



SOCON Sonar Well Services, Inc.

## **ECHO – LOG**

### **Wood Environment & Infrastructure Solutions**

#### **Combined Sonar Print**

**GW-3, GW-4, GW-5, and GW-13**

**GW- 5 Reference Well**

**Carlsbad, New Mexico**

09/28/2021

213082



**SOCON Sonar Well Services, Inc.**

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**SOCON Sonar Well Services, Inc.**

Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13  
09/28/2021

213082

**Results of the Cavern Survey  
by means of Echo-Sounding  
in the cavern**

**GW-3, GW-4, GW-5, and GW-13**

**Date: 09/28/2021**

**213082**

**Wood Environment & Infrastructure Solutions**

**Carlsbad, New Mexico**

Responsible for the survey:

Surveyor : Mr. Steve Blasé / Mr. Mike Ryan  
Leadership : Mr. Kenneth Hale  
Interpreter : Mr. Tobias Tostmann  
Control : Mr. Darren Schidlowsky



## Contents

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Vertical sections

Logs



## Summary of results

### Well details

All depths are given as: **MD**

Datum level for all depths: **BHF**

Shoe of the cemented 7"-casing: 300.0 ft

Shoe of the - casing  
during the survey: 300.0 ft

Reference depth for ECHO-LOG: **300.0 ft**

Pressure at the well head: 38.1 psi

### Details of survey equipment

Measuring vehicle used: Socon 1

Tools used: Echo tool BSF 69

### General details

Number of runs: 1

Measured tilted sections: 62



**Maximum and minimum dimensions with ref. to the measuring axis**

**Reference direction:** **magnetic north**

Determination out of 36 vertical sections derived from horizontally and tilted measured data at 5 degree intervals:

minimum radius: 0.0 ft  
depth: 399.5 ft  
direction: 0°

maximum radius: 171.7 ft  
depth: 392.3 ft  
direction: 205°

highest point of cavern: 332.9 ft  
horizontal distance: 56.3 ft  
direction: 285°

lowest point of cavern: 431.9 ft  
horizontal distance: 83.7 ft  
direction: 15°

lowest point in the measuring axis: 399.5 ft

Determination out of 20 horizontal sections in the depths between 335.0 ft and 430.0 ft at 5 degree intervals:

maximum radius: 171.5 ft  
depth: 390.0 ft  
direction: 205°

maximum diameter: 231.3 ft  
depth: 400.0 ft  
direction: 25 - 205°

**Volume**

Estimated Combined Volume: 300757.3 bbls

depth range: 332.9 ft <--> 431.9 ft



**Interpretation**

Supposing a rectilinear propagation of ultrasonic waves all recorded echo travel times were converted into distances by using the subsequent speeds of sound:

1705.7 m/s ( 5596.0 ft/s) to 1704.5 m/s ( 5592.1 ft/s) in brine (measured)

In the case of recording several echoes along one trace of echo signals, the representative echo signal was selected according to the level of amplitude, transmission time, density of measured points and the shape of the cavern.

All plots presented in this report are referenced to Grid North

The images in this report are the results from the combination of the following surveys.

- GW-3 job number 213083
- GW-4 job number 213084
- GW-5 job number 213082
- Gw-13 job number 213081

The combined interpretation is referenced to Well GW-5.

**Horizontal sections**

The following 20 sections are constructed:

335.0 ft	340.0 ft	345.0 ft	350.0 ft	355.0 ft	360.0 ft	365.0 ft
370.0 ft	375.0 ft	380.0 ft	385.0 ft	390.0 ft	395.0 ft	400.0 ft
405.0 ft	410.0 ft	415.0 ft	420.0 ft	425.0 ft	430.0 ft	



**Tilted sections**

62 sections recorded with tilted echo-transducer at following measured depths are presented in the vertical sections:

21 sections of these with upwards-tilted echo-transducer:

Depth / Tilting Angle

390.0 / 12	390.0 / 15	390.0 / 18	390.0 / 24	390.0 / 26	390.0 / 28
395.0 / 21	395.0 / 24	395.0 / 27	395.0 / 30	395.0 / 33	395.0 / 36
395.0 / 42	395.0 / 48	395.0 / 54	395.0 / 60	395.0 / 66	395.0 / 72
395.0 / 78	395.0 / 84	395.0 / 87			

41 sections of these with downwards-tilted echo-transducer:

Depth / Tilting Angle

345.0 / 6	345.0 / 12	345.0 / 15	345.0 / 18	345.0 / 21	345.0 / 24
345.0 / 27	345.0 / 30	345.0 / 33	345.0 / 36	345.0 / 39	345.0 / 42
345.0 / 45	345.0 / 48	345.0 / 51	345.0 / 54	345.0 / 57	345.0 / 60
345.0 / 63	345.0 / 66	345.0 / 69	345.0 / 72	345.0 / 75	345.0 / 78
345.0 / 81	345.0 / 84	365.0 / 48	365.0 / 51	365.0 / 54	365.0 / 60
365.0 / 78	395.0 / 60	395.0 / 63	395.0 / 66	395.0 / 69	395.0 / 72
395.0 / 75	395.0 / 78	395.0 / 81	395.0 / 84	395.0 / 87	

**Vertical sections**

The shape of the cavern was determined by interpretation of all horizontally and tilted measured data and is presented by 36 vertical sections in this report.

**Maximum plots (top view)**

The maximum plot presents the largest extension of the cavern in a top view. The first picture shows the areas of all horizontal sections and the area resulting out of the vertical sections (hatched). The resulting total area is shown in the second picture (cross hatching) together with the largest single area.

In both pictures the total centre of gravity of the cavern is shown with its distance and its direction referring to the measuring axis.

The total centre of gravity is derived out of the envelope, which is the connection line of the largest cavern extension in every direction



### **Perspective views**

Several perspective drawings are included in this report to give a quick review of detailed relations.

### **Comparison with previously measured data**

If there are data of previous surveys available these are presented with a different line style to mark out for changes.

### **Pockets in the cavern wall**

Pockets in the cavern wall, which have been identified by the tilted echo-transducer, were transferred from the vertical sections to the respective horizontal sections. The resulting additional areas have been added to the calculated areas.

### **LOG - Data**

You will find the graphic representations of the following LOG data at the end of this report:

Temperature

Pressure

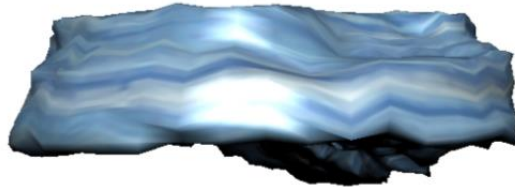
CCL





## LEGEND

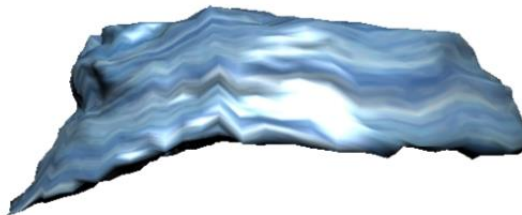
- Measured point recorded with horizontal adjusted ultrasonic transducer
- Measured point recorded with tilted or vertical orientated ultrasonic transducer
- ▲ Interpolated point derived from the vertical sections
  
- Connection line between two measured points in order to calculate the volume
- - Assumed connection line (in areas which are not sufficiently covered by measured points)
  
- GiN** Grid-North
  
- N** Magnetic north determined with compass inside the tool  
(magnetic compass in areas without tubings)  
(fibre gyro compass in areas with tubings)
  
- (N)** Assumed north direction (for sections in magnetic disturbed surroundings without fibre gyro compass)
  
- a** Longest extension in section  
(without considering of hidden leached pockets)
  
- b** Longest extension in section perpendicular to a  
(without considering of hidden leached pockets)
  
- a/b** Ratio of longest extensions in section which are perpendicular to each other
  
- (xx m<sup>2</sup>)** Area in actual section resulting from hidden leached pockets
  
- r~** Average radius



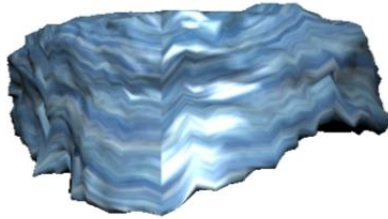
Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 --> 0° <--



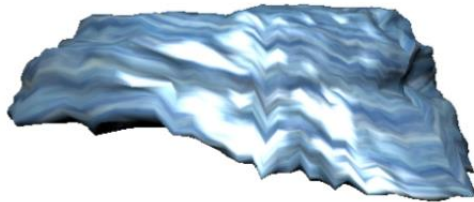
Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 --> 60° <--



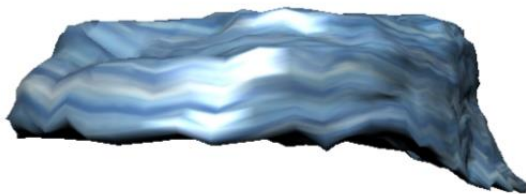
Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 --> 120° <--



Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 --> 180° <--



Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 --> 240° <--



Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 --> 300° <--



Combined Volume list

Cavity: GW-3, GW-4, GW-5, GW-13  
GW-5 Reference Well

213082

28-Sep-21

Depth [ft]	Radius [ft]	Area [ft <sup>2</sup> ]	Depth range [ft]		Volume [bbls]	
			from	to	partial	total
335.0	12.2	466	332.9	337.5	382.2	382.2
340.0	40.3	5097	337.5	342.5	4539.3	4921.5
345.0	79.8	20026	342.5	347.5	17833.4	22754.9
350.0	91.3	26160	347.5	352.5	23295.6	46050.5
355.0	94.2	27853	352.5	357.5	24802.9	70853.4
360.0	98.0	30182	357.5	362.5	26877.1	97730.5
365.0	100.9	32008	362.5	367.5	28503.0	126233.5
370.0	103.6	33707	367.5	372.5	30015.8	156249.3
375.0	103.8	33824	372.5	377.5	30120.1	186369.4
380.0	101.3	32235	377.5	382.5	28705.3	215074.7
385.0	98.5	30477	382.5	387.5	27140.0	242214.7
390.0	92.5	26883	387.5	392.5	23939.2	266153.9
395.0	78.1	19142	392.5	397.5	17045.7	283199.7
400.0	52.0	8493	397.5	402.5	7563.4	290763.1
405.0	36.4	4153	402.5	407.5	3698.1	294461.2
410.0	30.6	2950	407.5	412.5	2626.5	297087.7
415.0	25.3	2005	412.5	417.5	1785.6	298873.3
420.0	20.6	1328	417.5	422.5	1182.7	300056.0
425.0	15.0	711	422.5	427.5	632.7	300688.7
430.0	5.3	88	427.5	431.9	68.6	<b>300757.3</b>



### Combined Volume list

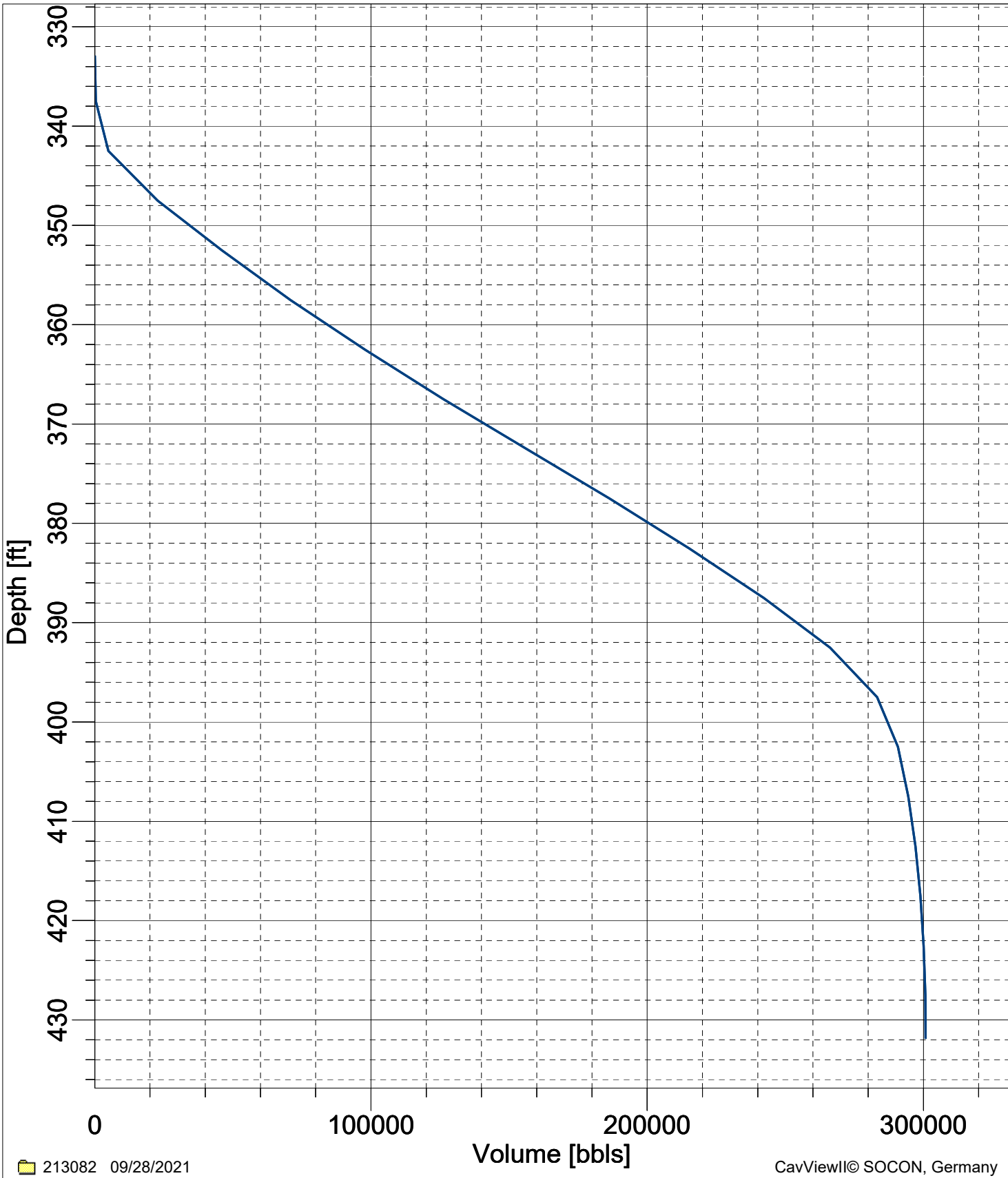
Job: 213082, name: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13, date: 09/28/2021

depth [ft]	volume [bbls]	depth [ft]	volume [bbls]	depth [ft]	volume [bbls]
332.0	0	333.0	8	334.0	91
335.0	174	336.0	258	337.0	341
338.0	836	339.0	1744	340.0	2652
341.0	3560	342.0	4468	343.0	6705
344.0	10271	345.0	13838	346.0	17405
347.0	20972	348.0	25084	349.0	29744
350.0	34403	351.0	39062	352.0	43721
353.0	48531	354.0	53491	355.0	58452
356.0	63413	357.0	68373	358.0	73541
359.0	78917	360.0	84292	361.0	89667
362.0	95043	363.0	100581	364.0	106281
365.0	111982	366.0	117683	367.0	123383
368.0	129235	369.0	135238	370.0	141241
371.0	147245	372.0	153248	373.0	159261
374.0	165285	375.0	171309	376.0	177333
377.0	183357	378.0	189240	379.0	194981
380.0	200722	381.0	206463	382.0	212204
383.0	217789	384.0	223217	385.0	228645
386.0	234073	387.0	239501	388.0	244609
389.0	249396	390.0	254184	391.0	258972
392.0	263760	393.0	267859	394.0	271268
395.0	274677	396.0	278086	397.0	281495
398.0	283956	399.0	285469	400.0	286981
401.0	288494	402.0	290007	403.0	291133
404.0	291873	405.0	292612	406.0	293352
407.0	294091	408.0	294724	409.0	295249
410.0	295774	411.0	296300	412.0	296825
413.0	297266	414.0	297623	415.0	297981
416.0	298338	417.0	298695	418.0	298992
419.0	299228	420.0	299465	421.0	299701
422.0	299938	423.0	300119	424.0	300246
425.0	300372	426.0	300499	427.0	300625
428.0	300697	429.0	300712	430.0	300728
431.0	300743	432.0	300757		



# COMBINED VOLUME

09/28/2021



— Combined volume = 300757.3 bbls



## Table of radii and diameters Combined

Table of radii and diameters

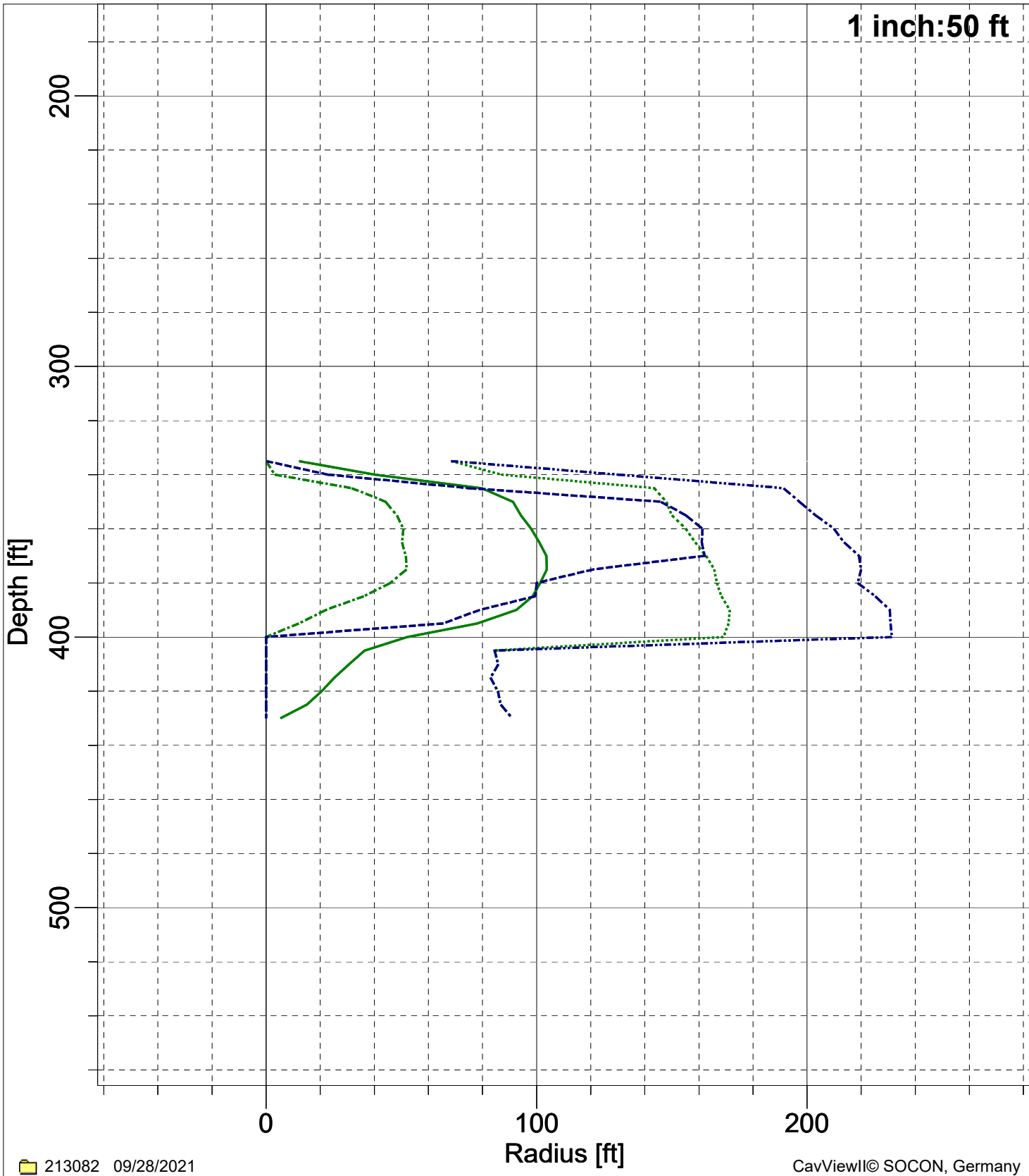
Cavity : Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 213082 09/28/2021

Depth [ft]	Radius[MIN]		Radius[MAX]		Diameter [MIN]				[MAX]			
	[ft]	[degs]	[ft]	[degs]	[ft]	[degs]	[ft]	[degs]	[ft]	[degs]	[ft]	[degs]
335.0	0.0	0	68.4	290	0.0	0	<->	180	68.4	110	<->	290
340.0	3.2	254	86.9	235	22.8	125	<->	305	130.1	85	<->	265
345.0	31.6	114	143.5	200	75.1	42	<->	222	191.3	20	<->	200
350.0	44.2	360	148.1	195	145.9	110	<->	290	197.2	15	<->	195
355.0	48.3	35	150.0	195	155.2	110	<->	290	203.1	15	<->	195
360.0	50.8	35	155.2	200	161.3	95	<->	275	210.0	20	<->	200
365.0	50.3	30	158.6	210	161.1	90	<->	270	213.6	15	<->	195
370.0	51.7	40	162.7	190	162.2	95	<->	275	219.2	10	<->	190
375.0	51.9	49	165.8	190	120.9	65	<->	245	220.0	10	<->	190
380.0	45.9	250	166.6	195	100.0	65	<->	245	218.7	10	<->	190
385.0	36.1	269	168.4	195	99.5	85	<->	265	225.3	15	<->	195
390.0	22.1	254	171.5	205	79.0	69	<->	249	230.6	10	<->	190
395.0	12.1	240	170.9	205	65.5	59	<->	239	230.8	10	<->	190
400.0	0.0	0	169.0	205	0.0	0	<->	180	231.3	25	<->	205
405.0	0.0	0	84.5	320	0.0	0	<->	180	84.5	140	<->	320
410.0	0.0	0	85.8	325	0.0	0	<->	180	85.8	145	<->	325
415.0	0.0	0	82.9	345	0.0	0	<->	180	82.9	165	<->	345
420.0	0.0	0	85.7	345	0.0	0	<->	180	85.7	165	<->	345
425.0	0.0	0	86.8	355	0.0	0	<->	180	86.8	175	<->	355
430.0	0.0	0	91.0	0	0.0	0	<->	180	91.0	0	<->	180

Carlsbad\_Well\_GW-3\_GW-4\_RADII / DIAMETERS

09/28/2021

1 inch:50 ft



— Average radius	- - - Minimum radius	..... Maximum radius
- - - Minimum diameter	..... Maximum diameter	

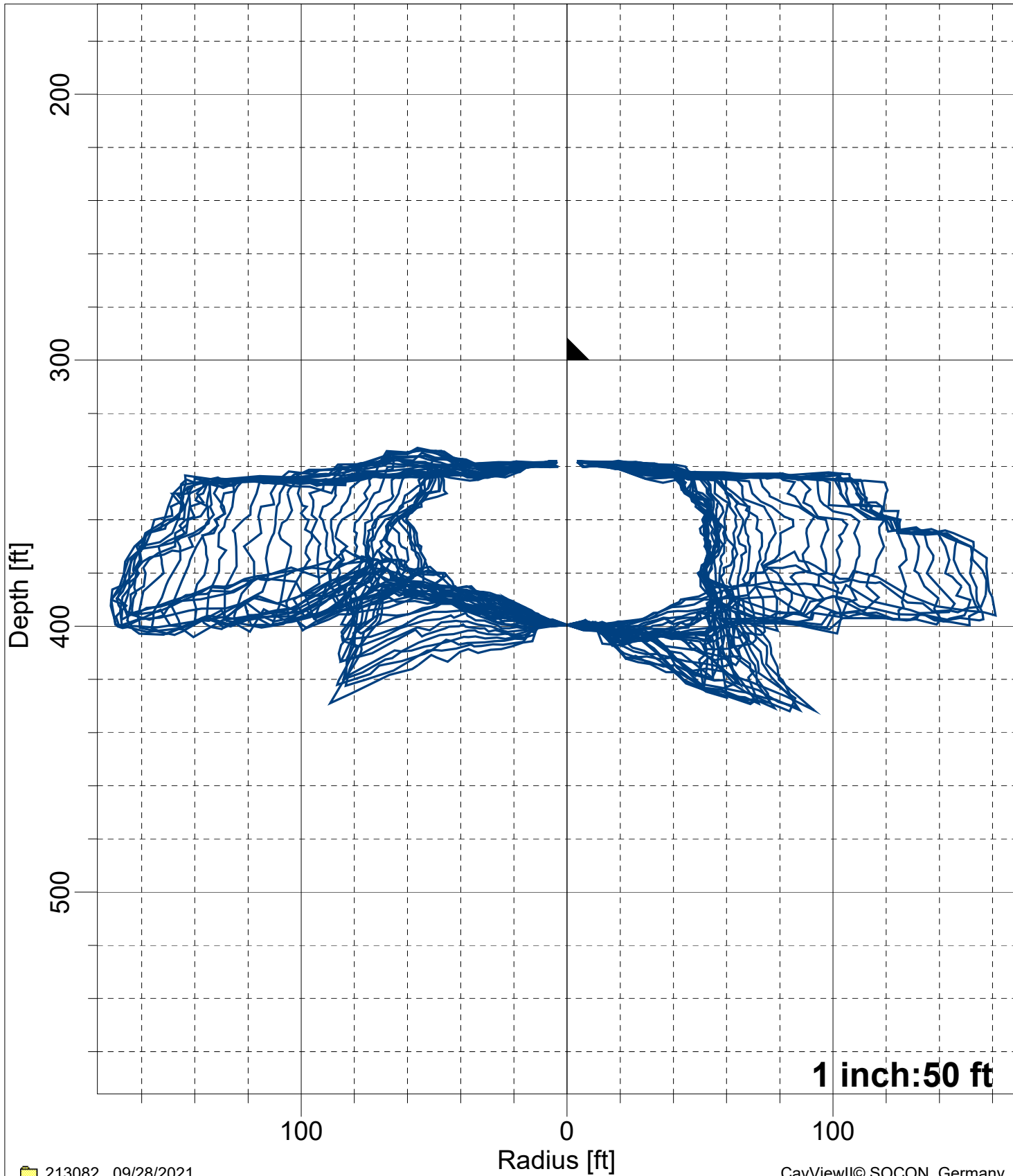


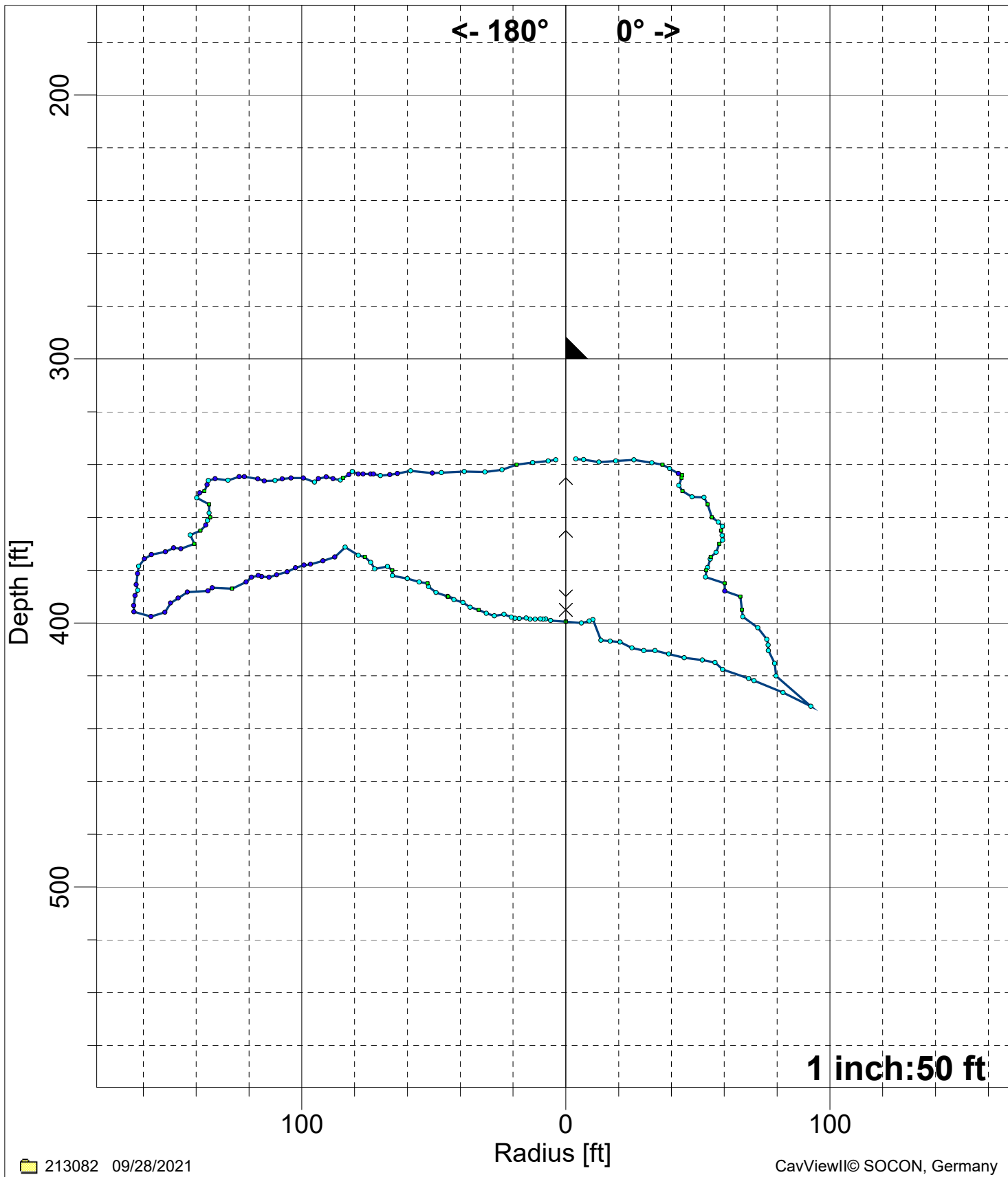


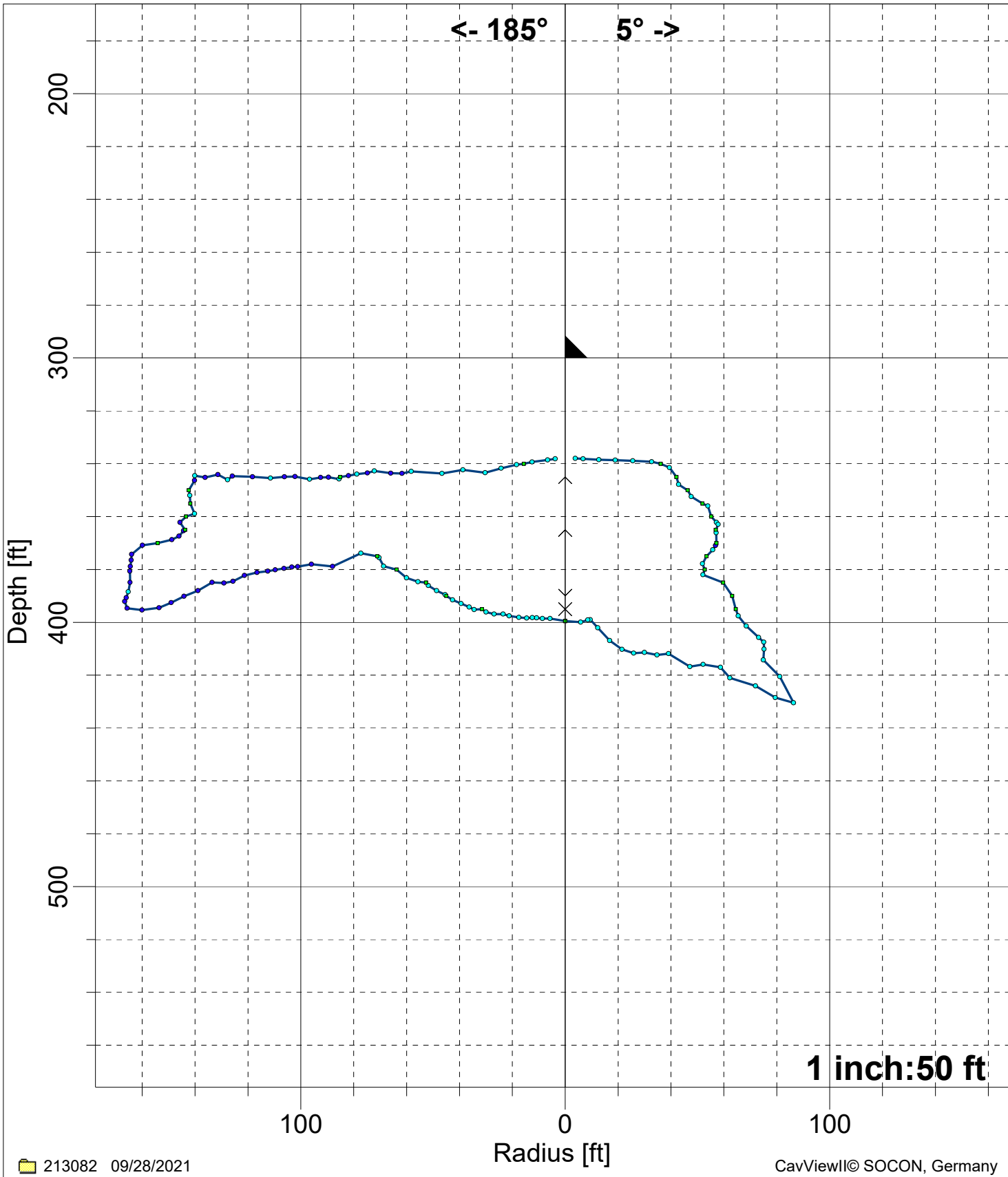
**Table of radii in N-E-S-W-NE-SE-SW-NW presentation**

Job-No.: 213082, Name: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13, Date: 09/28/2021

Depth	<r>	N	E	S	W	NE	SE	SW	NW
[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
335.0	12.2	0.0	0.0	0.0	62.2	0.0	0.0	0.0	0.0
340.0	40.3	36.6	38.9	18.7	81.2	32.6	14.9	16.2	51.7
345.0	79.8	43.8	59.8	125.0	99.8	41.6	96.2	131.6	50.6
350.0	91.3	44.2	59.6	136.9	101.3	46.9	98.7	134.9	56.1
355.0	94.2	53.7	63.3	135.1	98.0	52.5	107.1	135.3	62.9
360.0	98.0	55.3	66.1	134.6	97.2	53.0	119.4	142.5	68.4
365.0	100.9	58.7	65.0	138.4	96.1	52.8	117.5	143.2	71.9
370.0	103.6	58.1	67.0	140.7	97.9	52.7	119.1	153.6	73.5
375.0	103.8	54.9	65.7	158.5	96.8	52.1	116.4	152.5	72.9
380.0	101.3	53.2	64.9	162.0	100.0	50.1	115.5	151.7	73.2
385.0	98.5	60.1	64.1	162.7	102.7	50.2	112.6	157.3	75.5
390.0	92.5	66.1	64.8	163.2	105.1	54.6	116.2	160.1	81.7
395.0	78.1	66.7	64.0	163.6	105.0	55.0	103.3	161.1	80.7
400.0	52.0	70.3	65.3	0.0	0.0	55.8	97.9	160.7	83.1
405.0	36.4	75.2	68.3	0.0	0.0	56.4	0.0	0.0	83.9
410.0	30.6	76.7	64.7	0.0	0.0	57.4	0.0	0.0	0.0
415.0	25.3	78.9	0.0	0.0	0.0	58.4	0.0	0.0	0.0
420.0	20.6	79.6	0.0	0.0	0.0	59.1	0.0	0.0	0.0
425.0	15.0	85.3	0.0	0.0	0.0	59.8	0.0	0.0	0.0
430.0	5.3	91.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

