXECUTIVE SUMMARY
REPORT 15XXXX
CV-123 CONVEYOR
XXX MINE
XX MONTH 2015

PREVIOUS REPORT 14XXXXX

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IMPORTANT INFORMATION:

This document is an **Executive Summary** of the results of a condition monitoring scan performed on the subject conveyor.

It is designed to be easy to read and understand, and to deliver only important findings and recommendations relating to the scan.

Clients with appropriate privileges who are seeking to review all the information relating to the scan, along with all data captured can find that information here: http://www.beltscan.com/Log-in.html

Table of Contents

Recommendations and Findings

1.1 Recommendations

It is recommended that the following action be initiated on this conveyor. The number assigned to any recommendation is an indication of its priority. No.1 assumes highest priority.

INSERT RECOMMENDATIONS HERE

Note:

Beltscan strongly recommends that details of repairs and replacement of belting and splices be forwarded to our office at info@beltscan.com. Beltscan will file these details as part of the belting database.

1.2 Summary of Findings

The belting on this conveyor was last scanned by Beltscan on XXXXXXX.

The data from the current scan has been compared with the data captured during the XXXXXX scan. This comparison reveals.....

INSERT FINDINGS HERE

A magnetic signature has been produced for each of the 10 splices in this belt, which will serve as a base for all future splice comparisons.

Comparison of the current signatures with past, resulted in the comments cited above.

No identification was evident for splices 1 - 10. These numbers have been assigned by Beltscan during the scanning process. Permanent markings should be made within these splices to allow for ease of identification.

1.3 Table of Events

Following is a list of damage in the belting noted by Beltscan during the current scan and from previous scans. The list is in descending order of severity. Once an event number has been used, it will not be used again unless there is a complete belt change-out.

Event	Longitudinal Reference	Lateral Reference	No. of Cords Damaged	Comments
1				
2				
3				
4				

1.4 Events Inspected

Event	Location	Findings

1.5 Events to be Inspected by Belt Maintenance Personnel

Following is a list of Events Beltscan recommends belt maintenance personnel inspect. The events are listed in belt running order. This list was compiled after careful analysis of the scanning data. In cases where the belting has numerous existing cord break locations, Beltscan will list the locations of new events or those with a higher degree of significance only.

Event	Longitudinal Reference	Lateral Reference	Approximate Number of Cords Affected (Number of Cords in this belting is XX)

1.6 General Visual Observations

This section shows any anomalies that scanning personnel noted throughout the scanning process, if it was a manual scan. The problems included in this section are related to cover condition, idlers, structure, spillage, scrapers, pulleys or any other visual anomalies that may affect belt life.

Technical Specifications

2.1 General Information

Client

Order Number

Location of Belt

Belt ID

Client's Contact

Scanning Technician

Data Analyst

Date of Scan

Date of Report

Previous Scan Date

Previous Report Number

2.2 Conveyor Details

Product	Black Coal
Man riding	No
Belt Turnover	No
Tramp Metal Detector	No
Tramp Metal Extractor	No
Conveyor Profile·	Drift Conveyor
Other Details	N/A

2.3 Belt Specifications

Manufacturer		
Date of Commissioning		
Belt Rating		
Belt Width		mm
Belt Length		m
Belt Speed		m/s
Belt Cycle Time		
Inspection Speed		
Cord Diameter		mm
Cord Pitch		mm
Number of Cords	114	
Cord Construction		
Belt Edge Dimension		mm
Carry Cover Thickness		mm
Pulley Cover Thickness		mm
Total Belt Thickness		mm
Cover Grade		
Breaker/Lateral Members·		
in Carry Cover		
in Pulley Cover		
Weight of Belting		kg/m
Number of Splices		
Splice Make-up		Stage
Rip Detection Loops		
Number of Loops		

2.4 Splice Identification and Belt Section Lengths

The following table shows the approximate lengths for each of the belt sections and the splice identification. Please note that the section measurement includes the lengths of the splices at both ends. For belt replacement, the length required must be measured accurately. Use the following numbers as a guide only.

Splice Number	Section Number	Splice Number	Section Length
A		B	39.6
B		C	323.2
C		D	326.8
D		E	324
E		F	325.6
F		G	83.8
G		H	287.7
H		I	271.7
I		J	121.7
J		A	233

Note: No identification was evident for Splices A - J. These numbers have been assigned by Beltscan during the scanning process. Permanent markings should be made within these splices to allow for ease of identification.

