

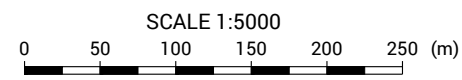


Geology Legend:

	Quartz-keratophyre
	Epidiorite
	Albitic Metadolerite
	Hornfels Facies Schist
	Rock Drilling and Blasting Areas
	Suction Dredging Areas
	9.7m Dredge Depth

Notes:
 1. These drawings have been prepared for the benefit of South Port New Zealand Limited with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.
 2. North-East Bank Geology interpreted from Service (1938).

Legend:
 WSP Borehole Location GeoSolve Borehole Location
 2+80 — — — Cross Section examples and associated chainages



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DRAWN	WCG	Nov.21
DRAFTING CHECKED	JAS	Nov.21
APPROVED	FAW	Nov.21
CADFILE: 210452.dwg		
SCALES (AT A3 SIZE): 1:5000		
PROJECT No: 210452		

South Port New Zealand Limited
 Bluff Harbour Channel Deepening
 Geological Setting
 Rock Drilling, Blasting and Suction Dredging Areas

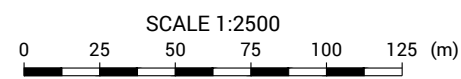
FIG No: Appendix A - Figure 1a REV. 1



Notes:
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Legend:

	Banded layering dip/direction		Hornfels Facies Schist		Cross Section examples and associated chainages
	Rock Drilling and Blasting Areas		9.7m Dredge Depth		