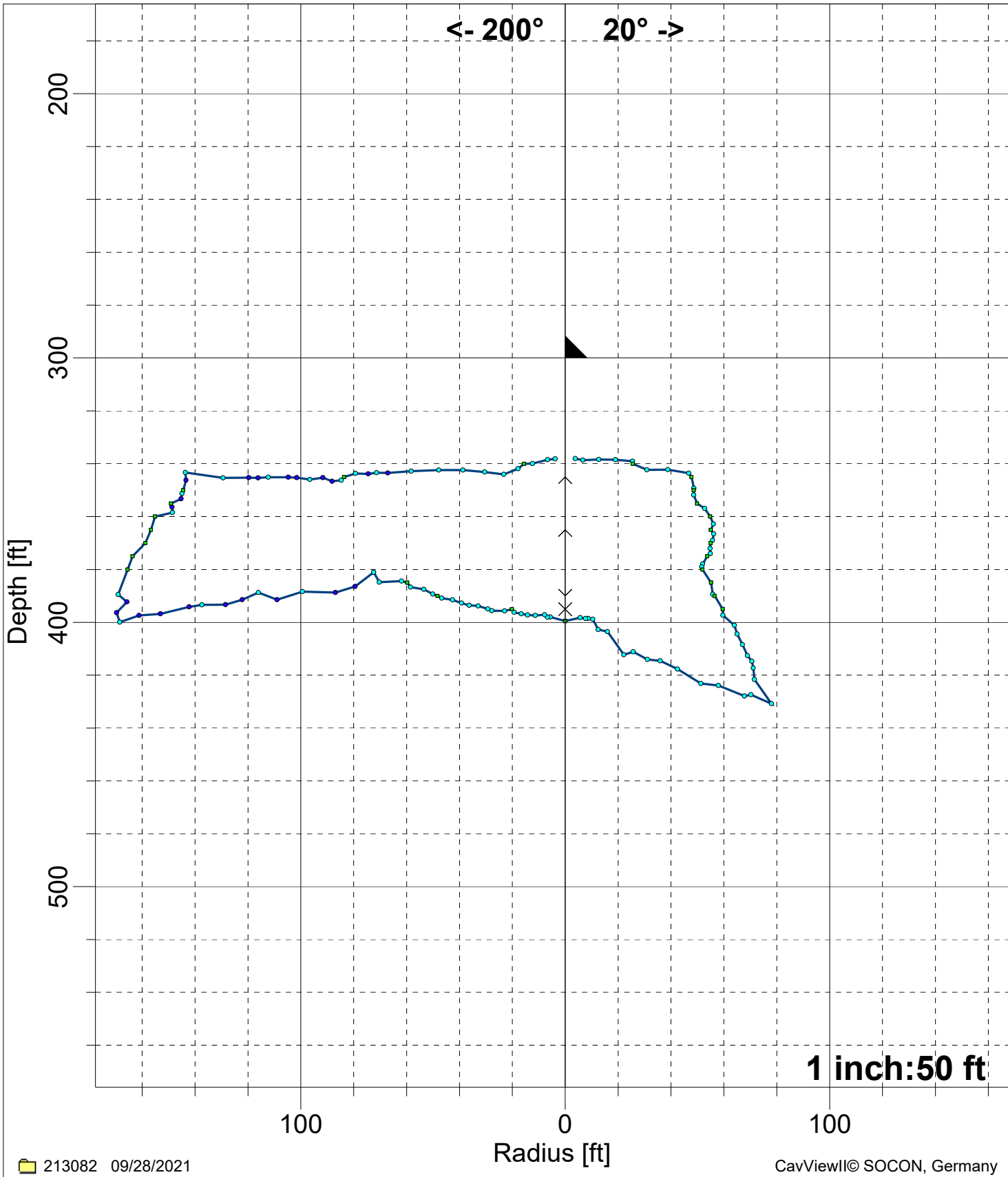


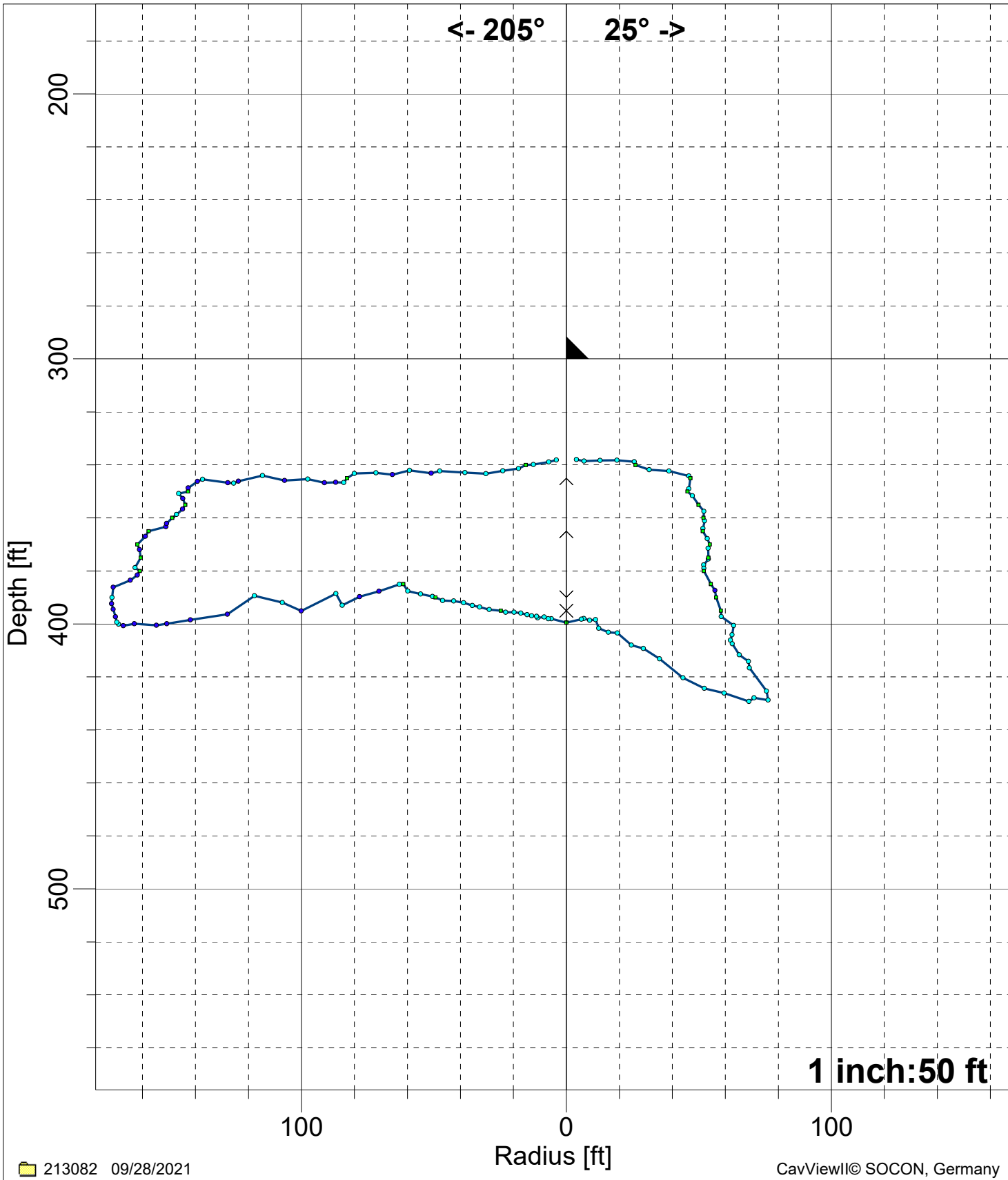




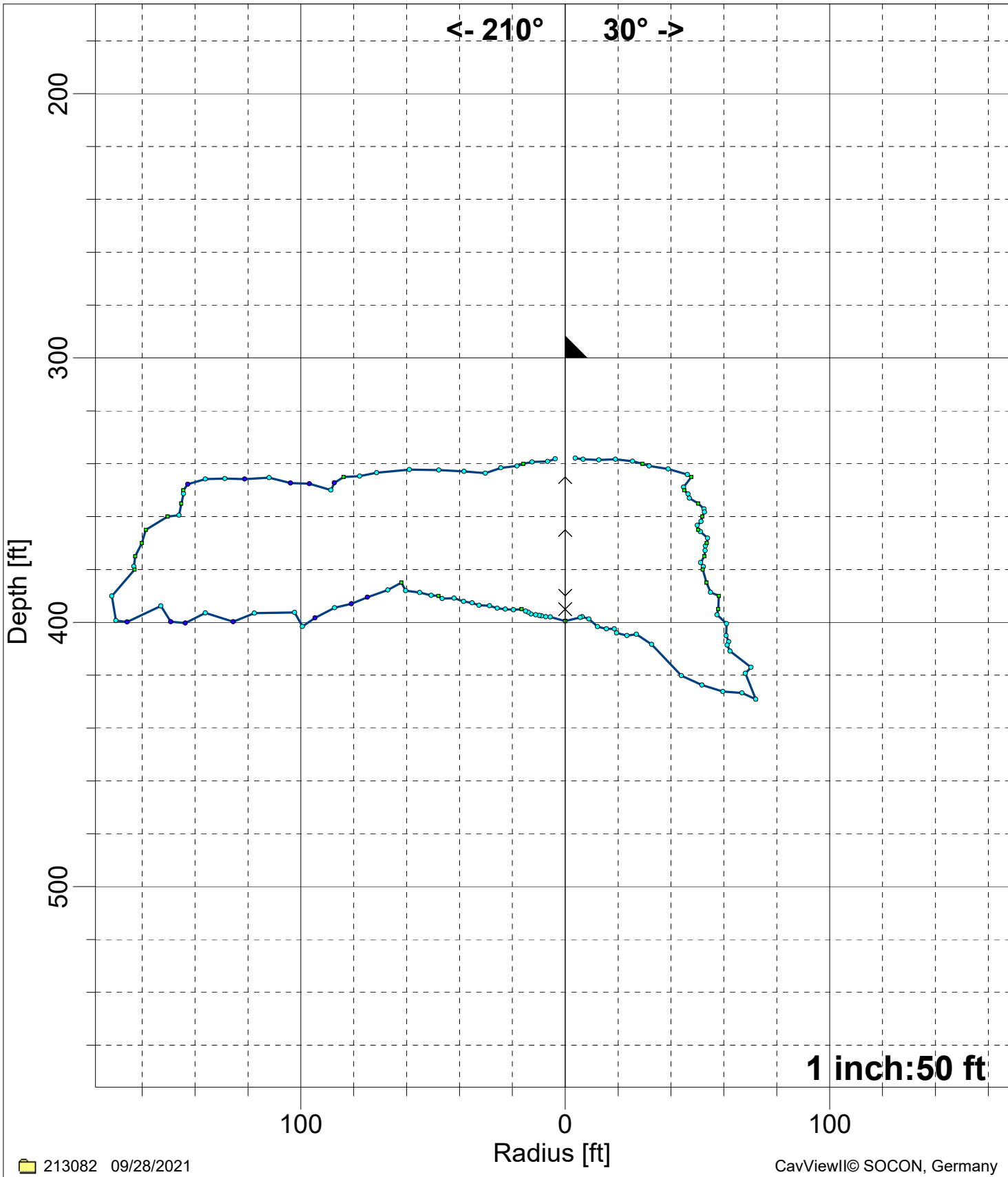




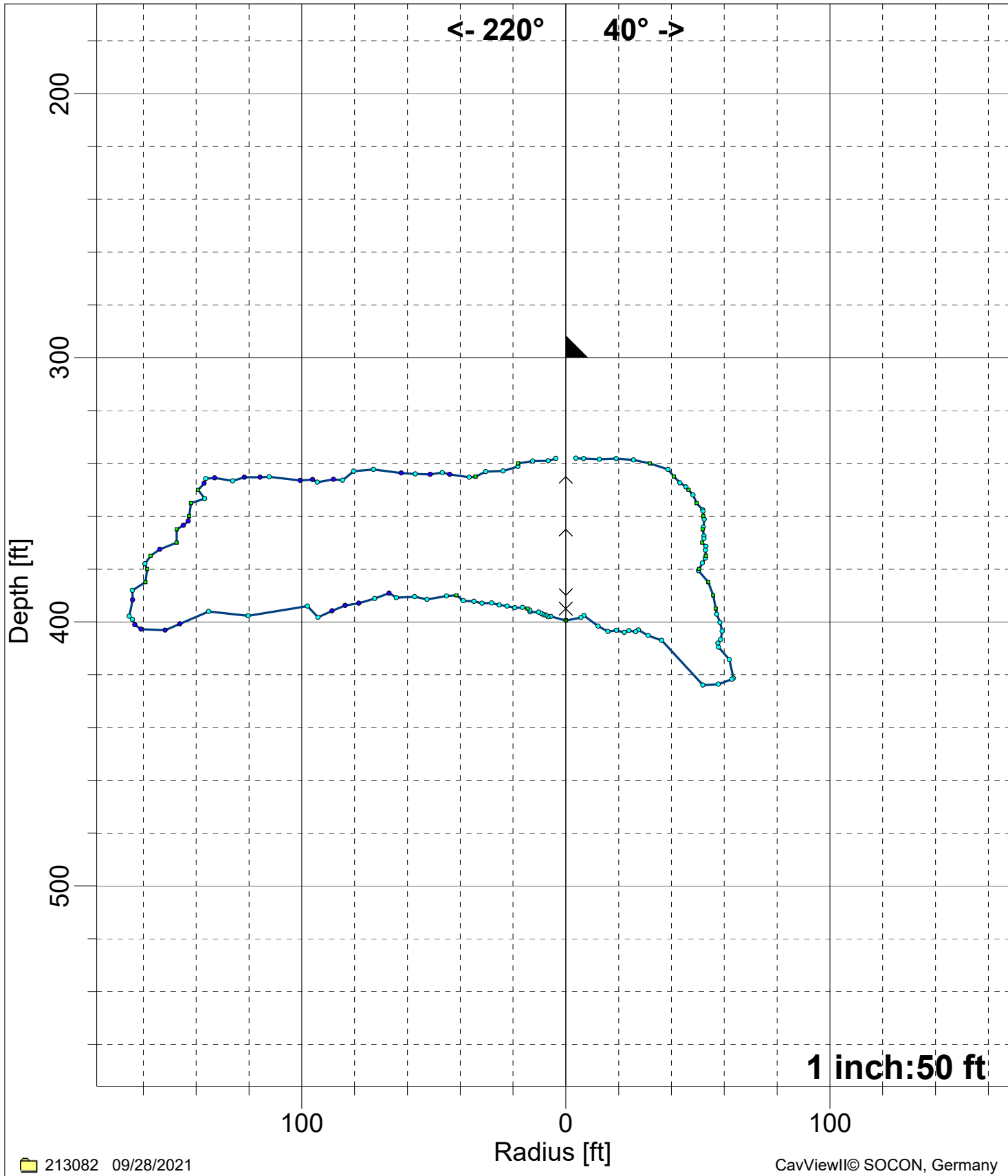










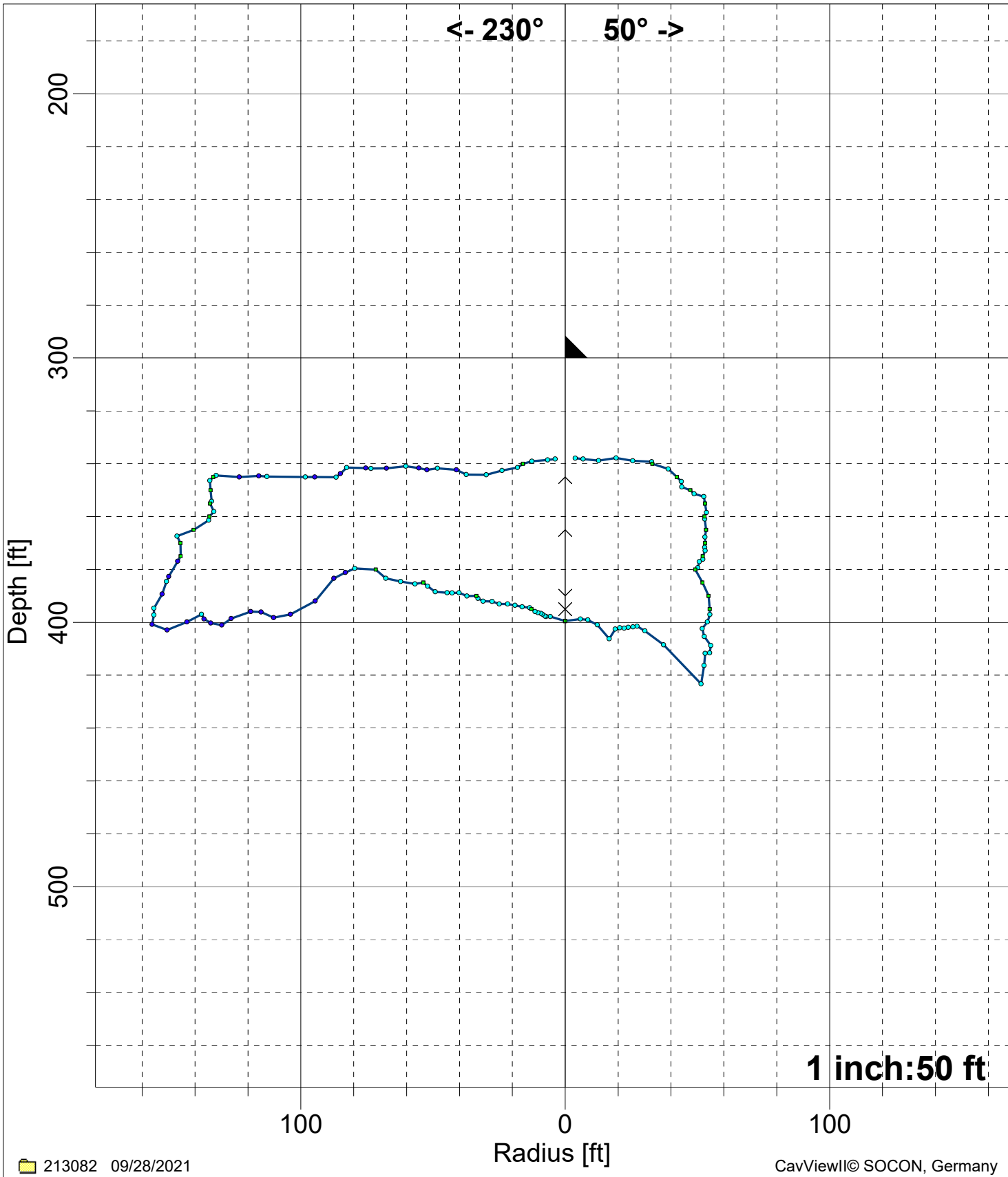




(09/28/2021)

