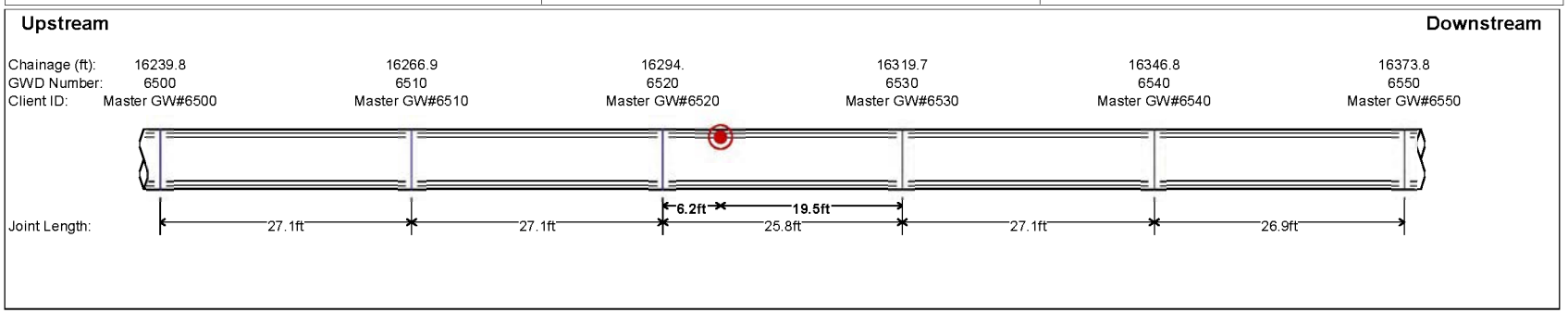
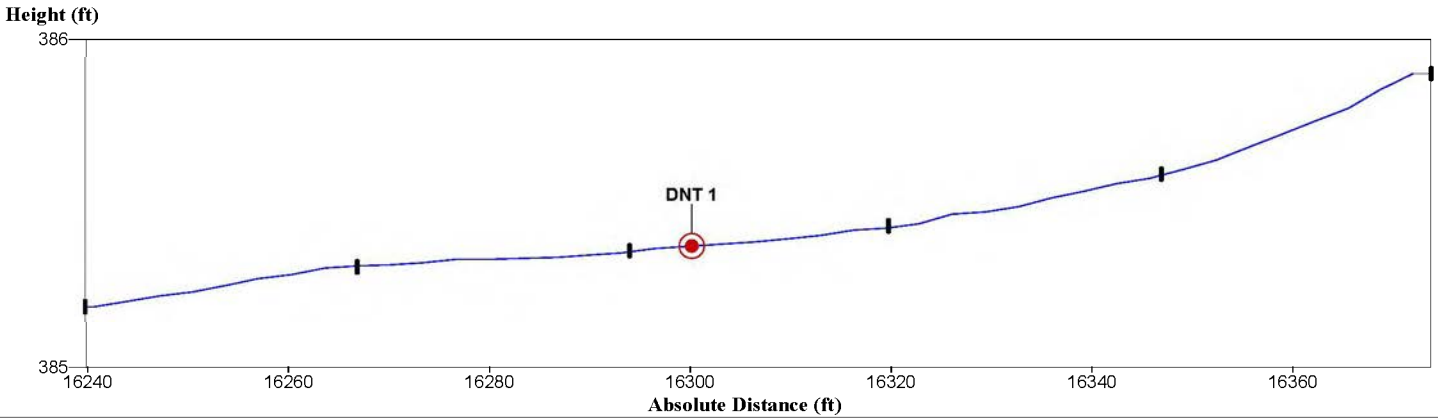
PipeWall Anomaly Inspection Sheet

Client:	Enbridge	Run Date:	July 31, 2013	Projection:	UTM	Zone:	16
Project:	NPS 20 CaliperJ2008-12	Location:	St Ignace - Mackinaw	Datum:	WGS 84	C.M.:	-87