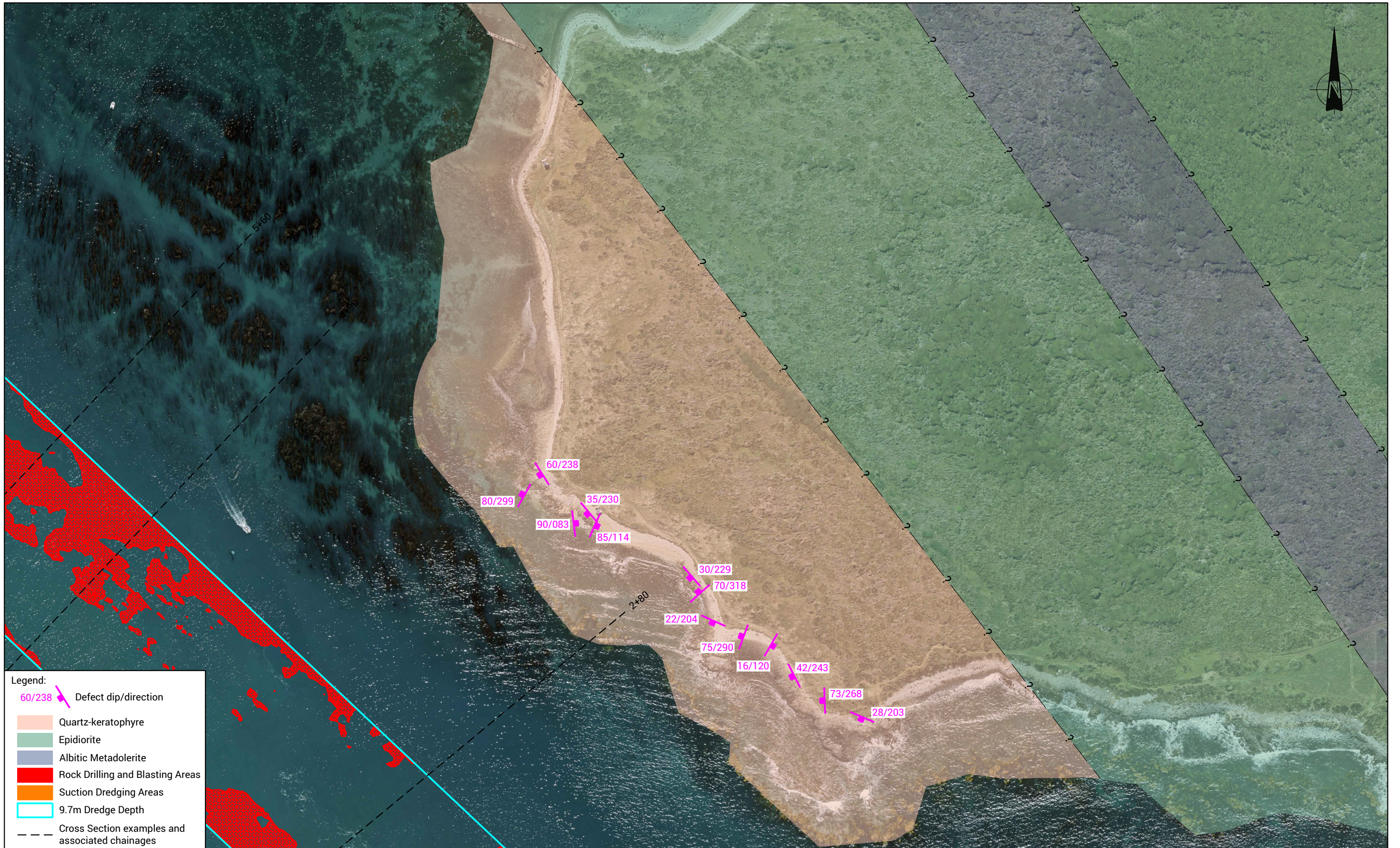


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DRAWN	WCG	Nov.21
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APPROVED	FAW	Nov.21
CADFILE: 210452.dwg		
SCALES (AT A3 SIZE): 1:2500		
PROJECT No:	210452	

South Port New Zealand Limited
 Bluff Harbour Channel Deepening
 Defect Field Mapping
 South-West Bank Defect Map

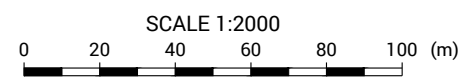
FIG No:	Appendix A - Figure 1b	REV.	0
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Legend:

- ↙ 60/238 Defect dip/direction
- Quartz-keratophyre
- Epidiorite
- Albitic Metadolerite
- Rock Drilling and Blasting Areas
- Suction Dredging Areas
- 9.7m Dredge Depth
- Cross Section examples and associated chainages