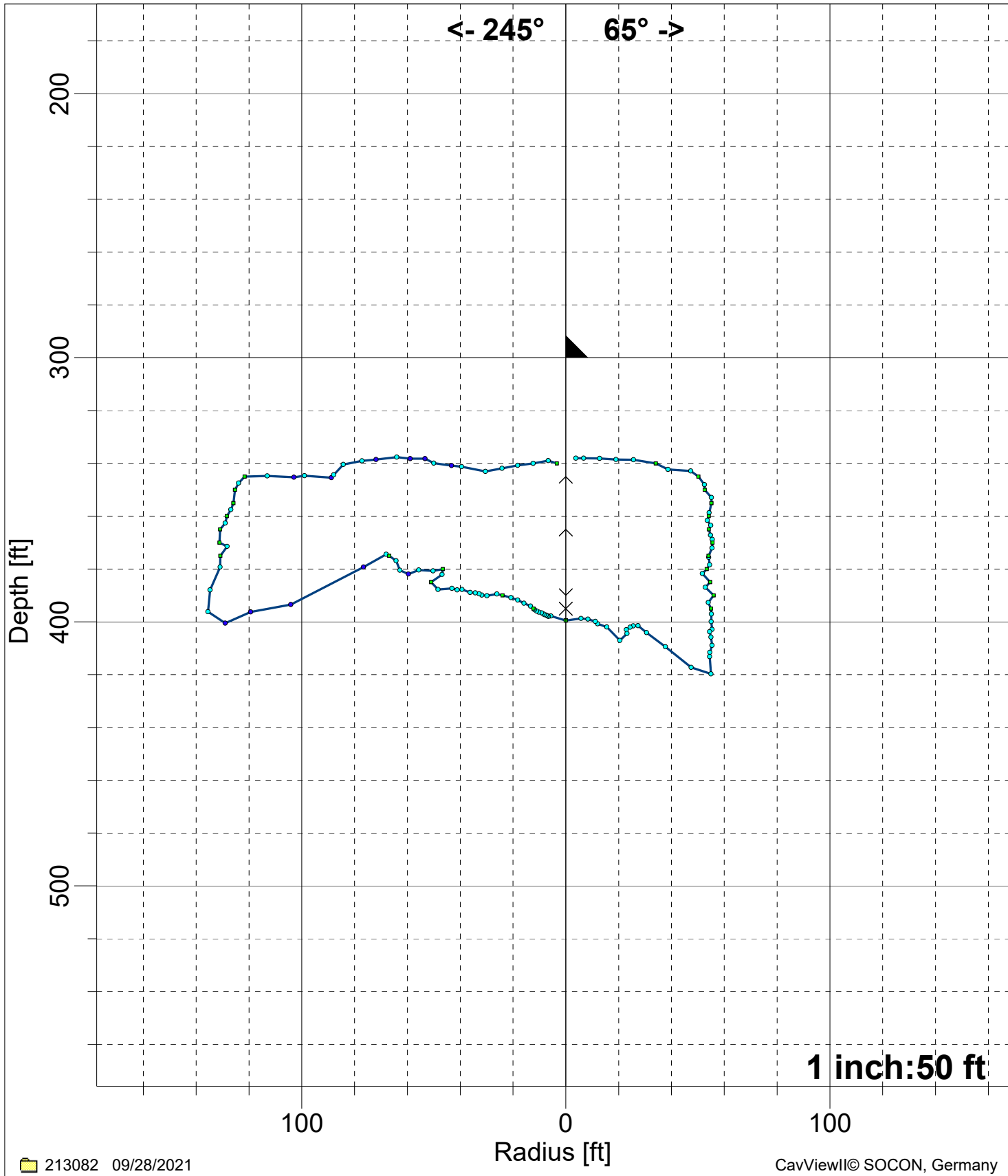
7" : 300.0 ft

^ ^ Tilting position

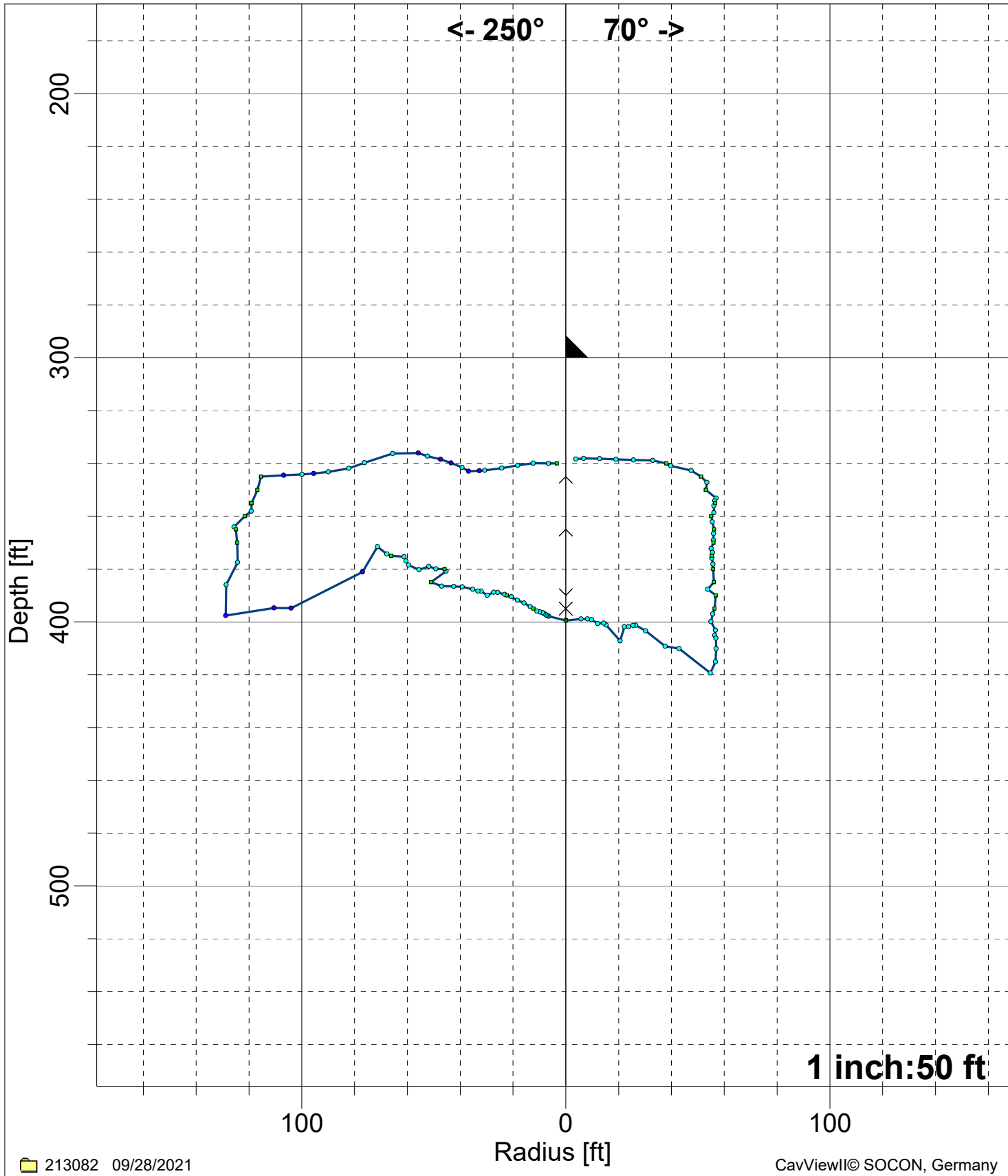




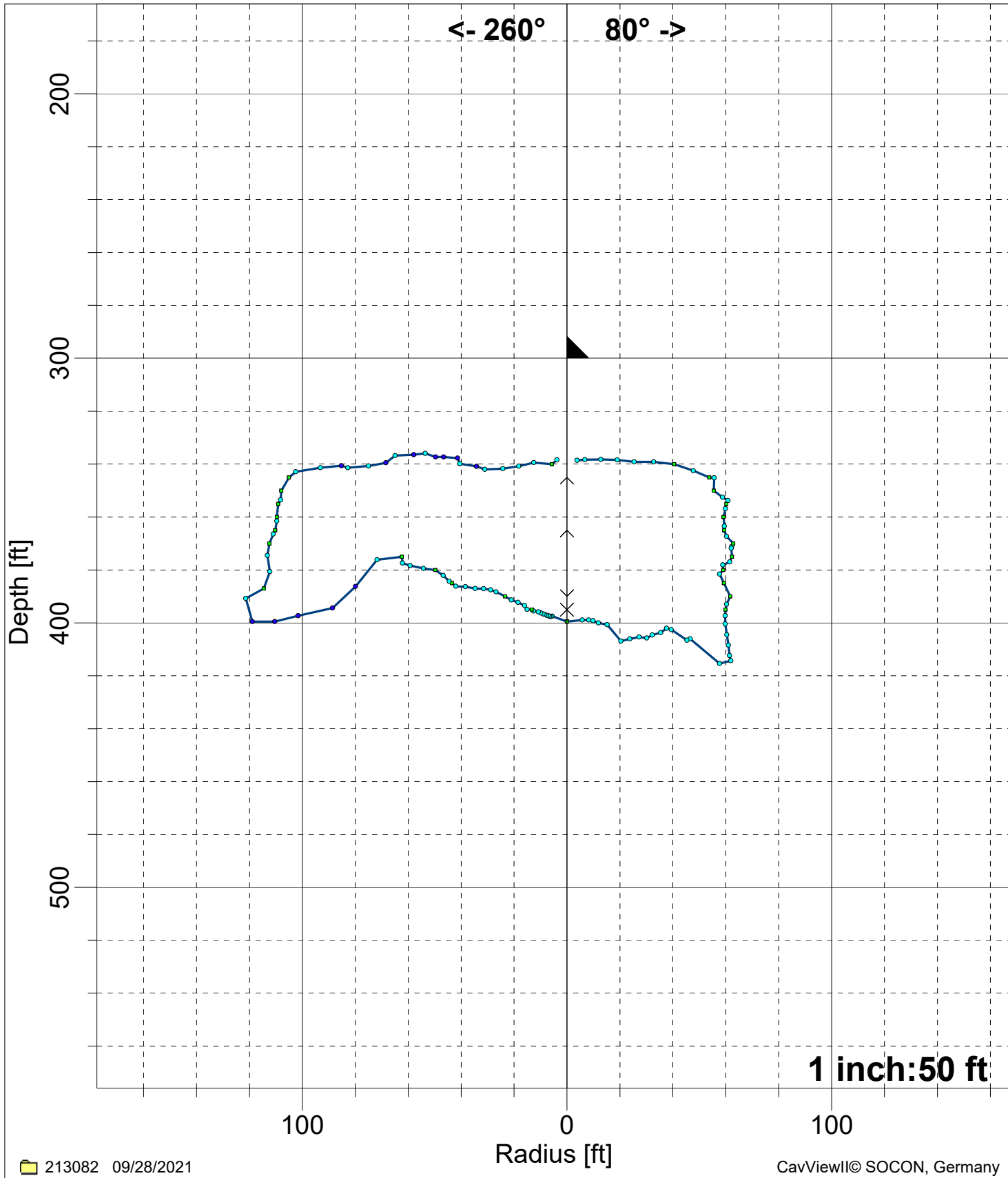








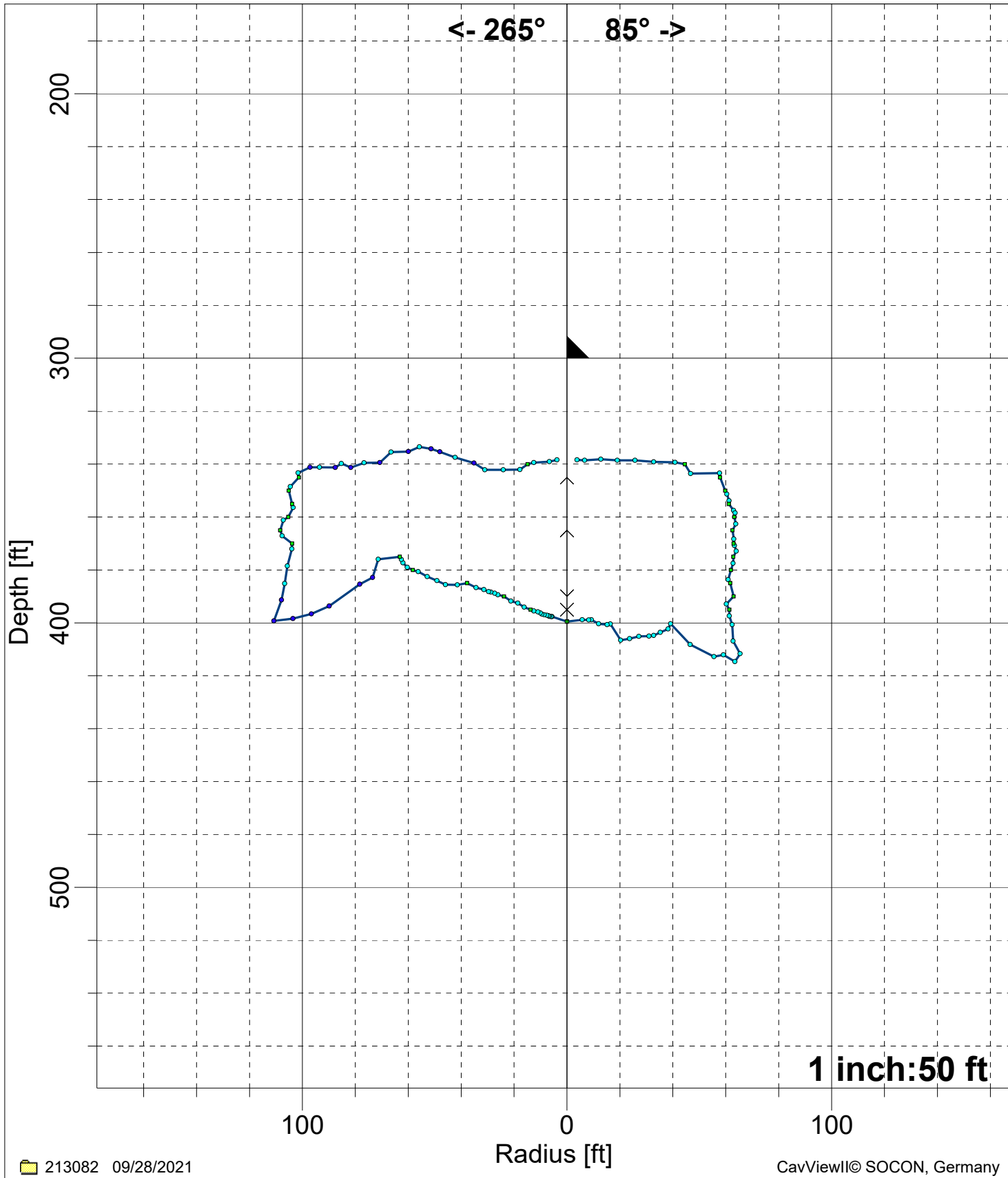


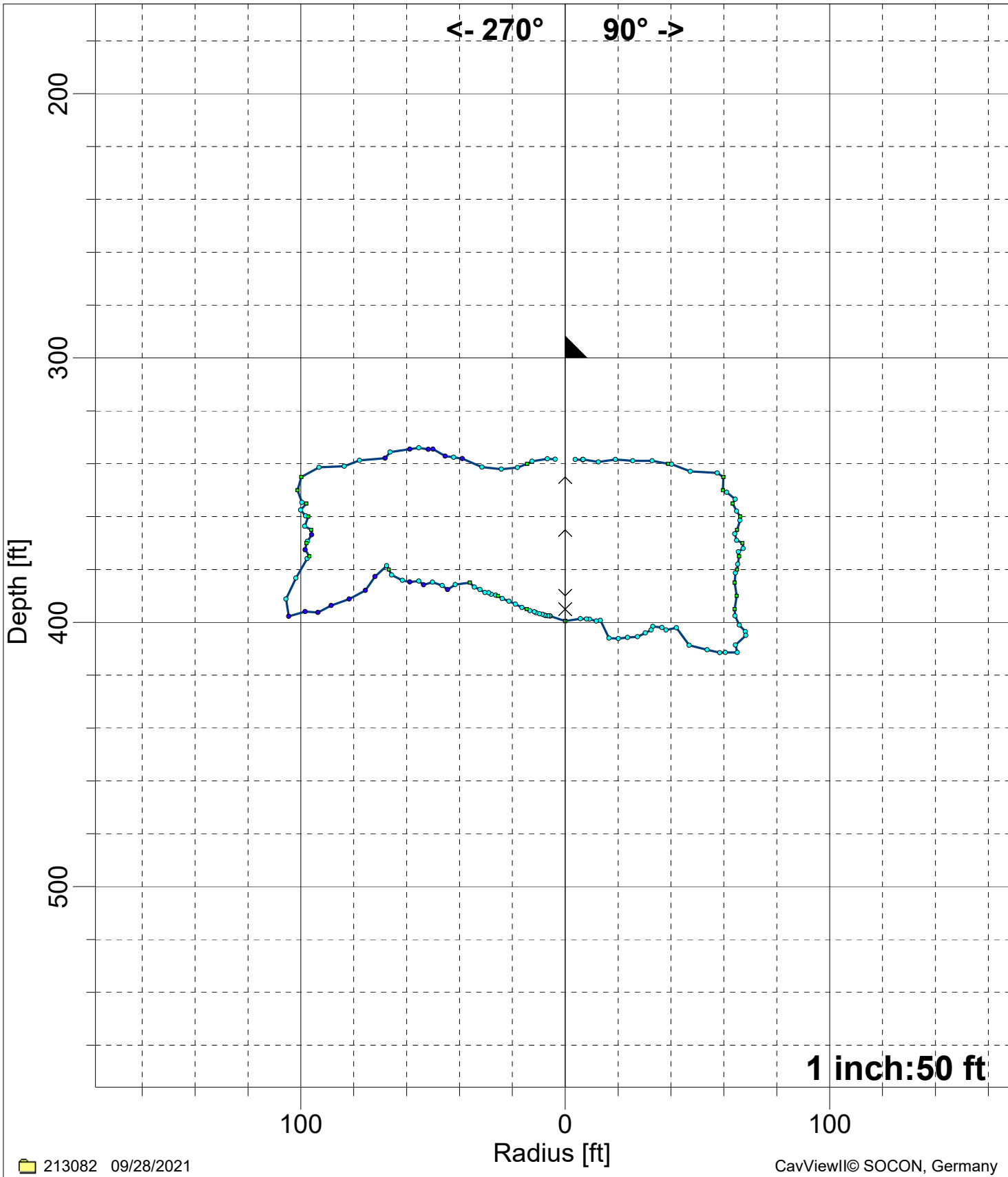


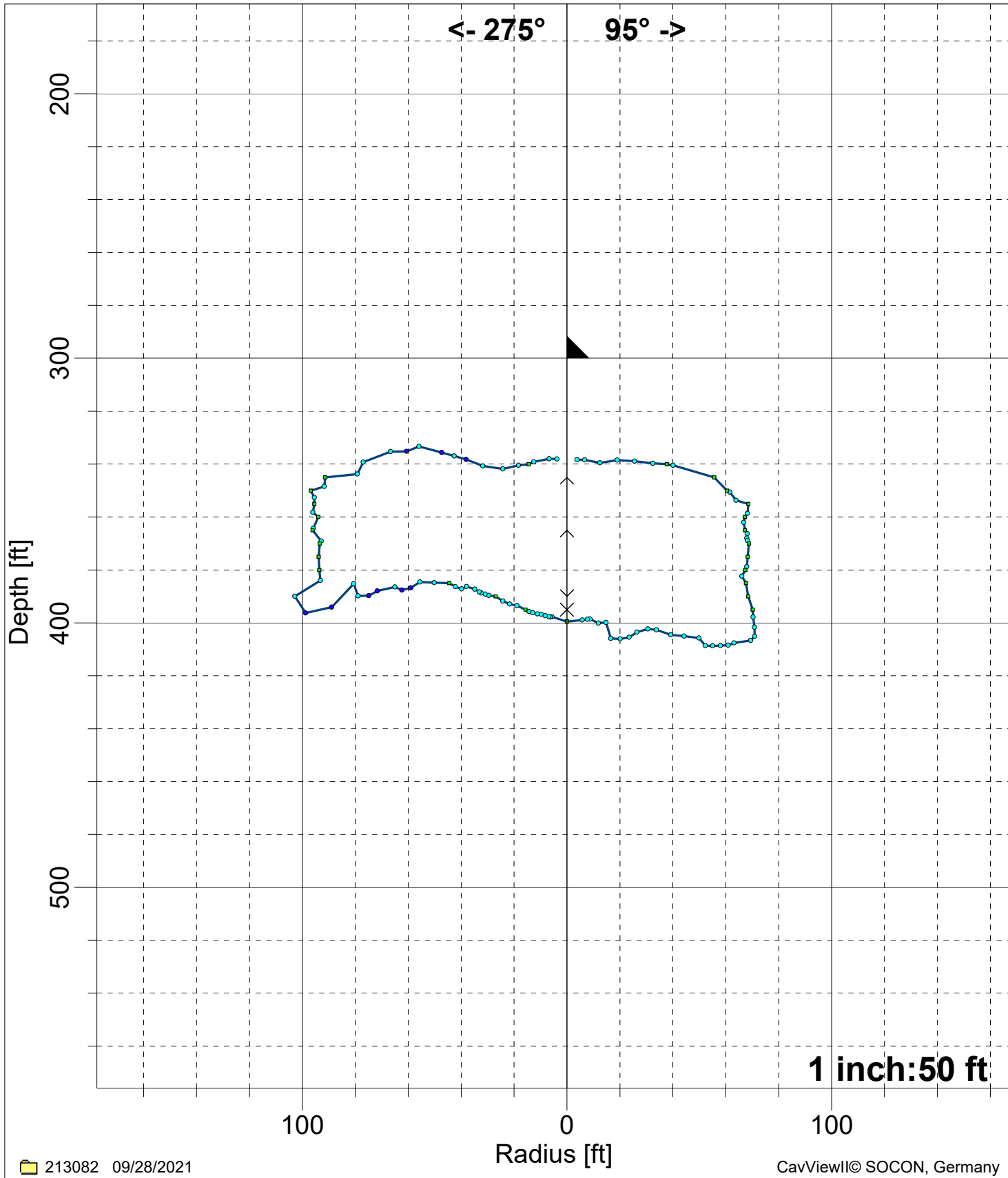
(09/28/2021)

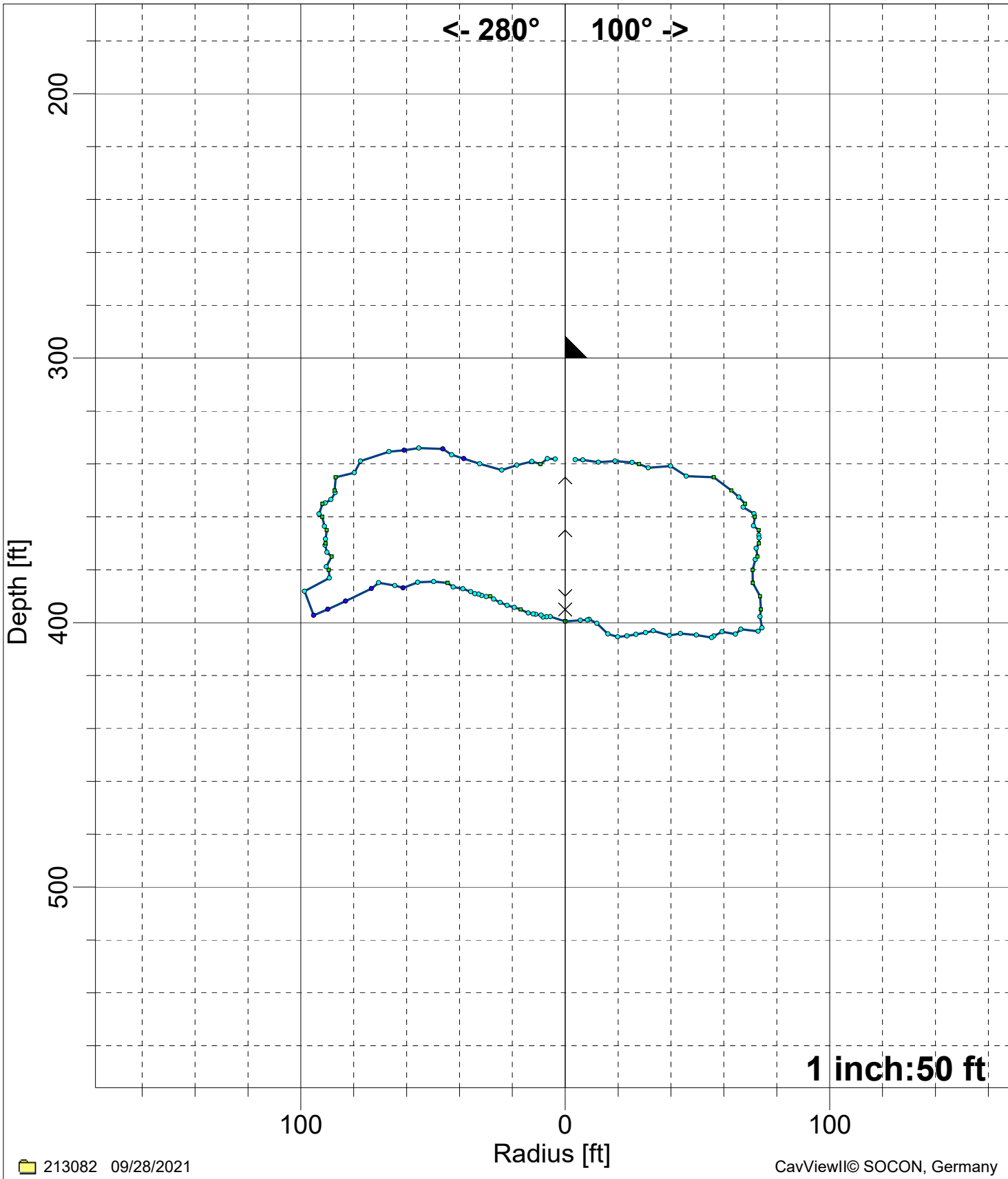
7" : 300.0 ft

∨ ^ Tilting position



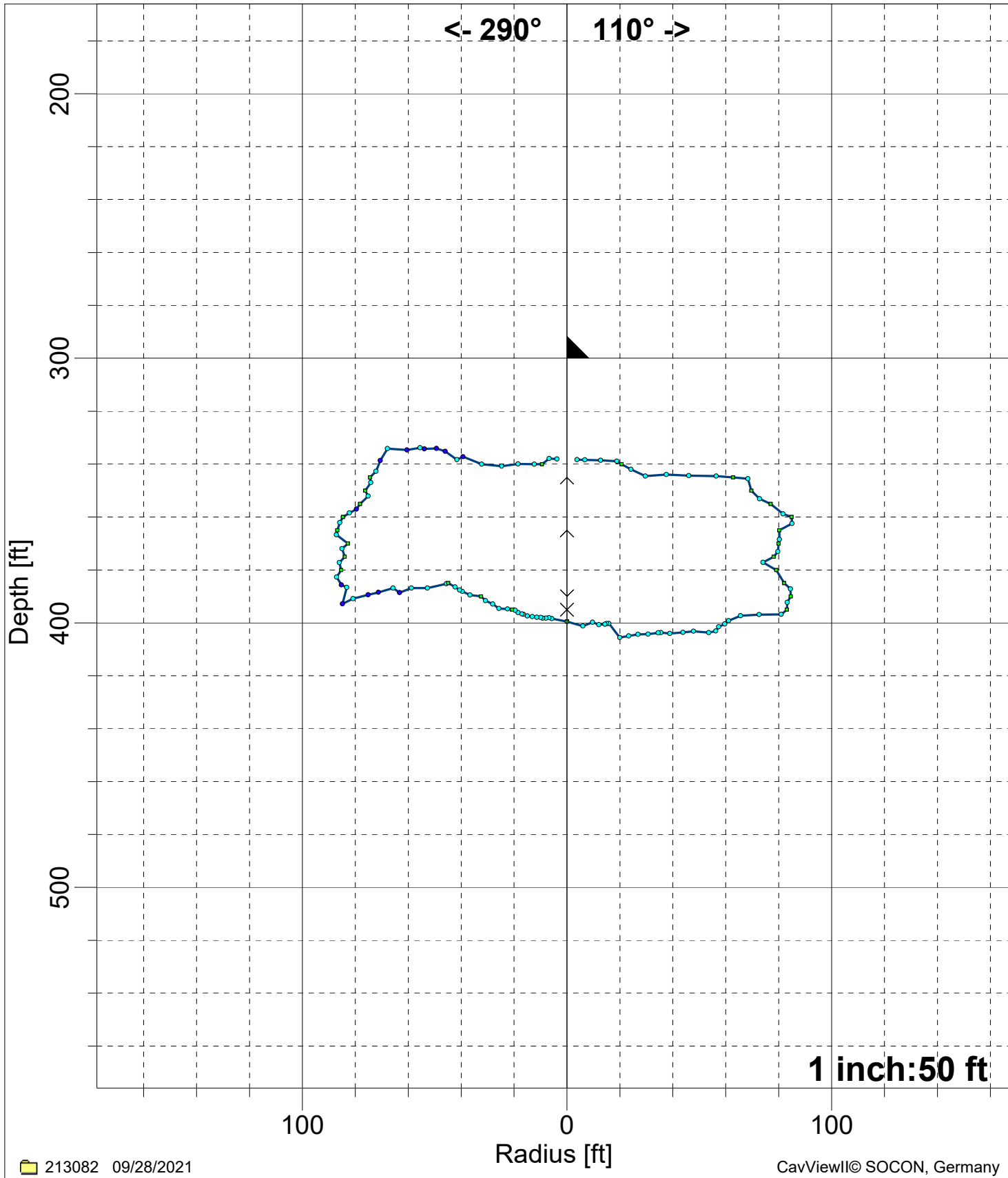


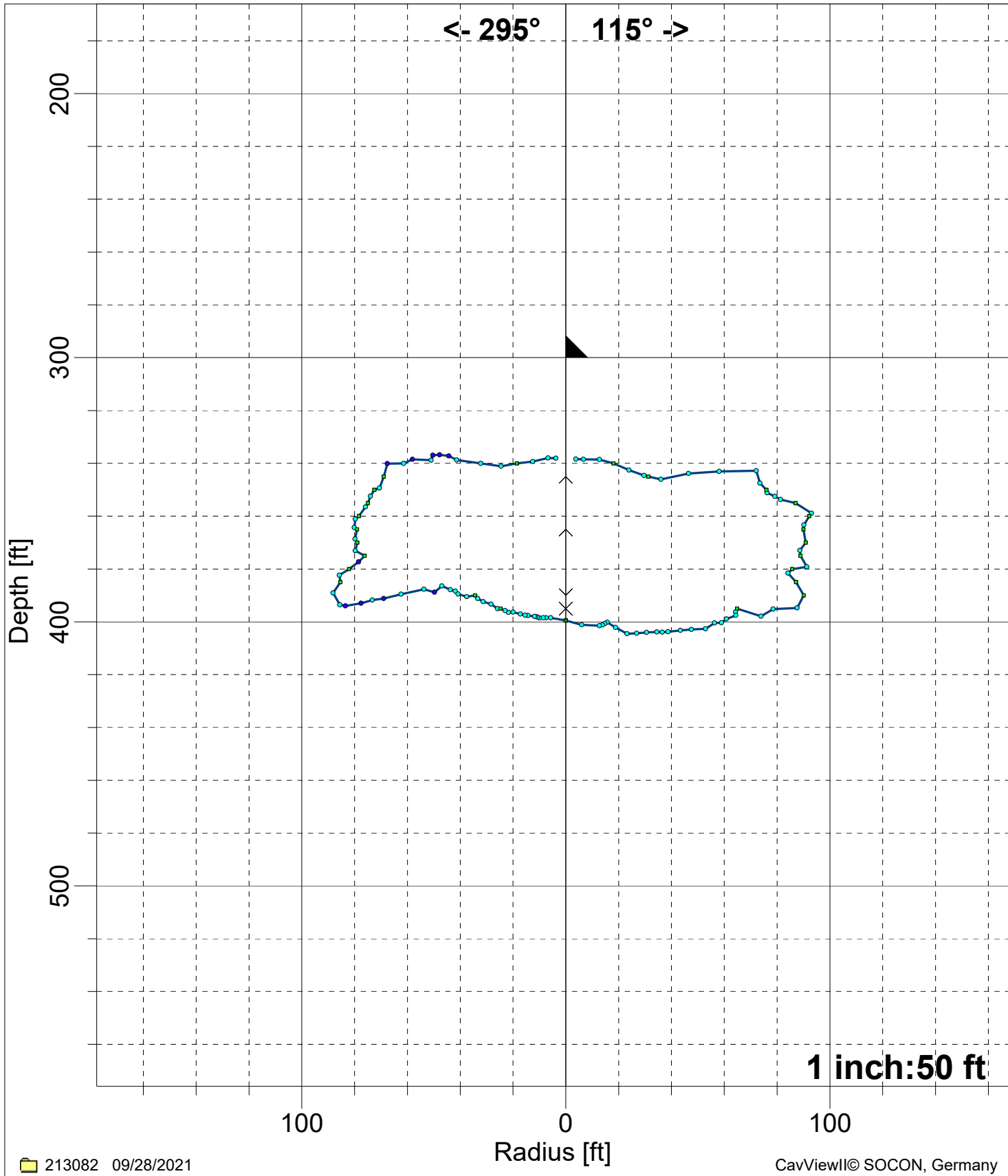


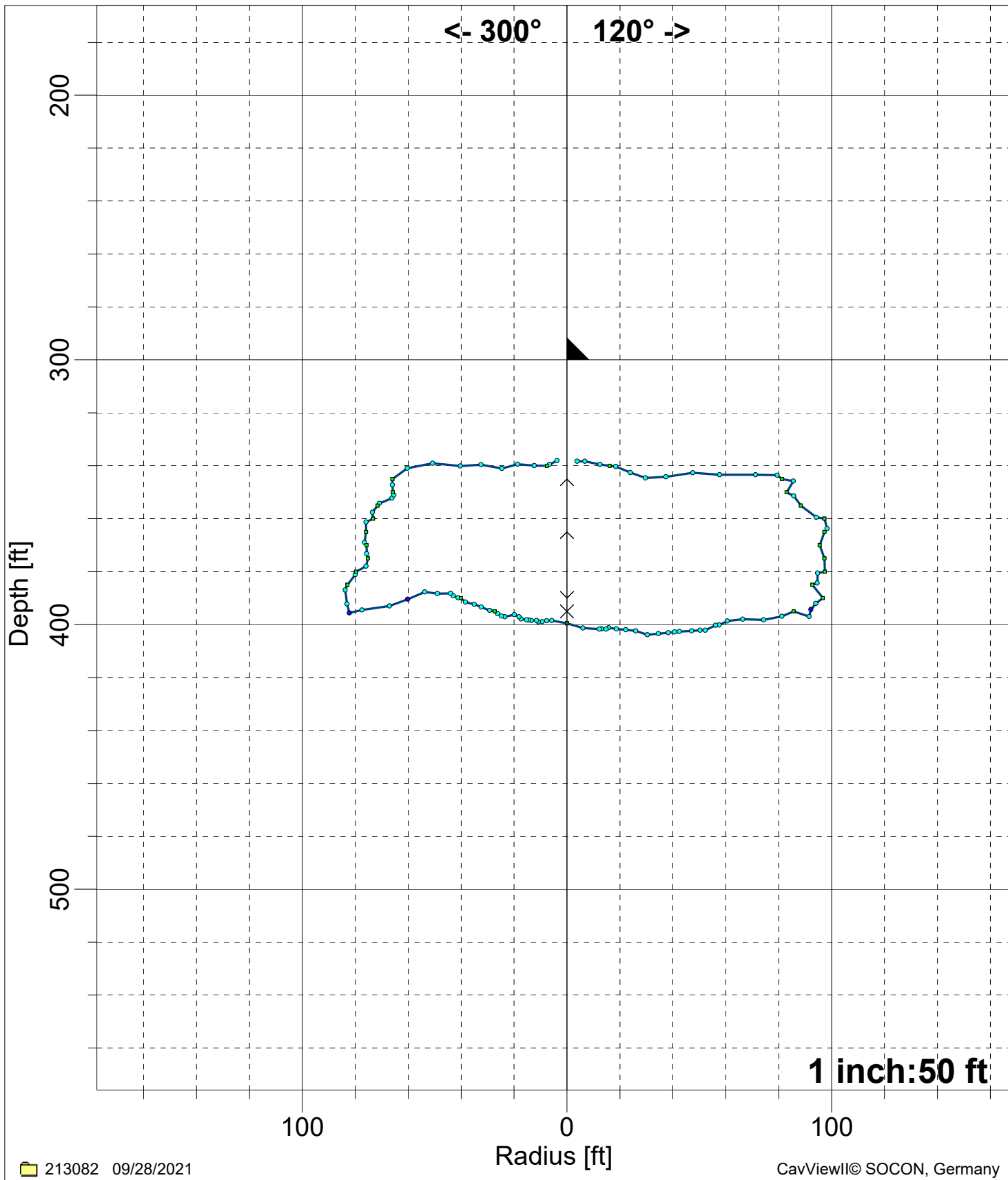


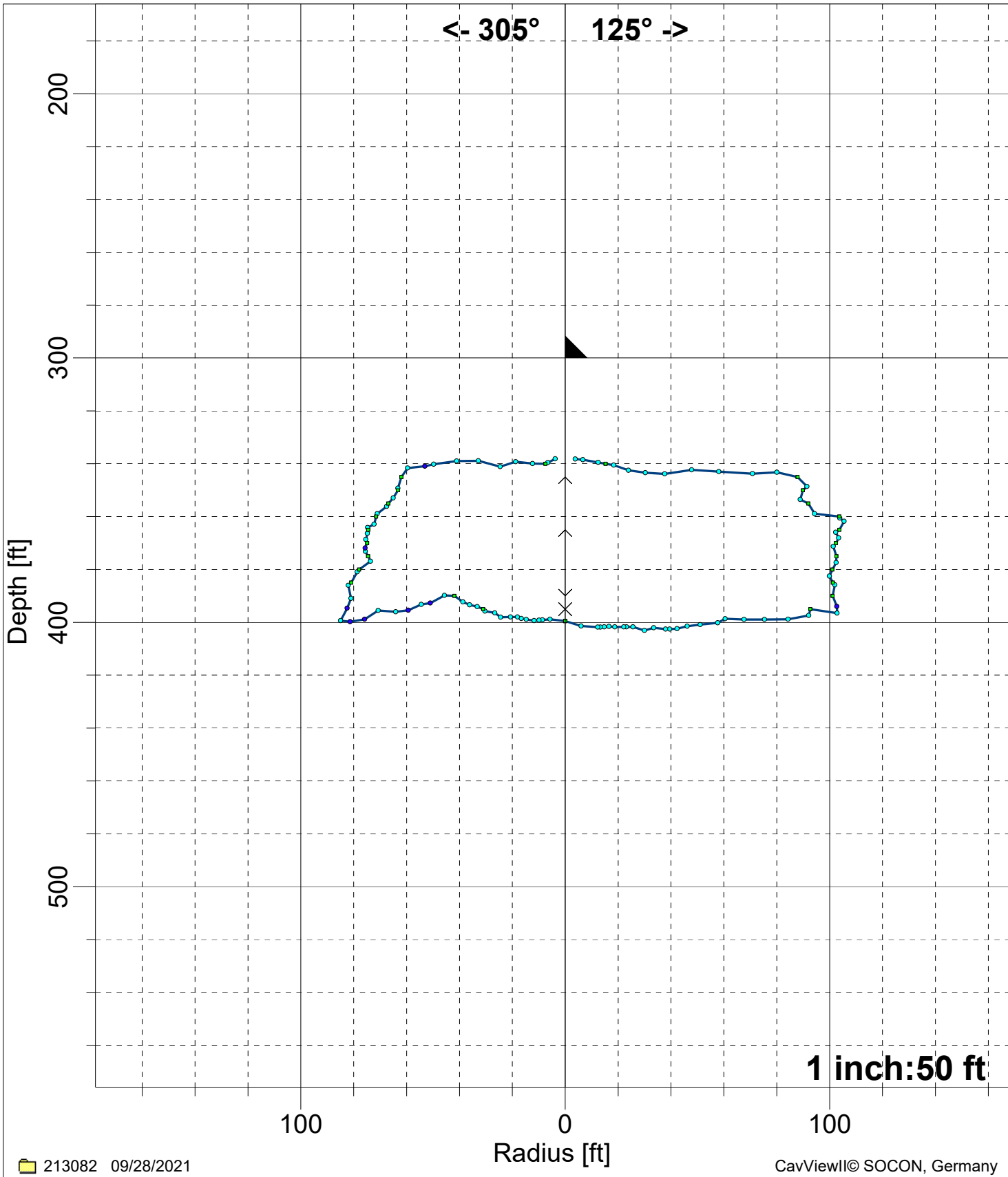


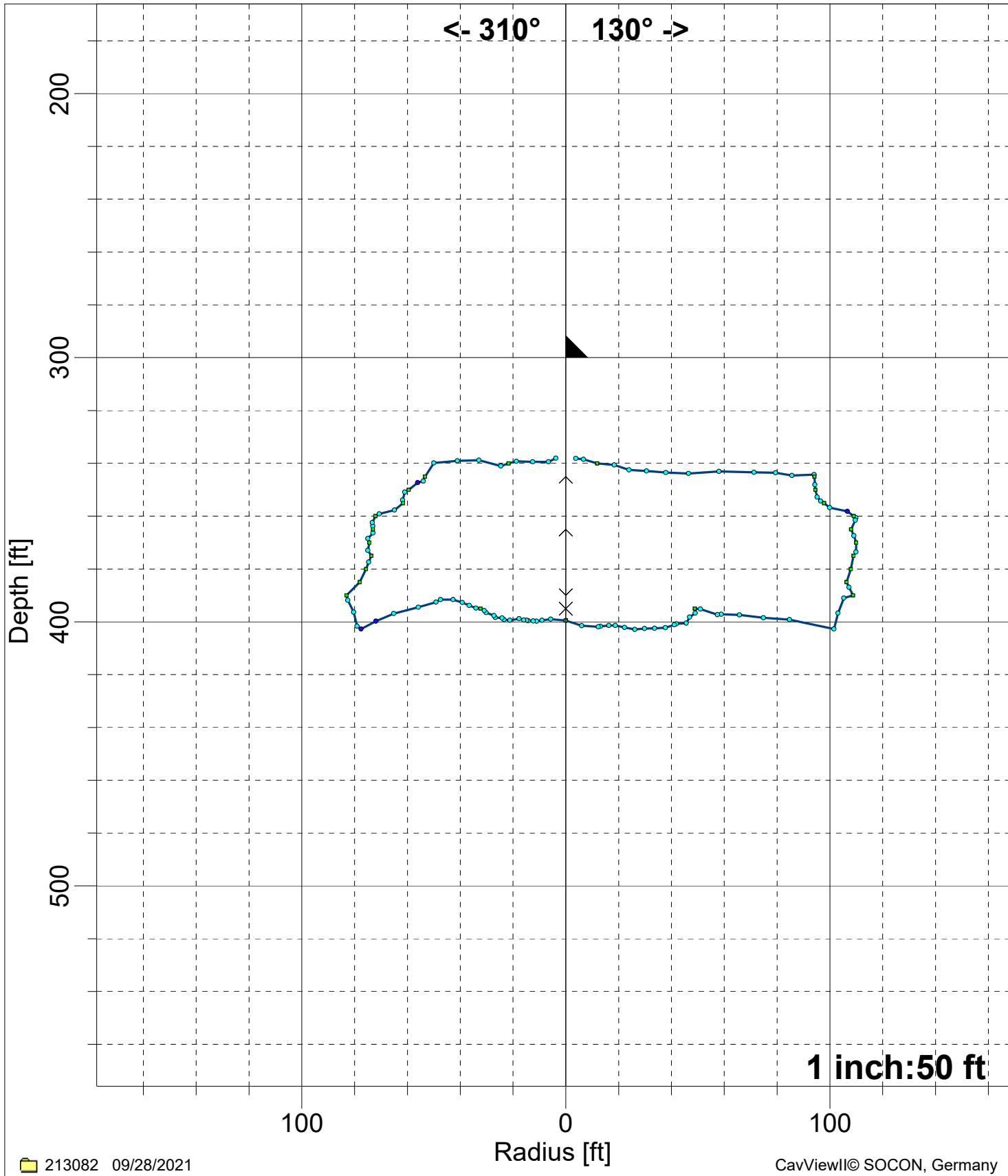


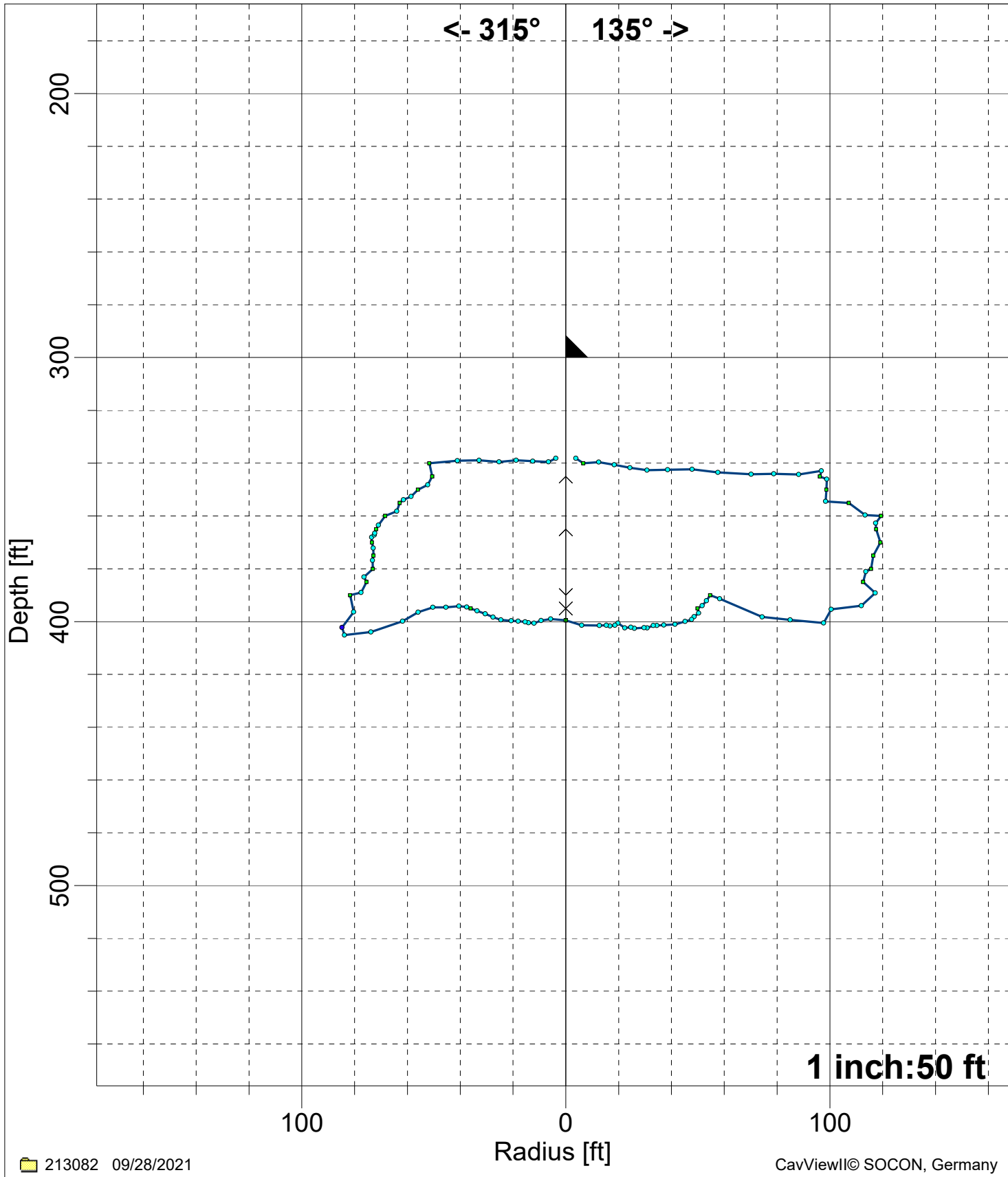


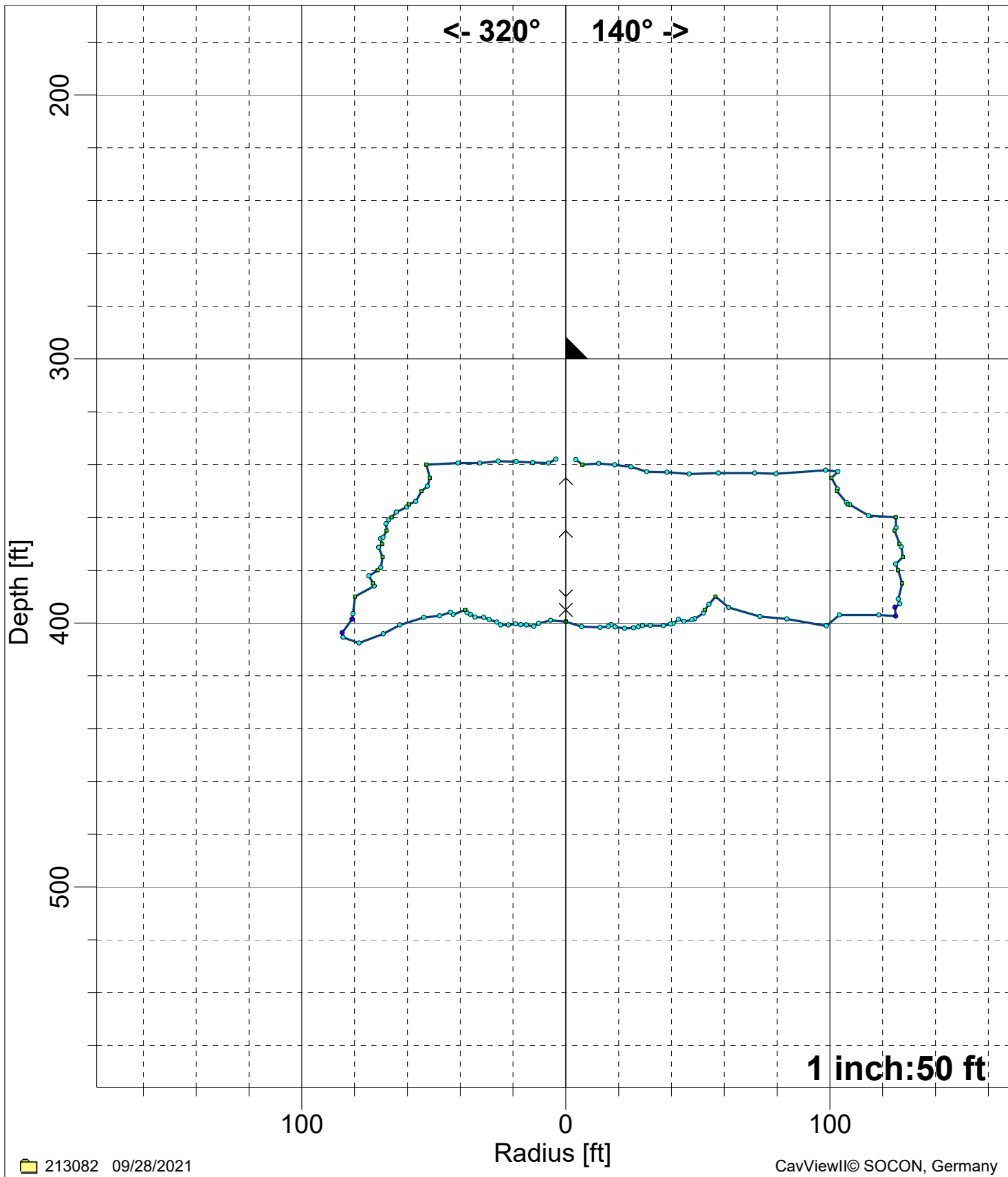


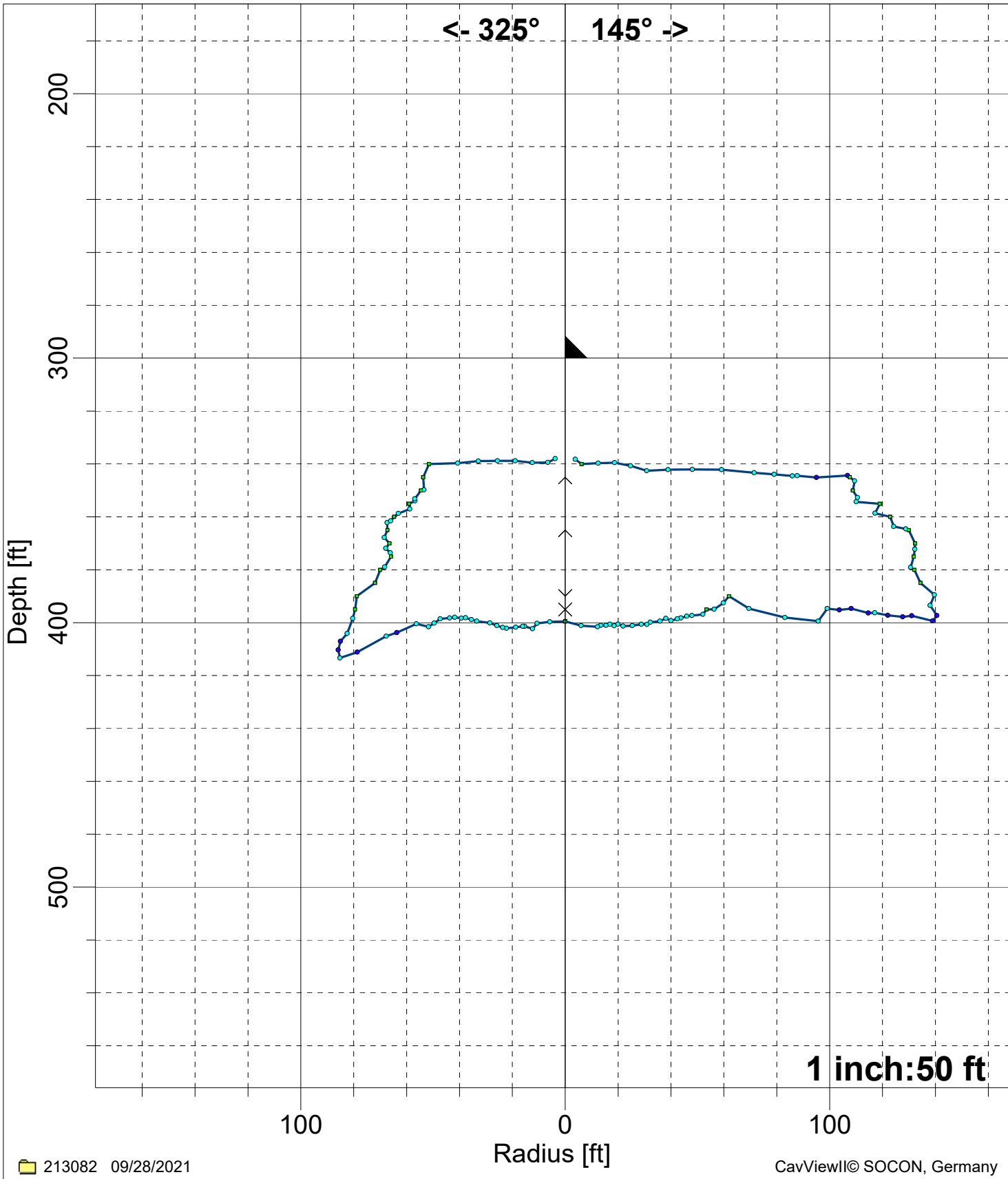












<- 325° 145° ->

200

300

400

500

100

0

100

Radius [ft]

