

PIPELINE COMMANDER

TECHNICAL DATASHEET



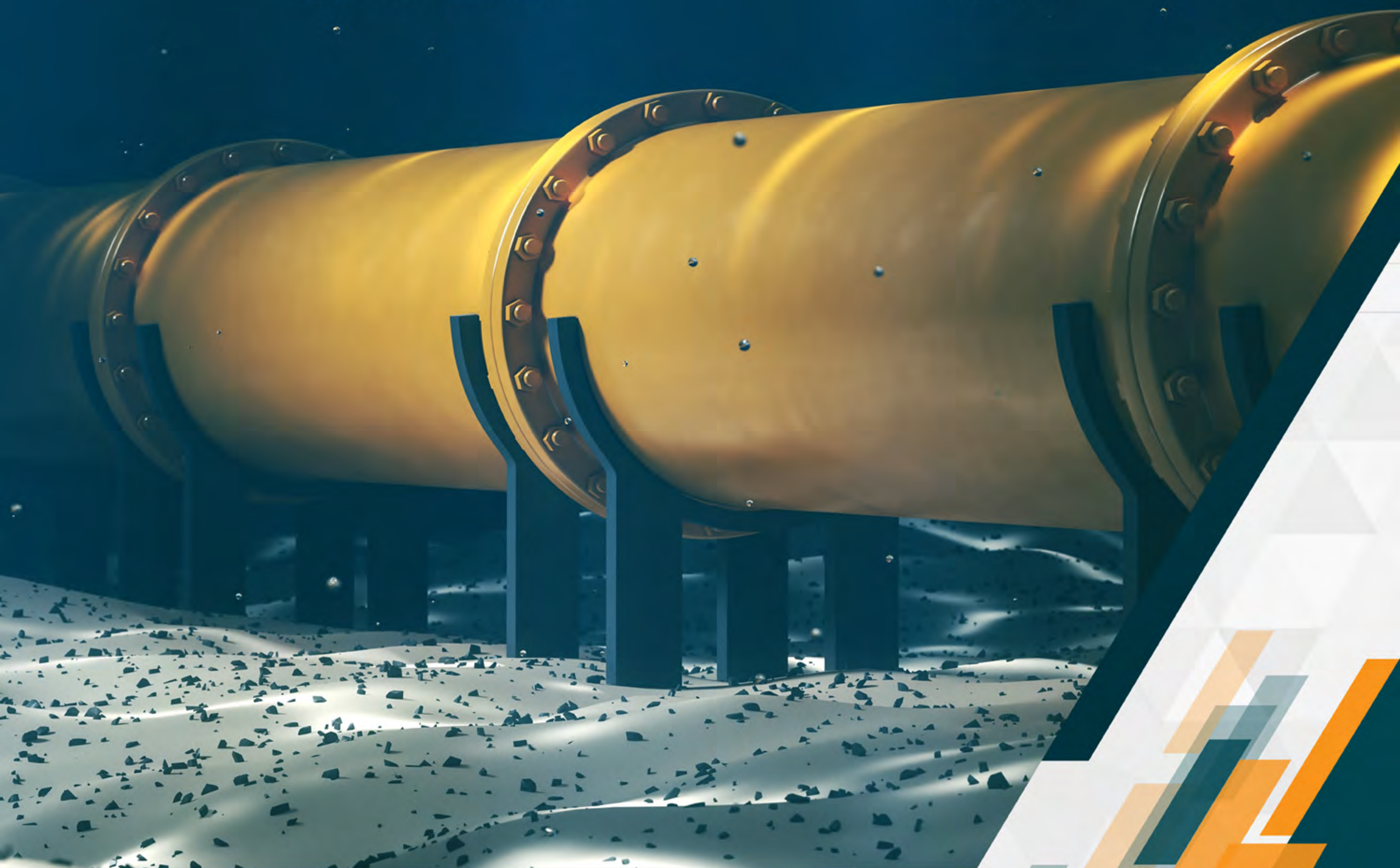
+120,000Km
SUBSEA PIPELINE
SYSTEMS INSPECTED



+80
CUSTOMERS



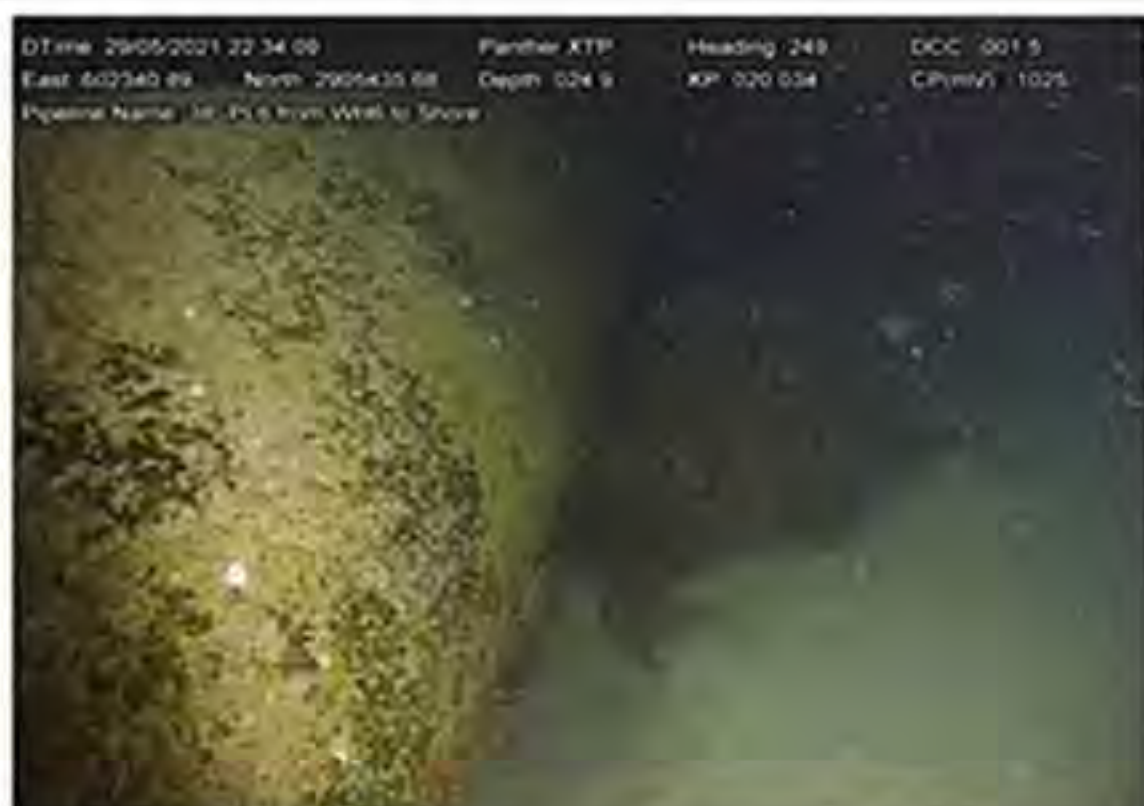
+20 YEARS
SUBSEA INSPECTION
EXPERIENCE



Part of the MCS Group
mcsoil.com

RELIABLE AND PRODUCTIVE

Pipeline Commander ensures the efficient and cost-effective collection of high-quality inspection data. It detects and removes any inaccuracies from readings and data conversion without suspending data gathering or processing. Advanced features and automation facilitate the inspection workflow which saves man hours and allows the project team to focus on the details.



ID	1215	KP	20.029	Event Code	DB-NT
Anomaly Code	DB	Severity	Low		
Description	Fish trap, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height				

Image 6.116: Fish trap

Automation – The software automatically detects pipelines while processing to save time.

Risk Detection - Real-time anomaly alerting, tracking, and auditing.

Integration - Analyses pipeline integrity between track, longitudinal profile, cross profile, CP, and events.

Synchronized - In-line Inspection (ILI) is aligned with GVI data and video.

Multitasking - It brings together all ROV inspection data into one single viewer.

High quality video – Pipeline Commander can record HD videos, with a compressed size, for ease of transfer without compromising on quality.

Visual Overlay - Built-in video overlay displays relevant information

Remote inspection All inspection aspects can be run remotely through our Remote Operation Centres (ROCs)