Notes:
 1. These drawings have been prepared for the benefit of South Port New Zealand Limited with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.
 2. Geology extrapolated from Service (1938).



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DRAWN	WCG	Nov.21
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APPROVED	FAW	Nov.21
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SCALES (AT A3 SIZE): 1:2000		
PROJECT No:	210452	

South Port New Zealand Limited
 Bluff Harbour Channel Deepening
 Defect Field Mapping
 North-East Bank Defect Map

FIG No: Appendix A - Figure 1c	REV. 1
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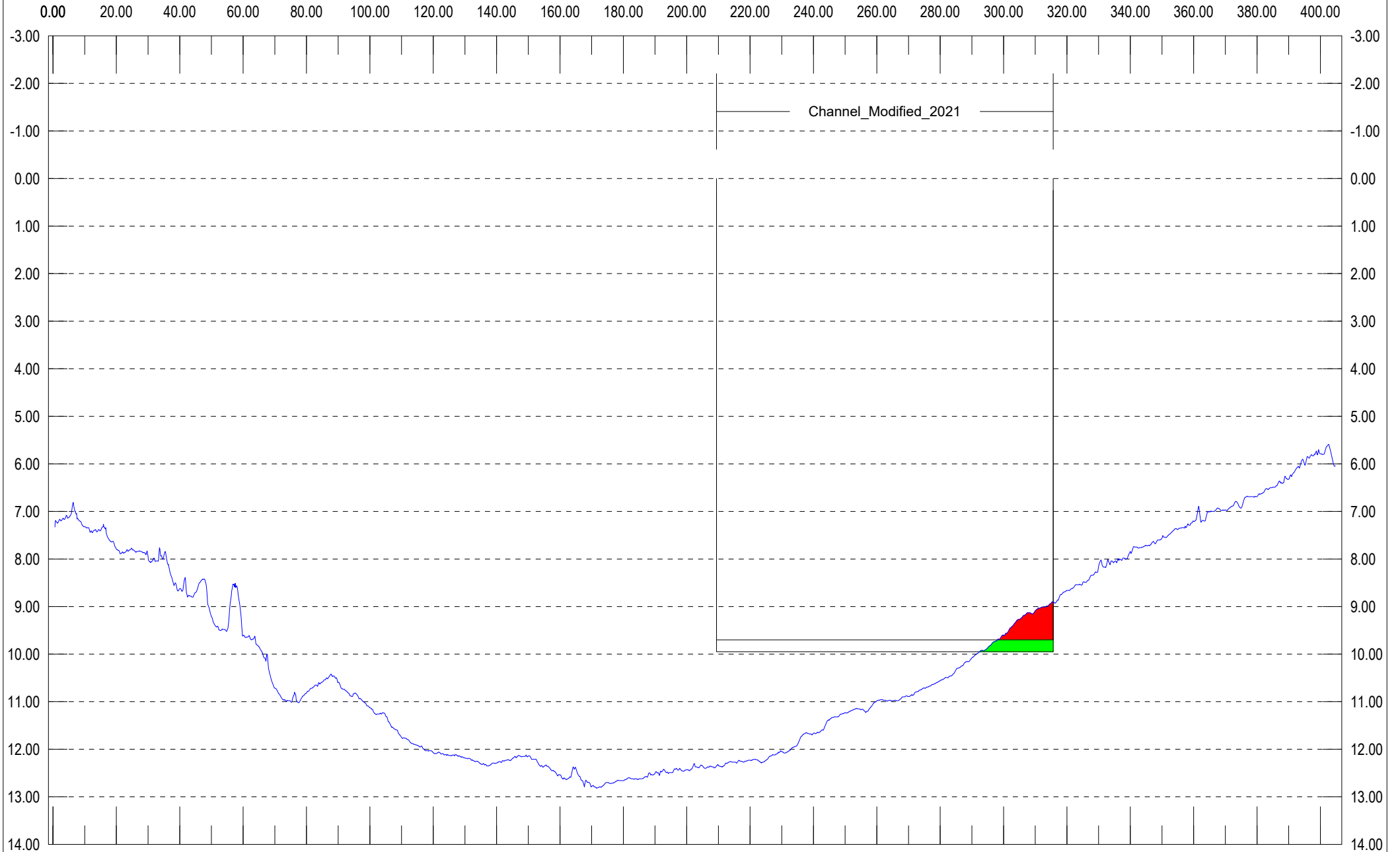
X: 1244585.94
Y: 4828213.05