1 inch:50 ft

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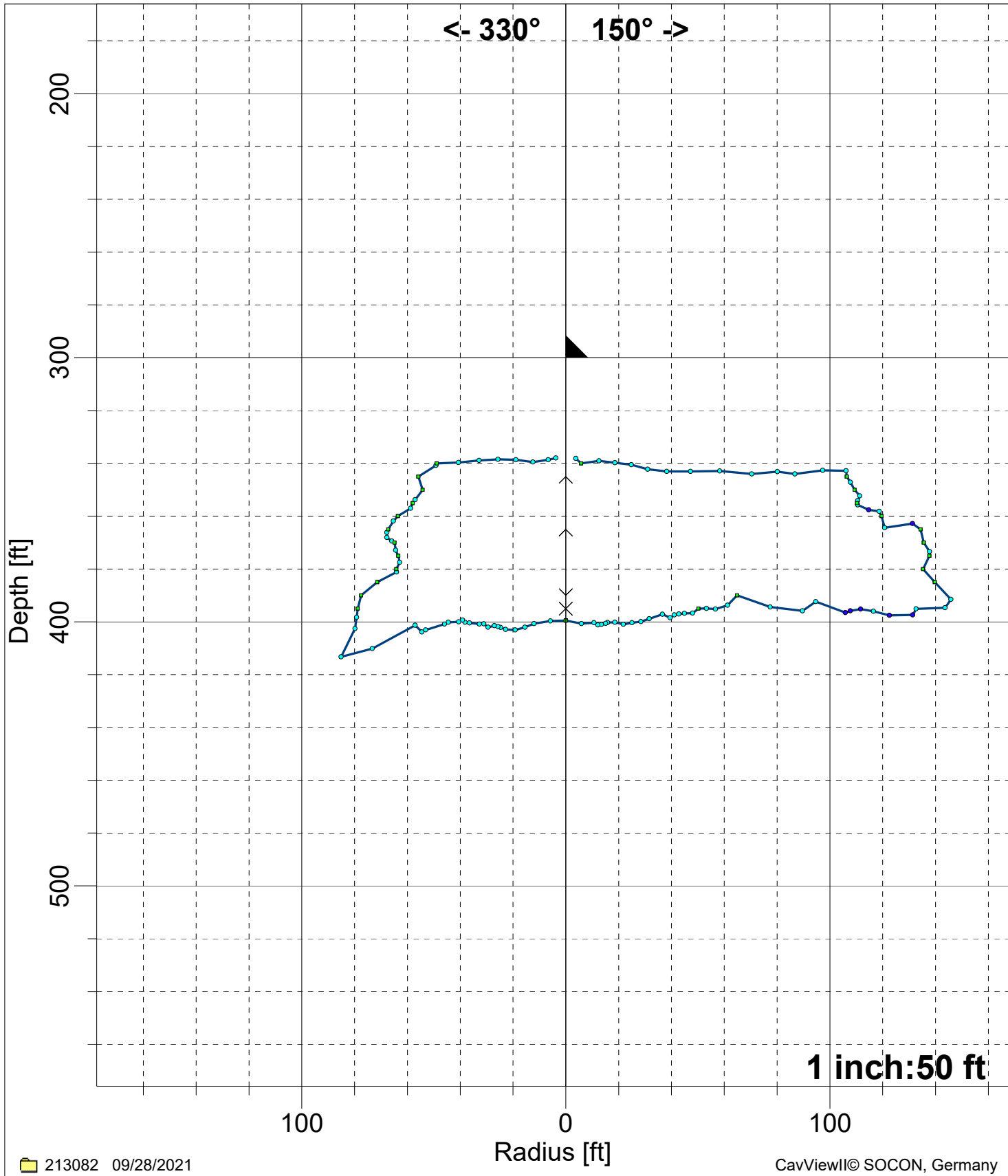
CavViewII© SOCON, Germany

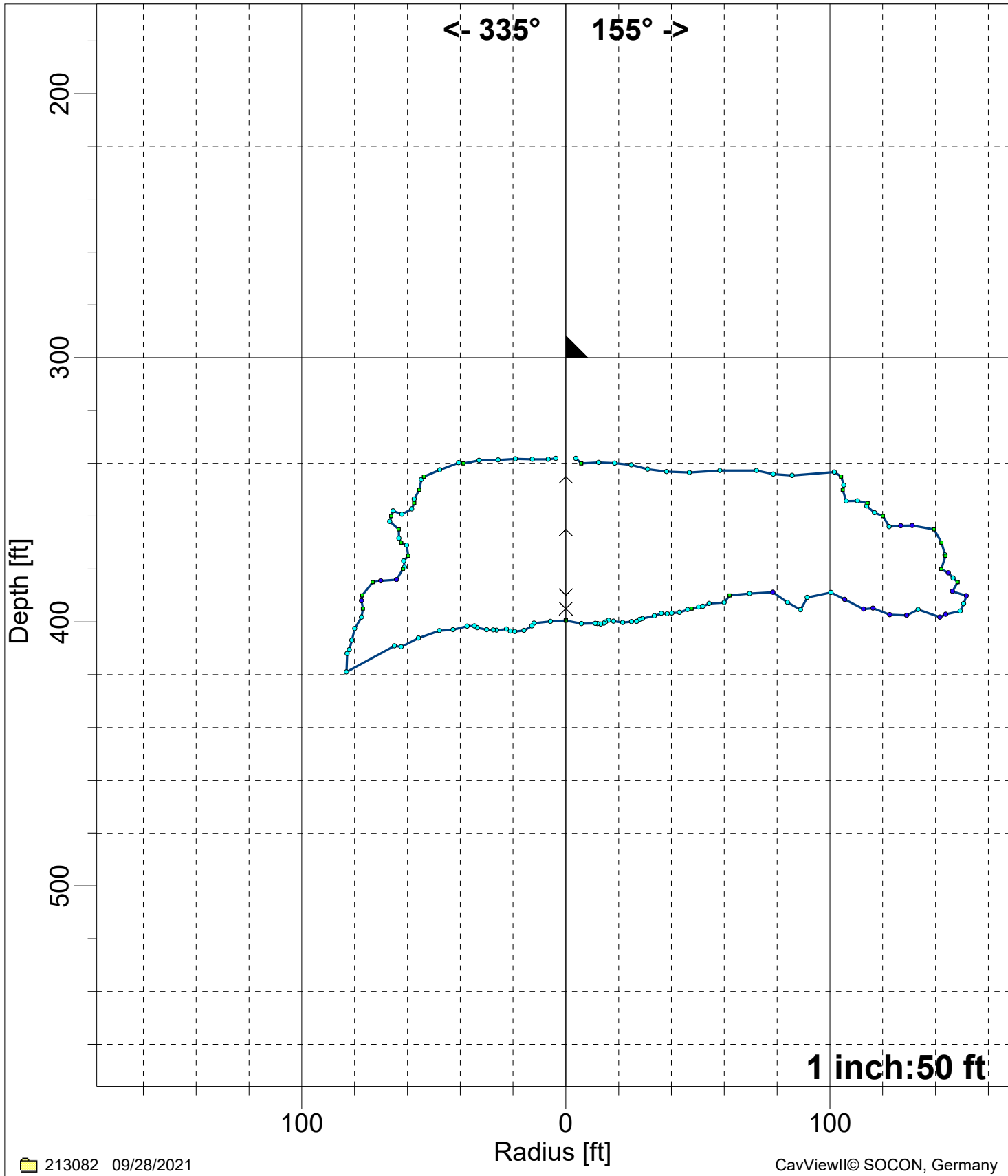
(09/28/2021)

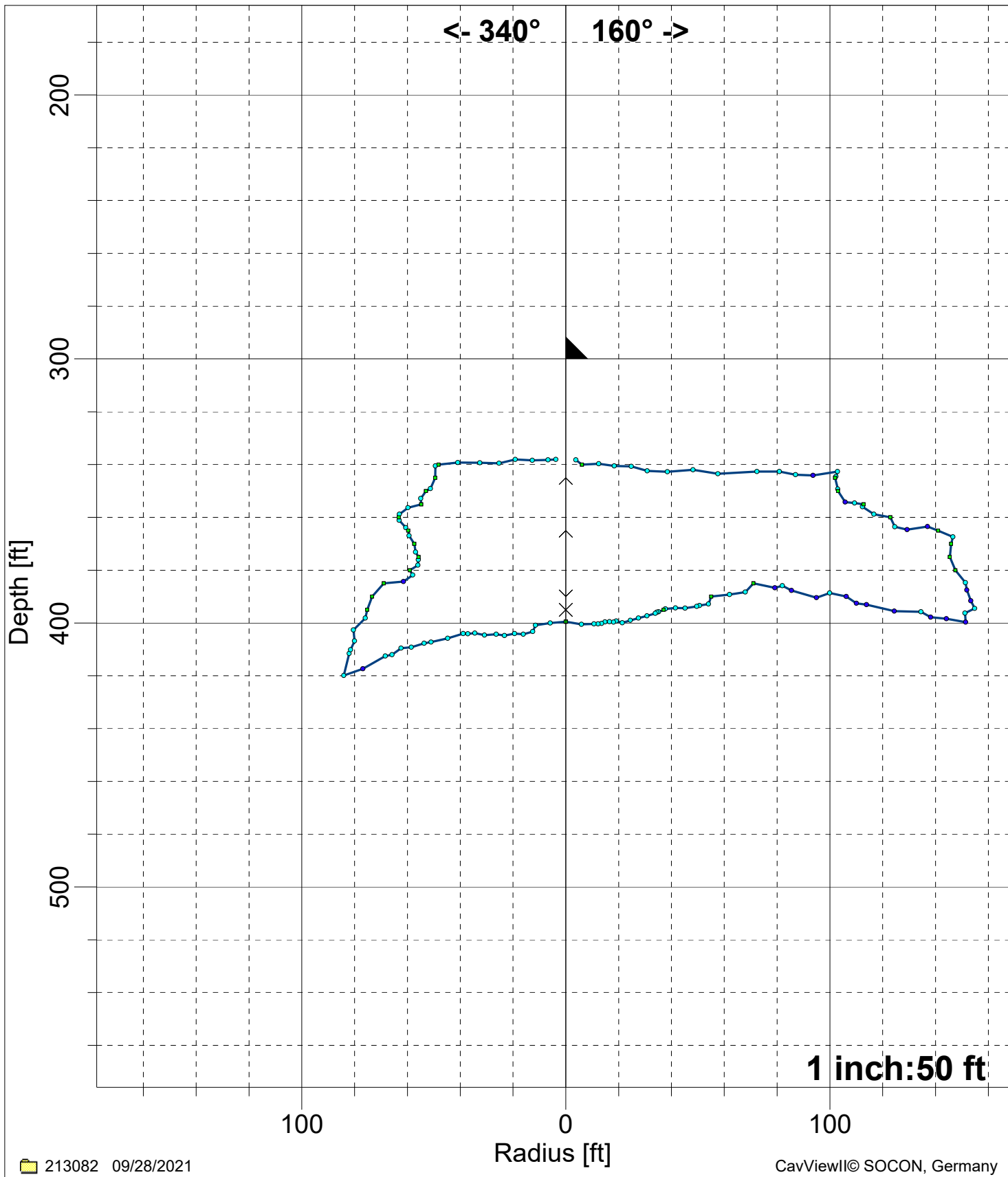
7" : 300.0 ft

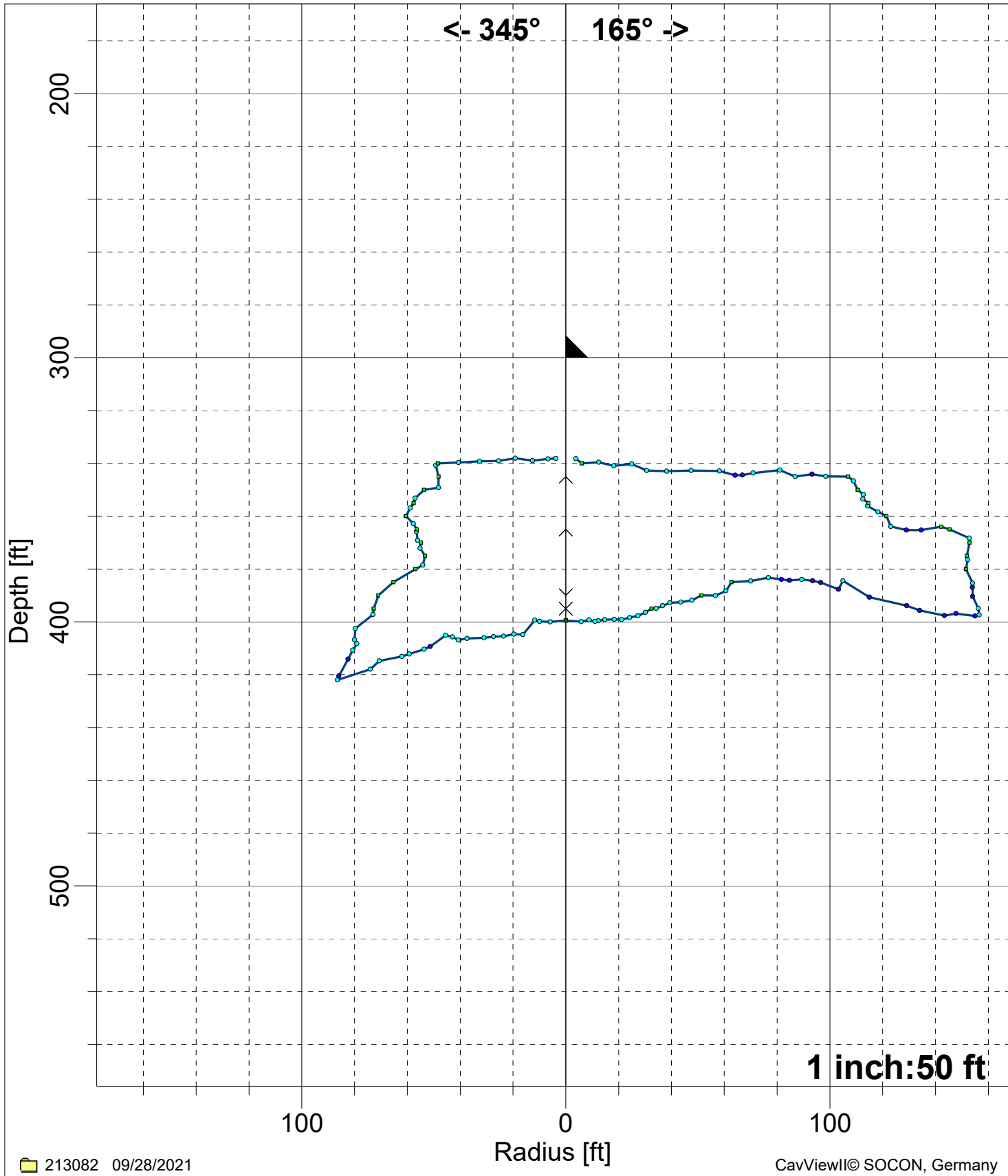
∨ ∨ Tilting position

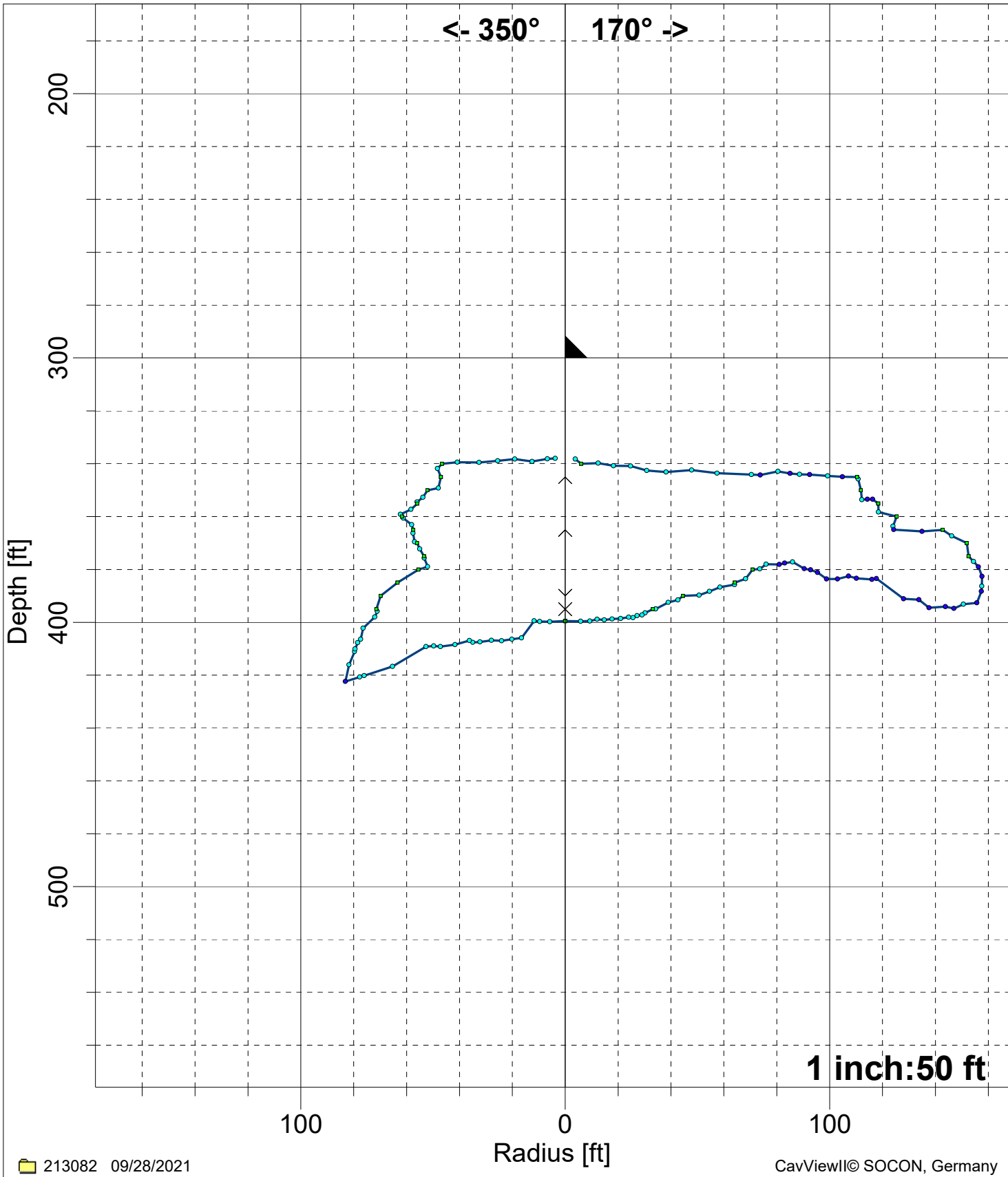










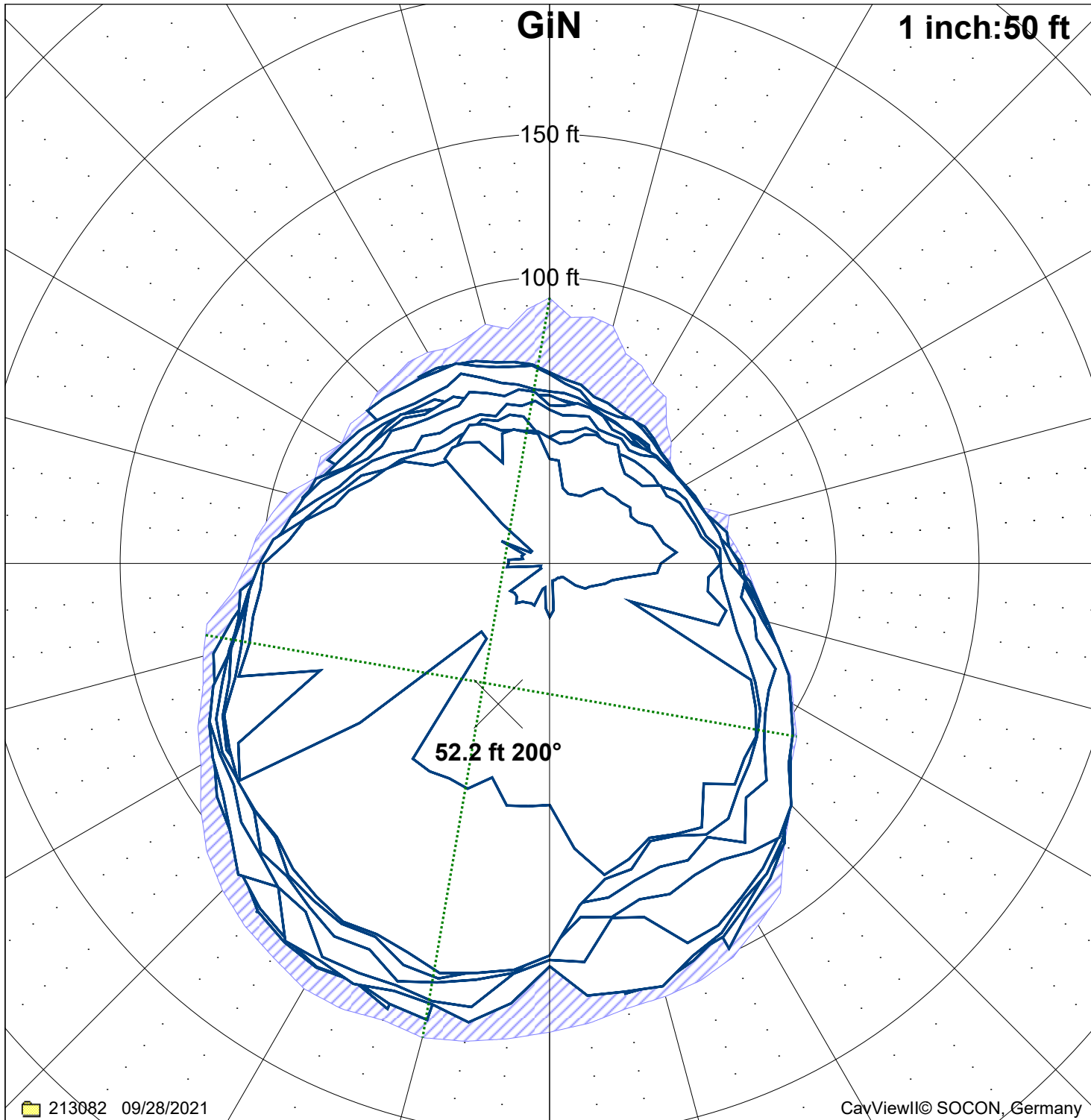




(09/28/2021)

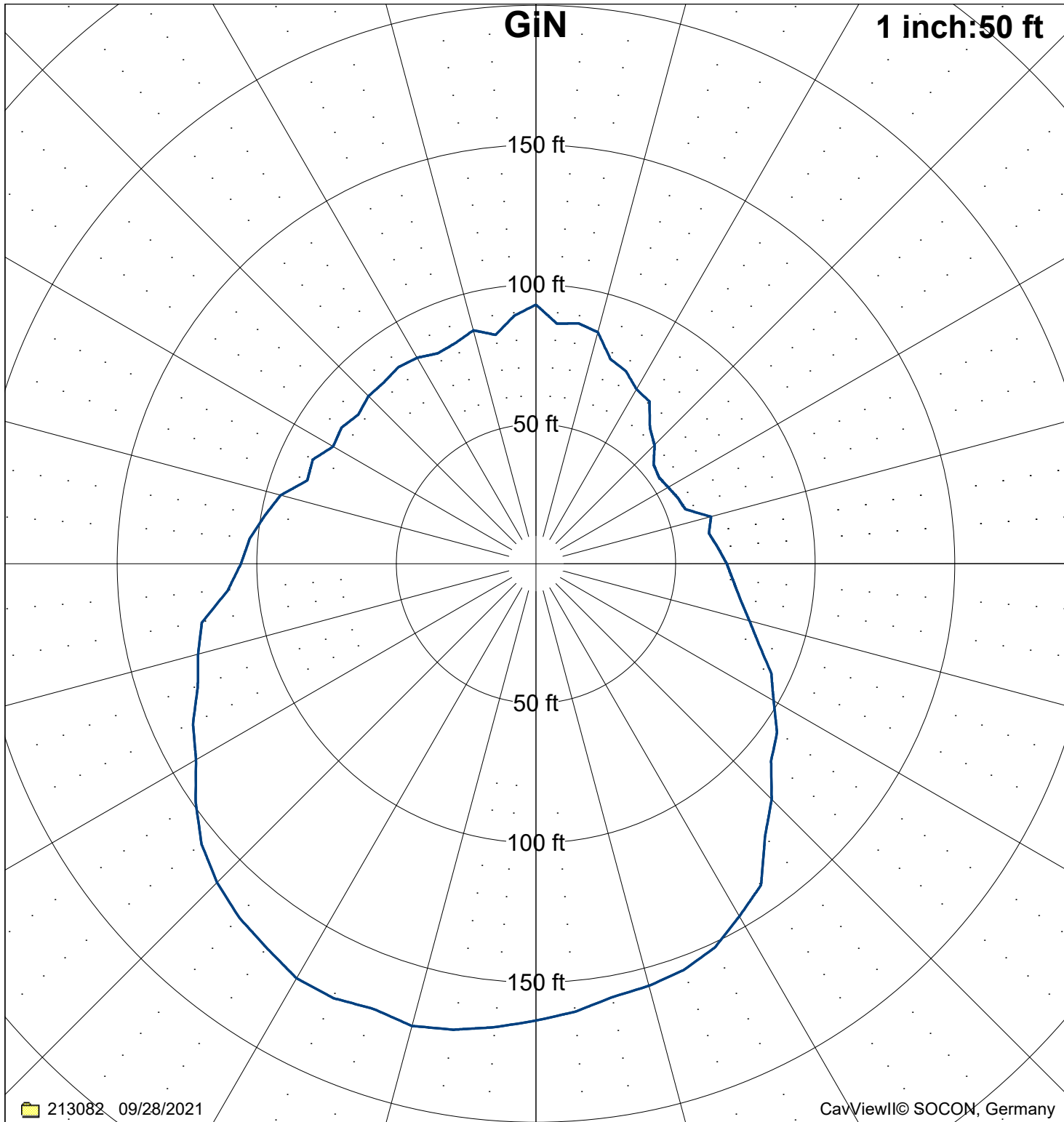
7" : 300.0 ft

∨ ^ Tilting position



V-Maxplot (09/28/2021) (40087 ft<sup>2</sup>), 
  Horizontal sections 
  a/b  
X Center of gravity

H/V-Maxplot:  $d_{max}$ : 257.2 ft 15° <--> 195°  $r_{min}$ : 53.8 ft -> 55°  $r_{\sim}$ : 113.0 ft  $r_{max}$ : 171.7 ft -> 205°  
 H/V-Maxplot: a/b = 1.252 a = 262.1 ft (0°-195°) b = 209.4 ft (125°-258°)  
 Area from vertical sections: 40087 ft<sup>2</sup>, Area from horizontal and vertical sections: 40087 ft<sup>2</sup>



— H/V-Maxplot (09/28/2021) (40087 ft<sup>2</sup>)

H/V-Maxplot:  $d_{max}$ : 257.2 ft 15° <--> 195°  $r_{min}$ : 53.8 ft -> 55°  $r_{\sim}$ : 113.0 ft  $r_{max}$ : 171.7 ft -> 205°  
 H/V-Maxplot:  $a/b$  = 1.252  $a$  = 262.1 ft (0°-195°)  $b$  = 209.4 ft (125°-258°)  
 Largest single area: 33824 ft<sup>2</sup> in depth: 375.0 ft

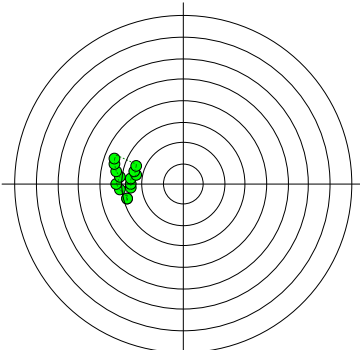




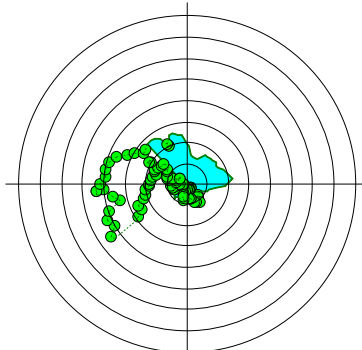
SOCON Sonar Well Services, Inc.