Anomaly: **DNT # 1**

Location			Size			Reference Points		
Absolute Distance:	16,300.2	ft	Size Definition:	Without Ovality		U/S Weld Number:	6520	
Enbridge Area Number:	0		Depth:	.298	in	Distance to U/S Weld:	6.2	ft
Enbridge Chainage:	16,339.0	ft	Depth %:	1.5	%OD	Distance to D/S Weld:	19.5	ft
Northing:	16,647,484.7	ft	Length:	15.8	in	Joint Length:	25.8	ft
Easting:	2,209,585.3	ft	Width:	6.7	in	U/S Ref.:	Launch Valve GPS-1	
Latitude:	45.79913012	deg.	Clock Position:	11:15	h:mm	Distance to U/S Ref.:	16,241.1	ft
Longitude:	-84.76762044	deg.	Wall Thickness:	.812	in	D/S Ref.:		
			Comments:	On top of pipe, Multiple Dents		Distance to D/S Ref.:	5,376.9	ft



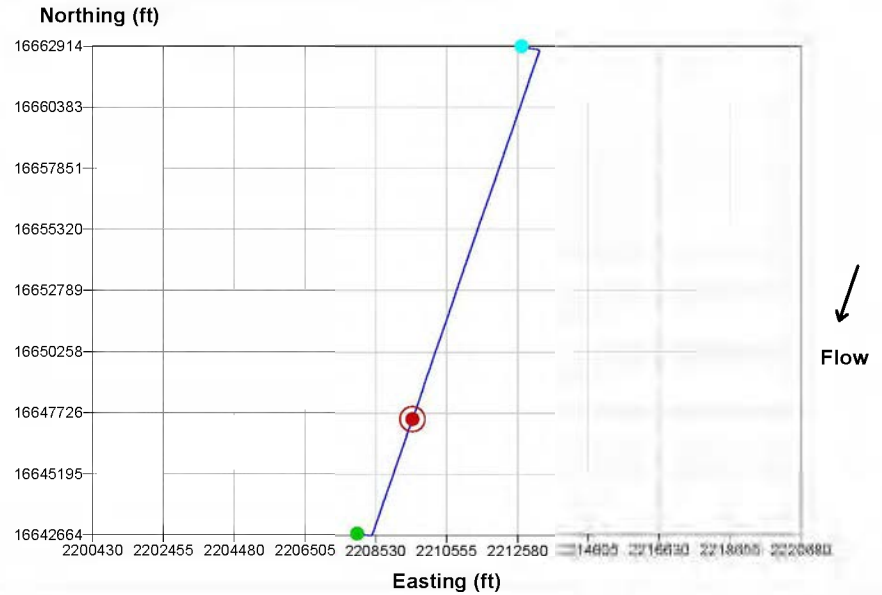


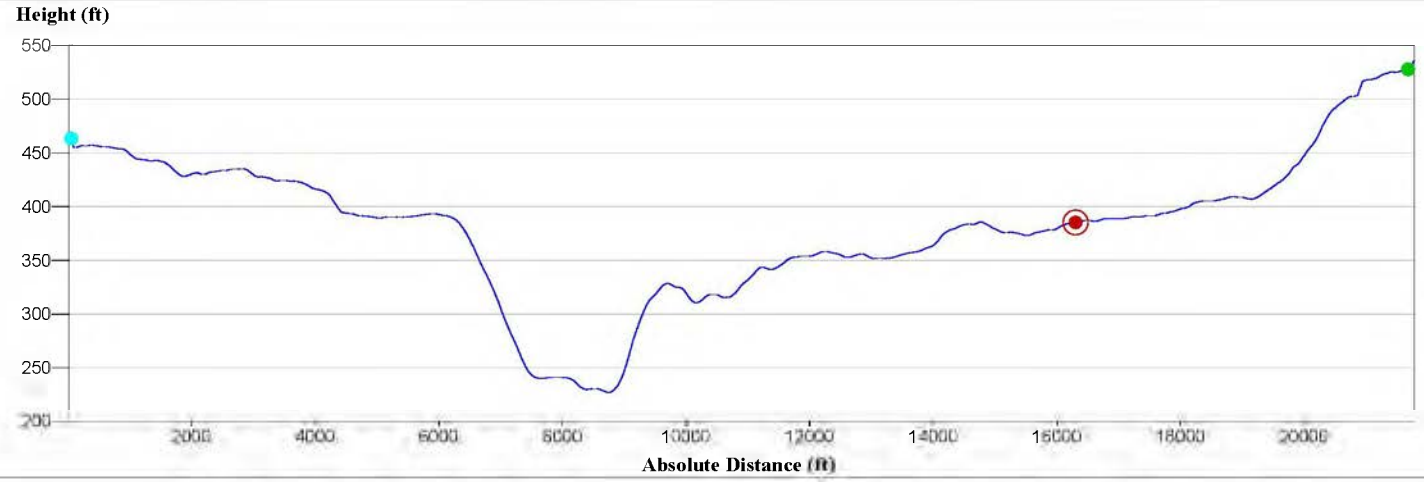
PipeWall Anomaly Inspection Sheet

Client:	Enbridge	Run Date:	July 31, 2013	Projection:	UTM	Zone:	16
Project:	NPS 20 CaliperJ2008-12	Location:	St Ignace - Mackinaw	Datum:	WGS 84	C.M.:	-87