0+10.

Length: 450.00

Azimuth: 47.02

X: 1244915.16
Y: 4828519.83



Q2-2020
0+10.

9.70m + 0.25m OD

DBL 1576.66 M:M
Depth 105.01 M:M

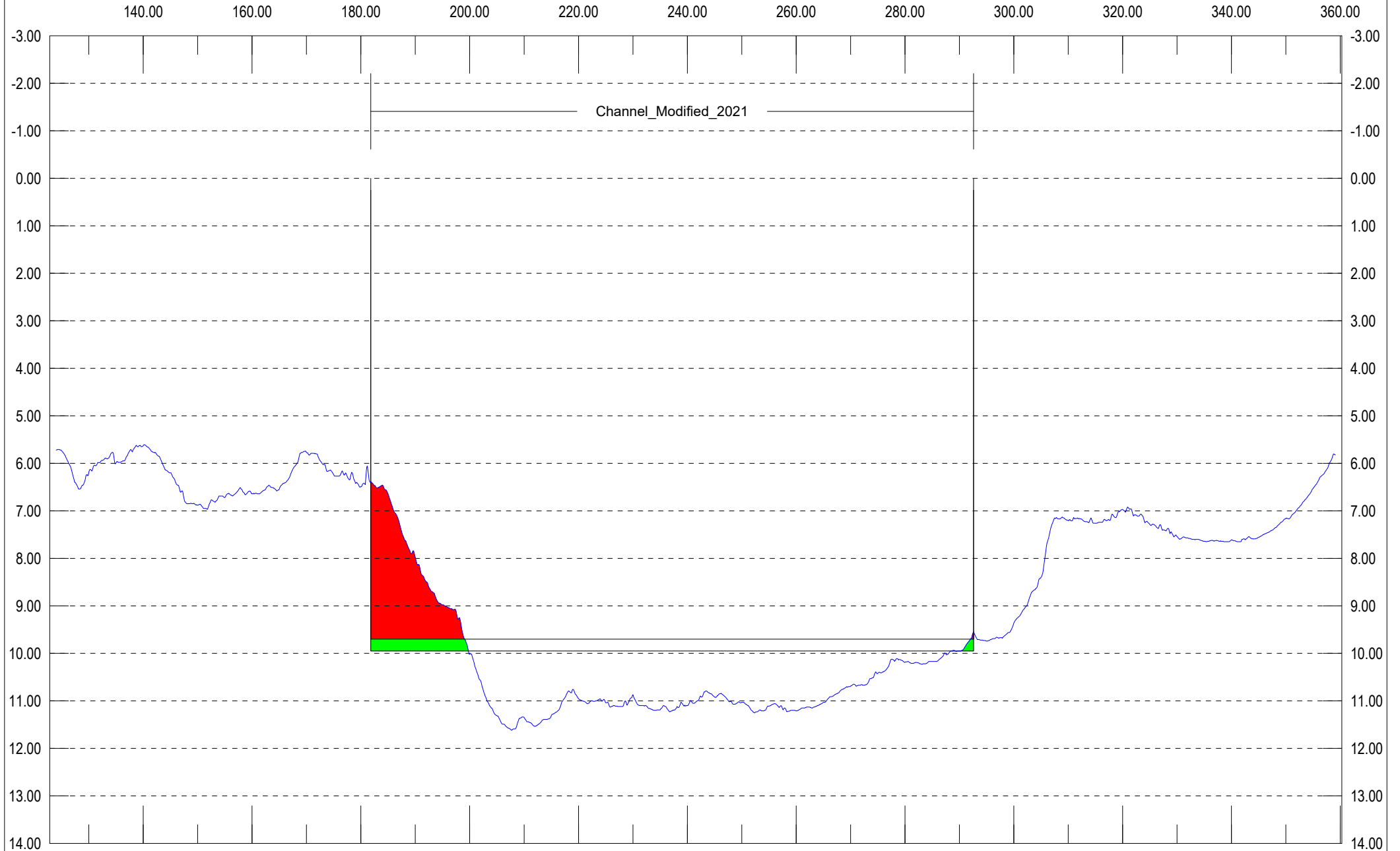
X: 1244401.87
Y: 4828410.59

2+80.