## Horizontal slices 1 - 12

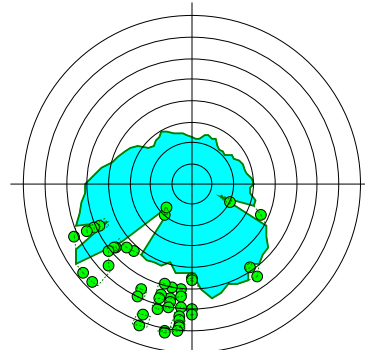
█ Cavity: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 Report number: 213082 Date: 09



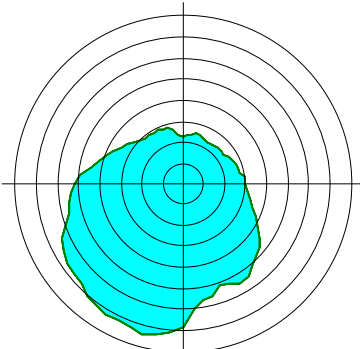
335.0 ft / 466 ft<sup>2</sup>



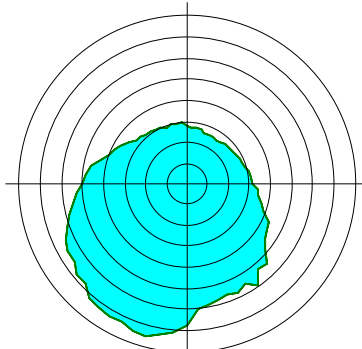
340.0 ft / 5097 ft<sup>2</sup>



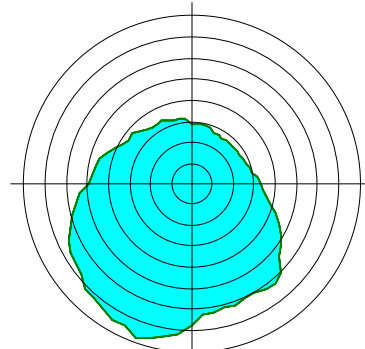
345.0 ft / 20026 ft<sup>2</sup>



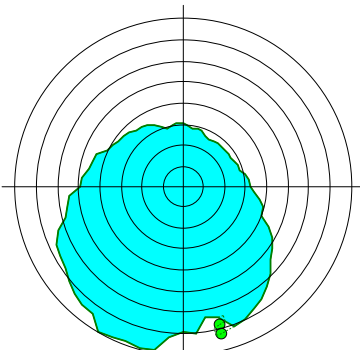
350.0 ft / 26160 ft<sup>2</sup>



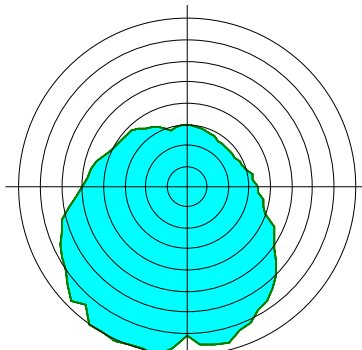
355.0 ft / 27853 ft<sup>2</sup>



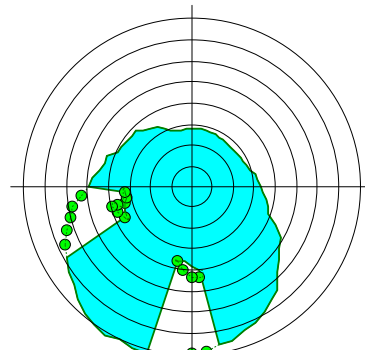
360.0 ft / 30182 ft<sup>2</sup>



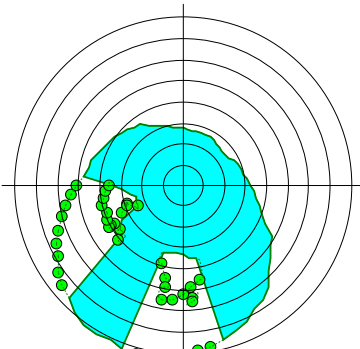
365.0 ft / 32008 ft<sup>2</sup>



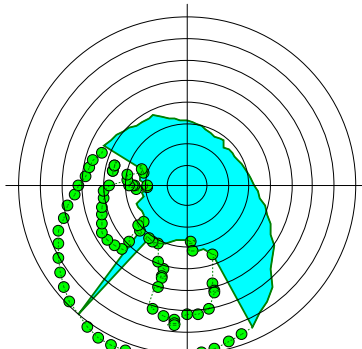
370.0 ft / 33707 ft<sup>2</sup>



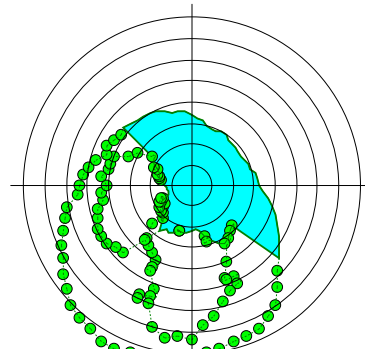
375.0 ft / 33824 ft<sup>2</sup> (max)



380.0 ft / 32235 ft<sup>2</sup>



385.0 ft / 30477 ft<sup>2</sup>



390.0 ft / 26883 ft<sup>2</sup>

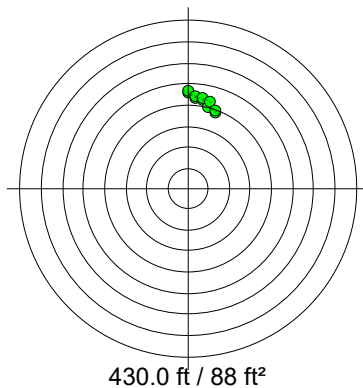
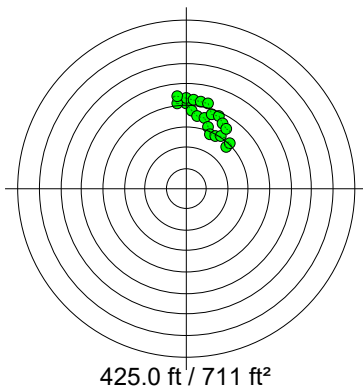
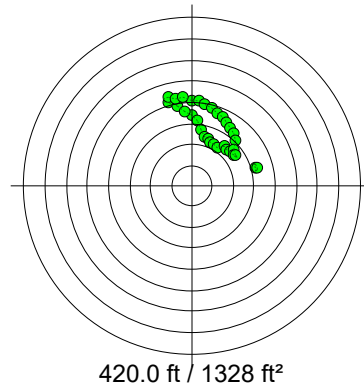
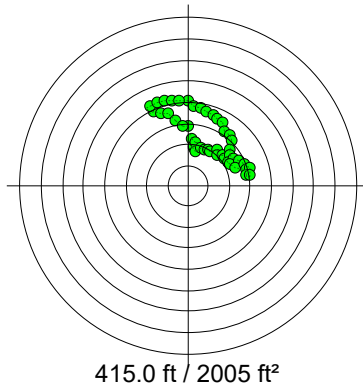
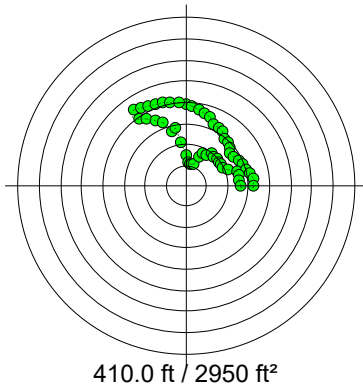
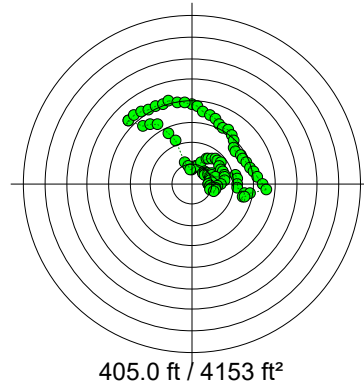
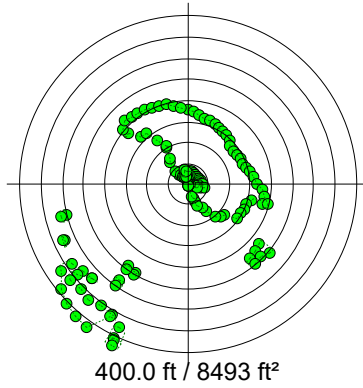
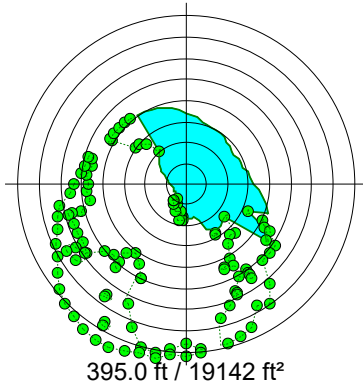
The distance between 2 circles equals 20 ft



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## Horizontal slices 13 - 20

 Cavity: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 Report number: 213082 Date: 09

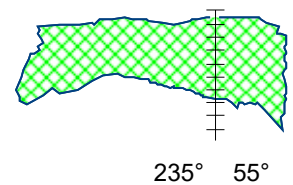
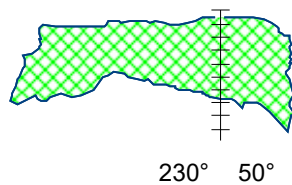
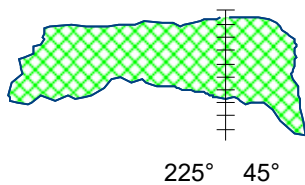
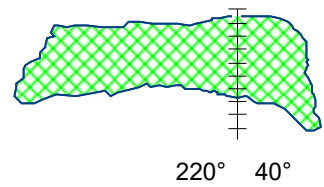
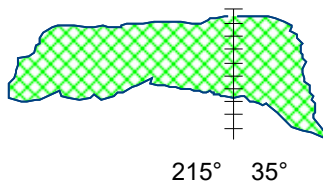
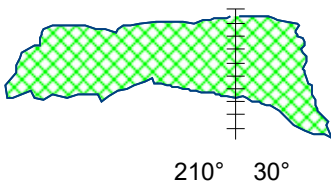
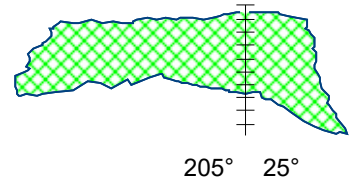
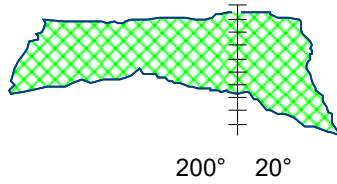
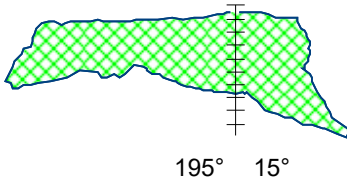
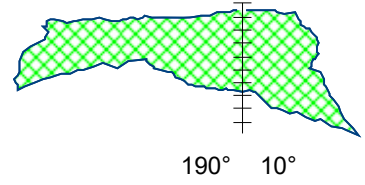
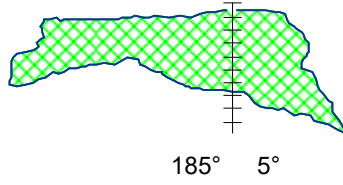
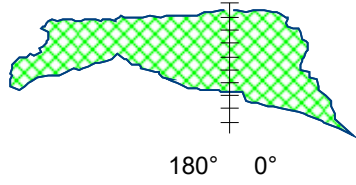




SOCON Sonar Well Services, Inc.

## Vertical slices 1 - 12

 Cavity: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 Report number: 213082 Date: 09



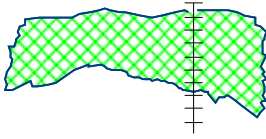
Range from 332 ft to 431 ft, step 10 ft



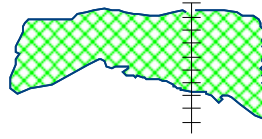
SOCON Sonar Well Services, Inc.

## Vertical slices 13 - 24

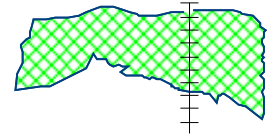
 Cavity: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 Report number: 213082 Date: 09



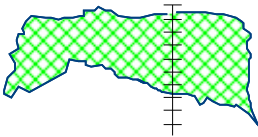
240° 60°



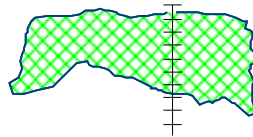
245° 65°



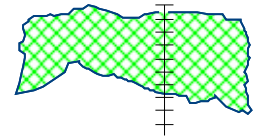
250° 70°



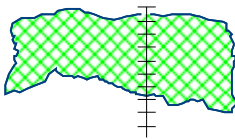
255° 75°



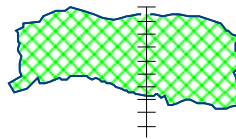
260° 80°



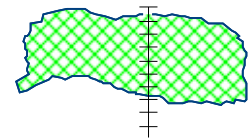
265° 85°



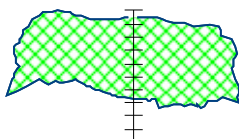
270° 90°



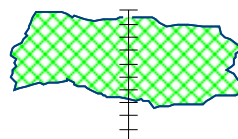
275° 95°



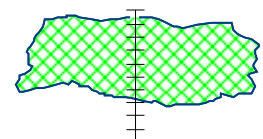
280° 100°



285° 105°



290° 110°



295° 115°

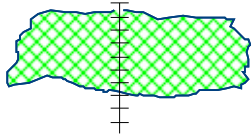
Range from 332 ft to 431 ft, step 10 ft



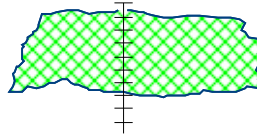
SOCON Sonar Well Services, Inc.

## Vertical slices 25 - 36

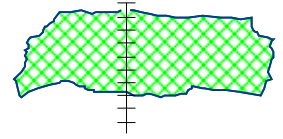
 Cavity: Carlsbad\_Well\_GW-3\_GW-4\_GW-5\_GW-13 Report number: 213082 Date: 09



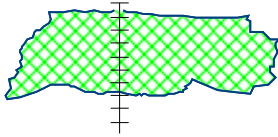
300° 120°



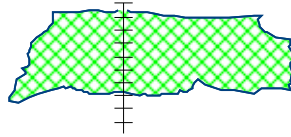
305° 125°



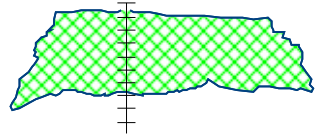
310° 130°



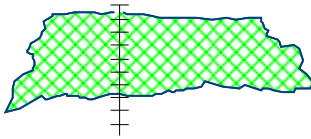
315° 135°



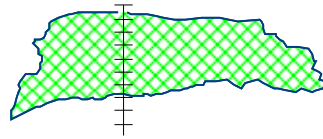
320° 140°



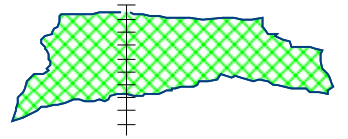
325° 145°



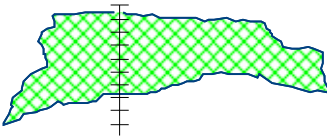
330° 150°



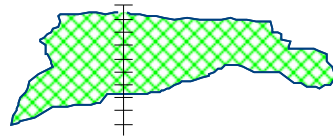
335° 155°



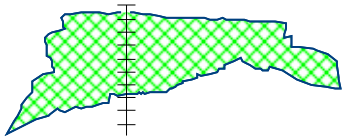
340° 160°



345° 165°



350° 170°



355° 175°

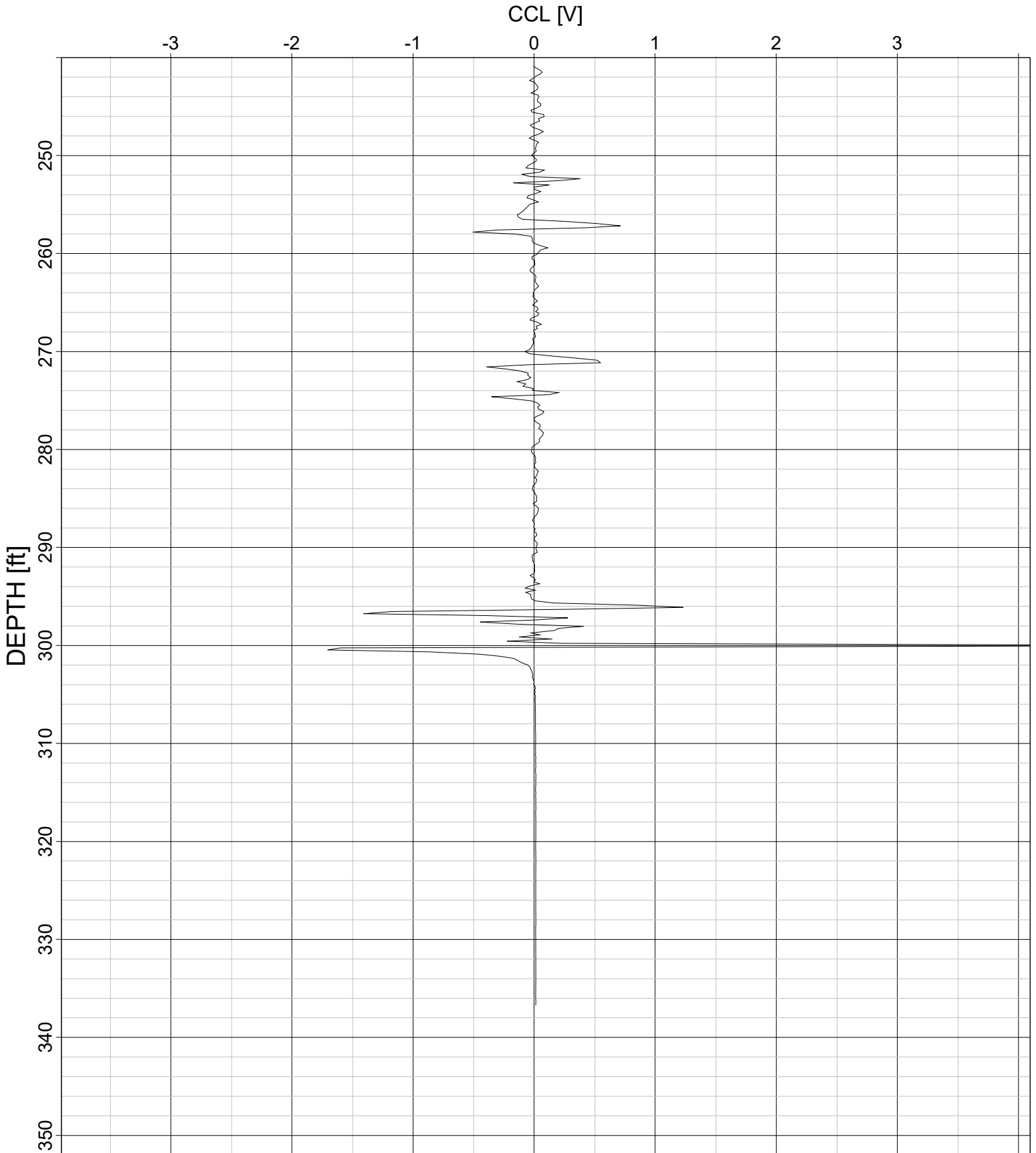
Range from 332 ft to 431 ft, step 10 ft



**Carlsbad Well Reference GW-5**

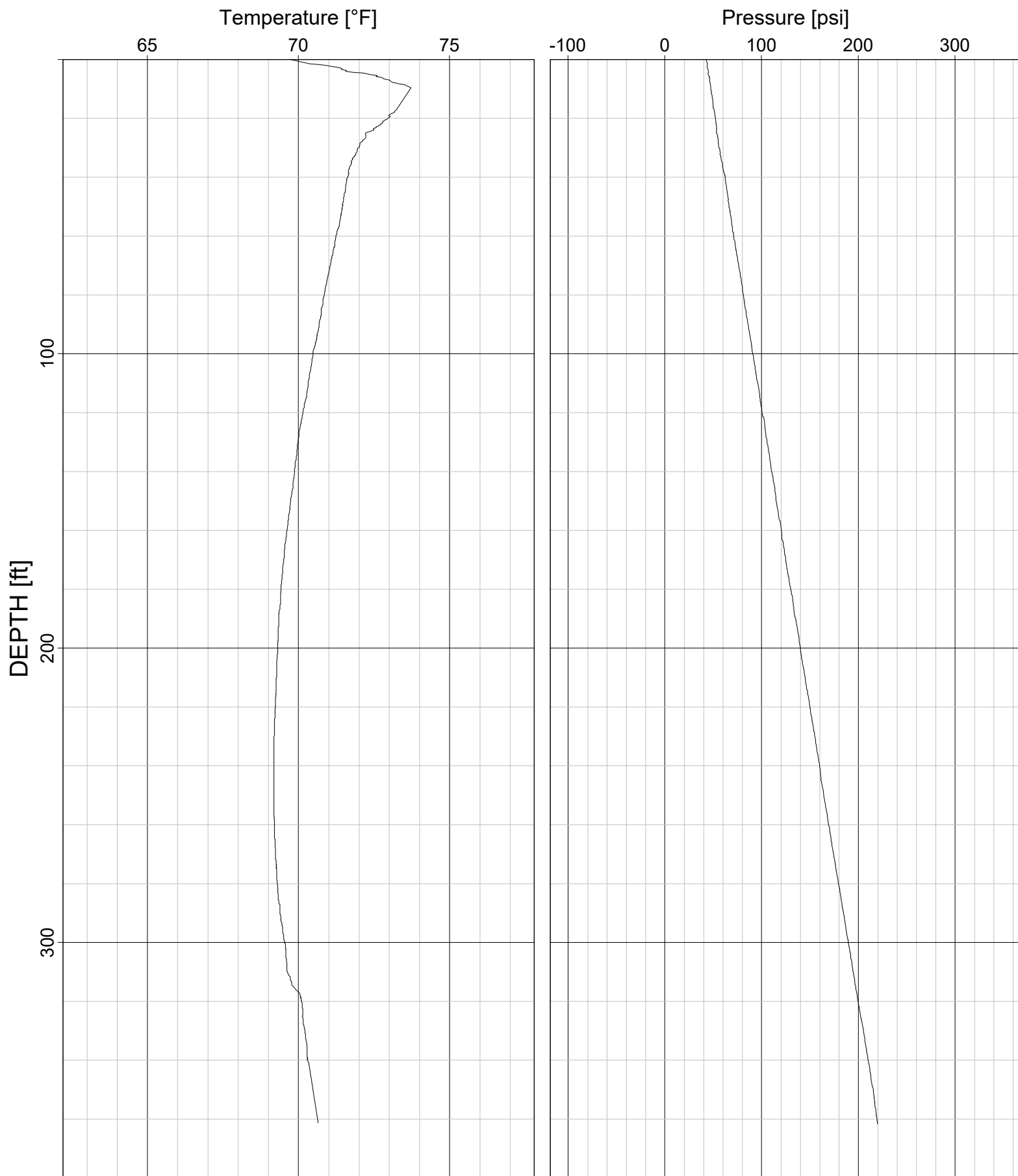
**09/28/2021**

7" Casing Shoe @ 300 ft



**Carlsbad Well Reference GW-5**

**09/28/2021**



VOLUME COMPARISON

09/28/2021

1 inch:50 ft



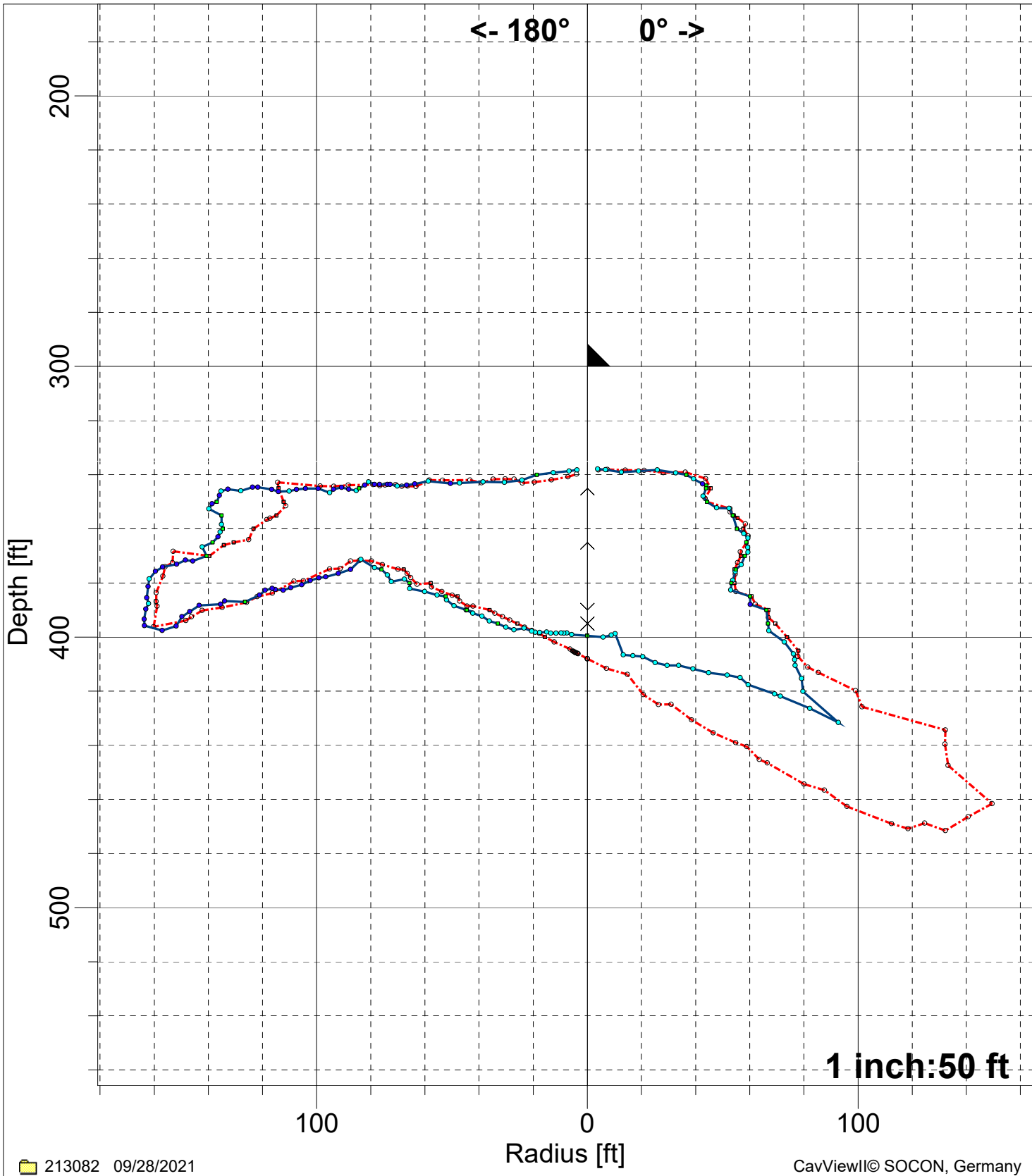
213082 09/28/2021

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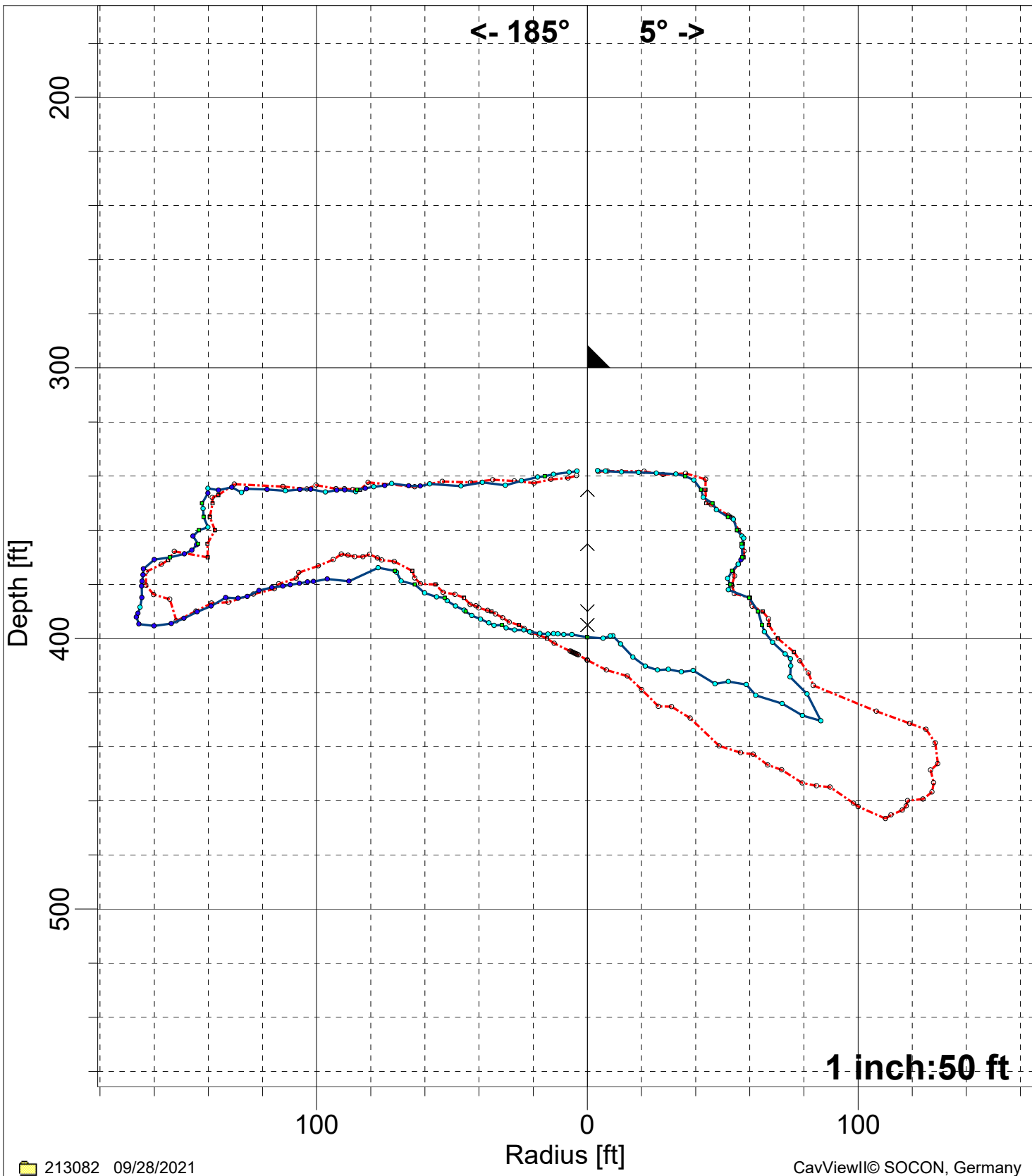
— Total volume = 300757.3 bbls

— Total volume = 374314.6 bbls (05/29/2020)

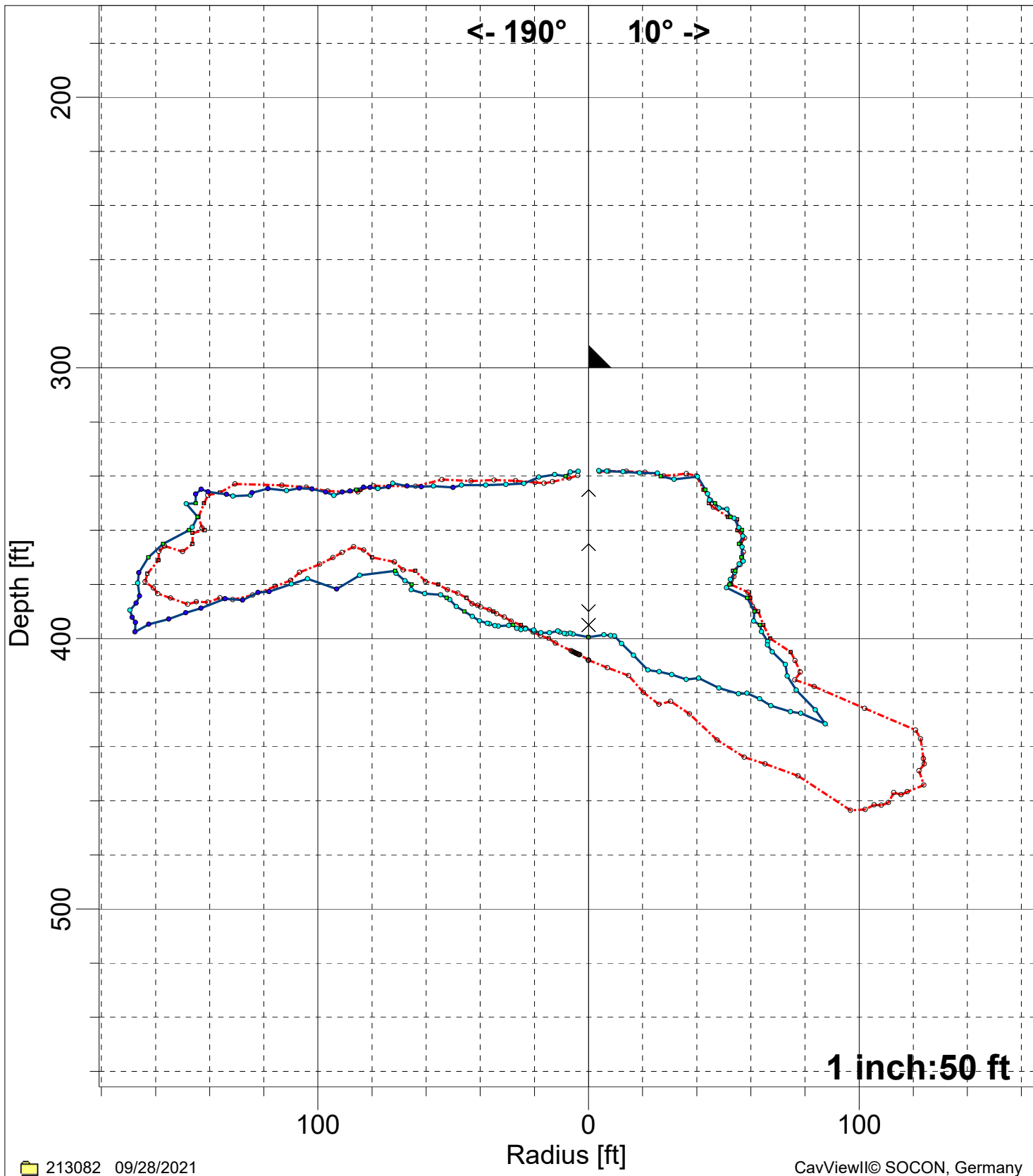




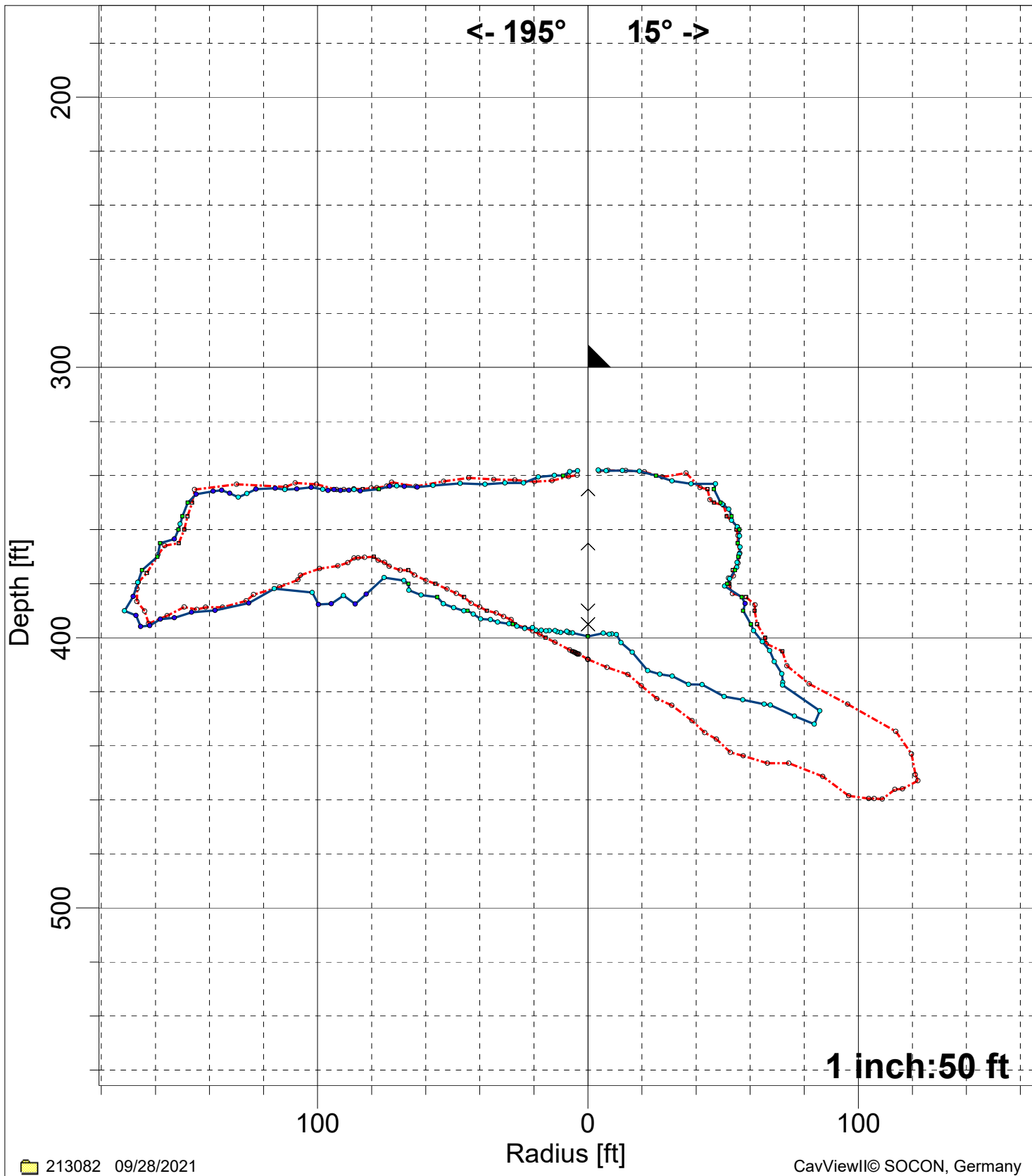
—●— (09/28/2021)	- - -●- - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