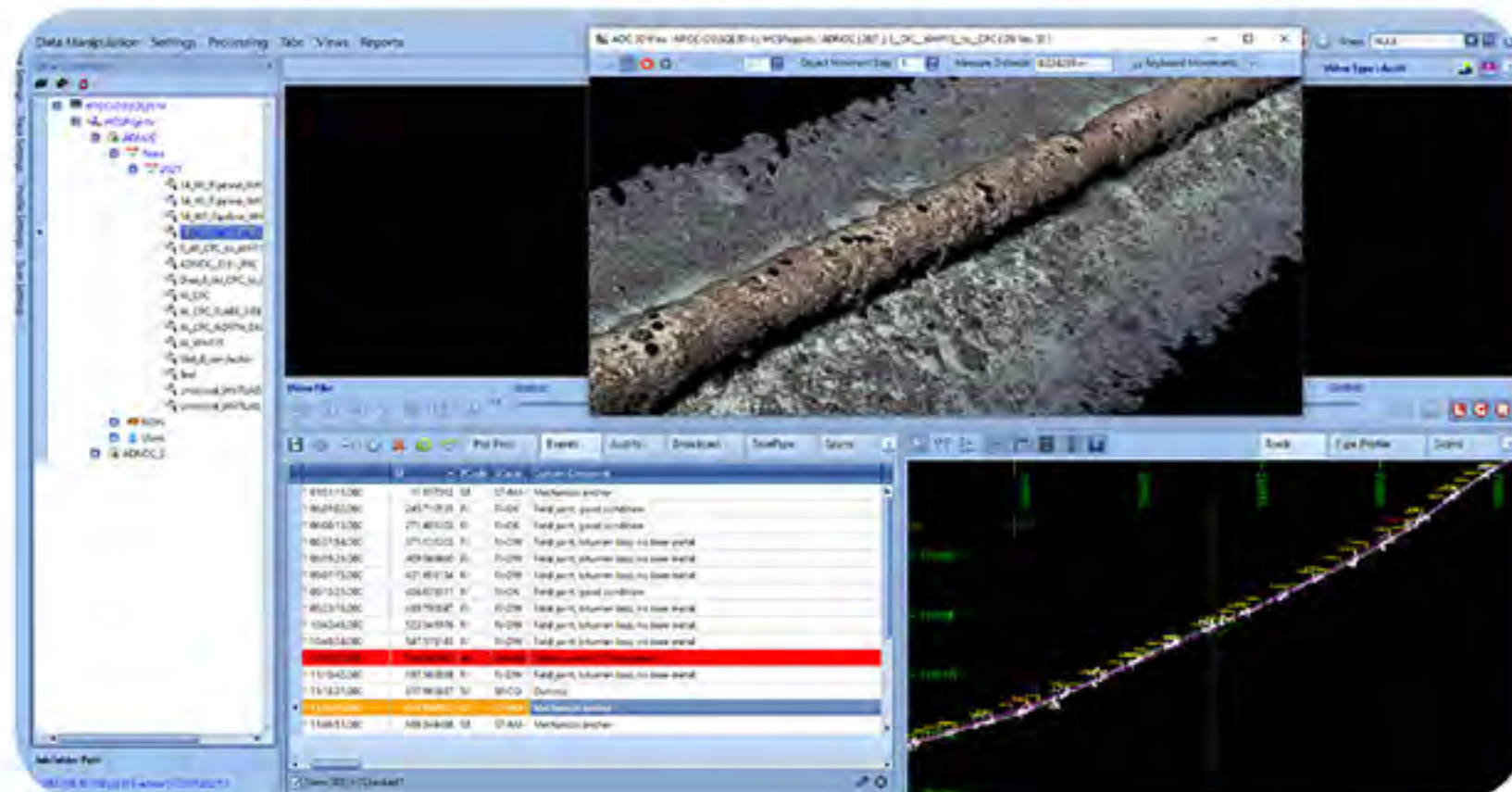


Pipeline commander viewer

BESPOKE TO YOUR REQUIREMENTS

The system can be integrated with our cutting-edge 3D Photo Realistic Cloud (PRC) technology which presents a highly accurate 3D visualization of scanned objects synchronized into digital videos.

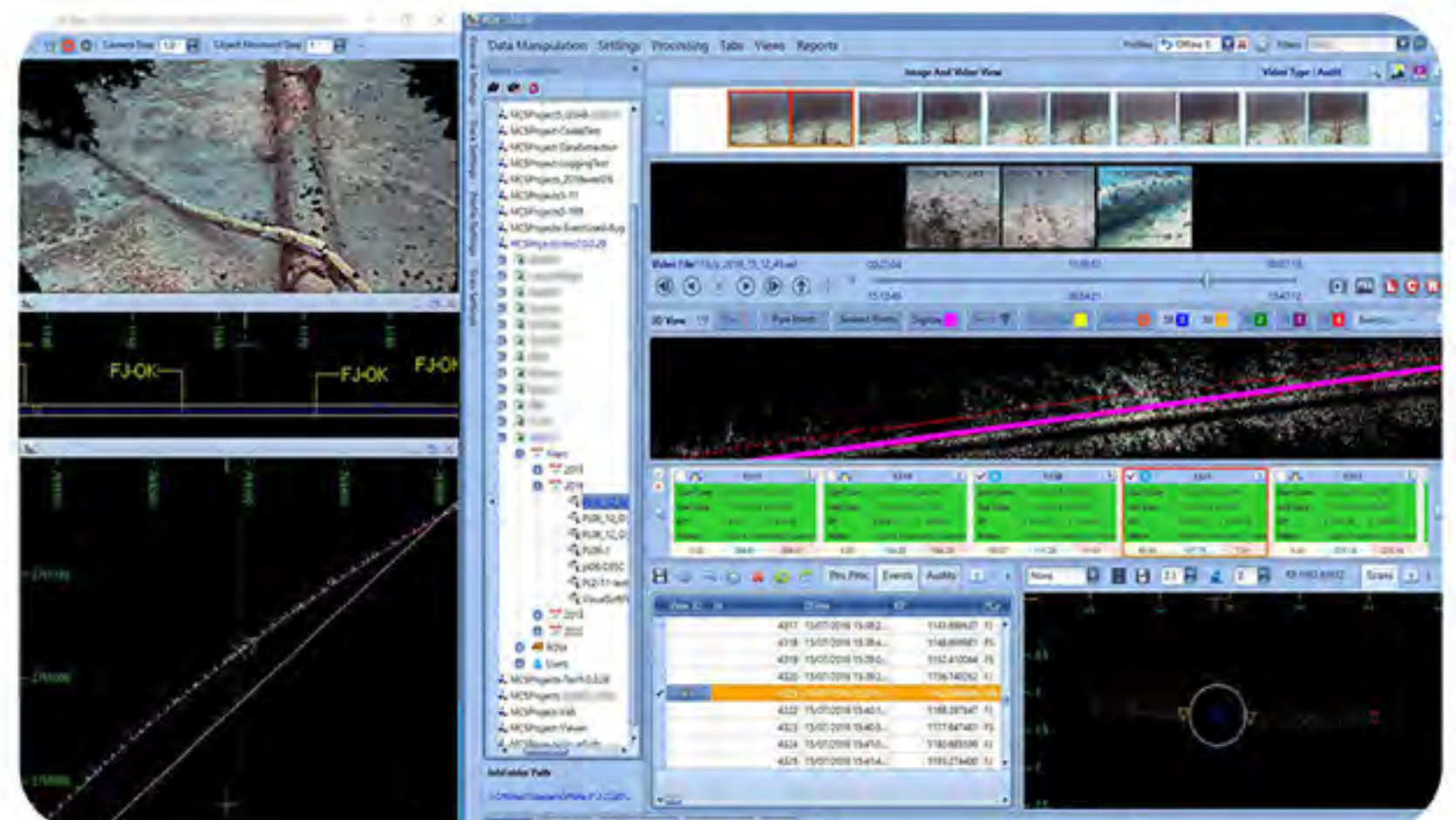
It can also be enhanced with mechanical profiler systems or multibeam for the ability to view, process and analyze 3D models using color-coded Digital Terrain Models (DTM).



ANTICIPATE YOUR SCHEDULE

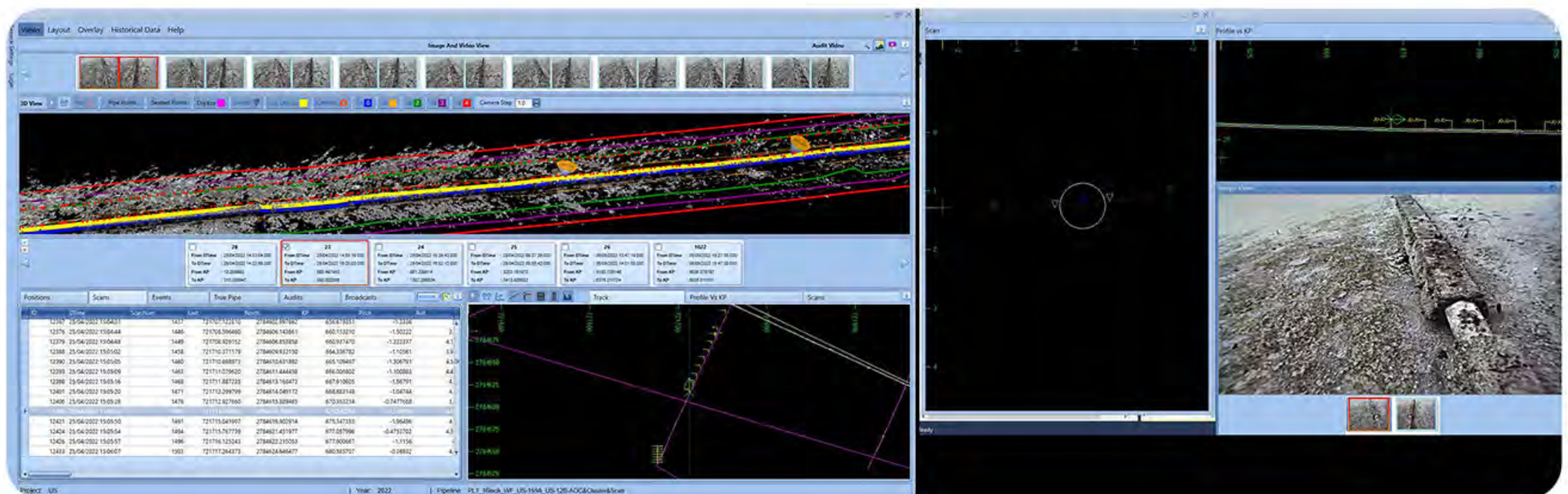
The Area of Concern (AOC) feature helps our clients be future oriented by allowing them to track and analyze where problems may occur on their assets with in-depth investigations into specific areas.

