

## EVO Mapping

# Pipeline Mapping High-Accuracy GPS Information




### The Problem

Integration of pipeline data is a major concern for pipeline operators. Regulations require pipeline operators to document the specific location of their assets, however, the legacy documentation may not always be available. Timely inspection of pipelines can save valuable effort and resources at a later stage.

### The Solution

By leveraging high-end exploration technology and leading-edge software products, NDT Global's EVO Mapping can pinpoint installations, welds and anomalies in gas and liquid pipelines even at the preliminary reporting stage. Inertial measurement units carried on these tools deliver precise information that enables NDT Global's experts to identify the precise location of a flaw. The captured data can be exported to a geographic information system (GIS), helping operators better understand and visualize their pipeline and any anomalies identified. NDT Global delivers a range of specialist software products for the management and analysis of inspection data and other key metrics relating to pipeline management.

 Axial Cracks

 Circumferential Cracks

 Metal Loss

 Geometry Ovalities

 Mapping

### EVO Mapping

EVO Mapping inspection can offer an accurate and extended picture of the current status of your assets and provide a sound basis for decision making. High-accuracy GPS information provides a reliable reference to relate pipeline data and at the same time, reduces verification costs.

EVO Mapping can deliver 3D coordinates with sub-meter accuracy. This service can also provide bend quantification accurately – deflection angle, direction and bend radius. The GPS information can be integrated and transferred to subsequent runs with other inspection technology.

### Benefits

- 3D sub-meter accuracy positions
- Direct GIS input & flexible output formats, including ESRI® SHP files, spreadsheets and Google Earth compatible files
- Essential components of any baseline assessment and integrity management plan
- Pipeline bending quantification
- Available from 6" to 48"

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## Specifications

### Key Tool Specifications: EVO Mapping

Tool sizes	6" to 48"	6" to 48"
Pipeline medium	Liquid	Liquid
Max. operation speed	4 m/s	9 mph
Temperature range	-10 to +50 °C	14 to 122 °F
Max. pressure	120 bar	1740 psi
Min. bend radius	1.5 D 90°	1.5 D 90°
Strain reporting threshold	≥ 0.1%	≥ 0.1%

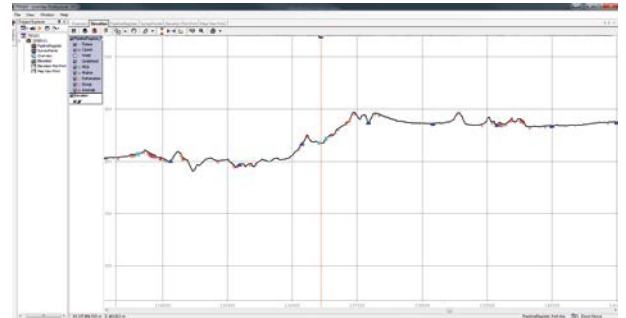
### Deliverables Specifications

Datum	WGS84 <sup>1</sup>
System	Geographic and/or map projection
Projection	UTM WGS84 <sup>1</sup>
Resolution/sampling	0.025 m (1.0 in) normalized
Coordinates	Appended to the pipeline register for all ILI events
Deliverable format on request	ESRI® Shape, CSV, Microsoft® Excel, KMZ

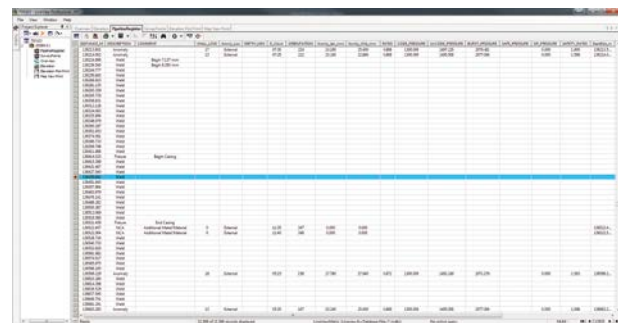
<sup>1</sup> Global/international definitions upon request

### Position Accuracy

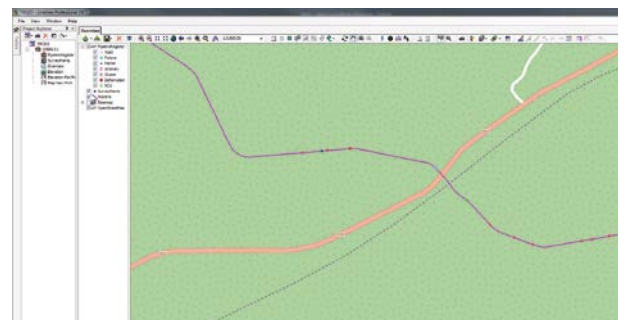
Horizontal accuracy (1 $\sigma$ )	± 0.5 m (1.6 ft)
Vertical accuracy (1 $\sigma$ )	± 0.5 m (1.6 ft)
Relative accuracy (1 $\sigma$ )	1:2000



An accurate elevation data is an integral element to the development of an integrity program. It also helps to create an accurate pressure profile for future assessments.



The provided GPS data, along with the pipeline register, also provides a detailed feature description and identification that can be easily loaded into any GIS software.



It is important to highlight the fact that the INS data can align and compare with several GIS data sources; terrain, elevation and HCA models, etc. The data can also be easily loaded in mapping services like Google Earth™ and OpenStreetMap.

Please note: Tool and performance specifications depend on inspection and pipeline conditions. Please contact your local NDT Global representative for further information. NDT Global reserves the right to introduce modifications and changes without prior notice.