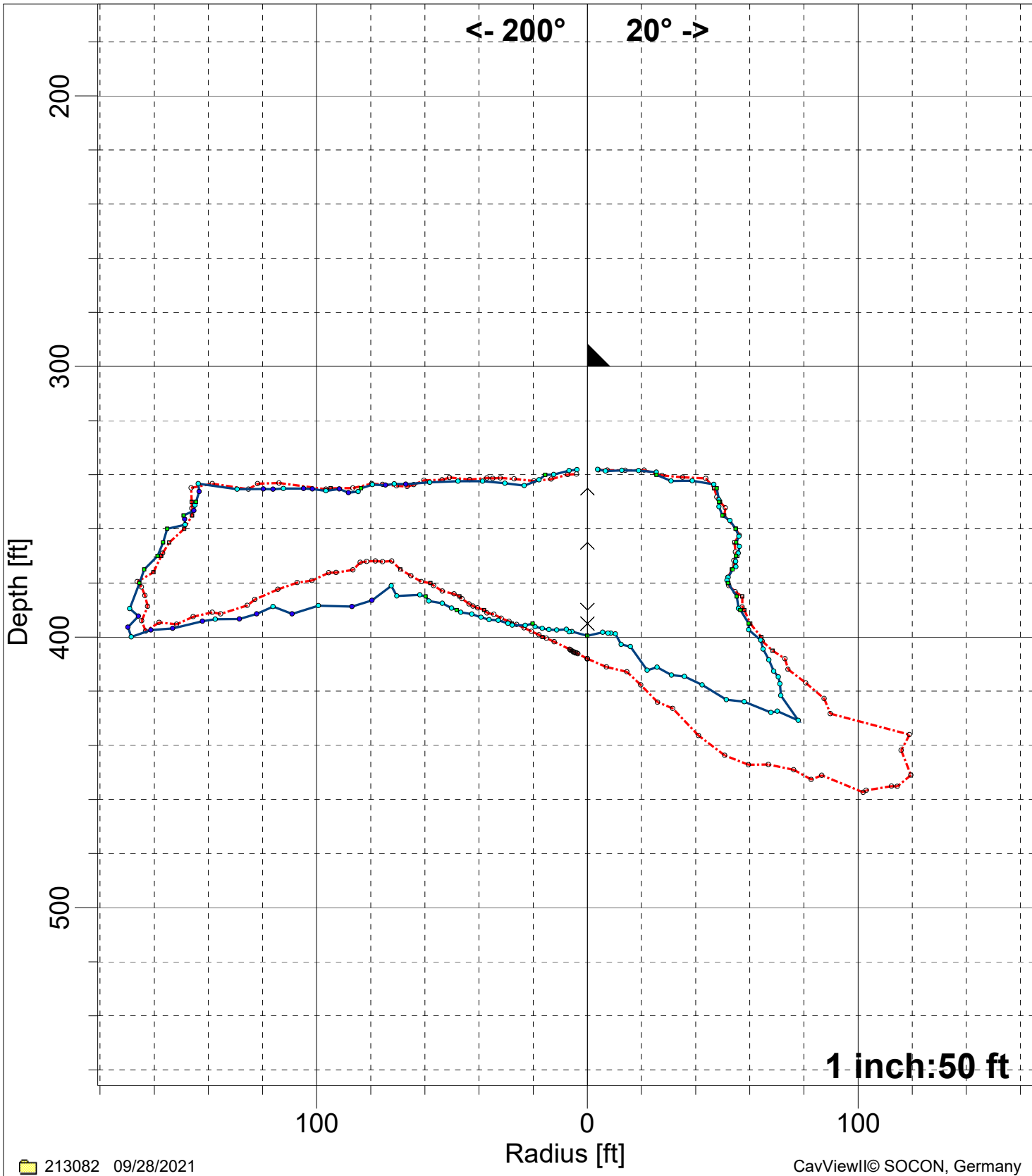
—●— (09/28/2021)	- - -○- - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



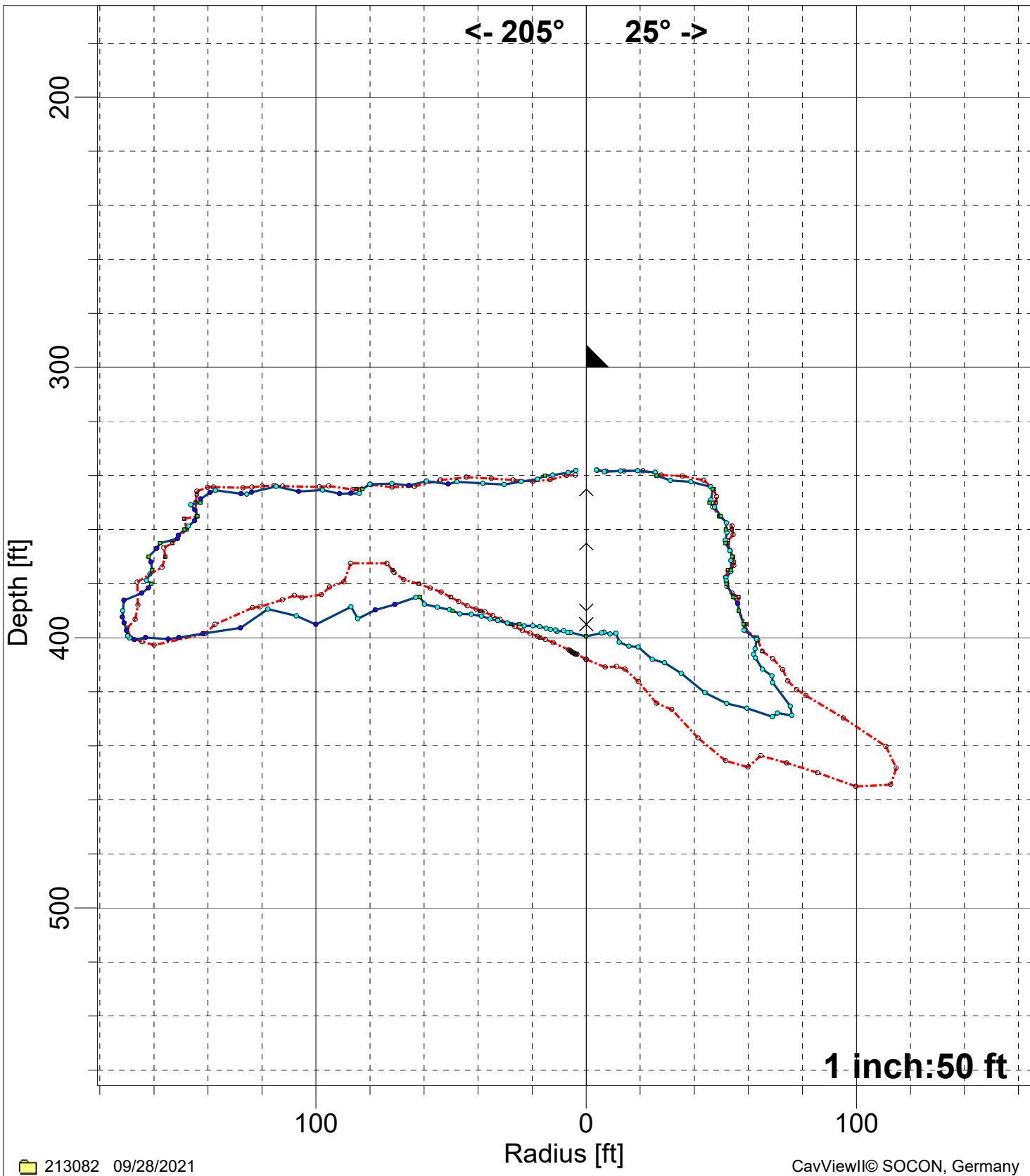
<p>213082 09/28/2021</p>	<p>(09/28/2021)</p>	<p>(05/29/2020)</p>	<p>7" : 300.0 ft</p>
<p>∨ ^ Tilting position</p>			



—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



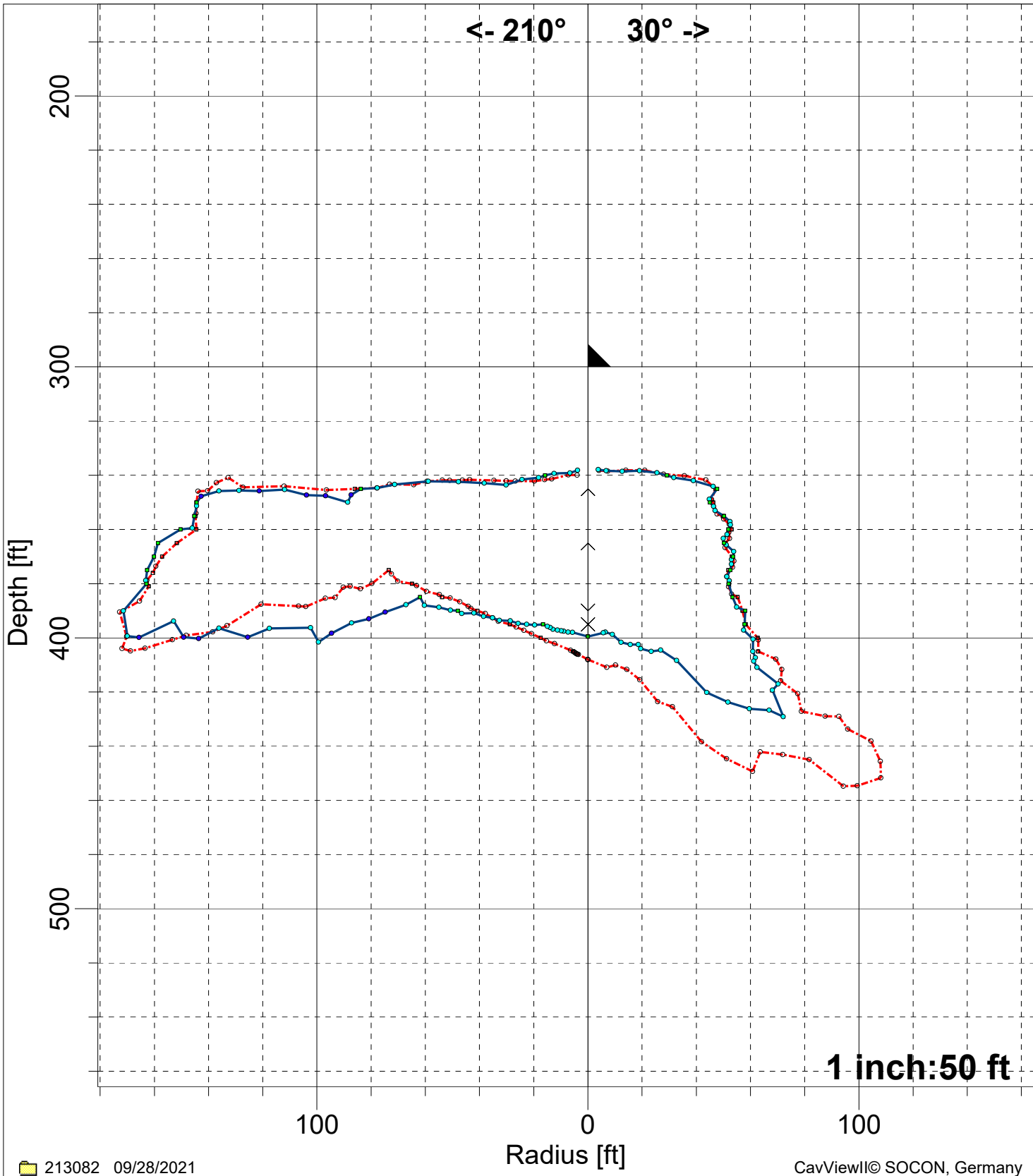
—●— (09/28/2021)	- - -○- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



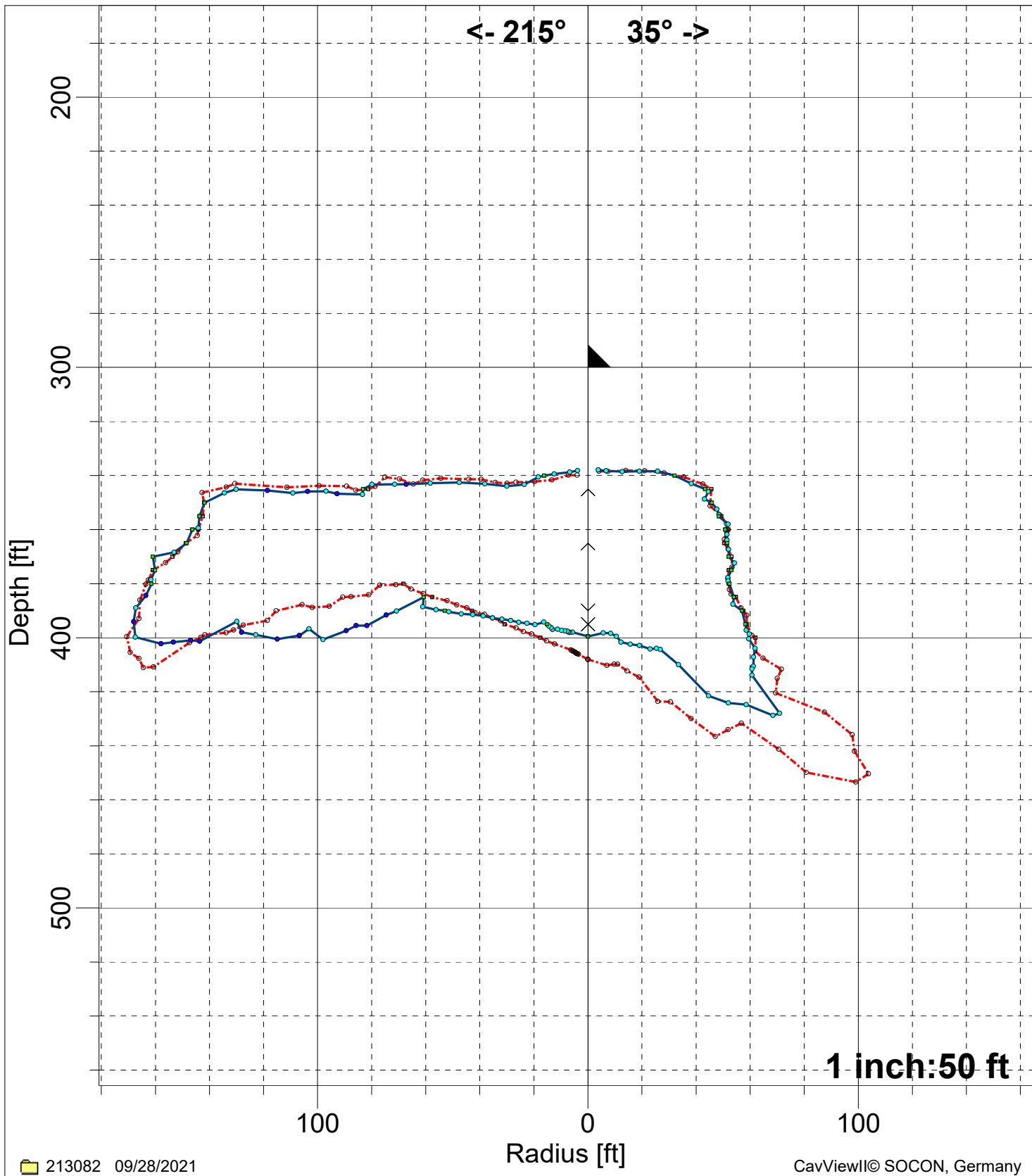
213082 09/28/2021

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(09/28/2021)	(05/29/2020)	7" : 300.0 ft
Tilting position		



—●— (09/28/2021)	- - - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



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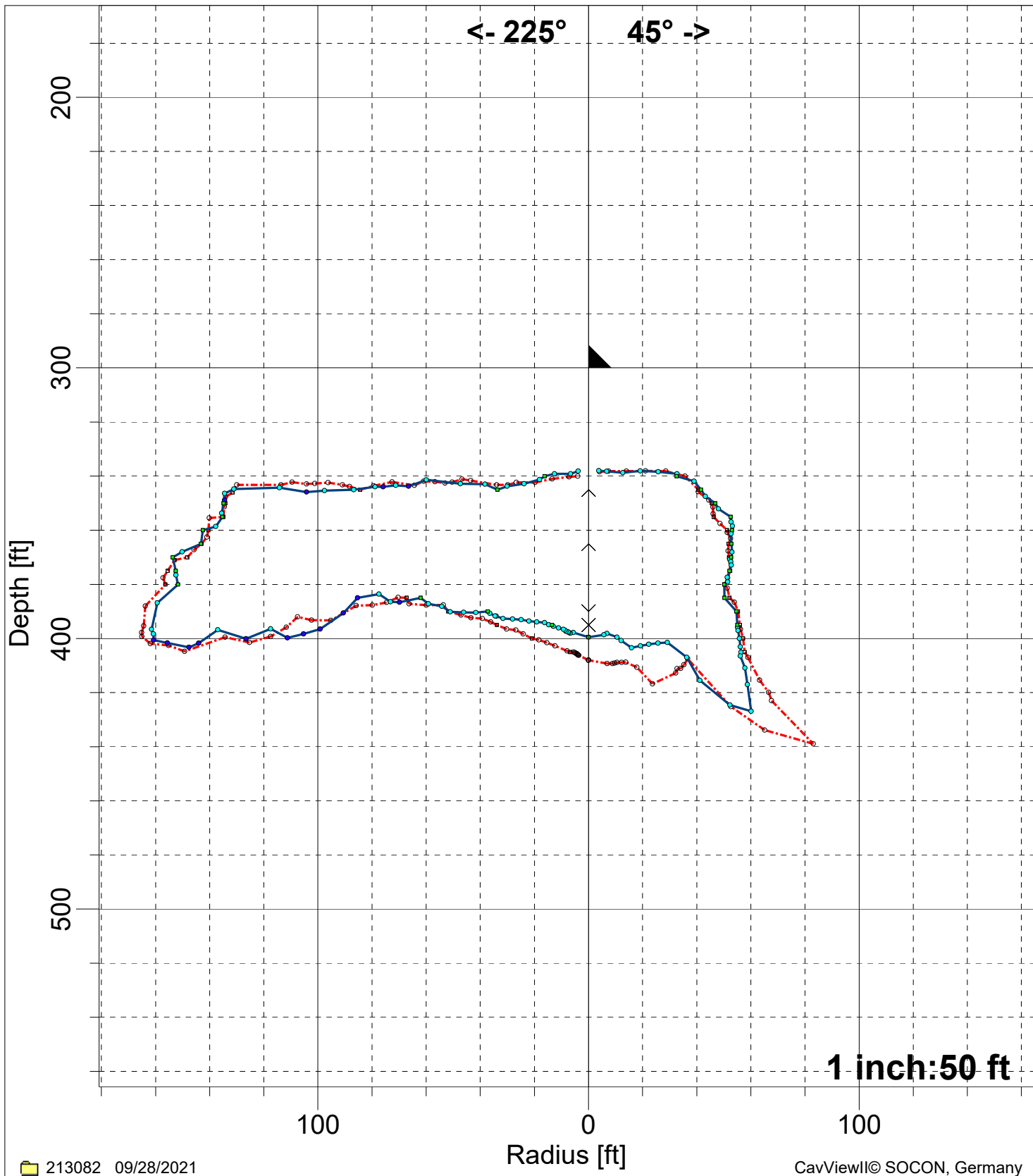
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—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		

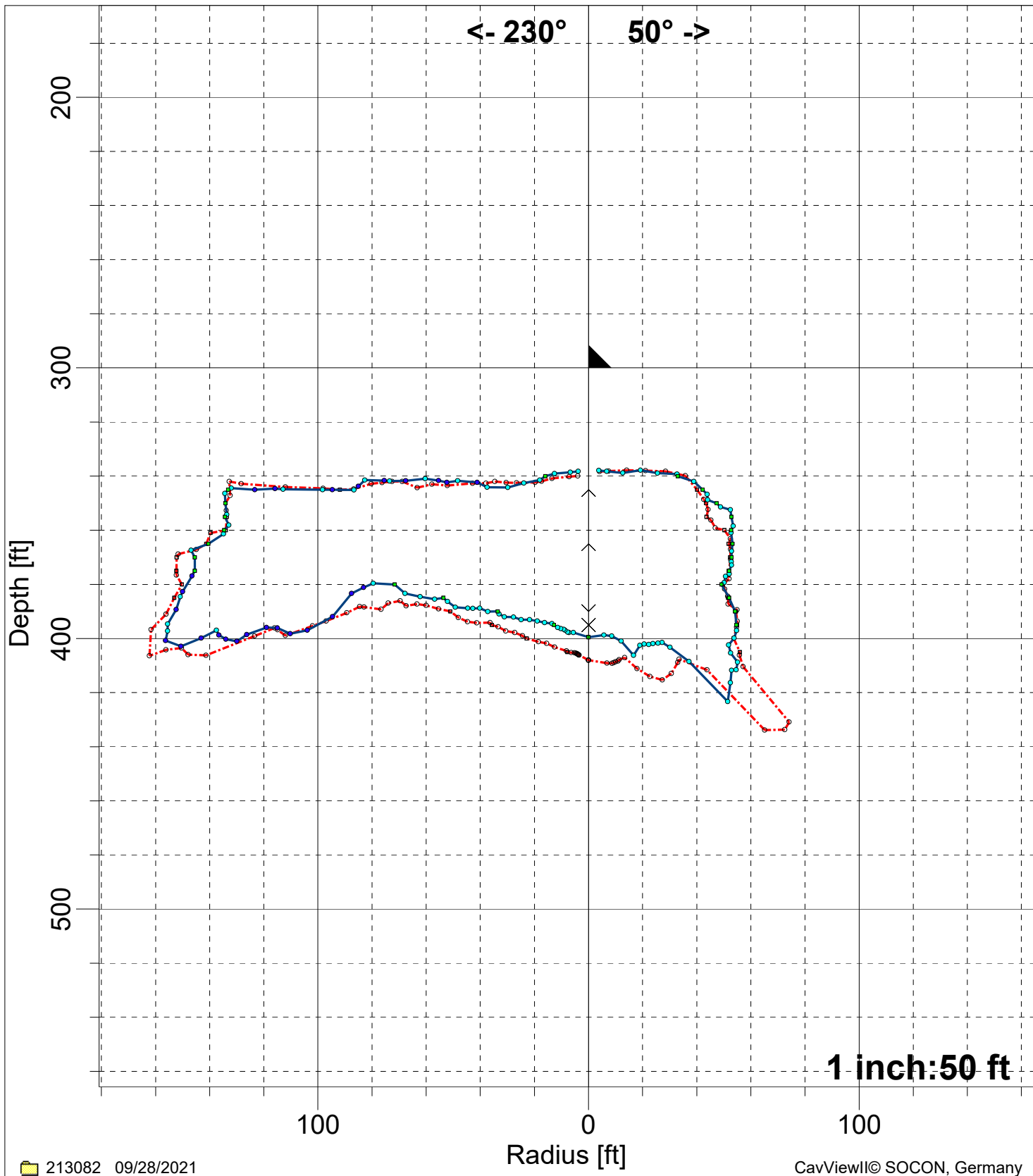




(09/28/2021)	(05/29/2020)	7" : 300.0 ft
Tilting position		



<p>—●— (09/28/2021)</p>	<p>- - -●- (05/29/2020)</p>	<p>▲ 7" : 300.0 ft</p>
<p>∨ ^ Tilting position</p>		



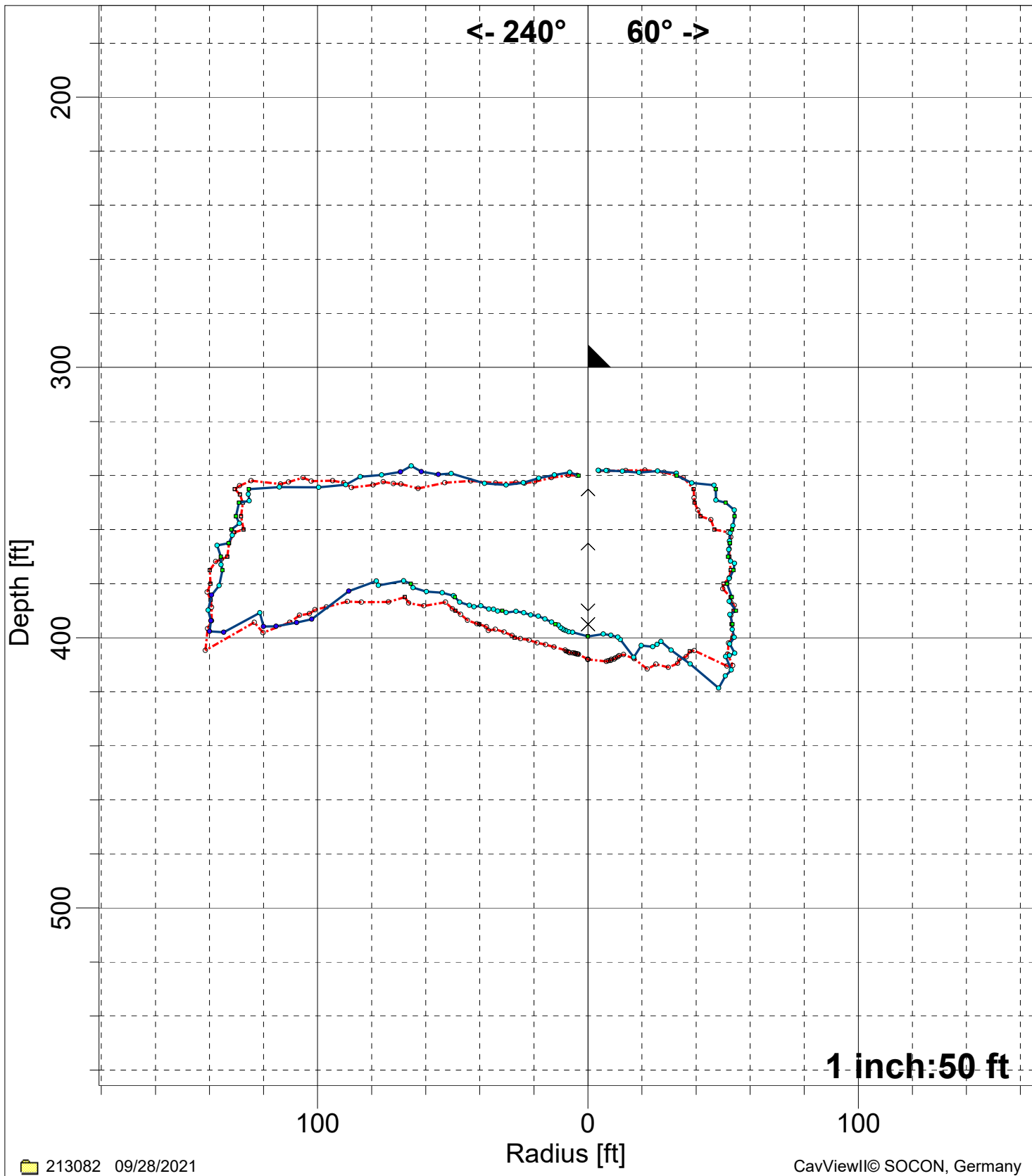
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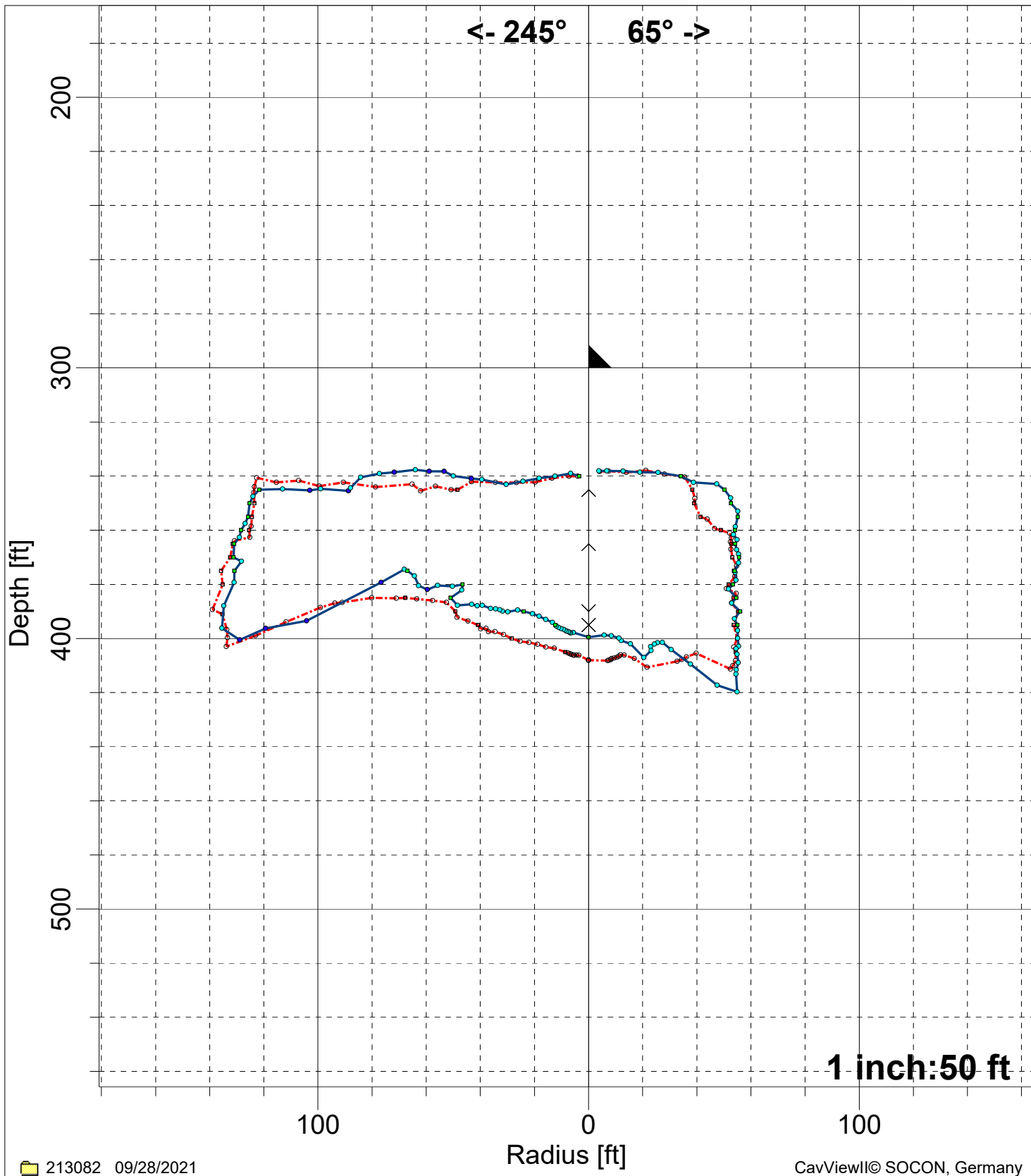
<p>—●— (09/28/2021)</p>	<p>- - -●- - (05/29/2020)</p>	<p>▲ 7" : 300.0 ft</p>
<p>∨ ^ Tilting position</p>		



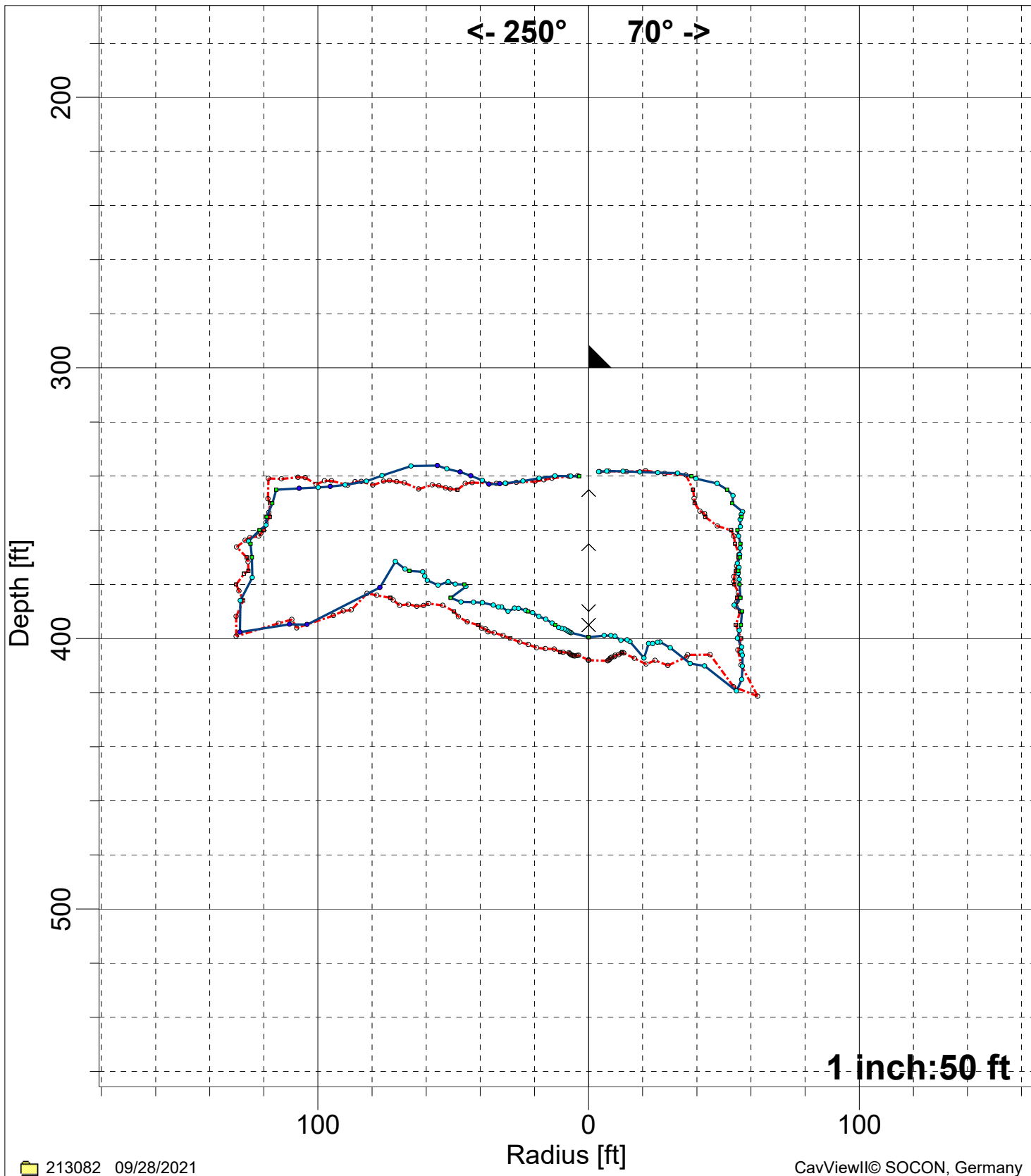
(09/28/2021)	(05/29/2020)	7" : 300.0 ft
Tilting position		