Plan and Profile between U/S and D/S Reference Points

Anomaly:	**DNT 1**	
Absolute Distance:	16,300.2	ft
Northing:	16,647,484.7	ft
Easting:	2,209,585.3	ft
Height:	385.4	ft
U/S Ref.:	Launch Valve GPS-1	
Enbridge Chainage:	82.80	ft
Distance to U/S Ref.:	16,241.10	ft
D/S Ref.:		
Enbridge Chainage:	21,722.04	ft
Distance to D/S Ref.:	5,376.90	ft



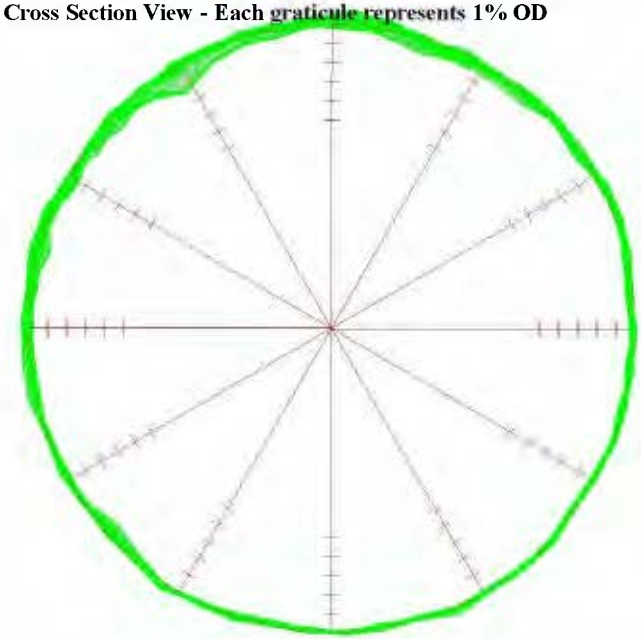


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PipeWall Anomaly Inspection Sheet

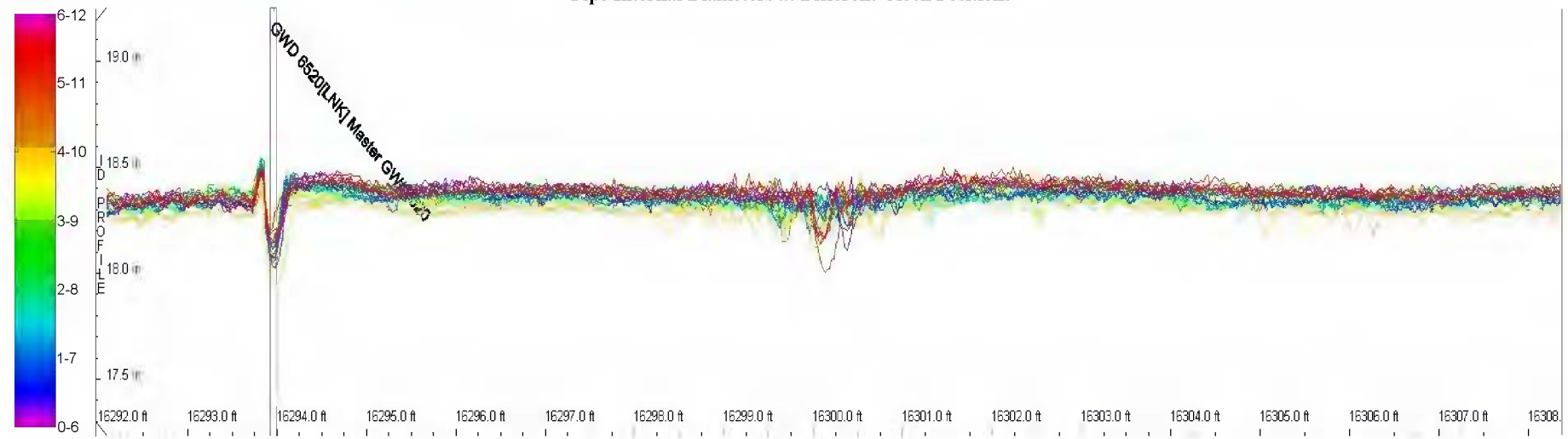
Client:	Enbridge	Run Date:	July 31, 2013	Projection:	UTM	Zone:	16
Project:	NPS 20 CaliperJ2008-12	Location:	St Ignace - Mackinaw	Datum:	WGS 84	C.M.:	-87