Technology

3.1 Belt Scanner MF Condition Monitoring

The information obtained by Beltscan is derived from non-destructive magnetic based measurements taken from a dedicated transducer, held at a fixed distance, preferably from the pulley cover of the belting. The transducer is located close to a plain flat idler roller or pulley, which stabilises the running belt and reduces the cords/transducer distance to a minimum, which allows maximum lateral selectivity. The Belt Scanner MF system is able to monitor the belt at normal speed, usually in the return path, for corrosion of cords, cord breaks and kinks (vertical plane). The system not only detects degradation and wear in the carcass and splices, it also allows for detailed quantification of specific points of interest, without physical inspection or conveyor stoppage.

The results are particularly beneficial to the client since they permit a very rigorous evaluation of the belting condition, without conveyor downtime. Most Belt Scanner MF benefits are achieved over time, by periodic measurement, to obtain a complete history of the belt from the day of commissioning to the present time.

As the belt ages, Beltscan condition monitoring is used to check the evolution of defects, and damaged cords. This permits the operator to plan scheduled maintenance. Knowledge gained through regular condition monitoring also provides valuable assistance in establishing the manufacturing parameters for any replacement belting.

In a permanent Belt Scanner MF system, a DED (Disastrous Event Detection) threshold can be set (number of damaged cords in any one Event). The belting is monitored on-line 24/7 for a catastrophic event occurrence, which, if detected, will initiate a conveyor HALT command, which may be used to stop the conveyor.

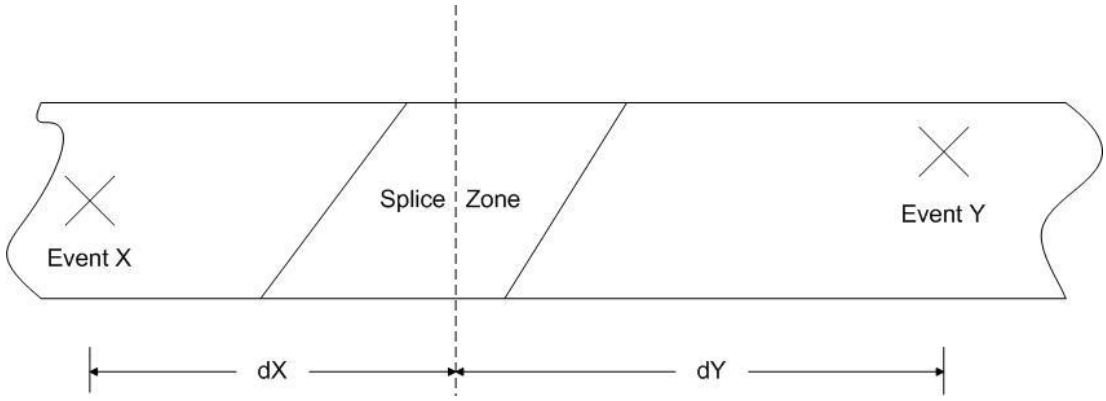
A significant feature of the Belt Scanner MF is that the whole belt's raw data is stored in non-volatile memory, where it is available for download and analysis by any number of qualified personnel. The data is kept permanently for comparisons with other relevant information.

3.2 Measurement Accuracy

LONGITUDINAL ACCURACY

A digital tachometer is installed off an idler roller, which is used to synchronise data with belt length. A supplementary measuring instrument, a magnetometer, can then be used to locate any event **absolutely**. This should be done on site for major events, post scanning.

Where referenced to a splice, the distances along the belt referred to in this report are measured from the longitudinal centre of the splice zone as shown in the following diagram.



To find the absolute location of an event, refer to the cord break traces in this report and specifically to the distance cursers and "difference" window at the bottom of the data view, and the lateral position of the damage in relation to either belt edge.

In the Cord Break data view, the cords are individually numbered in the Y Axis scale on the right-hand side of the graph. The edge of the belt closest to cord # 1 is established and noted prior to scanning.

Determine the distance of the event from the nearest reference point (usually a Splice). Park the belt at a convenient location and measure from the reference point in the **correct** direction, then use a magnetometer to find the precise location of the event. Magnetometers are available from Beltscan.

LATERAL ACCURACY

Multiple sensors in the transducer provide for single cord identification.

Cords

4.1 Interpretation of Data from the Graphs

Section 4 contains 'Composite and Cord Break Traces' for the belt.

The transducer houses a large number of magnetic sensors, displaced evenly across the belt. The cords are selectively magnetised and where cords are damaged, an external magnetic field is established. It is this field which excites a sensor as the belt passes the scanning location. Each sensor's output is shown as a horizontal line in the data view. Where no magnetic activity is detected, the line is continuous.