Length: 450.01

Azimuth: 47.02

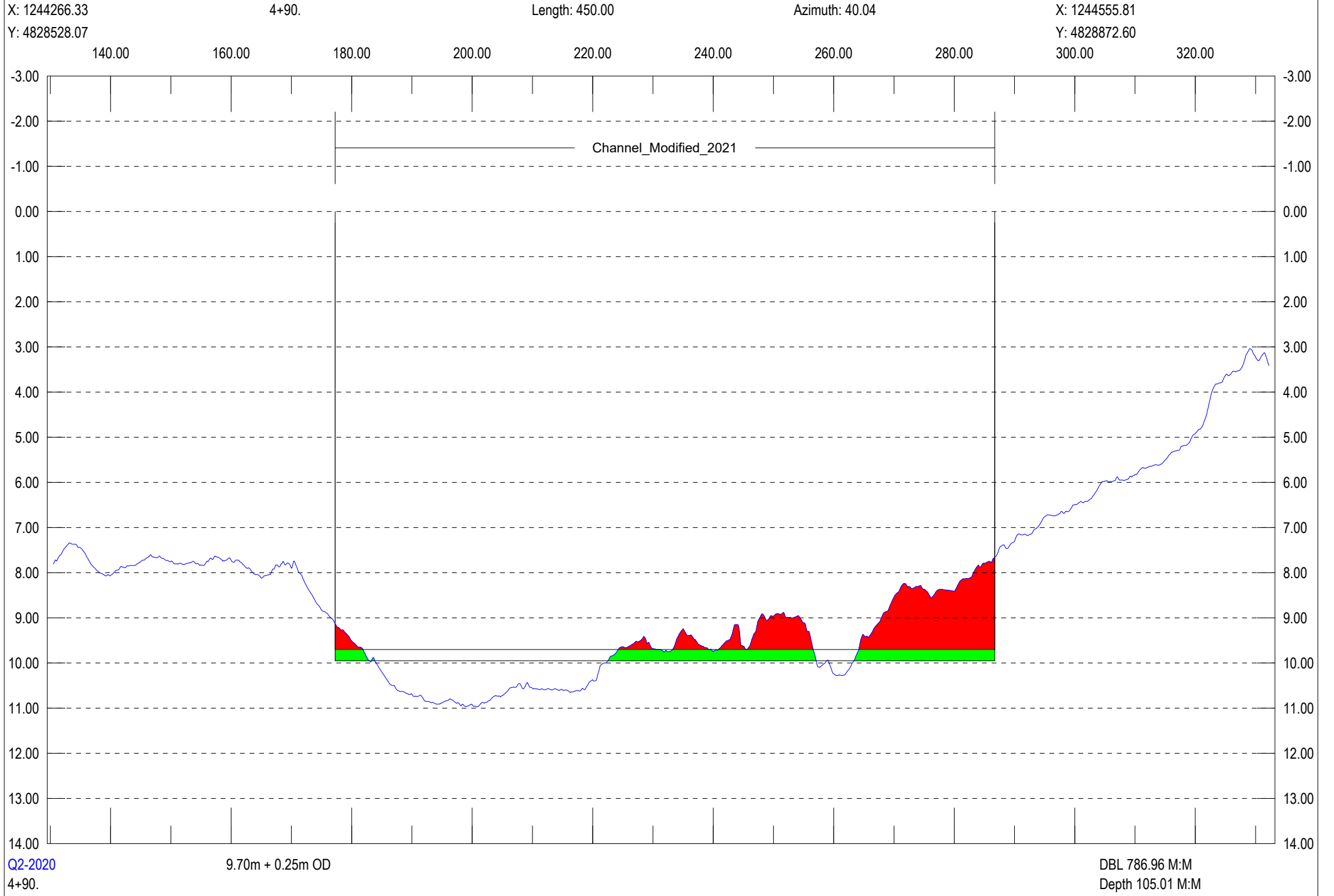
X: 1244731.10
Y: 4828717.37



Q2-2020
2+80.

9.70m + 0.25m OD

DBL 917.28 M:M
Depth 105.01 M:M



X: 1244212.73

5+60.