Cross Section View - Each graticule represents 1% OD **Anomaly Size = 1.5%** **3D View - Exaggerated 3 times**





Pipe Internal Diameters at Different Clock Positions

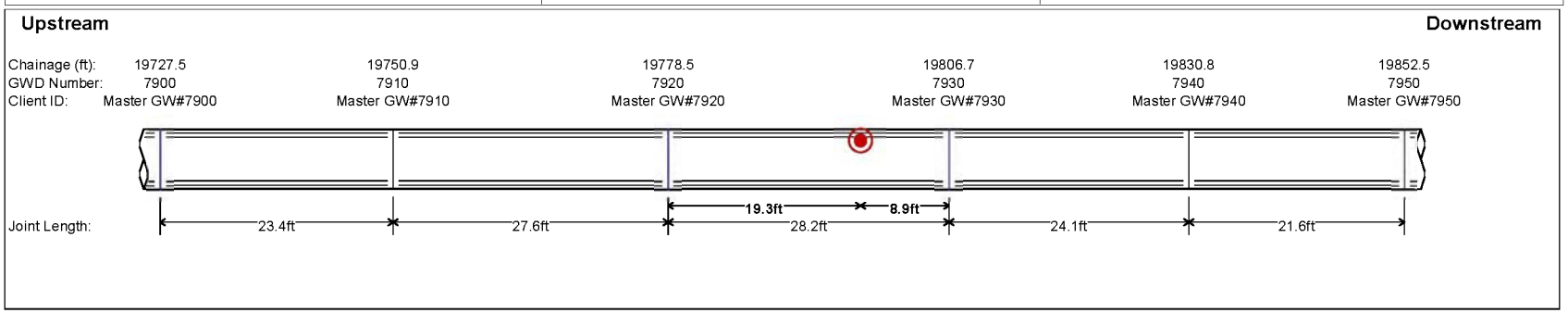


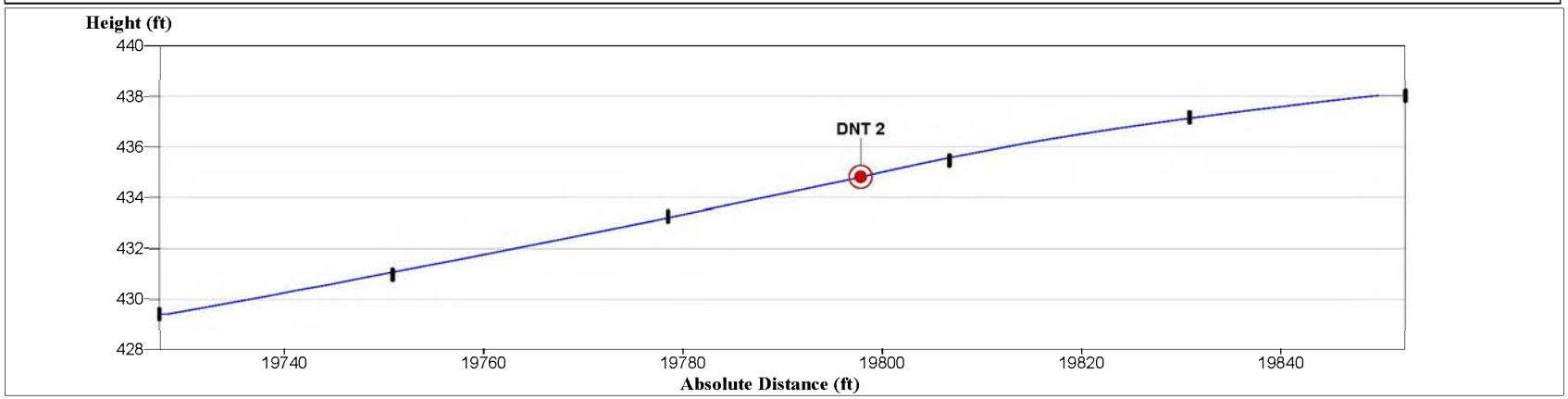
PipeWall Anomaly Inspection Sheet

Client:	Enbridge	Run Date:	July 31, 2013	Projection:	UTM	Zone:	16
Project:	NPS 20 CaliperJ2008-12	Location:	St Ignace - Mackinaw	Datum:	WGS 84	C.M.:	-87