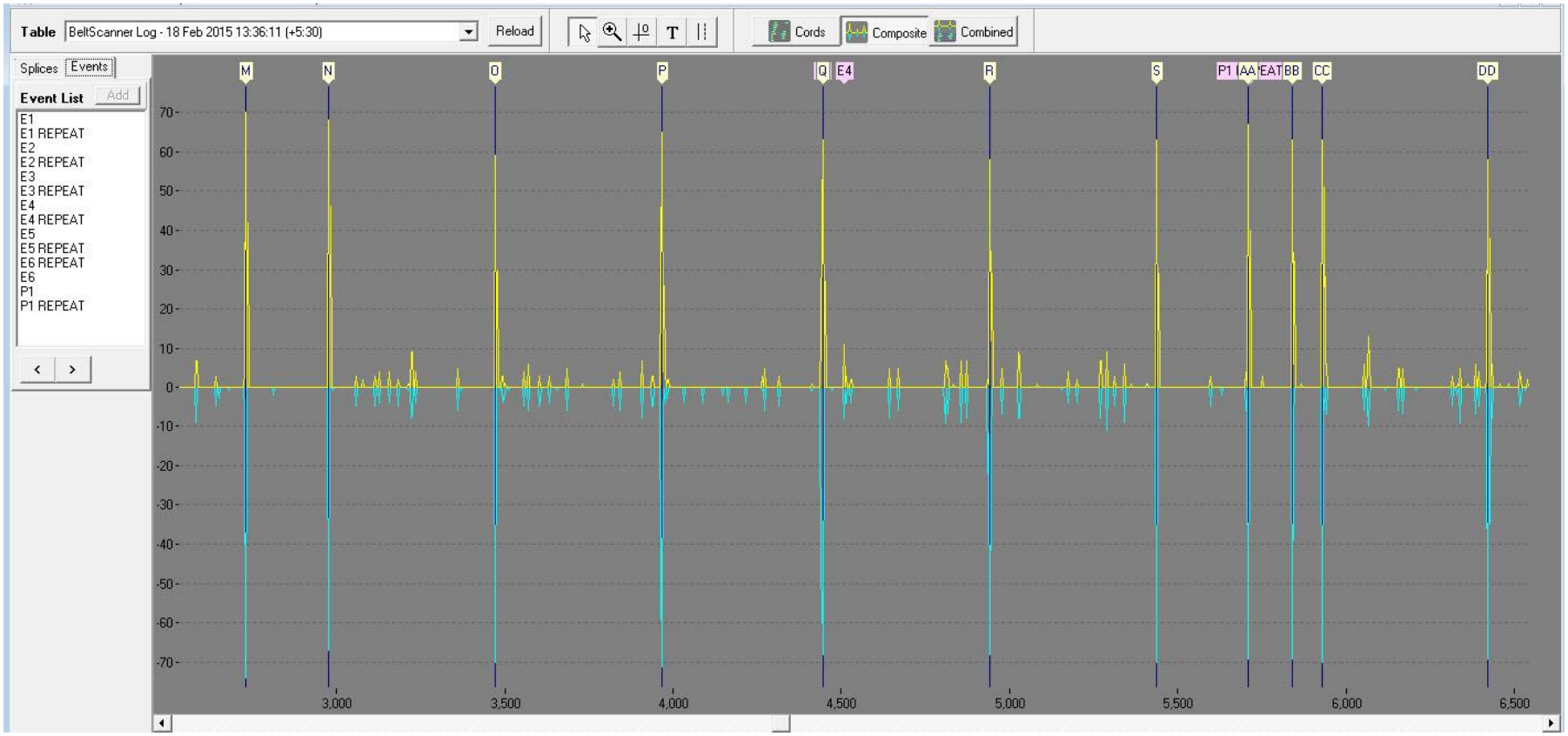
When magnetic activity is detected, the sensor output injects coloured pixels into the line graph. The North and South polarity of the magnetic field is displayed in different colours.

Splices are easily seen in the data as areas of high magnetic activity, associated with their multiple cord ends.