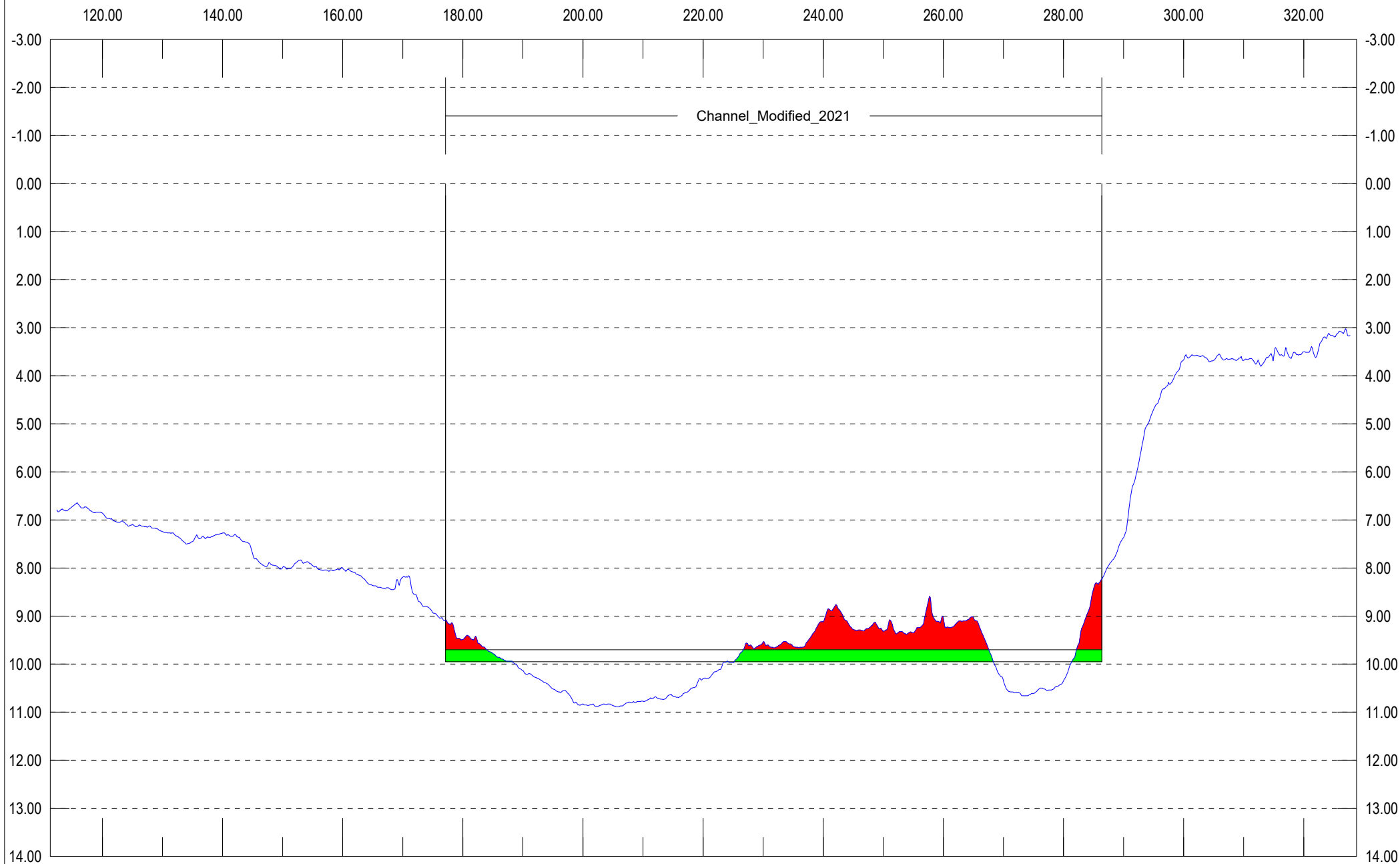
Length: 450.00

Azimuth: 40.04

X: 1244502.22

Y: 4828573.11

Y: 4828917.63



Q2-2020
5+60.

9.70m + 0.25m OD

DBL 840.03 M:M
Depth 105.01 M:M

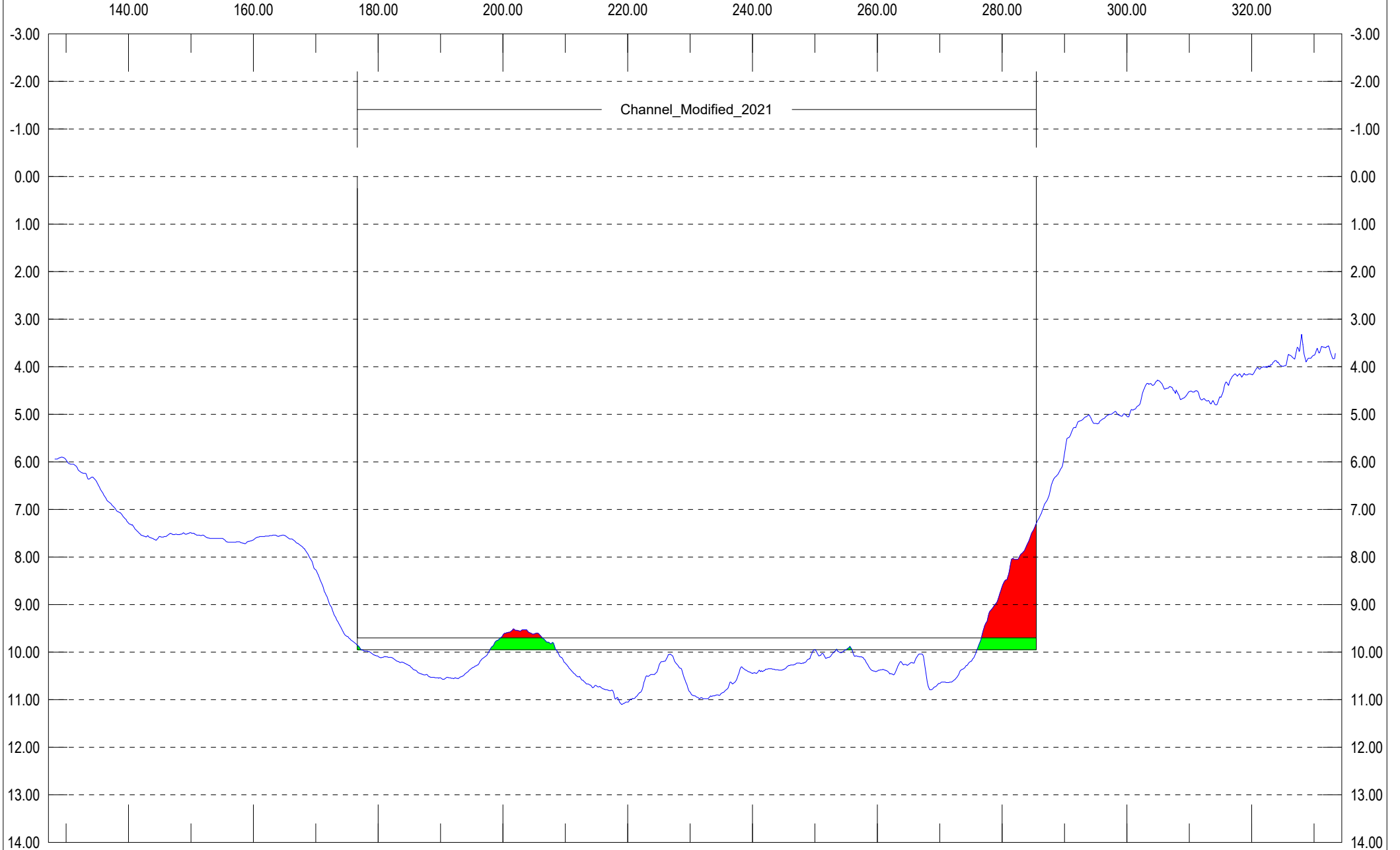
X: 1244059.61
Y: 4828701.77

7+60.