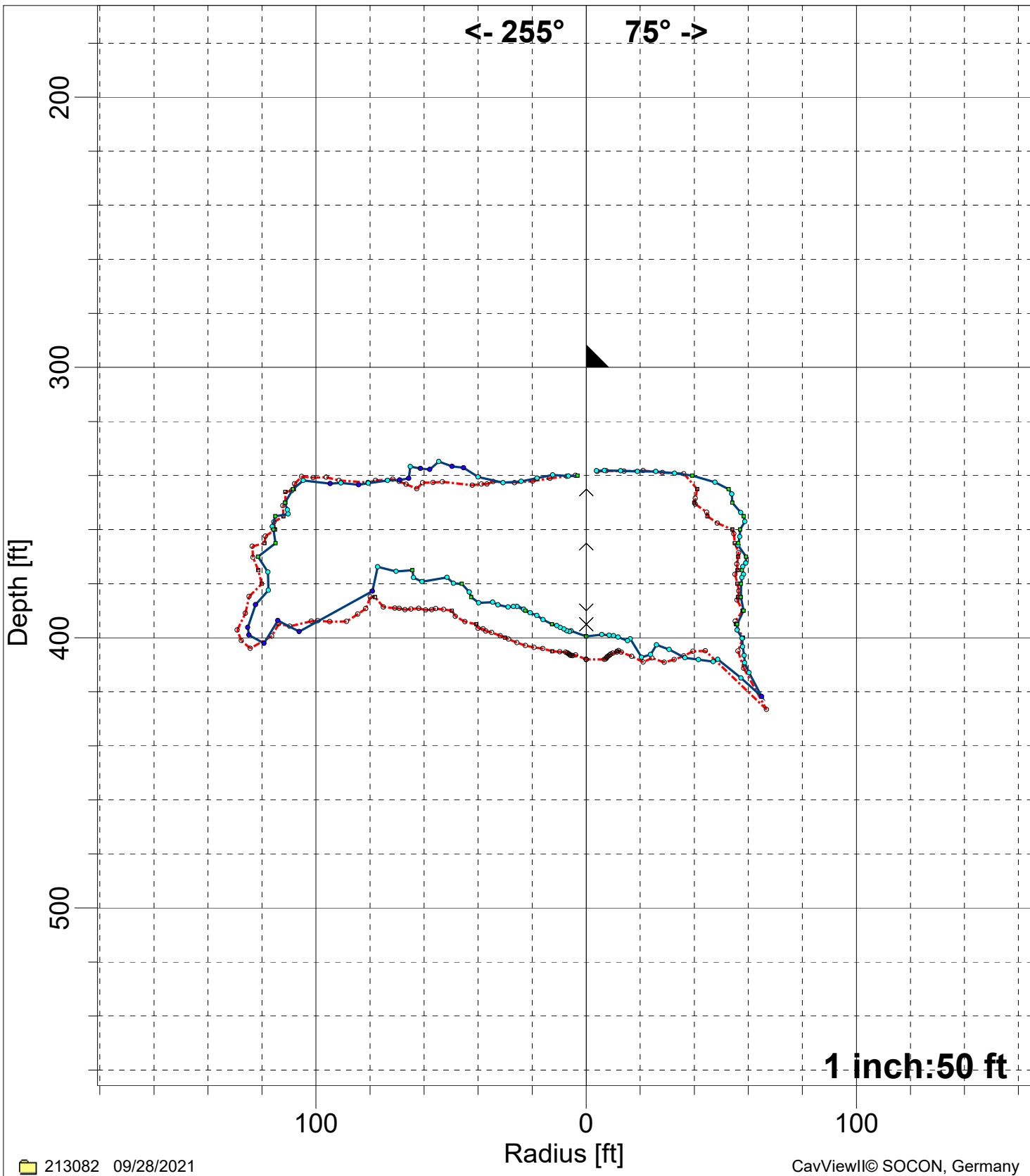
<span style="color: blue;">—●—</span> (09/28/2021)	<span style="color: red;">- - - ○ - - -</span> (05/29/2020)	<span style="color: black;">▲</span> 7" : 300.0 ft
<span style="color: black;">∨</span> <span style="color: black;">∧</span> Tilting position		



<span style="color: blue;">—●—</span> (09/28/2021)	<span style="color: red;">- - - ● - - -</span> (05/29/2020)	<span style="color: black;">▲</span> 7" : 300.0 ft
<span style="color: black;">∨</span> <span style="color: black;">∧</span> Tilting position		



<span style="color: blue;">—●—</span> (09/28/2021)	<span style="color: red;">- - - ● - - -</span> (05/29/2020)	<span style="color: black;">▲</span> 7" : 300.0 ft
<span style="color: black;">∨ ^</span> Tilting position		

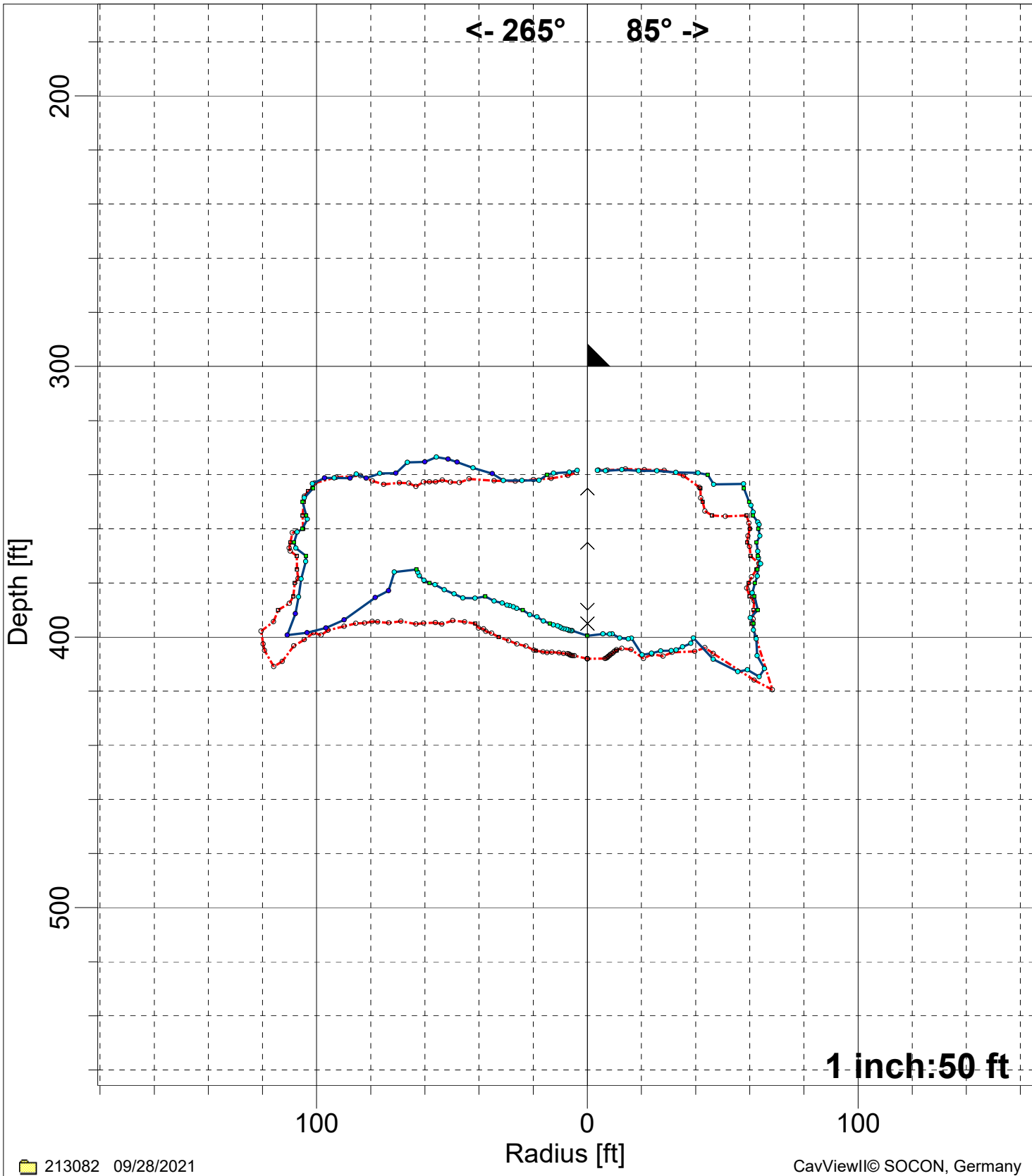


—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		





—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



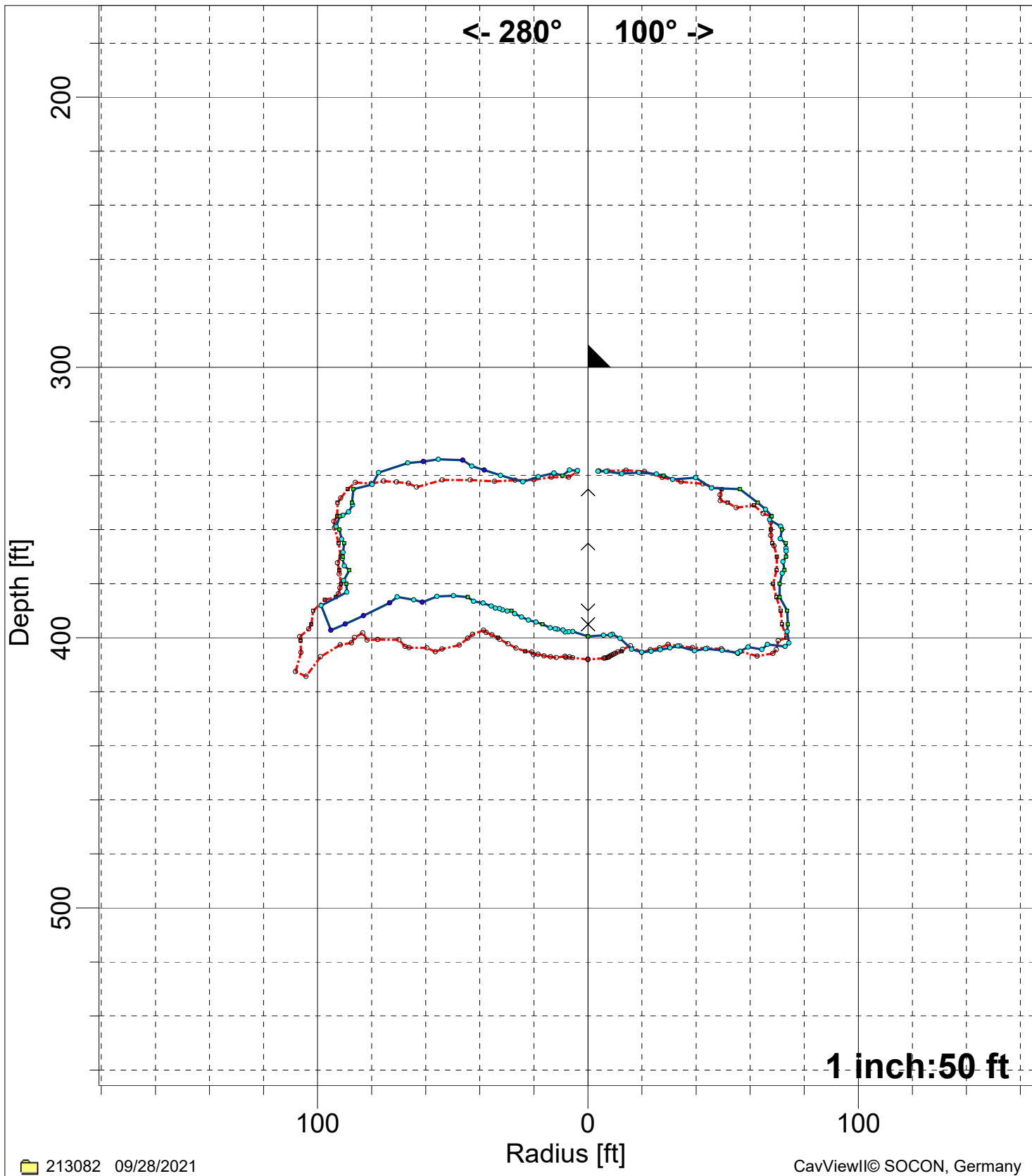
—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



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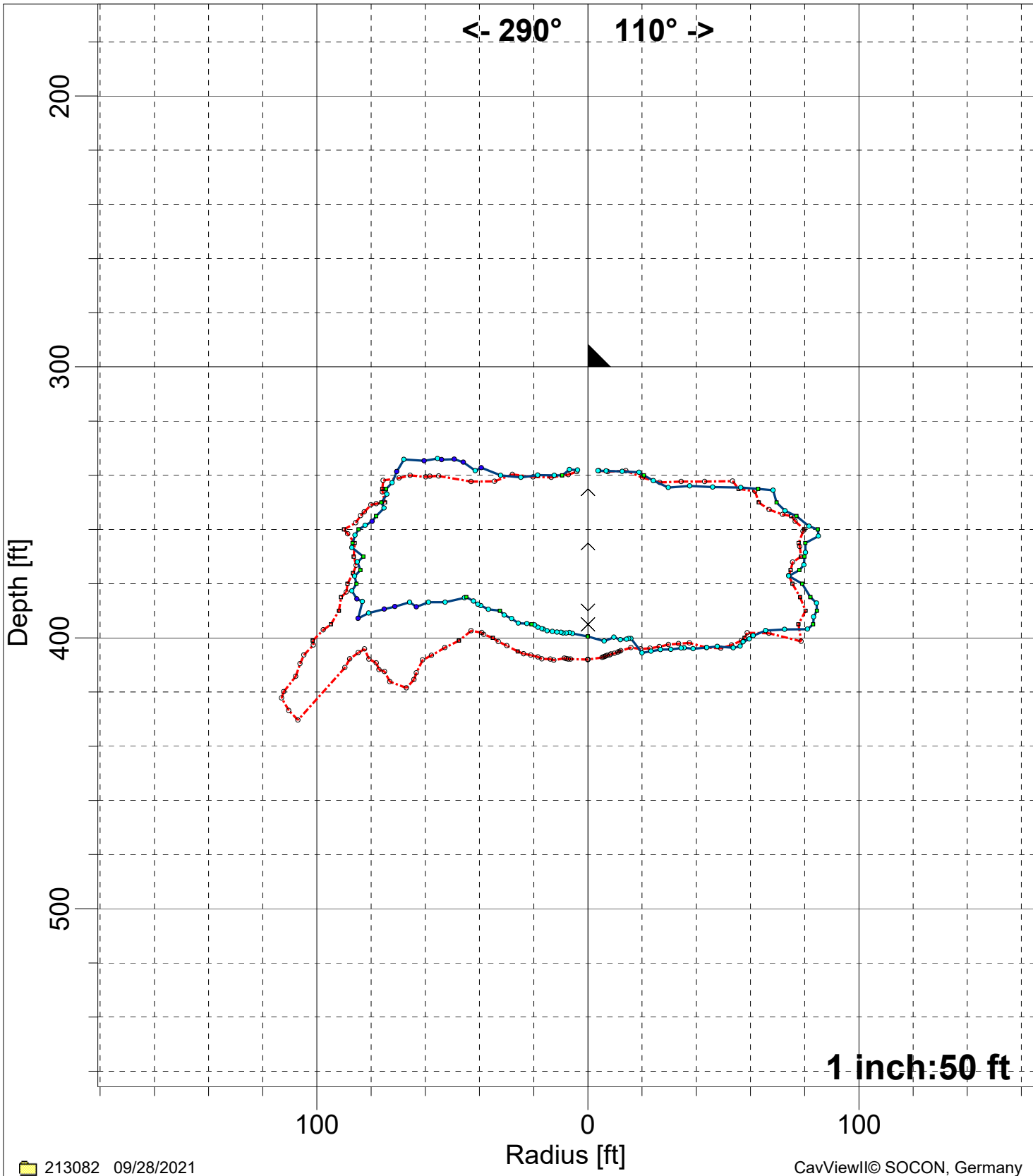
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∨ ^ Tilting position		



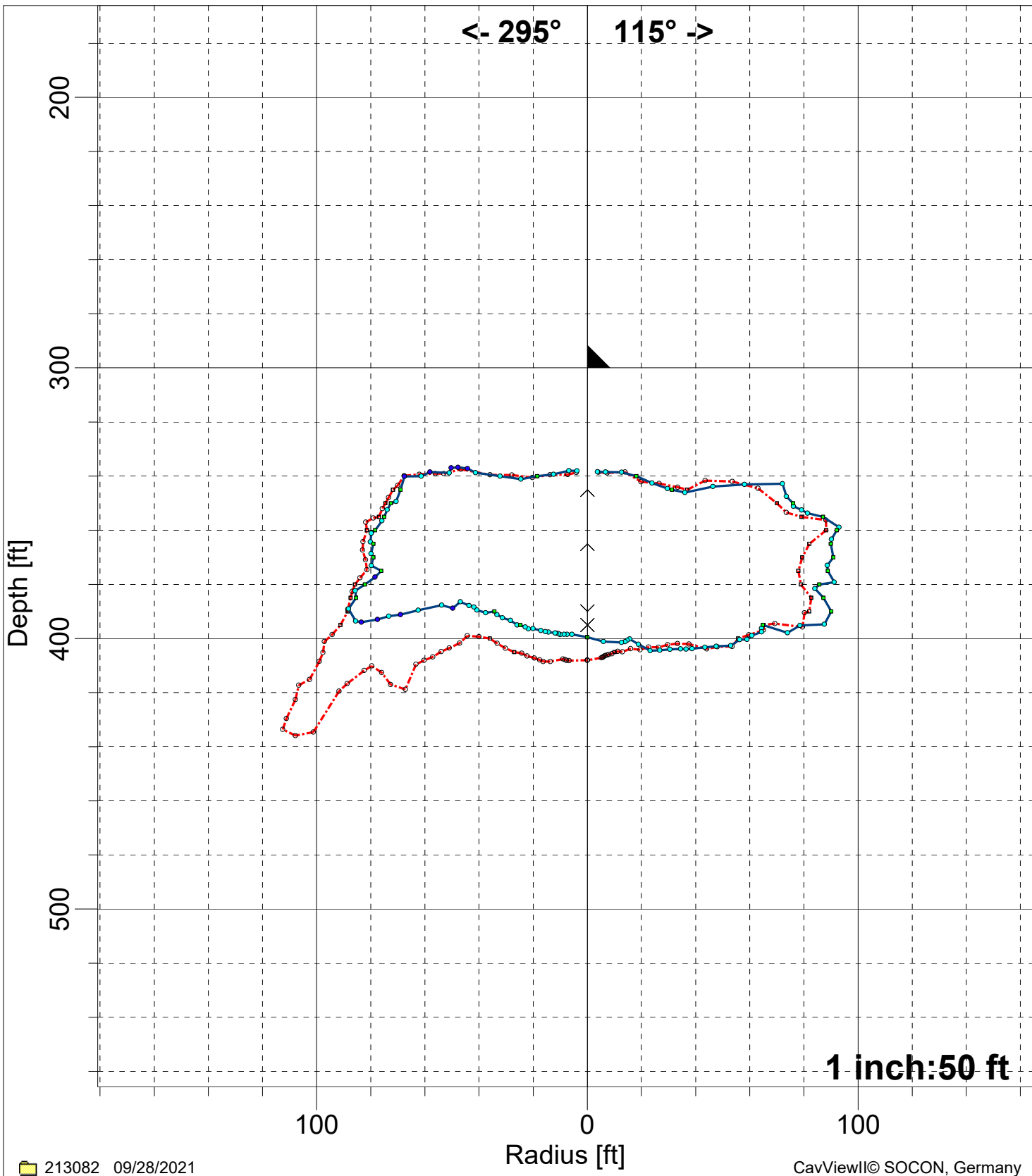
(09/28/2021)  
 ∨ ^ Tilting position

(05/29/2020)

▲ 7" : 300.0 ft

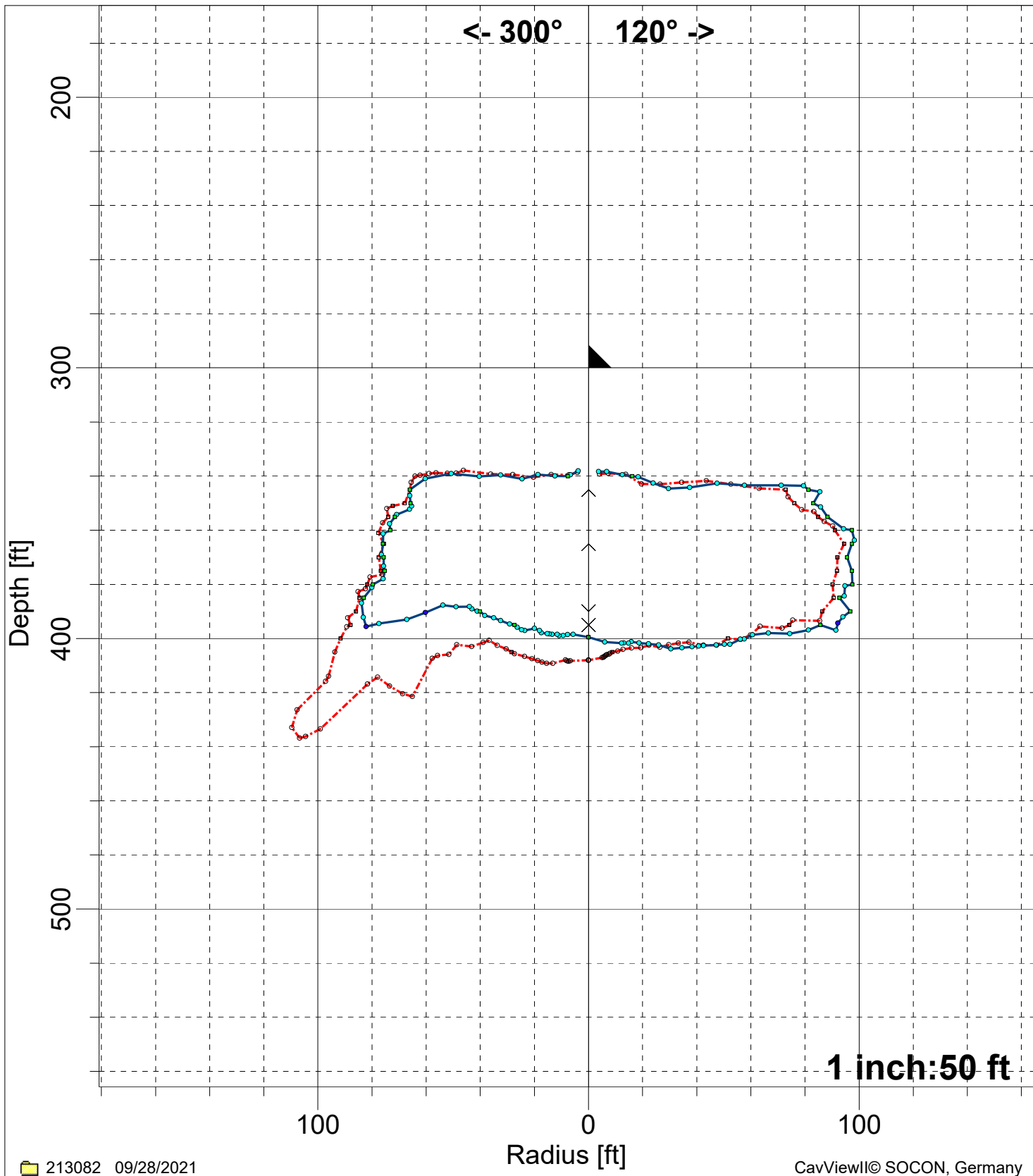


<span style="color: blue;">—●—</span> (09/28/2021)	<span style="color: red;">- - - ● - - -</span> (05/29/2020)	<span style="color: black;">▲</span> 7" : 300.0 ft
<span style="color: black;">∨ ^</span> Tilting position		

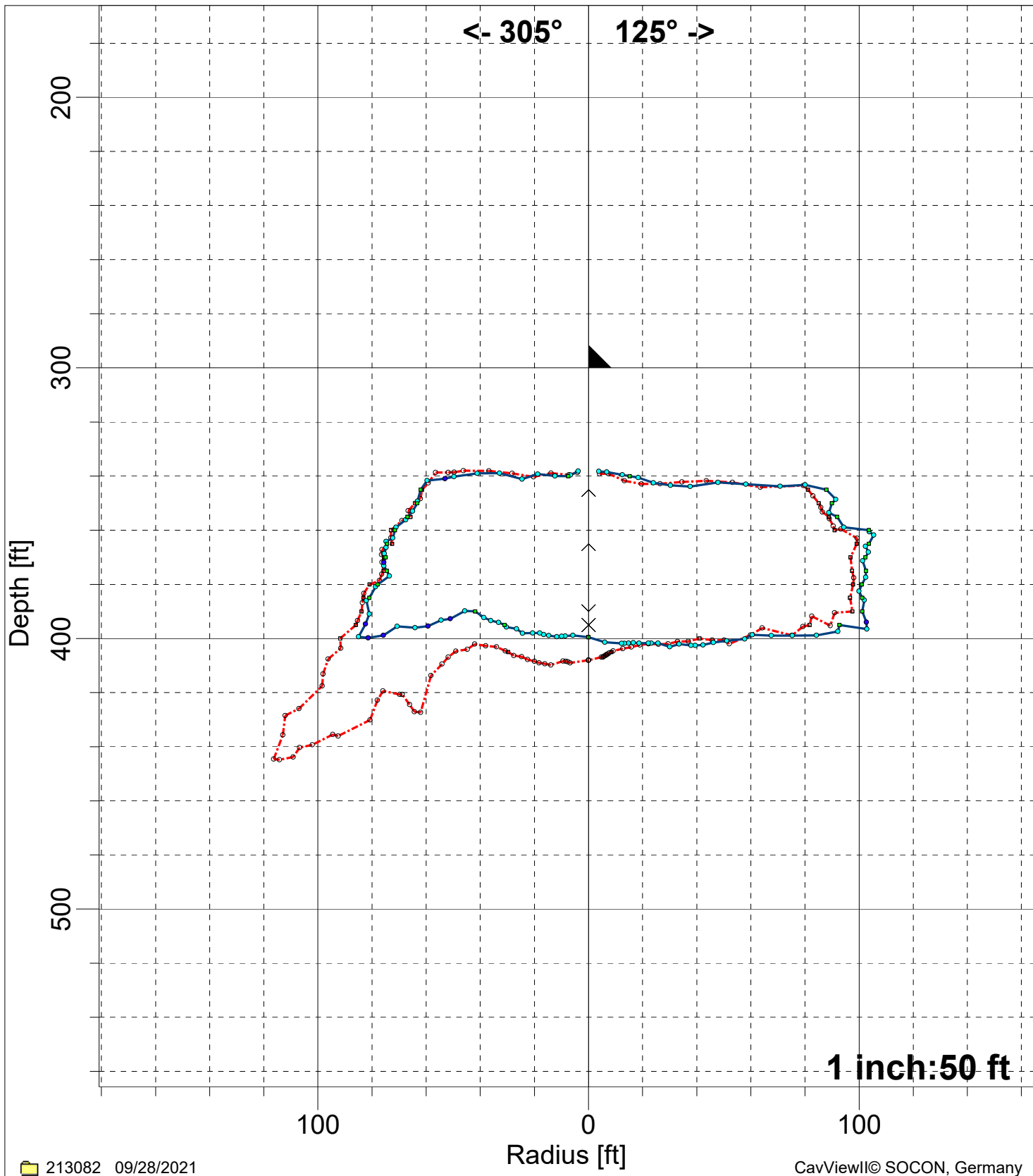


(09/28/2021)	(05/29/2020)	7" : 300.0 ft
Tilting position		

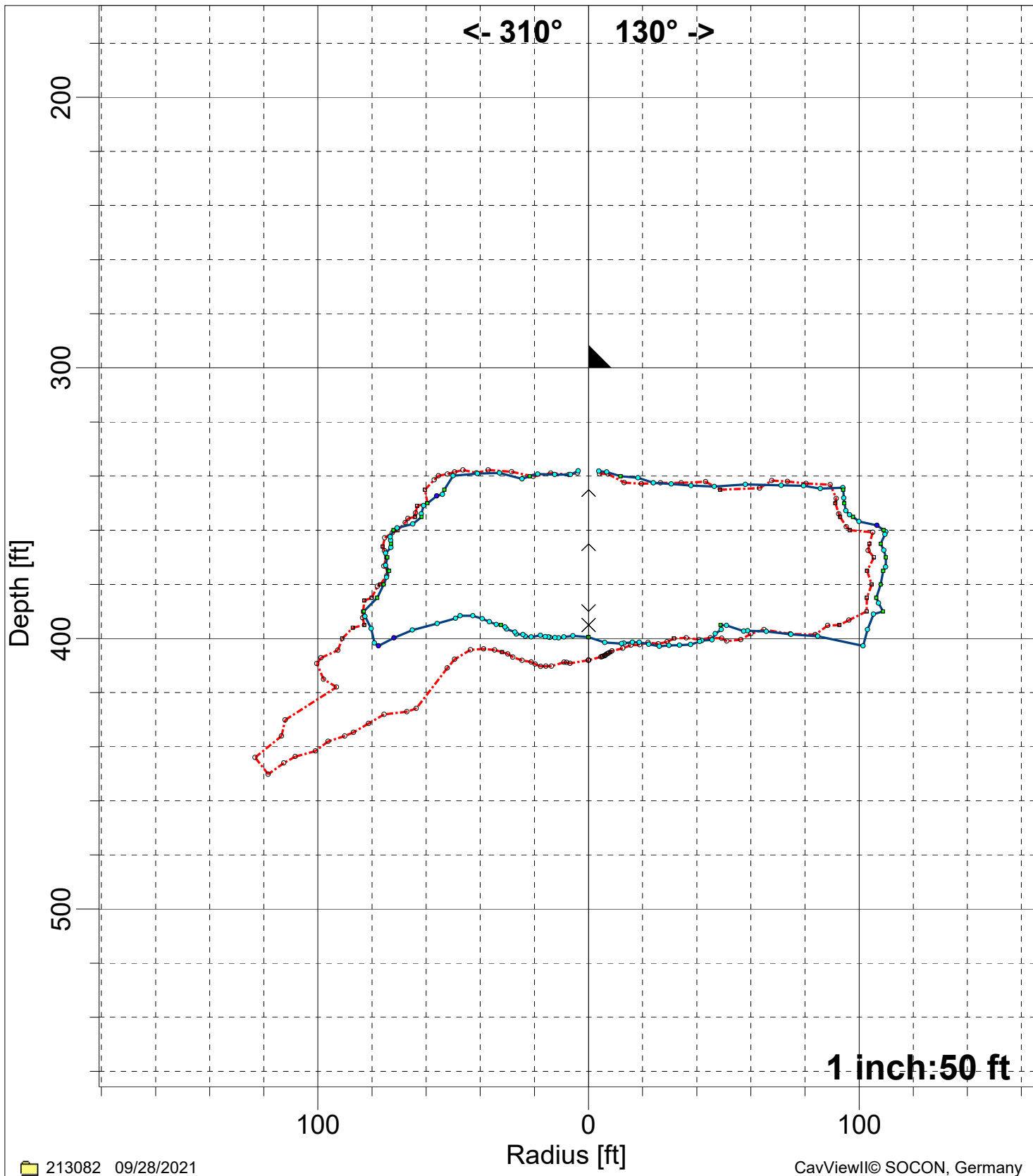




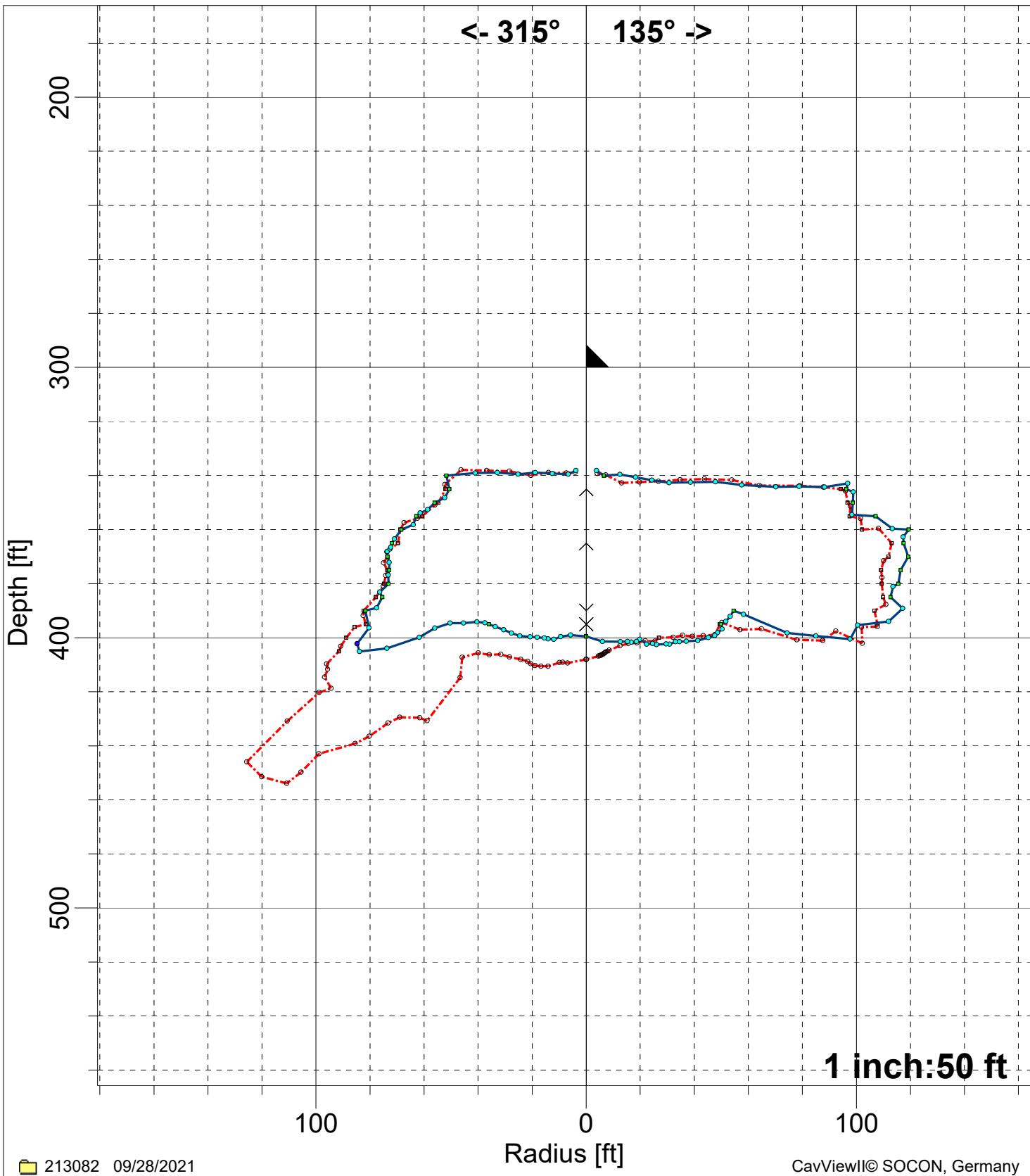
—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