For example, it can perform a 360-degree inspection around new areas of landed pipeline.



CLUSTERING

The system uses clustering to divide the inspection information from hundreds of kilometers of pipeline sections and events into synchronized datasets to accelerate processing time and allow precise investigation and analysis.



OUTSTANDING DELIVERABLES

The Pipeline Commander viewer consolidates all the ROV inspection data into one user-friendly interface where clients can access fully synchronized data, high-definition videos and produce and print customized reports.

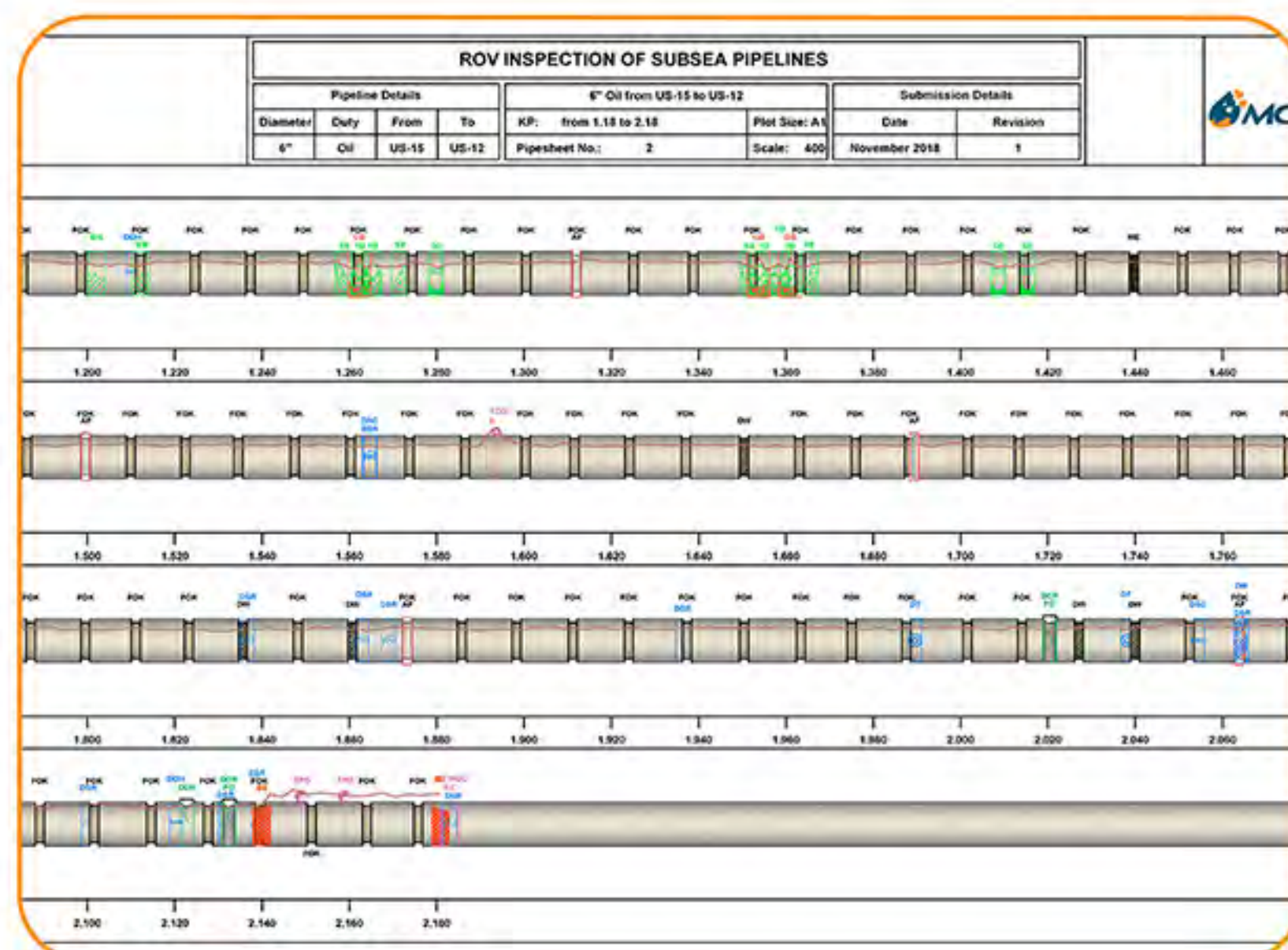
Simultaneously display data from multiple years and events for comparison in one simple viewer interface.



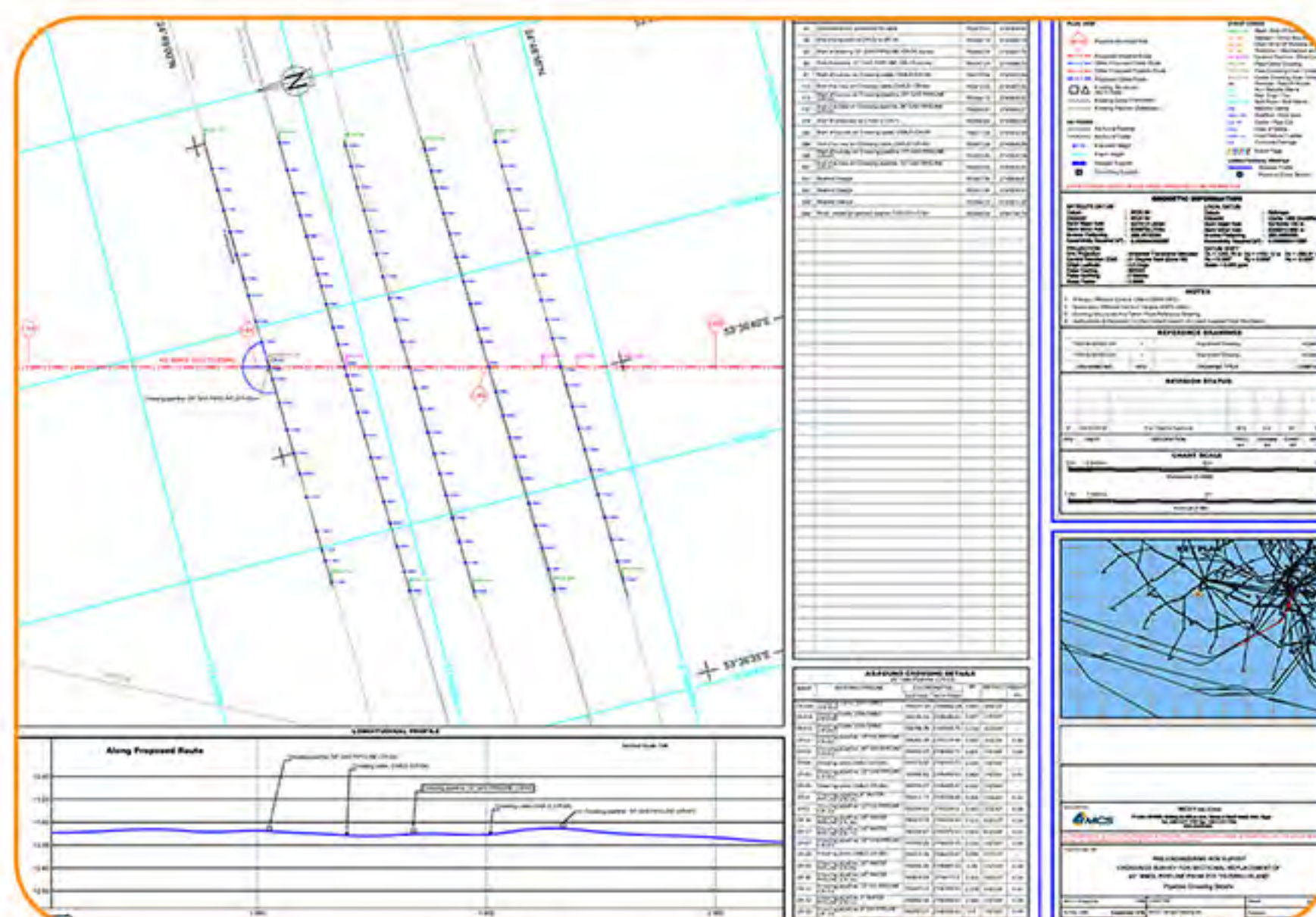
Reports & Charts: Our Pipeline Commander offers a flexible solution to present large data sets through interactive modules and bespoke reports for all inspection assets. Automated charting and reporting, 3D visualization and an easy-to-use viewer module allow faster data delivery which means preliminary reports are possible within 48 hours of the last dive.