Anomaly: **DNT # 2**

Location			Size			Reference Points		
Absolute Distance:	19,797.9	ft	Size Definition:	Without Ovality		U/S Weld Number:	7920	
Enbridge Area Number:	0		Depth:	.299	in	Distance to U/S Weld:	19.3	ft
Enbridge Chainage:	19,840.3	ft	Depth %:	1.5	%OD	Distance to D/S Weld:	8.9	ft
Northing:	16,644,085.9	ft	Length:	17.9	in	Joint Length:	28.2	ft
Easting:	2,208,768.7	ft	Width:	7.9	in	U/S Ref.:	Launch Valve GPS-1	
Latitude:	45.78987531	deg.	Clock Position:	1:15	h:mm	Distance to U/S Ref.:	19,738.8	ft
Longitude:	-84.77119250	deg.	Wall Thickness:	.812	in	D/S Ref.:		
			Comments:	On top of pipe		Distance to D/S Ref.:	1,879.2	ft



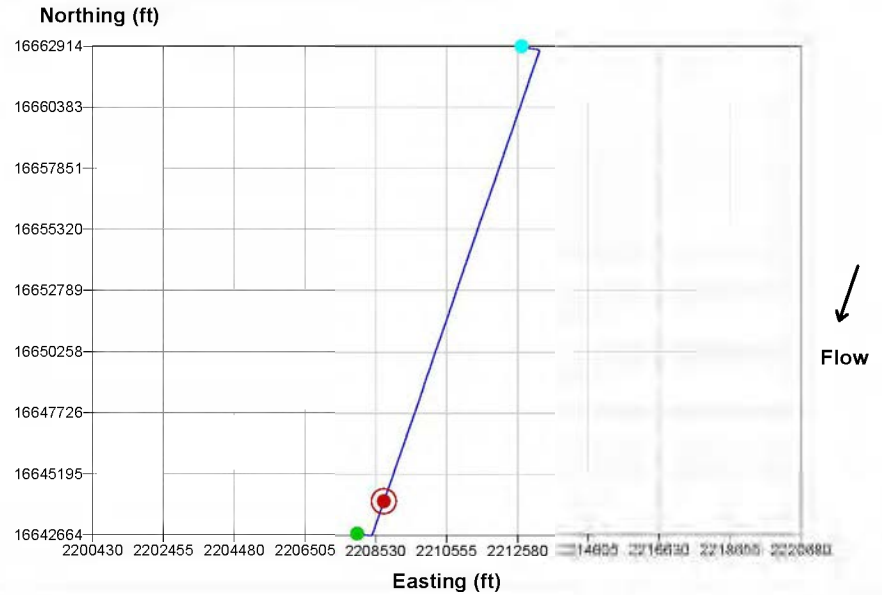


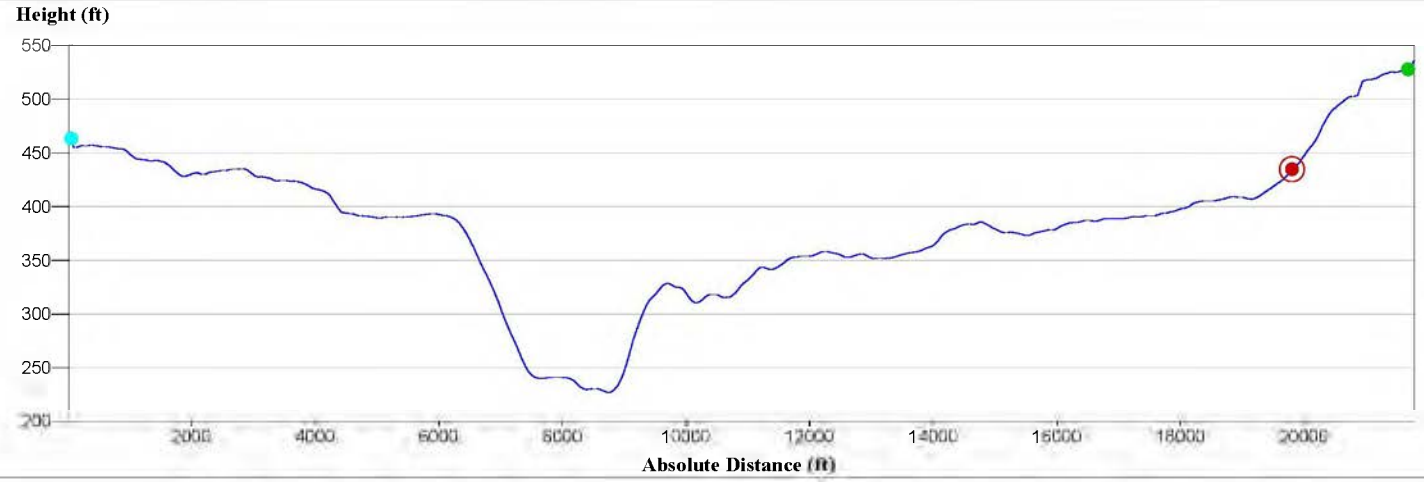
PipeWall Anomaly Inspection Sheet

Client:	Enbridge	Run Date:	July 31, 2013	Projection:	UTM	Zone:	16
Project:	NPS 20 CaliperJ2008-12	Location:	St Ignace - Mackinaw	Datum:	WGS 84	C.M.:	-87