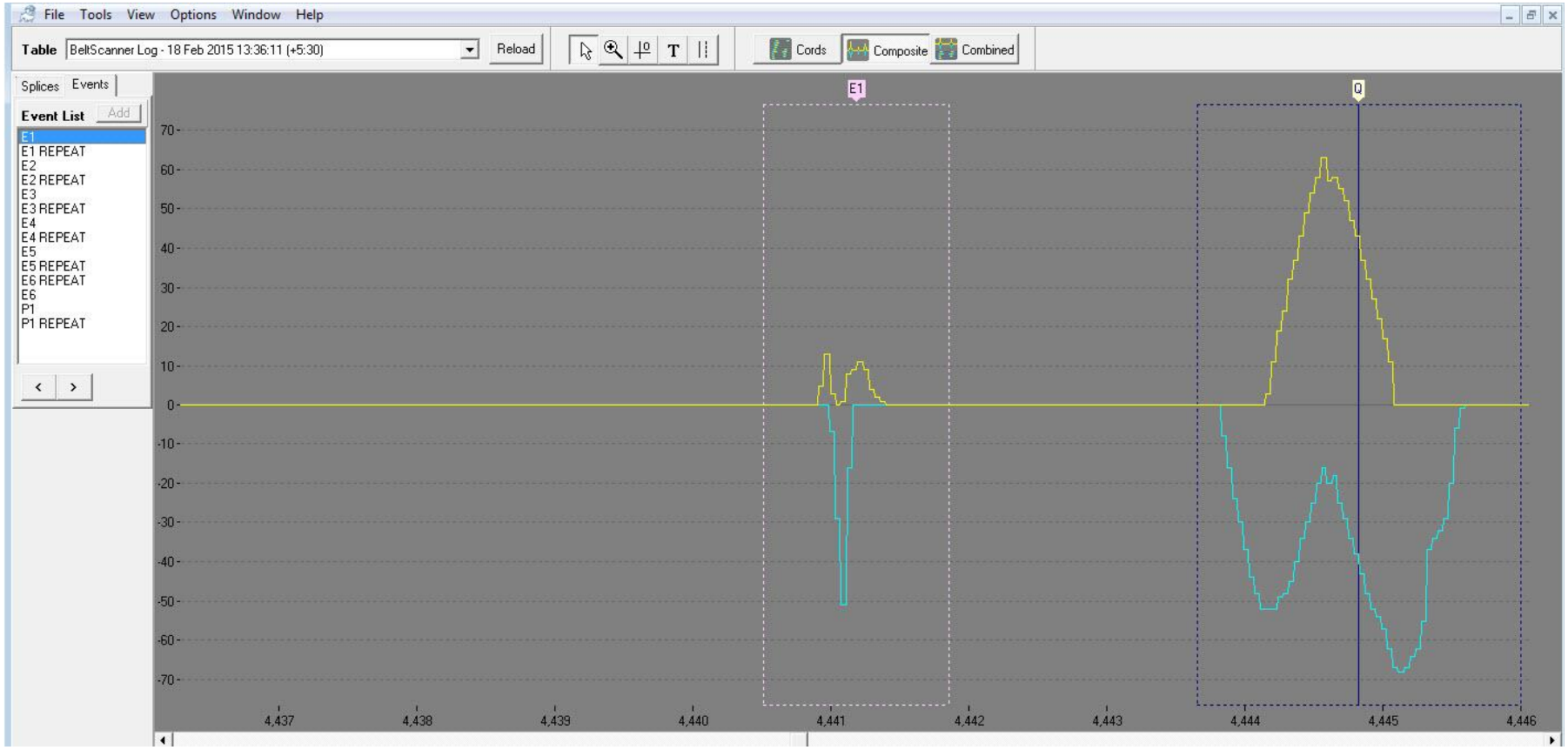
In the absence of site-specific instructions, the belt edges are referred to as 'Left' and 'Right'. The Left and Right sides of the belt are identified by facing the direction of product travel.

Also included is a Composite trace. This is an extremely useful feature, as it is constructed in the analysis software by adding numerically, the number of damaged cords at any cross section of the belting. It is against the amplitude of this trace that the DED threshold is set.