ID	Date Time	Event Code	Comment	KP	Easting [m]	Northing [m]	Location
1005	29/05/2021 17:35:15	DB-SR	Soft rope, crossing over the pipe, not in contact, greater than 5.0m length	17.556	604353.26	2906827.61	38in PL6 from WH6
1194	29/05/2021 22:01:02	DB-SR	Soft rope, crossing over the pipe, in contact, greater than 5.0m length	19.796	602535.83	2905563.47	38in PL6 from WH6
1215	29/05/2021 22:34:09	DB-NT	Fish trap, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height	20.029	602340.63	2905436.06	38in PL6 from WH6
1230	29/05/2021 22:52:51	DB-MT	Fish trap, North side, in contact, approx. 1.5m length x 0.5m width x 1.5m height	20.258	602146.97	2905314.10	38in PL6 from WH6
1243	29/05/2021 23:30:35	DB-NT	Fish trap, North side, in contact, approx. 1.5m length x 1.5m width x 1.5m height	20.323	602091.23	2905290.47	38in PL6 from WH6
1259	30/05/2021 00:04:27	DB-NT	Fish trap, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height	20.412	602021.04	2905225.92	38in PL6 from WH6
1274	30/05/2021 00:28:05	DB-MW	Metallic frame, North side, in contact, approx. 1.0m length x 1.0m width x 1.0m height, previously reported during 2015 campaign	20.577	601894.10	2905120.88	38in PL6 from WH6
1310	30/05/2021 01:22:55	DB-DR	Oil drum, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height	21.108	601477.18	2904790.96	38in PL6 from WH6
1344	30/05/2021 02:06:40	DB-SC	Scaffold, North side, in contact, approx. 1.0m length x 0.5m width x 1.0m height	21.338	601297.16	2904648.84	38in PL6 from WH6
1378	30/05/2021 04:22:27	DB-NT	Fish trap, North side, in contact, approx. 1.5m length x 0.5m width x 0.5m height	21.911	600948.67	2904294.05	38in PL6 from WH6

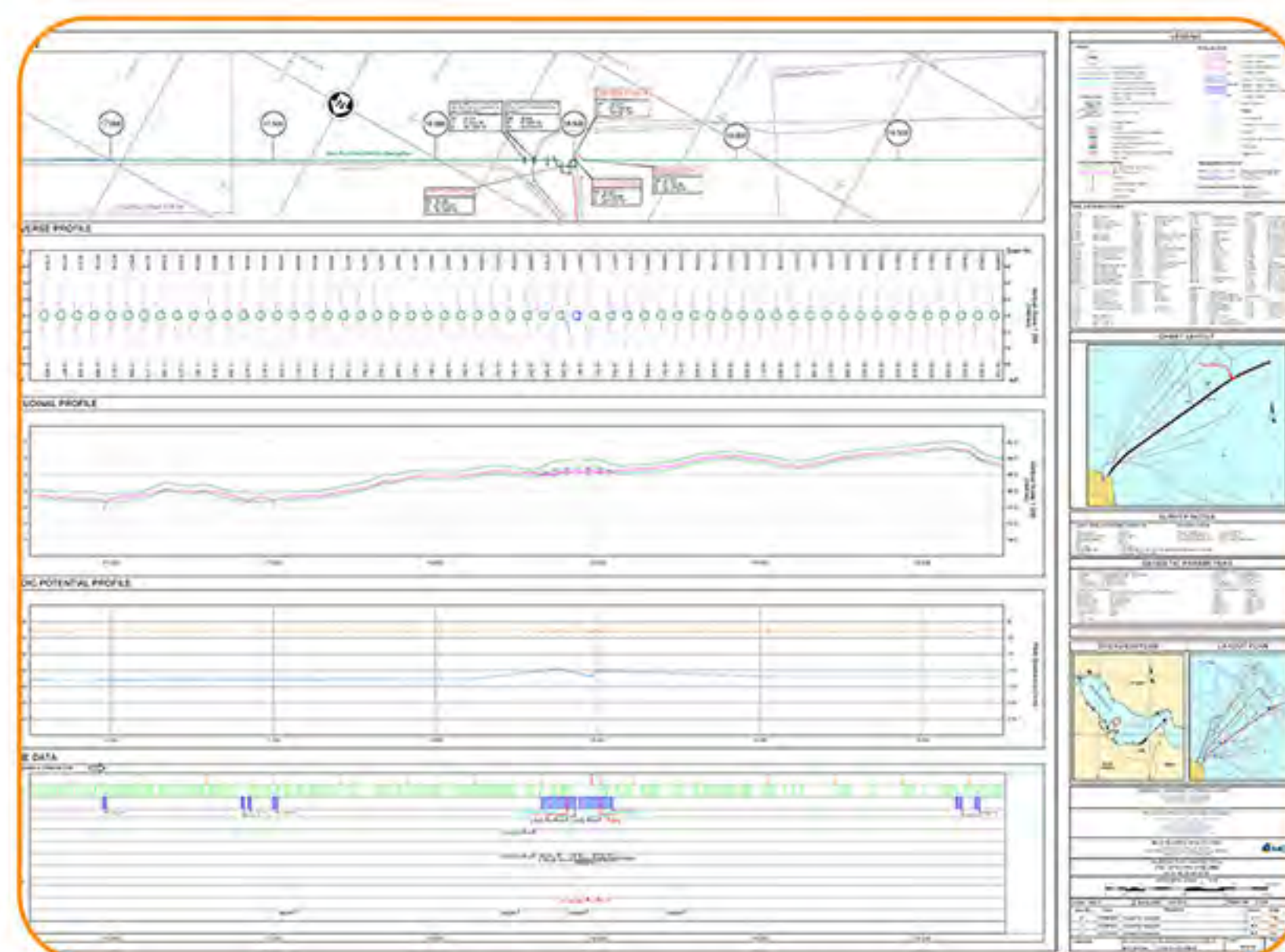
Event table



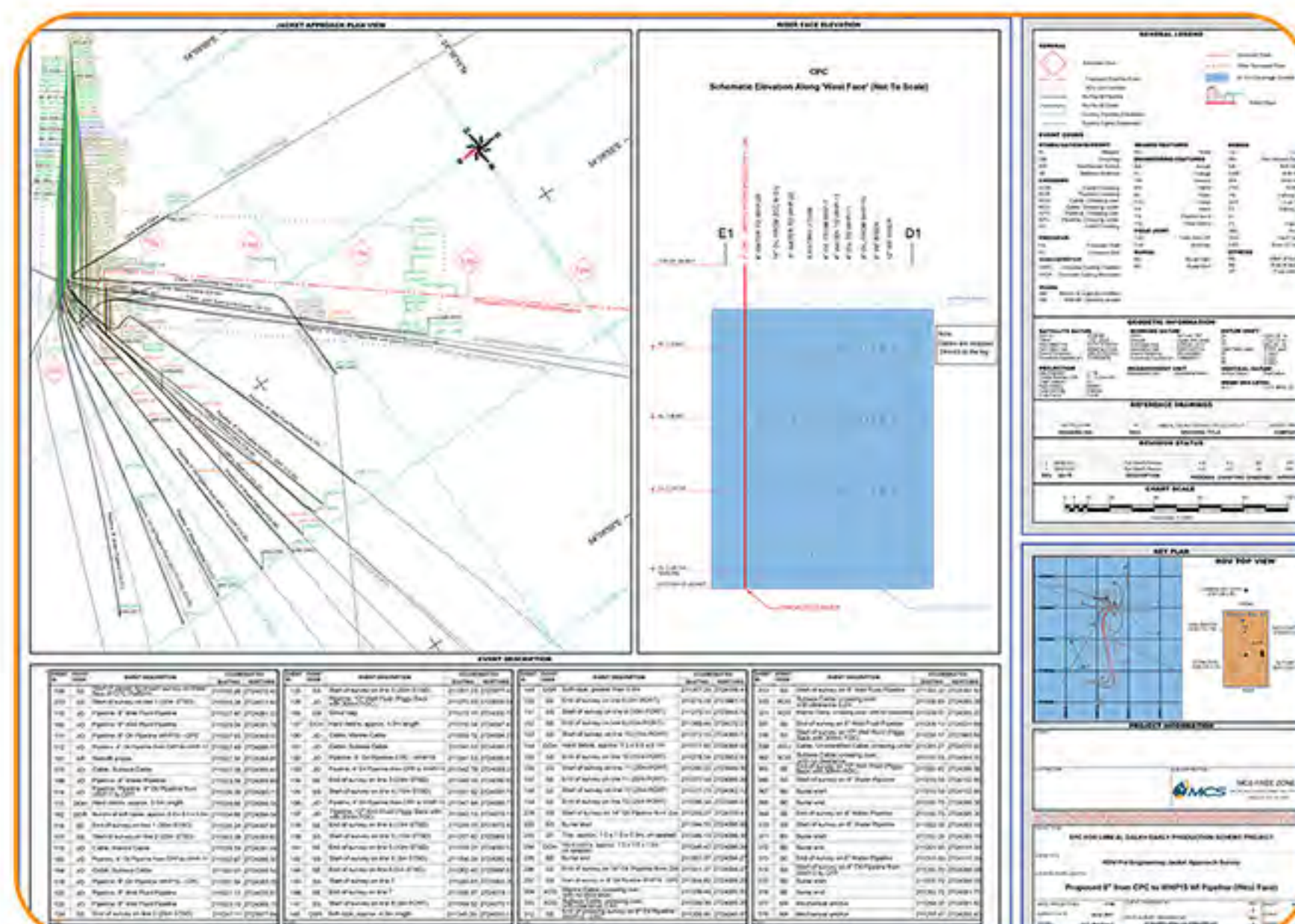
Pipeline sheet



Crossing chart



Existing pipeline chart



Jacket approach and Jacket face



+20 2 25218563
+20 2 25218570
mcsinfo@mcsoil.com
mcsoil.com/contact-us

OVERVIEW

MCS has more than 20 years' experience in subsea data management and inspection of underwater structures. We have designed a cutting-edge software system for data acquisition and processing to overcome challenges in the inspection and reporting of underwater pipelines.