Plan and Profile between U/S and D/S Reference Points

Anomaly:	**DNT 2**	
Absolute Distance:	19,797.9	ft
Northing:	16,644,085.9	ft
Easting:	2,208,768.7	ft
Height:	434.8	ft
U/S Ref.:	Launch Valve GPS-1	
Enbridge Chainage:	82.80	ft
Distance to U/S Ref.:	19,738.80	ft
D/S Ref.:		
Enbridge Chainage:	21,722.04	ft
Distance to D/S Ref.:	1,879.20	ft



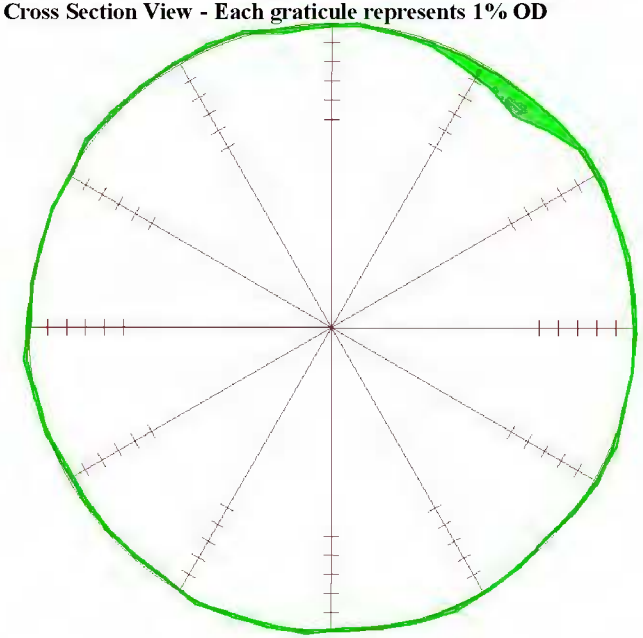


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PipeWall Anomaly Inspection Sheet

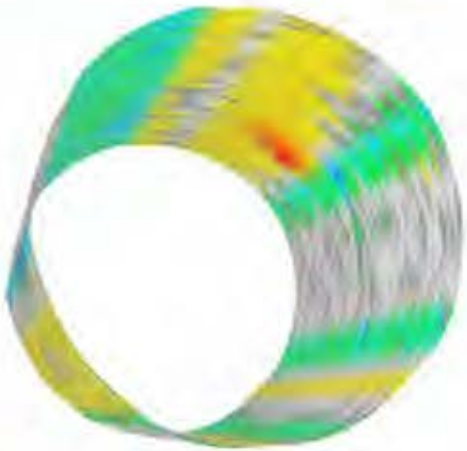
Client:	Enbridge	Run Date:	July 31, 2013	Projection:	UTM	Zone:	16
Project:	NPS 20 CaliperJ2008-12	Location:	St Ignace - Mackinaw	Datum:	WGS 84	C.M.:	-87

Cross Section View - Each graticule represents 1% OD



Anomaly Size = 1.5%

3D View - Exaggerated 3 times



O'Clock

Pipe Internal Diameters at Different Clock Positions