Length: 449.99

Azimuth: 40.04

X: 1244349.09
Y: 4829046.29



Q2-2020
7+60. 9.70m + 0.25m OD

DBL 800.62 M:M
Depth 105.01 M:M

X: 1243998.36

8+40.

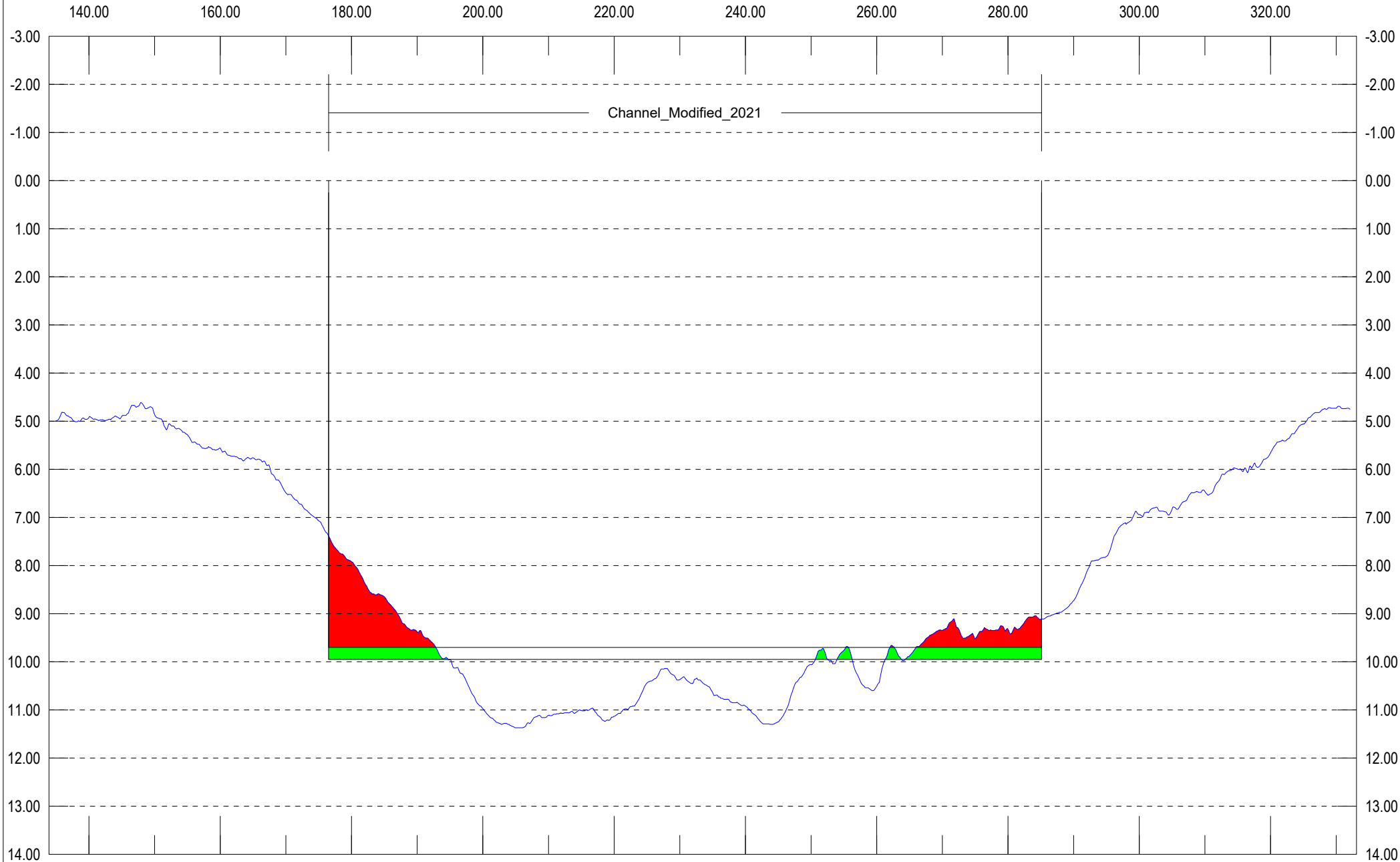
Length: 450.01

Azimuth: 40.04

X: 1244287.85

Y: 4828753.23

Y: 4829097.76



Q2-2020

9.70m + 0.25m OD

DBL 769.41 M:M

8+40.