OUR APPROACH

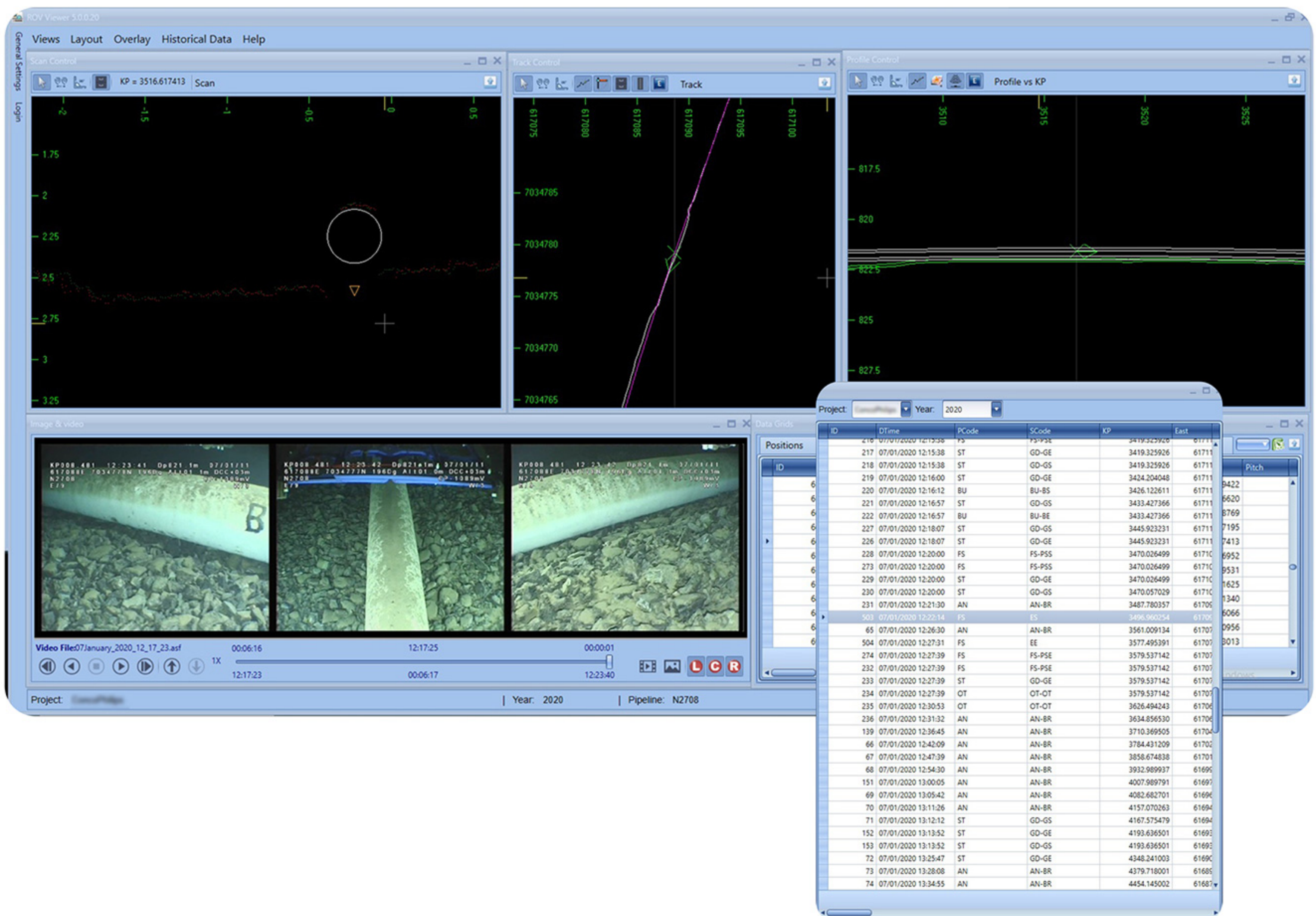
Our fully integrated Pipeline Commander system is a planning and management tool for the inspection and condition monitoring of underwater pipeline cables, flexible lines, and flying leads throughout their entire life cycle. Three modules including data acquisition, processing and deliverables provide bespoke charts, reports, and real-time viewing at your fingertips. The system streamlines data from multiple ROV cameras and combines them into one extremely accurate, synchronized 3D visualization, within a user-friendly interface.

TYPES OF INSPECTION / SURVEY:

- Pipeline pre-lay survey.
- Pipeline as-laid & as-found survey.
- Pipeline Crossings.
- Touchdown monitoring.
- Free Span correction.
- Pipeline Expansion Loops.
- Expansion Joints.
- Pipe support device.
- Buckle arrestors.

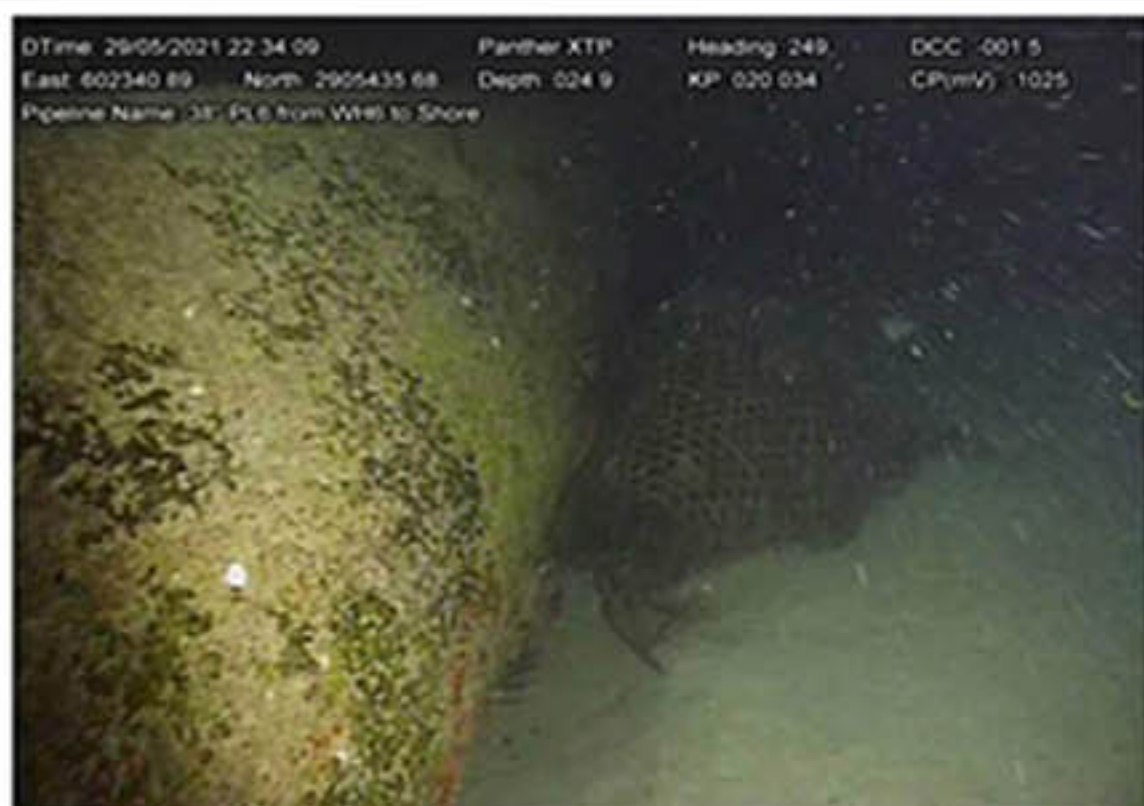
BENEFITS

- Real-time viewing, highly accurate data and automatic data processing with advanced algorithms allows for faster reporting times and reduces the need for human intervention.
- It's scalable and fully secure and encrypted to prevent data loss or corruption.
- Data processing can be completed onshore which results in cost savings.
- The system is flexible and capable of handling third-party inspection applications and data formats.
- The system can be integrated with our cutting-edge 3D Photo Realistic Cloud (PRC) technology.



RELIABLE AND PRODUCTIVE

Pipeline Commander ensures the efficient and cost-effective collection of high-quality inspection data. It detects and removes any inaccuracies from readings and data conversion without suspending data gathering or processing. Advanced features and automation facilitate the inspection workflow which saves man hours and allows the project team to focus on the details.



ID	1215	KP	20.029	Event Code	DB-NT
Anomaly Code	DB	Severity	Low		
Description	Fish trap, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height				

Image 6.116: Fish trap

Automation – The software automatically detects pipelines while processing to save time.

Risk Detection - Real-time anomaly alerting, tracking, and auditing.

Integration - Analyses pipeline integrity between track, longitudinal profile, cross profile, CP, and events.

Synchronized - In-line Inspection (ILI) is aligned with GVI data and video.

Multitasking - It brings together all ROV inspection data into one single viewer.

High quality video – Pipeline Commander can record HD videos, with a compressed size, for ease of transfer without compromising on quality.