4.2 Composite Traces and Events

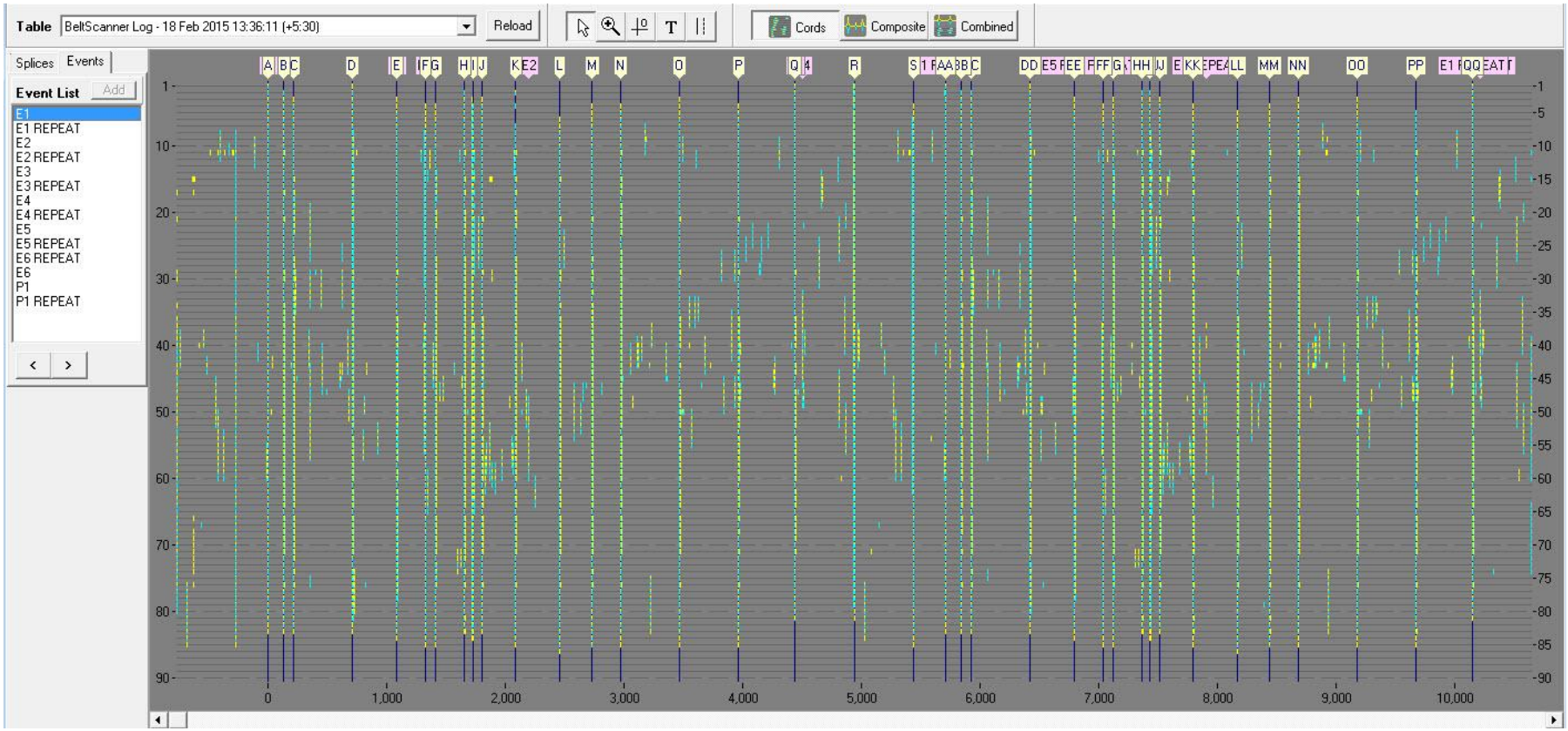


Composite Trace Full

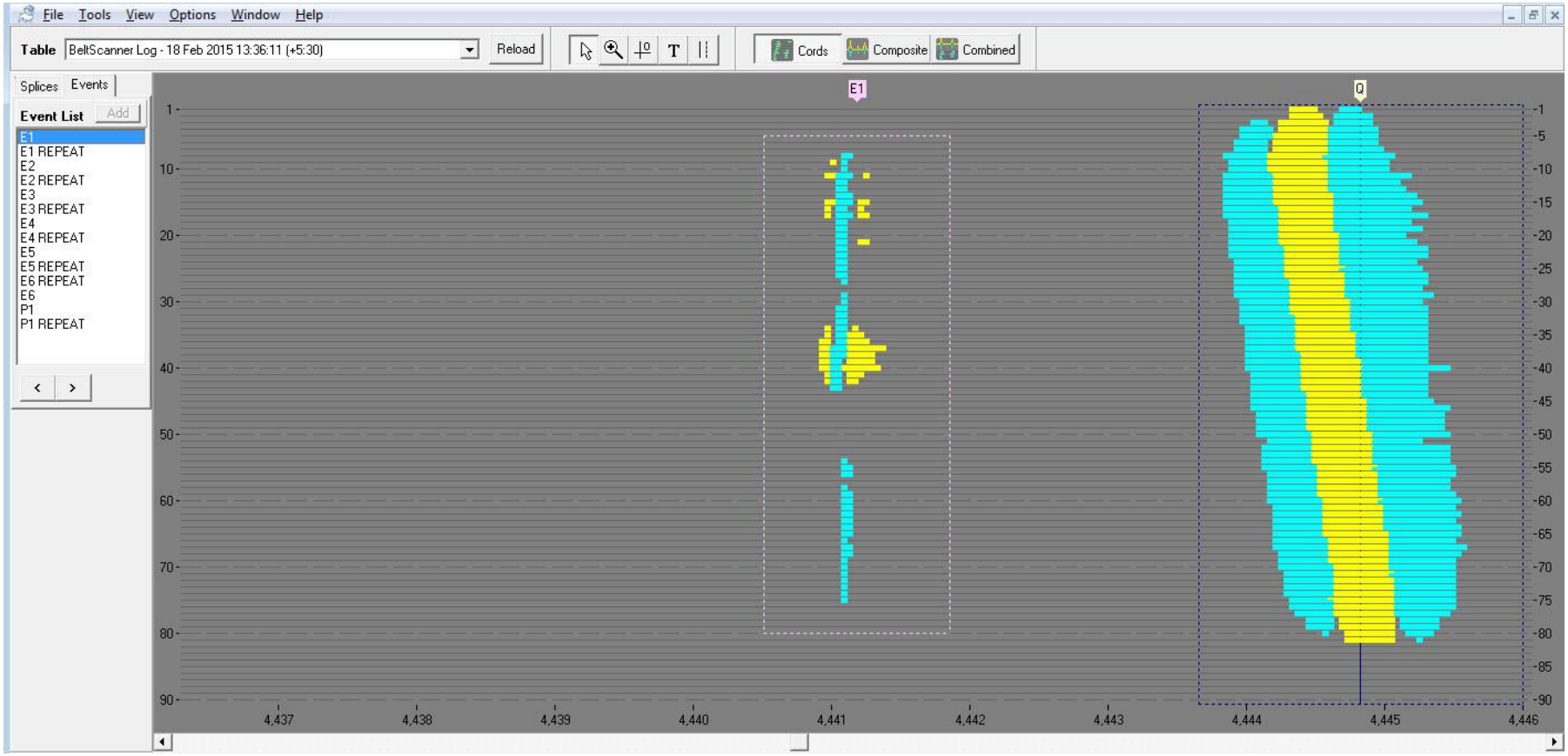


Composite Trace Event 1

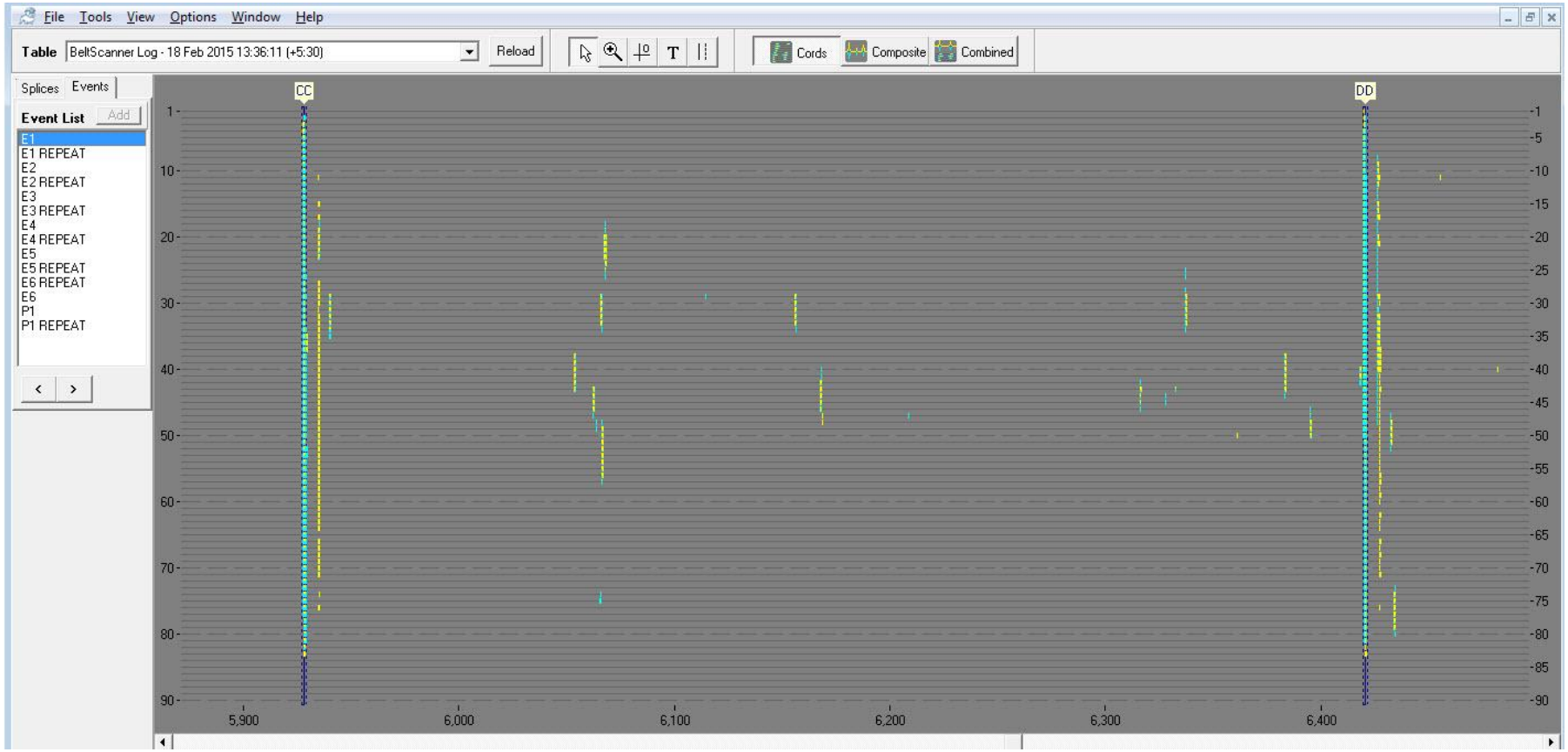