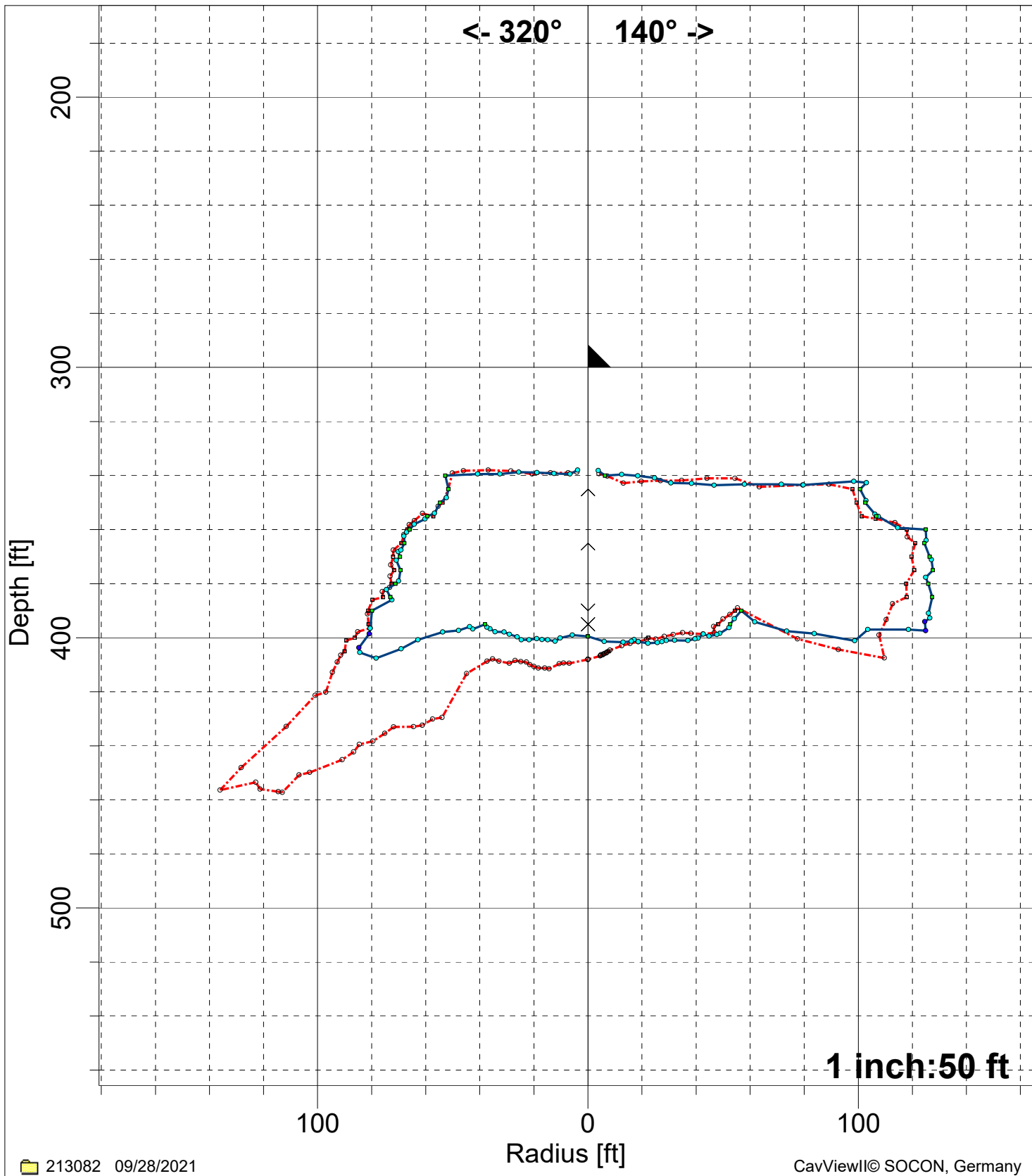
—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



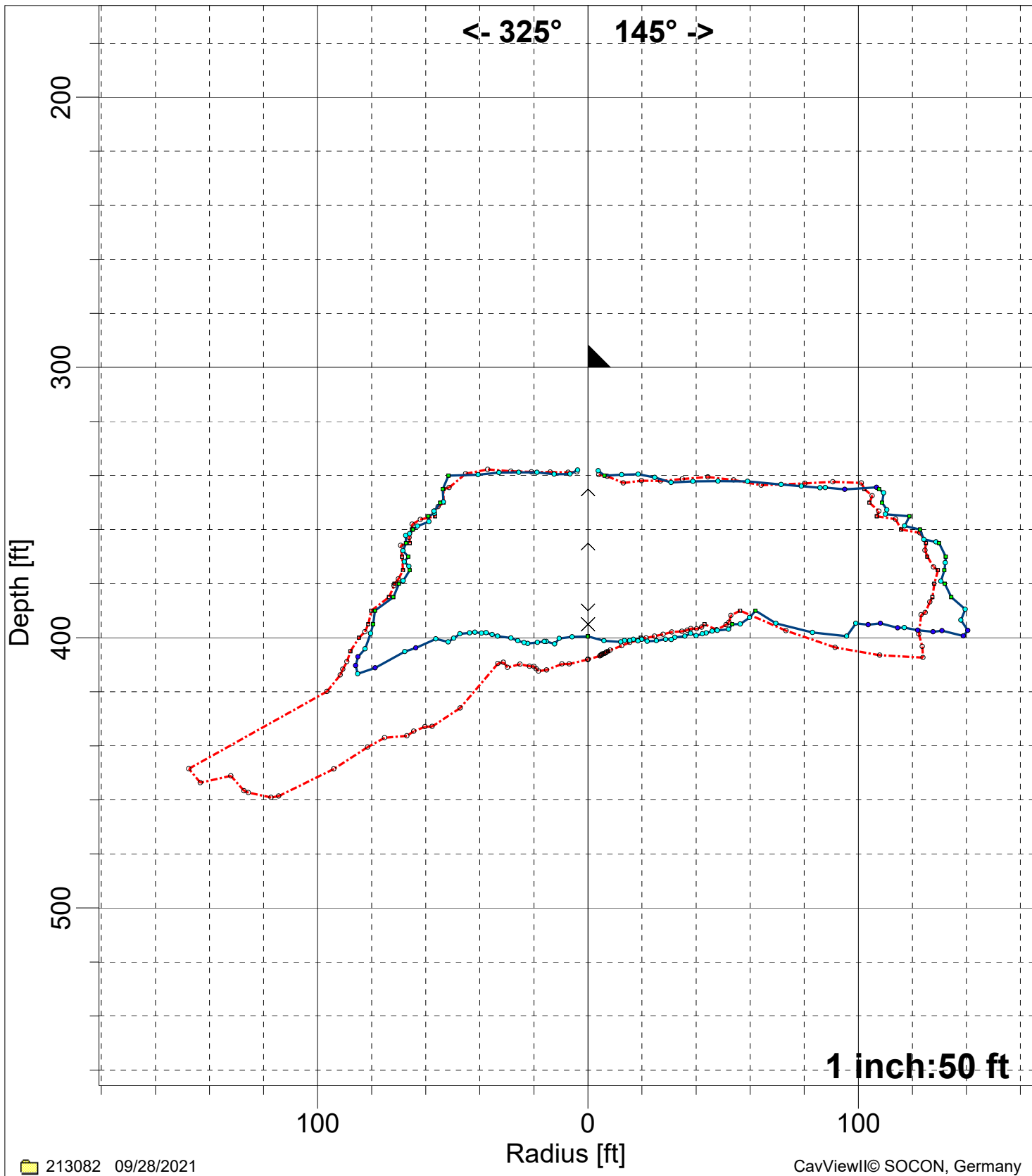
—●— (09/28/2021)	- - -●- - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



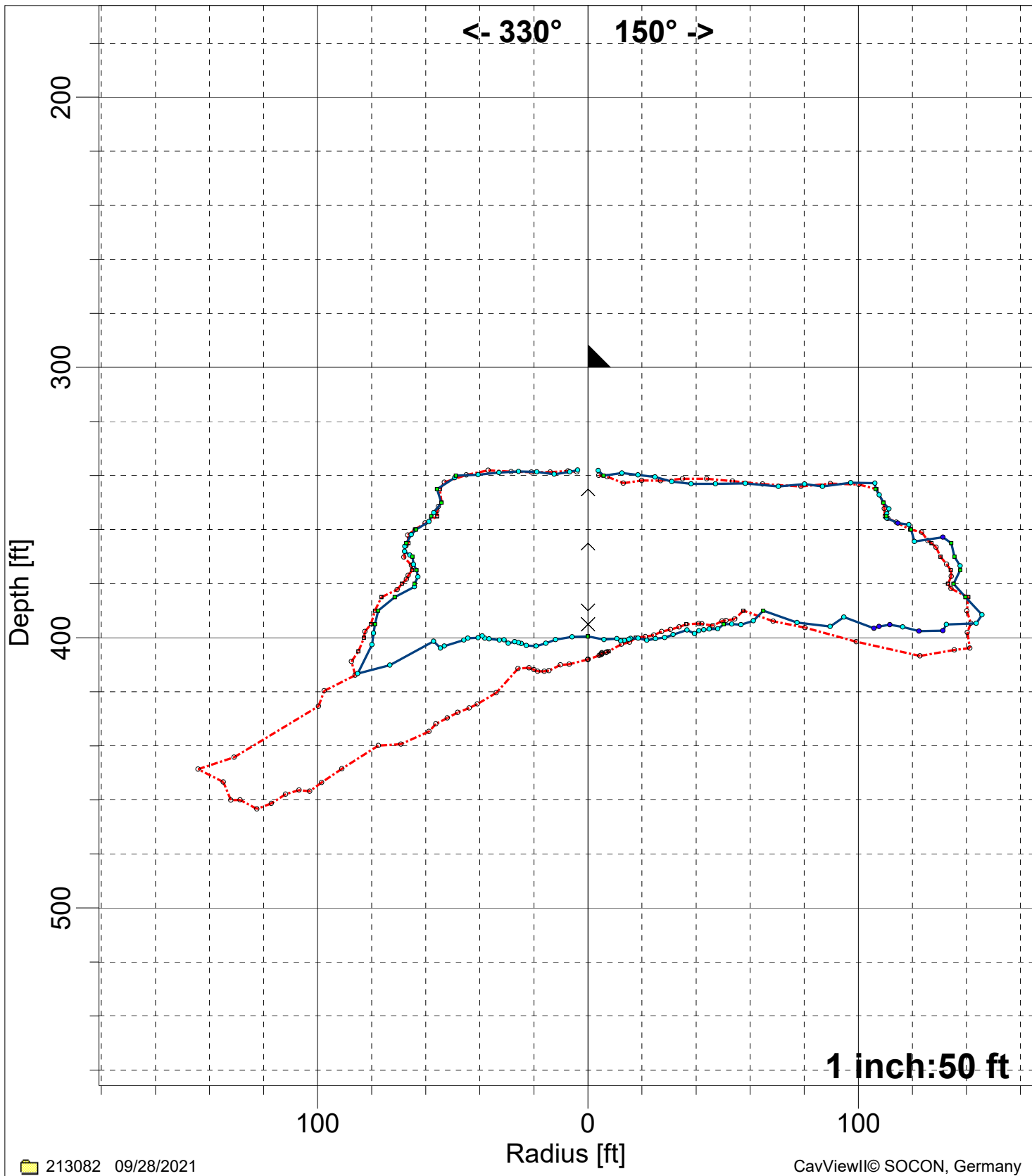
<p>—●— (09/28/2021)</p> <p>∨ ^ Tilting position</p>	<p>- - - - (05/29/2020)</p>	<p>▲ 7" : 300.0 ft</p>
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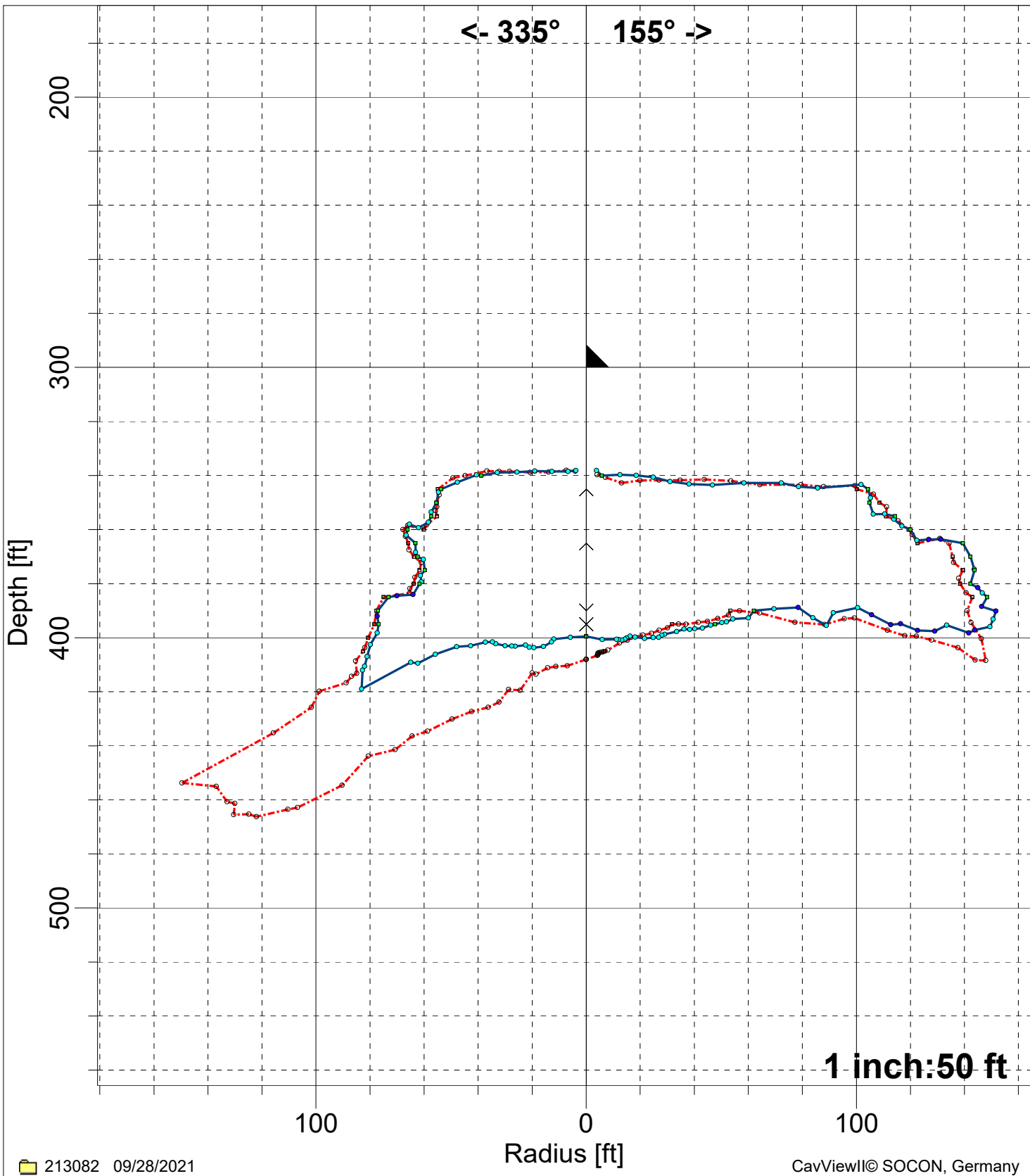
(09/28/2021)	(05/29/2020)	7" : 300.0 ft
Tilting position		



(09/28/2021)	(05/29/2020)	7" : 300.0 ft
Tilting position		

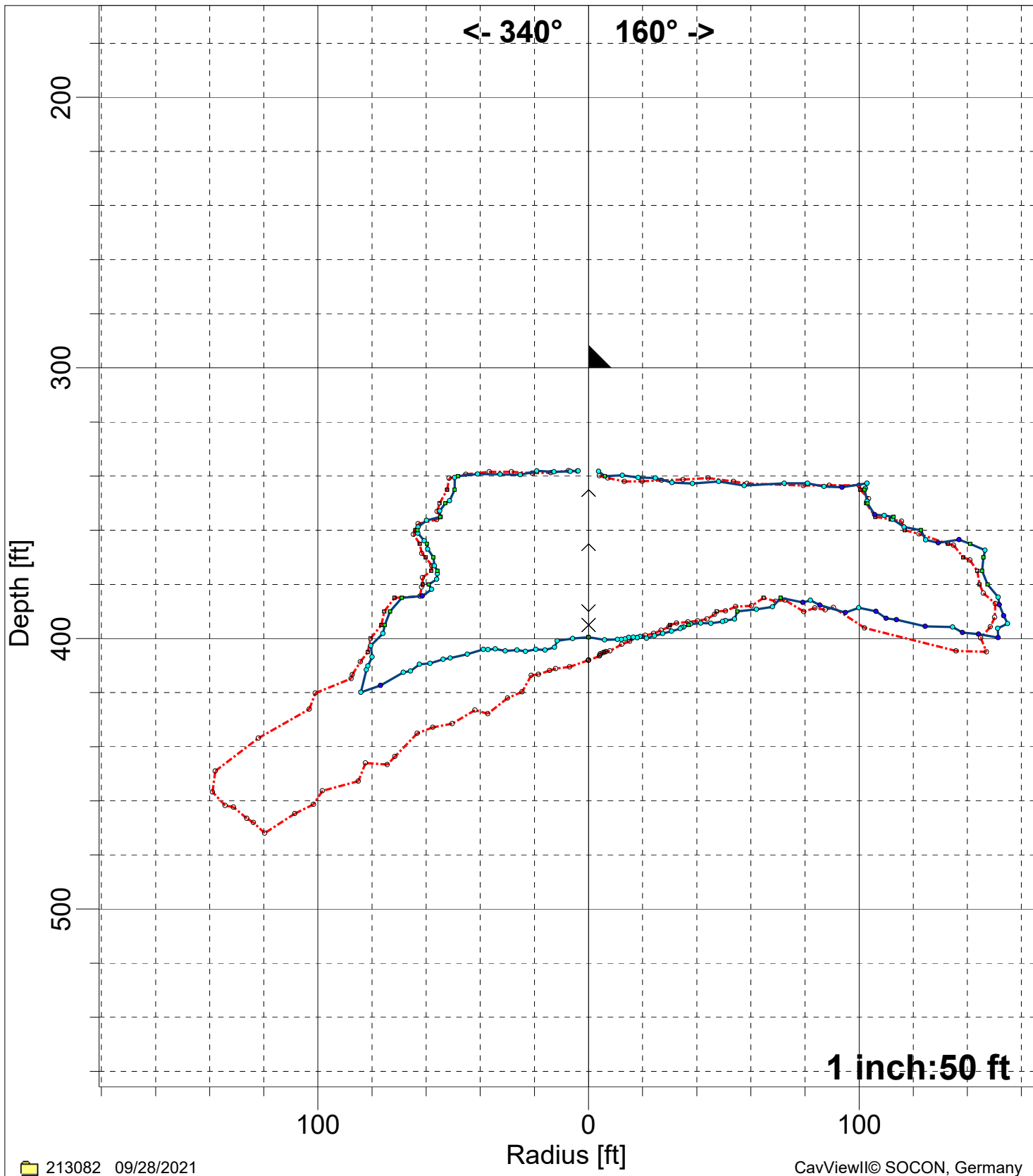


<p>—●— (09/28/2021)</p> <p>∨ ^ Tilting position</p>	<p>- - - - (05/29/2020)</p>	<p>▲ 7" : 300.0 ft</p>
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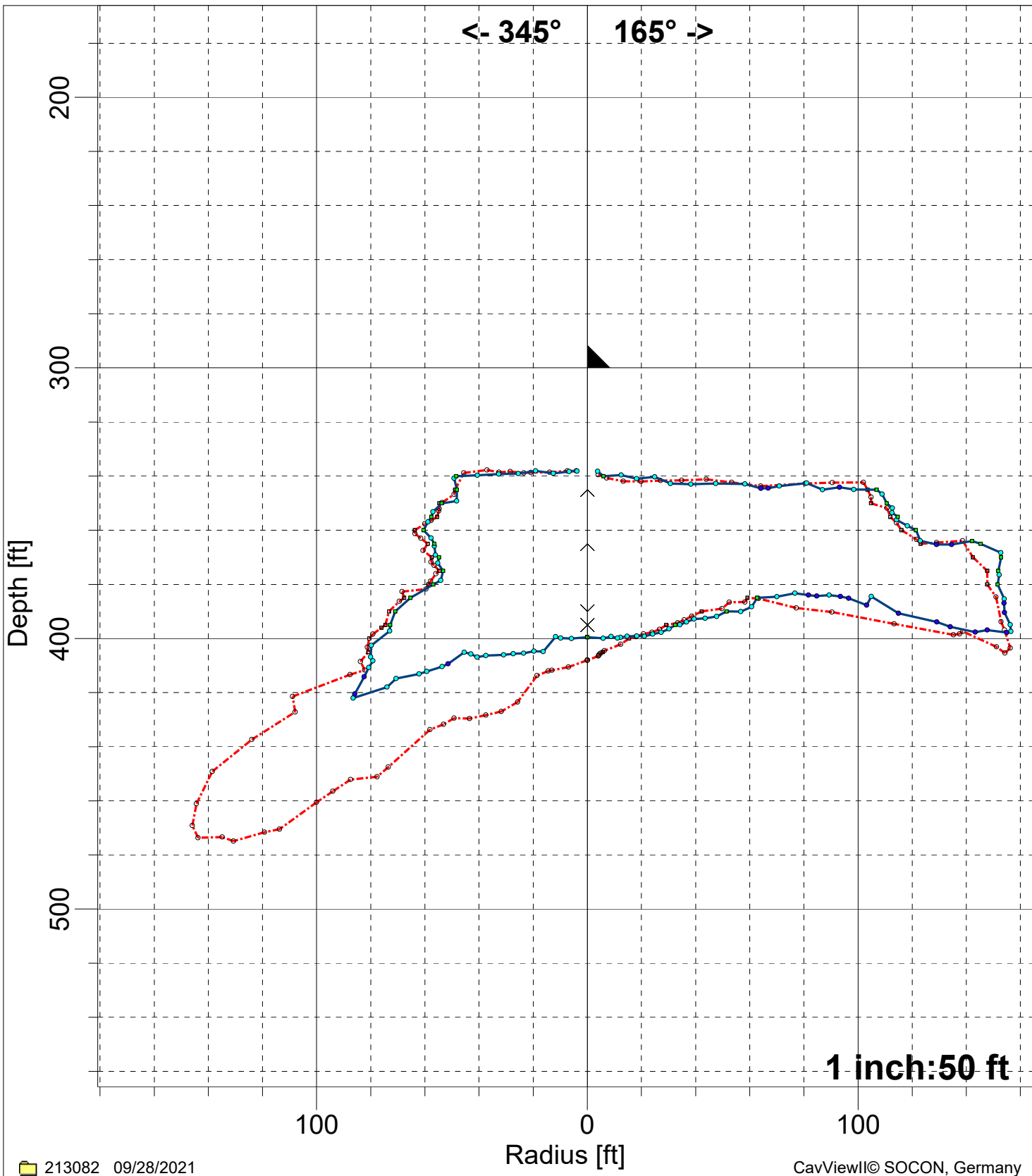


—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		

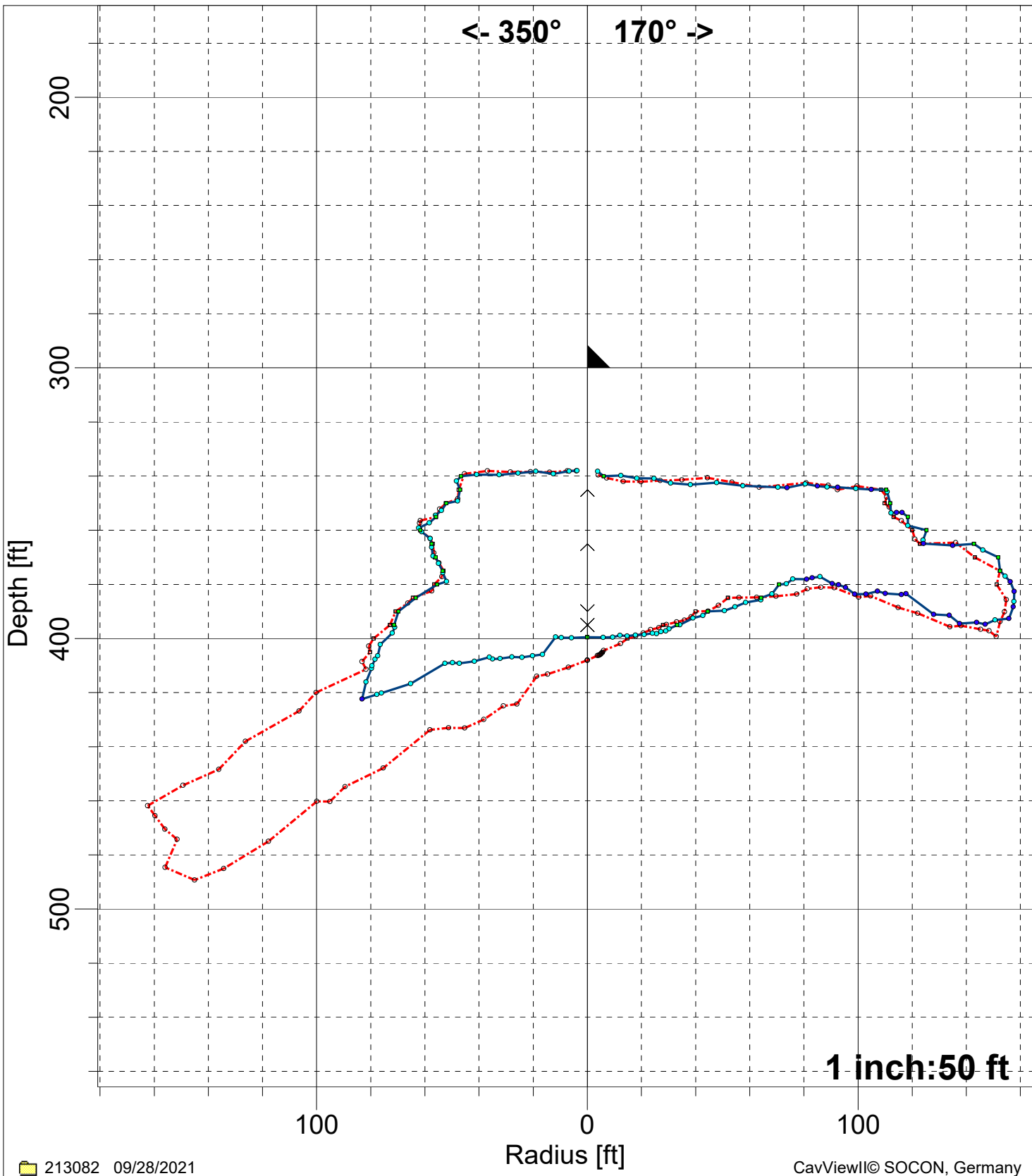




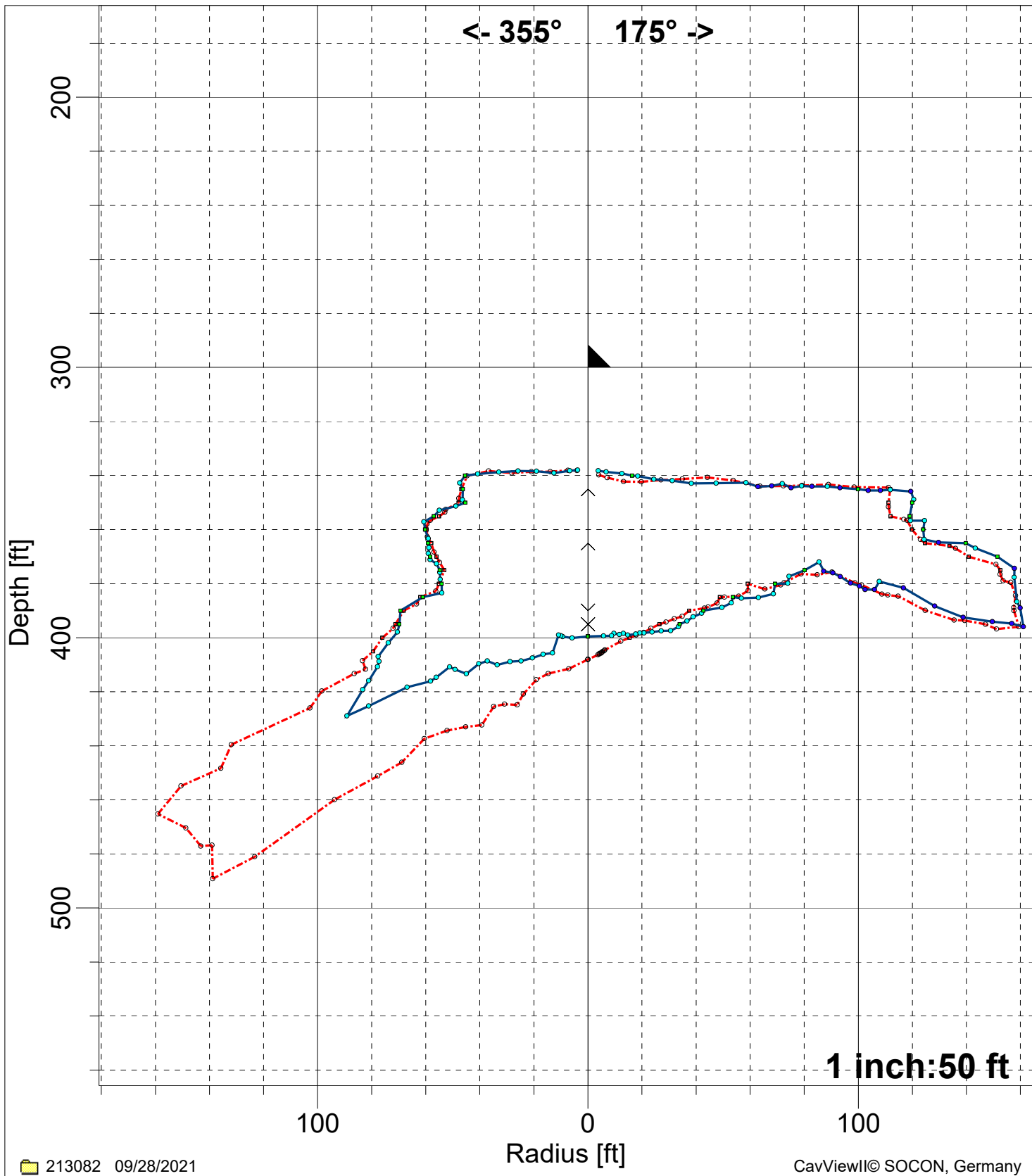
—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



<p>—●— (09/28/2021)</p> <p>∨ ^ Tilting position</p>	<p>- - - - (05/29/2020)</p>	<p>▲ 7" : 300.0 ft</p>
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—●— (09/28/2021)	- - - (05/29/2020)	▲ 7" : 300.0 ft
∨ ^ Tilting position		



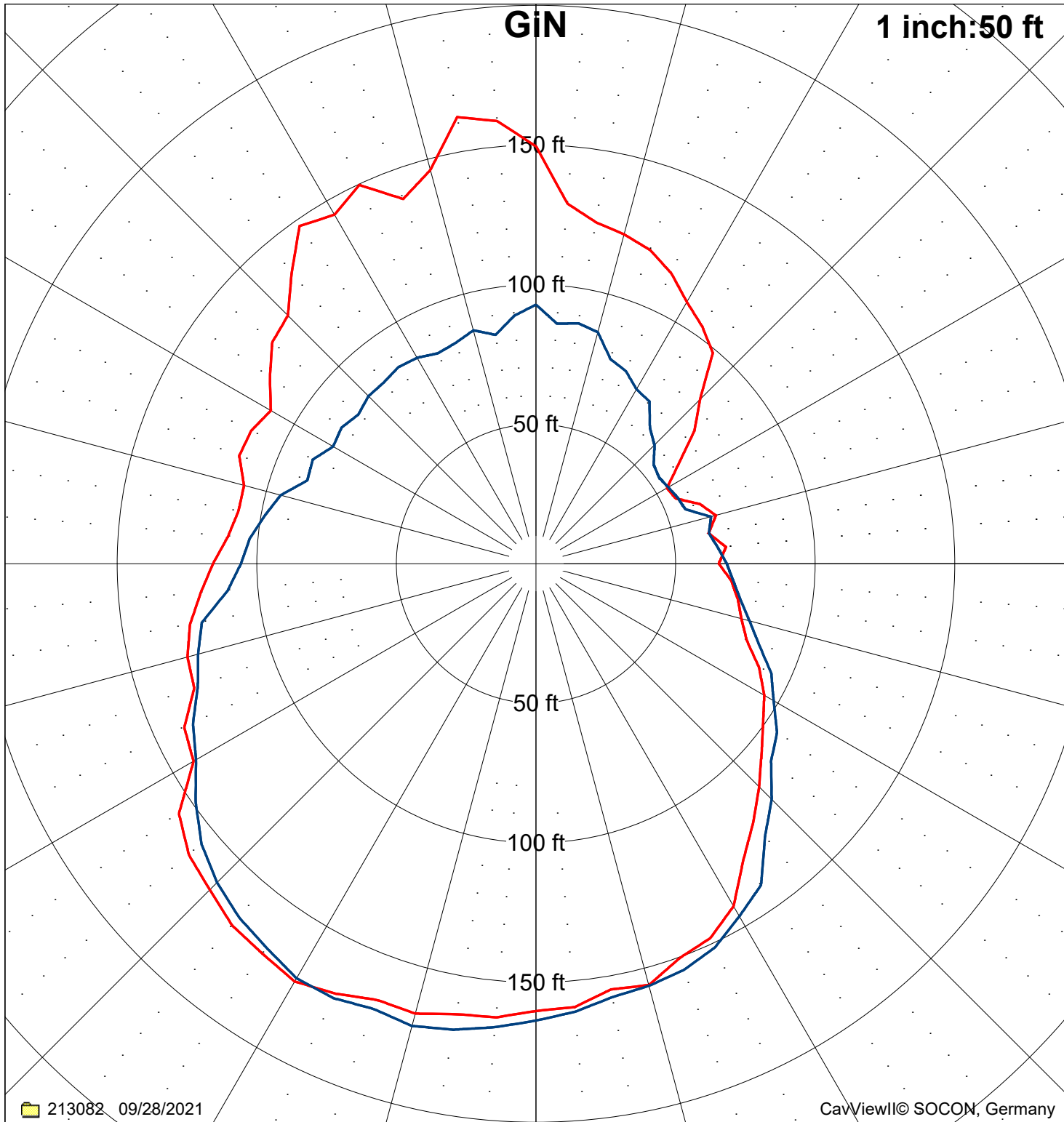
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(09/28/2021)  
 ∨ ^ Tilting position

--- (05/29/2020)

▲ 7" : 300.0 ft



— H/V-Maxplot (09/28/2021) (40087 ft<sup>2</sup>)      — H/V-Maxplot (05/29/2020) (50230 ft<sup>2</sup>)

H/V-Maxplot:  $d_{max}$ : 257.2 ft 15° <--> 195°    $r_{min}$ : 53.8 ft -> 55°    $r_{\sim}$ : 113.0 ft    $r_{max}$ : 171.7 ft -> 205°

H/V-Maxplot:  $a/b = 1.252$     $a = 262.1$  ft (0°-195°)    $b = 209.4$  ft (125°-258°)

Largest single area: 33824 ft<sup>2</sup> in depth: 375.0 ft