Visual Overlay - Built-in video overlay displays relevant information

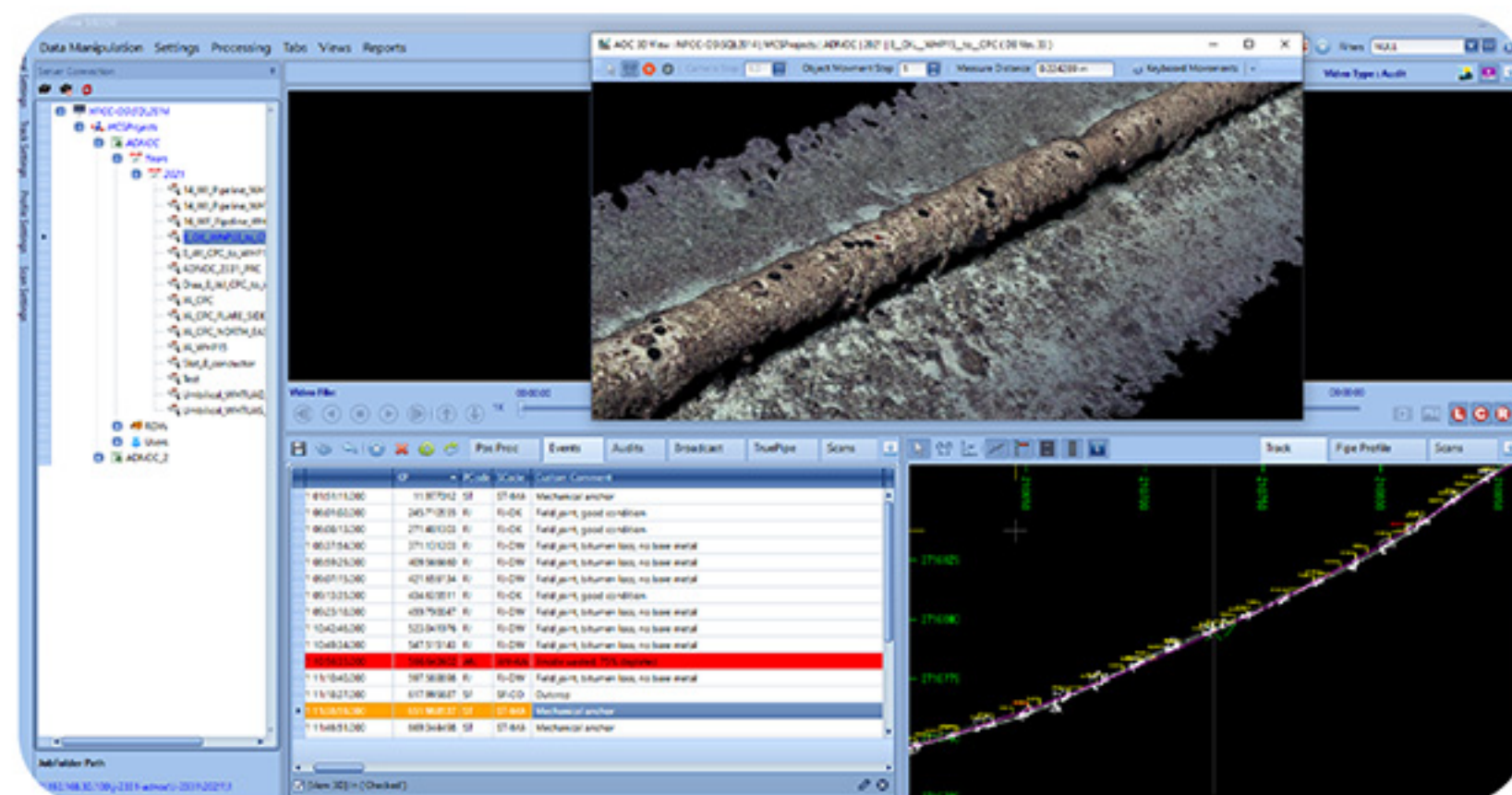
Remote inspection All inspection aspects can be run remotely through our Remote Operation Centres (ROCs)



Pipeline commander viewer

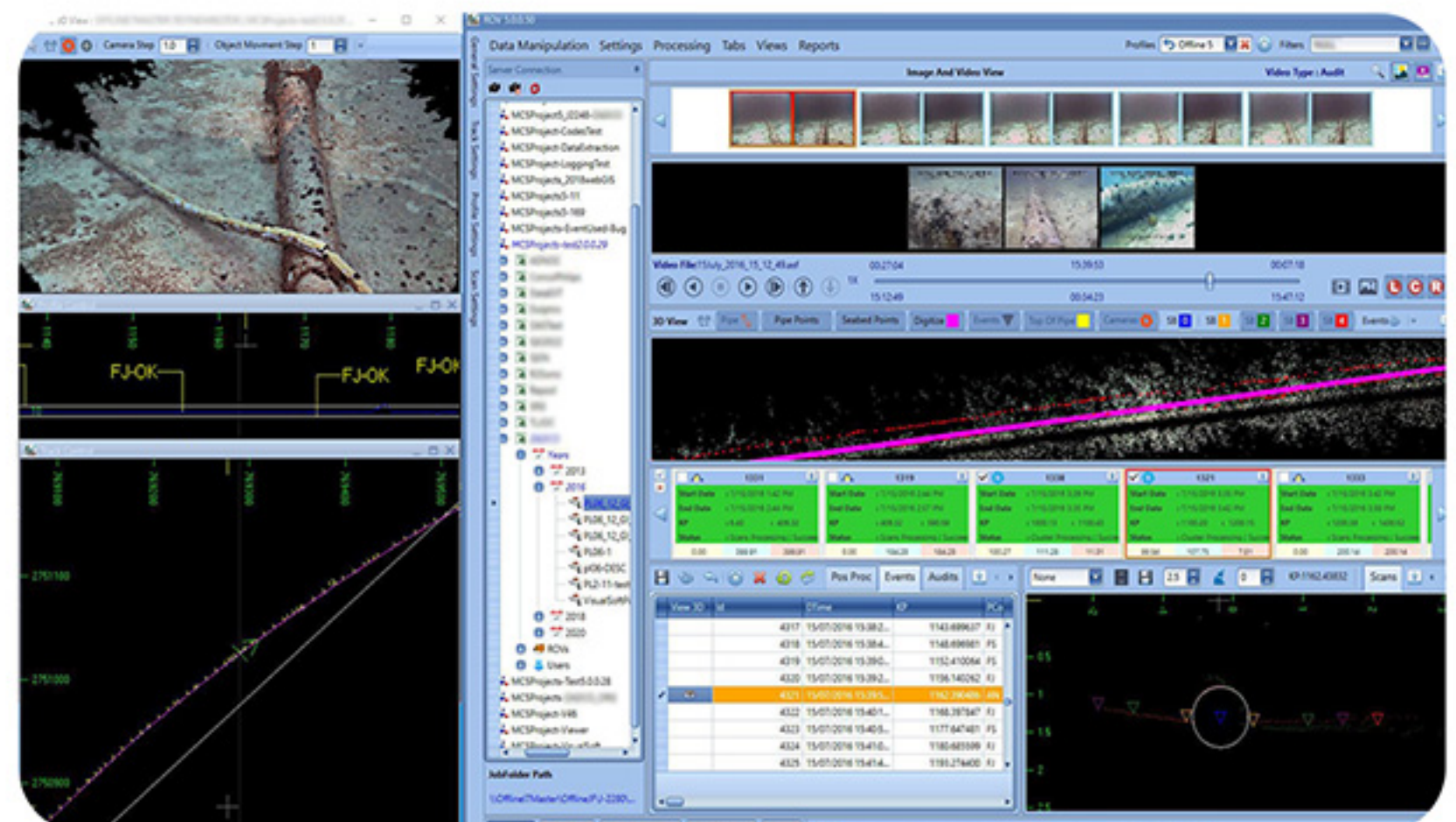
BESPOKE TO YOUR REQUIREMENTS

The system can be integrated with our cutting-edge **3D Photo Realistic Cloud (PRC) technology** which presents a highly accurate 3D visualization of scanned objects synchronized into digital videos. It can also be enhanced with mechanical profiler systems or multibeam for the ability to view, process and analyze 3D models using color-coded Digital Terrain Models (DTM).



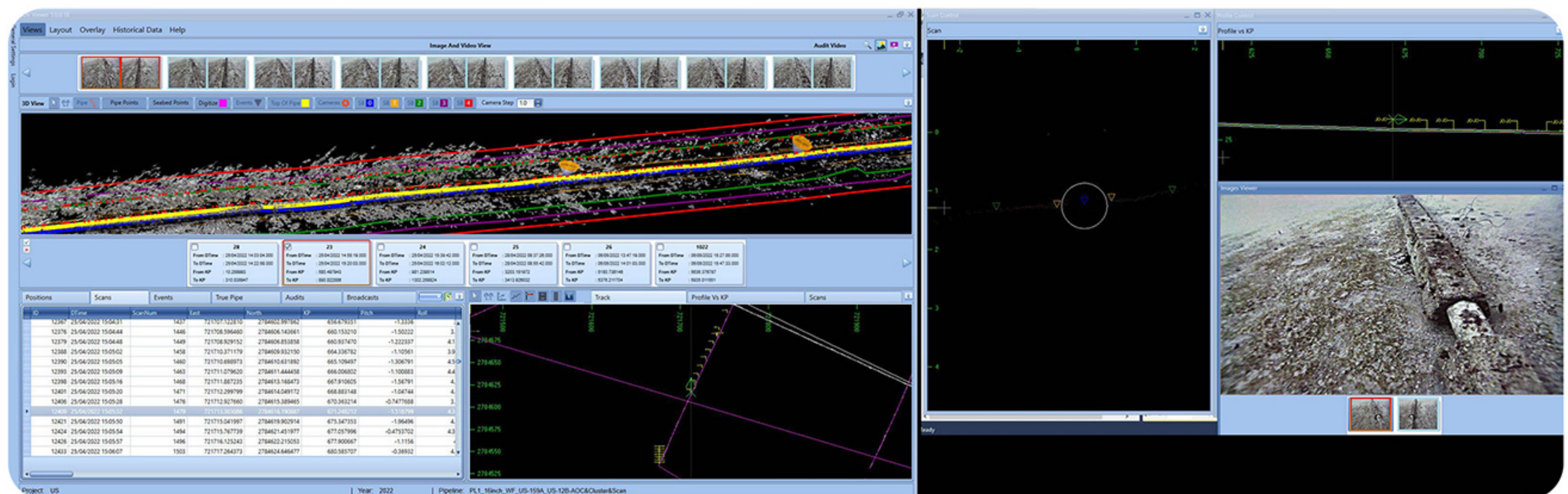
ANTICIPATE YOUR SCHEDULE

The **Area of Concern (AOC)** feature helps our clients be future oriented by allowing them to track and analyze where problems may occur on their assets with in-depth investigations into specific areas. For example, it can perform a 360-degree inspection around new areas of landed pipeline.