4.3 Cord Break Traces and Events



Cord Break Trace Full



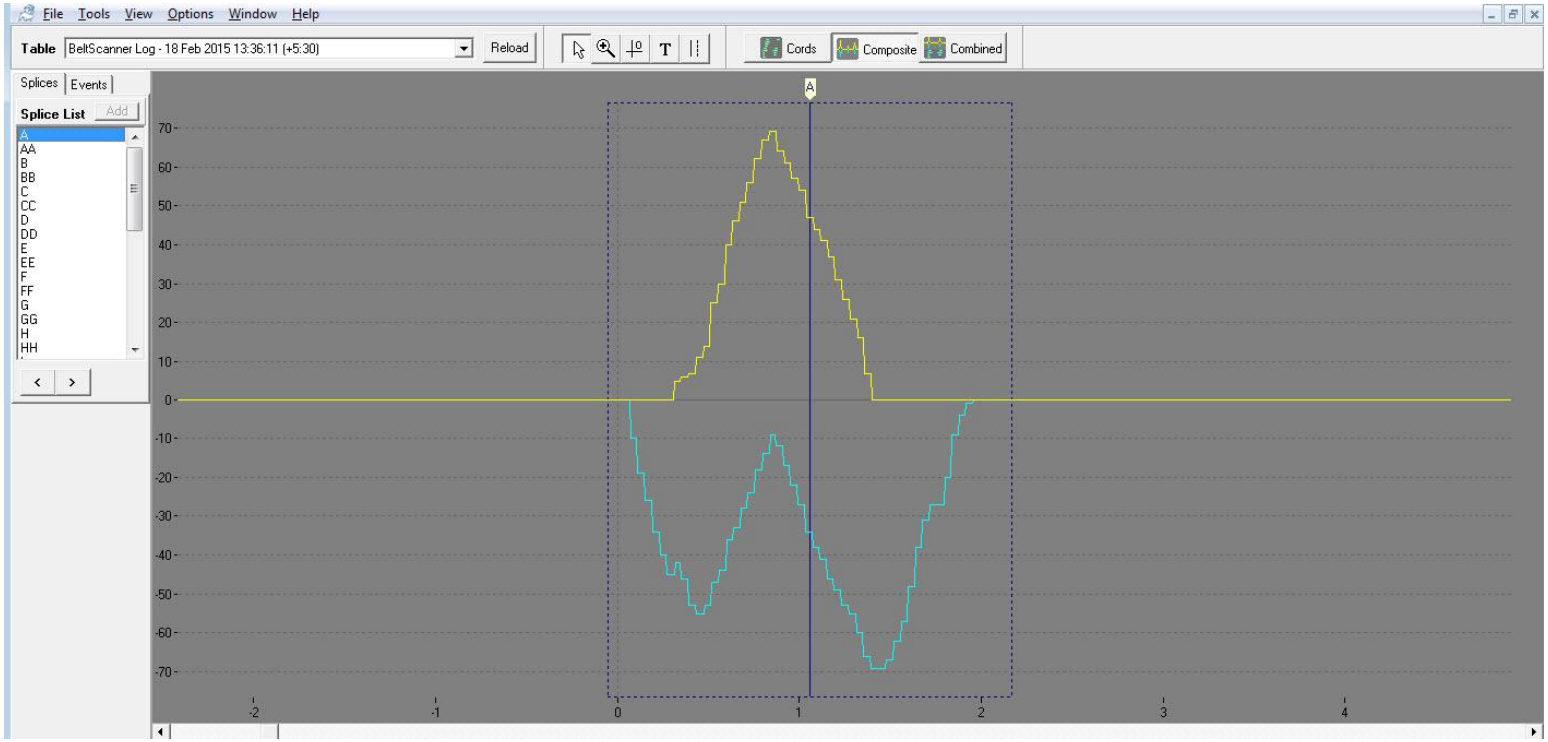
Cord Break Trace Event 1



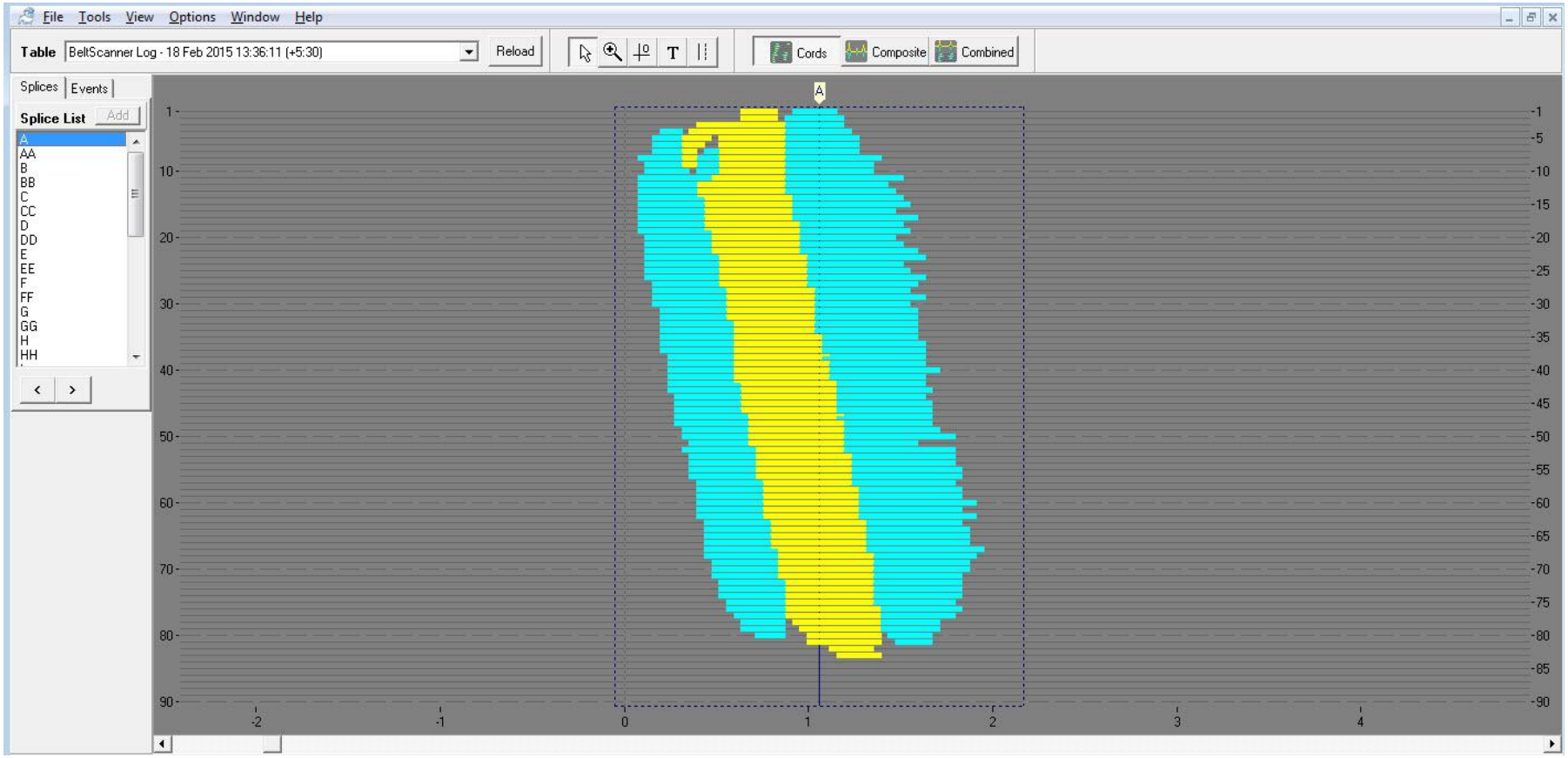
Cord Break Trace Section CC / DD

5.1 Splice Signatures

During scanning, magnetic signatures of the splices are created. These signatures indicate the lay-up or type of splice construction such as Stage One or Stage Two etc. Magnetic signatures are filed and form a reference for future scans. Changes in these signatures are related to cord movement and damage and precede splice failure.



Composite Signature Splice A



Cord Break Signature Splice A