Depth 105.01 M:M

X: 1243898.83

9+70.

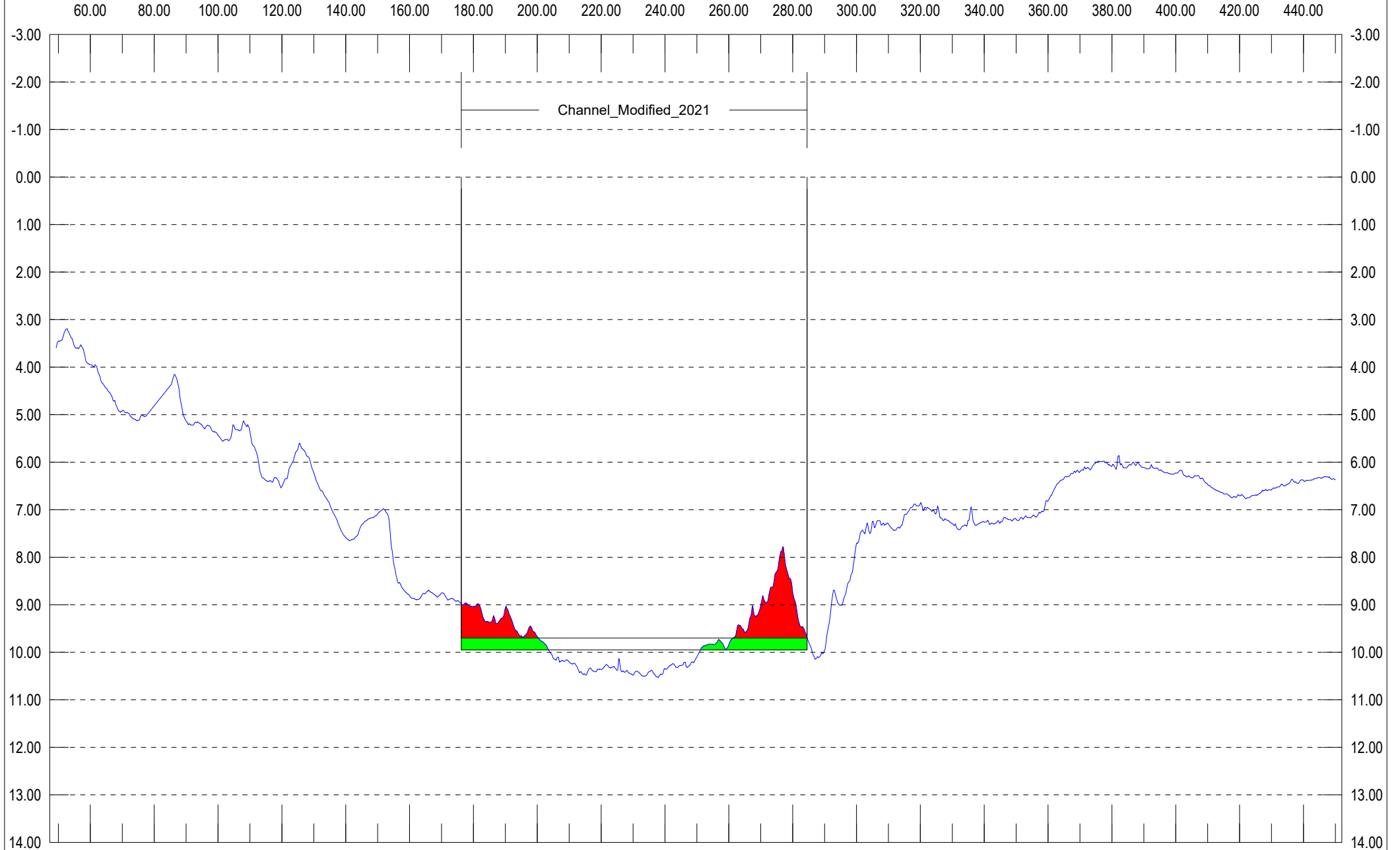
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Azimuth: 40.04

X: 1244188.32

Y: 4828836.86

Y: 4829181.38



Q2-2020

9.70m + 0.25m OD

DBL 1563.40 M:M

9+70.

Depth 105.01 M:M