CLUSTERING

The system uses clustering to divide the inspection information from hundreds of kilometers of pipeline sections and events into synchronized datasets to accelerate processing time and allow precise investigation and analysis.



OUTSTANDING DELIVERABLES

The **Pipeline Commander viewer** consolidates all the ROV inspection data into one user-friendly interface where clients can access fully synchronized data, high-definition videos and produce and print customized reports.

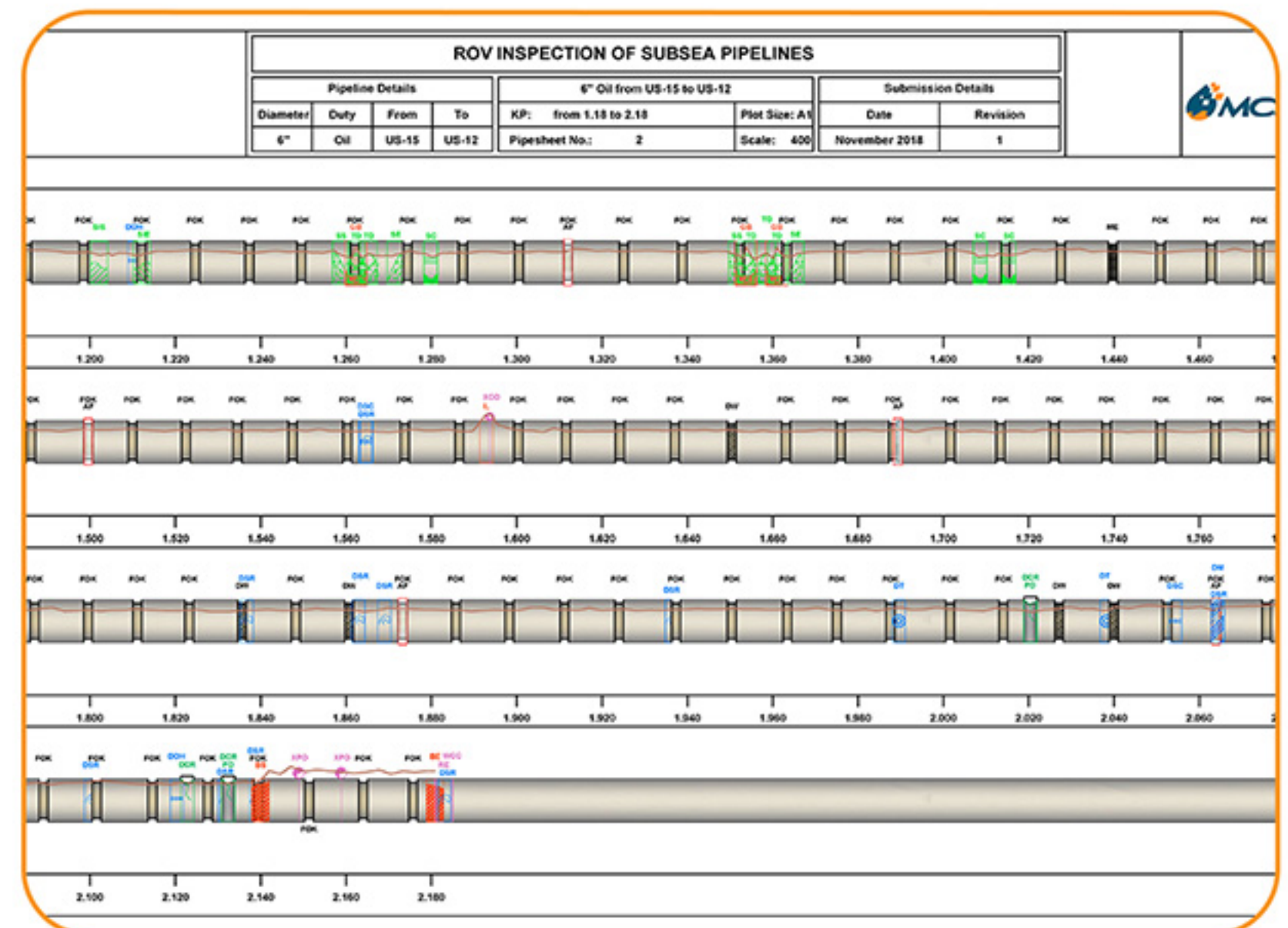
Simultaneously display data from multiple years and events for comparison in one simple viewer interface.



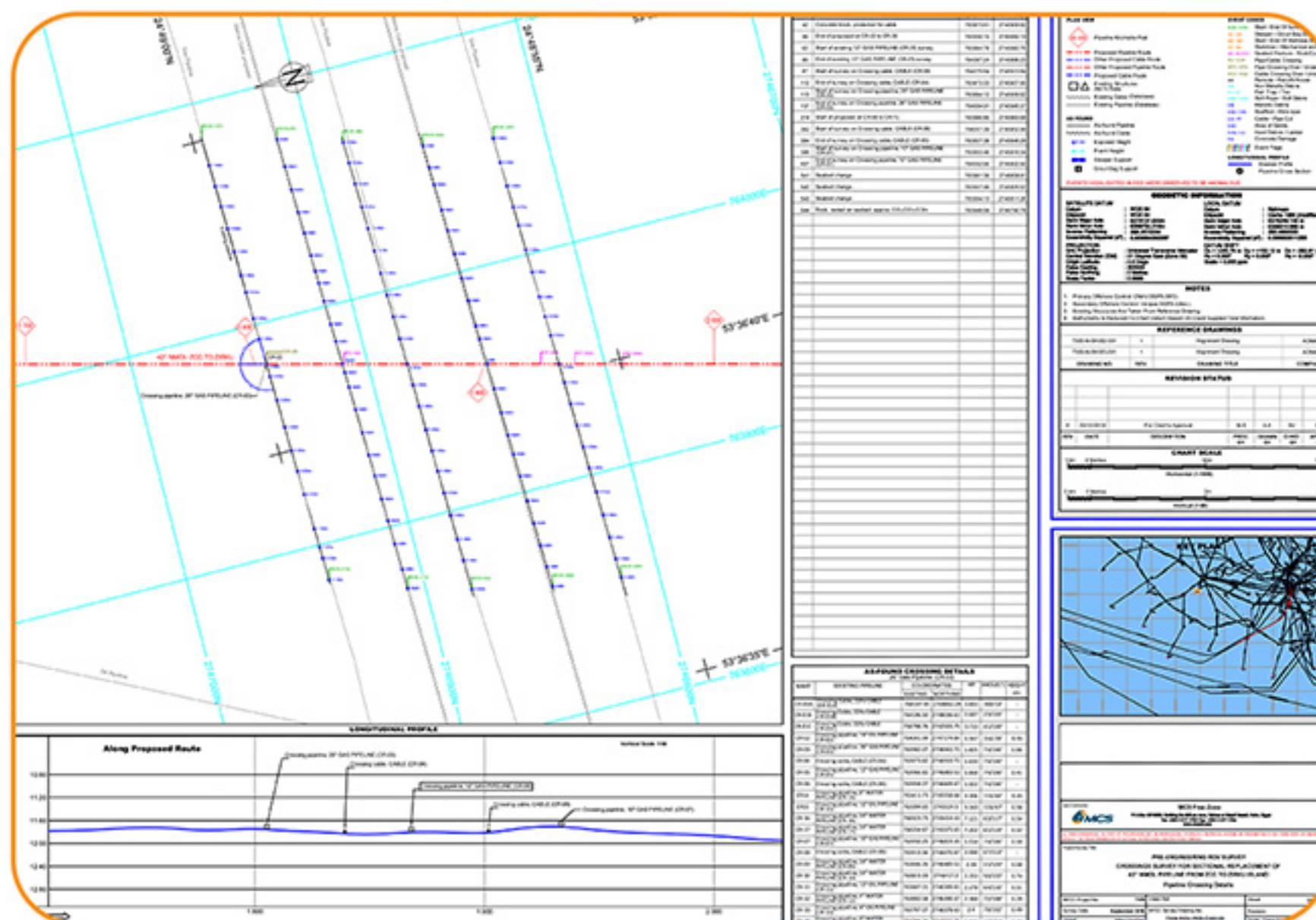
Reports & Charts: Our Pipeline Commander offers a flexible solution to present large data sets through interactive modules and bespoke reports for all inspection assets. Automated charting and reporting, 3D visualization and an easy-to-use viewer module allow faster data delivery which means preliminary reports are possible within 48 hours of the last dive.

ID	Date Time	Event Code	Comment	KP	Easting [m]	Northing [m]	Location
1005	29/05/2021 17:35:15	DB-SR	Soft rope, crossing over the pipe, not in contact, greater than 5.0m length	17.556	604383.26	2906827.61	38in PL6 from WH6
1194	29/05/2021 22:01:02	DB-SR	Soft rope, crossing over the pipe, in contact, greater than 5.0m length	19.796	602535.83	2905563.47	38in PL6 from WH6
1215	29/05/2021 22:34:09	DB-NT	Fish trap, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height	20.029	602340.63	2905436.06	38in PL6 from WH6
1236	29/05/2021 22:52:51	DB-NT	Fish trap, North side, in contact, approx. 1.5m length x 0.5m width x 1.5m height	20.258	602146.97	2905314.10	38in PL6 from WH6
1243	29/05/2021 23:30:35	DB-NT	Fish trap, North side, in contact, approx. 1.5m length x 1.5m width x 1.5m height	20.323	602091.23	2905280.47	38in PL6 from WH6
1259	30/05/2021 00:04:27	DB-NT	Fish trap, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height	20.412	602021.04	2905225.92	38in PL6 from WH6
1274	30/05/2021 00:28:05	DB-MW	Metallic frame, North side, in contact, approx. 1.0m length x 1.0m width x 1.0m height, previously reported during 2015 campaign	20.577	601894.10	2905120.86	38in PL6 from WH6
1316	30/05/2021 01:22:55	DB-DR	Oil drum, North side, in contact, approx. 1.0m length x 0.5m width x 0.5m height	21.108	601477.16	2904790.96	38in PL6 from WH6
1344	30/05/2021 02:06:40	DB-SC	Scaffold, North side, in contact, approx. 1.0m length x 0.5m width x 1.0m height	21.338	601297.16	2904648.84	38in PL6 from WH6
1378	30/05/2021 04:22:27	DB-NT	Fish trap, North side, in contact, approx. 1.5m length x 0.5m width x 0.5m height	21.911	600846.87	2904294.05	38in PL6 from WH6

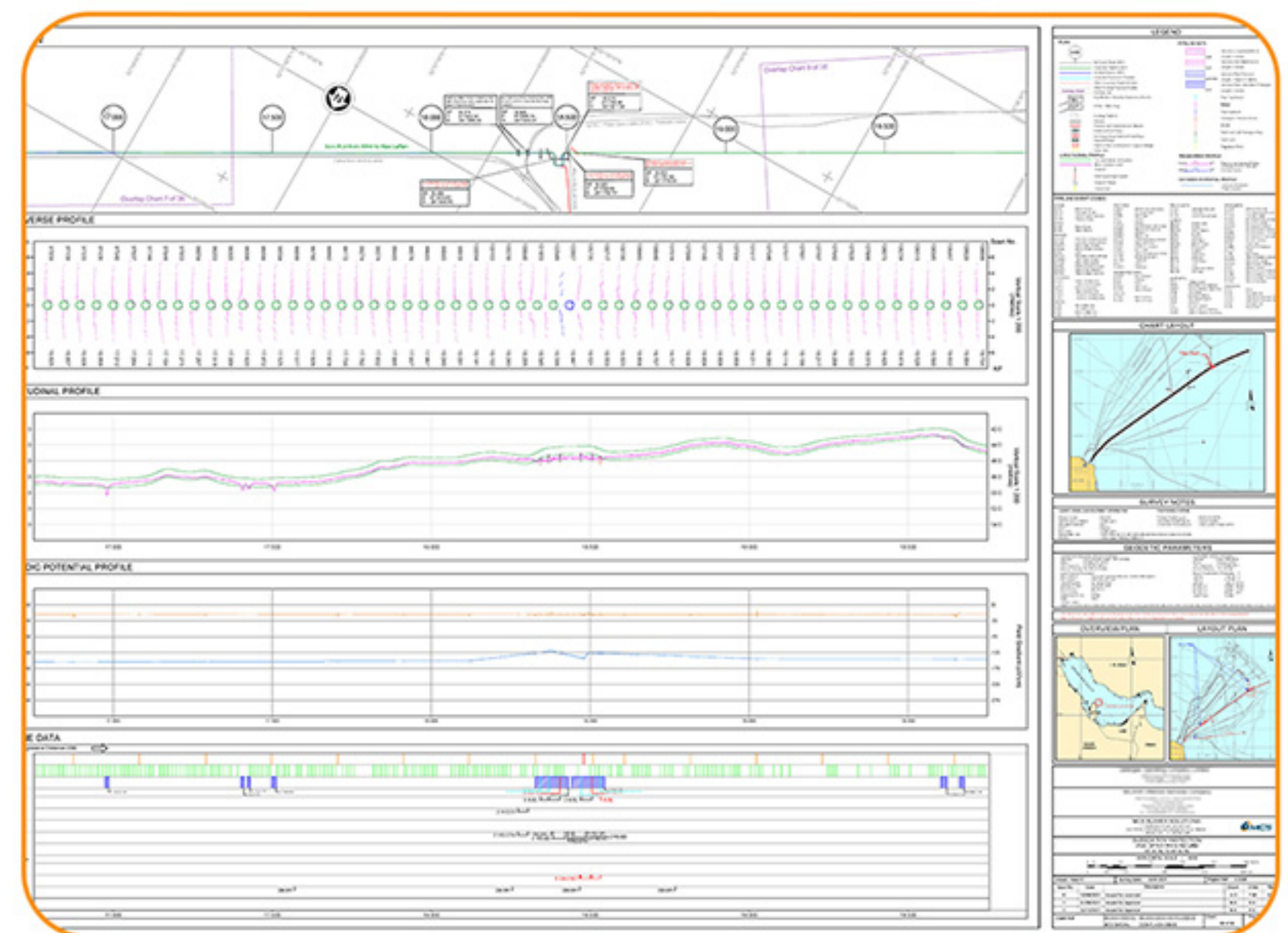
Event table



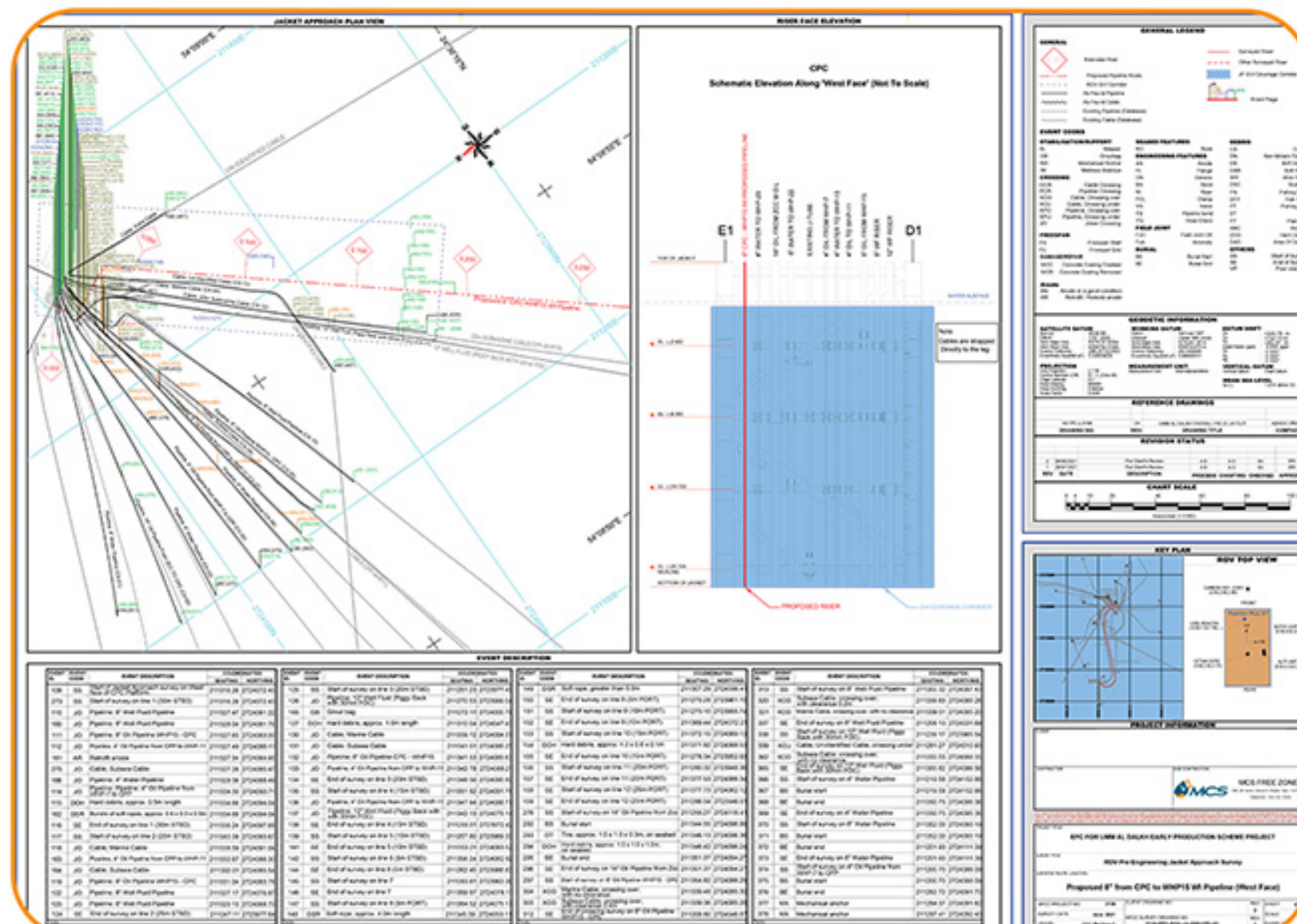
Pipeline sheet



Crossing chart



Existing pipeline chart



Jacket approach and Jacket face



+20 2 25218563
+20 2 25218570
mcsinfo@mcsoil.com
mcsoil.com/contact-us